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The Second Spectrum of Ytterbium (Yb II)

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(Edited by Charlotte E. Moore)

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The analysis of Yb II provides the most complete interpretation of a complex rare-earth spectrum known to date. The total number of energy levels is 315; 141 even levels and 174 odd levels. Three coupling schemes are represented: *LS*-coupling for the terms $4f^{14}ns\,^2S(n=6, 7, 8)$; $4f^{14}nd\,^2D(n=5, 6, 7)$ and $4f^{13}6s^2\,^2F^\circ$: $J_I J_{II}$-coupling for the levels from the configurations $4f^{13}6s\,6p$ and $4f^{13}5d\,6p$; and $J_I L_{II}$-coupling for those from the $4f^{13}5d\,6s$ and $4f^{13}5d^2$ configurations.

More than 5000 Yb II lines are listed, of which about 80 percent have been classified, and 95 percent of the total intensity is accounted for. Observed Zeeman patterns for over 1000 lines have yielded *g*-values for 258 levels. The agreement between observation and theory is excellent as regards both the positions of the energy levels and the *g*-values. The theoretical work was done in collaboration with Racah and his associates over more than a decade.

A limit, 98150 K, giving an ionization potential of 12.17 eV, has been derived from the three-member ^2S series.

Key Words: Analysis of Yb II. Atomic energy levels of Yb II. Classified lines of Yb II. Spectrum, Yb II. Ytterbium, second spectrum. Zeeman effect in Yb II.

1. Introduction

In November 1966 death claimed the eminent spectroscopist, William F. Meggers, the author of the present paper. It was characteristic of this author to leave a rich heritage for his colleagues. Part of this heritage is the analysis of Yb II. His interest in this rare-earth spectrum dates back at least to 1932 when the first regularities were known. In 1937 he and Scribner "provided the first useful description of conventional arc and spark spectra of this element" [1].[1] Some 1250 Yb II lines in the range 2000 to 11000 Å were reported. The resonance lines of Yb II were interpreted "with considerable certainty" as due to the transition from the ground state $4f^{14}6s\,^2S$ to $4f^{14}6p\,^2P^\circ$, giving rise to the strong lines at 3694.190 and 3289.370 Å. The second series member $4f^{14}7s\,^2S$ was also reported at this time.

Although this work was handicapped by the use of impure materials and conventional light sources, Meggers succeeded, in 1939, in photographing the first Zeeman patterns of ytterbium lines with the Bitter magnet and concave gratings of the Massachusetts Institute of Technology. With these Zeeman data and further observations of spark spectra he was able to extend the quantum interpretation of the spectrum. In 1947 he had measured 400 Zeeman patterns, reobserved and measured the spectrum from 2000 to 9000 Å, and classified about 700 Yb II lines "as combinations between 38 odd and 76 even levels." Additional configurations were detected. The configurations $4f^{13}5d\,6s$, $4f^{13}5d^2$, and $4f^{13}6s\,6d$ give rise to many odd levels whose combinations with larger families of even levels from $4f^{13}6s\,6p$ and $4f^{13}5d\,6p$ give Yb II "its rare earth characteristics" [2].

[1] Figures in brackets indicate the literature references at the end of this paper.

"When pure ytterbium metal and new light sources became available in 1950, Meggers and Corliss decided to make a new description of ytterbium spectra" [3]. In the new list some 5100 Yb II lines are recorded together with the Zeeman Effect Type for more than 1000 lines. "The spectra of microwave and ring discharges of ytterbium were photographed side-by-side together with short images of superimposed standards from iron arcs or from thorium-iodide tubes. To disperse and focus the spectra, four concave gratings of 6.5 m radius, in Wadsworth-type mountings, were used." The "region from 2000 Å to 2500 Å was photographed in the first order of two (30,000 lines per inch) gratings with a plate factor of 2.4 Å/mm." From "2500 Å to 4500 Å, the spectra were recorded in the second order of either grating with a plate factor of 0.87 Å/mm, and the same setting served to record the range 5000 Å to 9000 Å in the first order with a plate factor of 1.74 Å/mm." From 7000 to 10000 Å a third grating having 15,000 lines per inch was used, the plate factor being 5 Å/mm.

In 1962 Sugar developed a light source "for producing self-reversed lines in both first and second spectra of rare-earth elements" [4]. He made the first observations with this source with ytterbium electrodes, covering the range 2400 to 7000 Å. "These spectrograms were evaluated by Meggers . . . who found that 50 lines of Yb II were absorbed or self-reversed."

In 1963 N. Spector photographed ytterbium spectra from 6600 to 11600 Å by means of a sliding spark, a source described in a paper by Sugar [5]. Longer than 9000 Å Meggers found several hundred additional lines on these spectrograms, "many of which have been explained as transitions between previously established Yb II energy levels."

There are four classified Yb II lines longer than 11600 Å: these were observed by Humphreys and Paul with a lead sulfide cell as detector, and electrodeless lamps as source [6].

In the 1966 reference, Meggers gives a clearly written history of other observations and work on ytterbium spectra, which need not be repeated here. It was his intention to prepare a Monograph on this spectrum that would serve as an inspiration to others who were engaged in the difficult task of interpreting complex rare-earth spectra. Although the material was not in final form for publication, the analysis was essentially completed at the time of his death. The details of publication have been carried out with his general idea in mind, insofar as it could be anticipated.

2. Interpretation of the Spectrum

The first recollection of the writer (C. E. M.) regarding Yb II is connected with the concern of both Meggers and H. N. Russell over the failure to find the elusive $4f^{14}\,5d\,^2D$ term in spite of an exhaustive search made with the earlier line lists. The late G. Racah became interested in this problem and in December 1952 pointed out that this term was not a rare-earth term, and could, therefore, be extrapolated from the spectra Hf II to W II. His predicted position placed the two respective levels surprisingly high i.e., near 23500 and 25000 K, thus explaining why the earlier searches had been fruitless. Earlier, however (1951) with the aid of Meggers' data, Racah had detected an unusual kind of coupling ($J_I J_{II}$) in the configuration $4f^{13}\,6s\,6p$ of Yb II, which is described below. Thus started the long and fruitful collaboration between these eminent spectroscopists, which has resulted in the present analysis. From this date to the present time, with the aid of digital computers in both the experimental and theoretical aspects of the work, this complex spectrum has been unraveled slowly, by using the observed levels to obtain parameters for predicting missing levels, and repeating the process. The early correspondence reveals the painstaking care used in this step-by-step method to push the search for new levels to its present state. The collaboration for nearly 15 years has contributed results of far-reaching importance in the realm of complex rare-earth spectra.

To date there are 141 known even energy levels of Yb II. These are tabulated in table 1: the odd levels, 174 in all, are given in table 2. The level values are accurate "to about ±0.02 K." The tables are arranged similarly. Each table contains eight columns, headed, respectively: Configuration, Designation, J, Level, Interval, Observed g, Calculated g, and the number of observed combinations on which the level is based.

Three types of coupling-schemes are needed to describe the energy levels of Yb II.[2] The only entries in the "Interval" column are those for the regular terms having LS-coupling. These terms result from the configurations having the completed shell of f-electrons: $4f^{14}\,ns\,^2S(n=6, 7, 8)$, $4f^{14}\,nd\,^2D(n=5, 6, 7)$, $4f^{14}\,6p\,^2P^\circ$, and from the configuration $4f^{13}\,6s^2\,^2F^\circ$. All other assigned levels belong to the configurations $4f^{13}\,6s\,6p$, $4f^{13}\,5d\,6p$, $4f^{13}\,5d\,6s$, and $4f^{13}\,5d^2$.

The key to the interpretation of the spectrum was given by the configuration $4f^{13}\,6s\,6p$ [8]. The coupling is a $J_I J_{II}$-coupling, a type first noted by Shenstone in the $3d^9\,4s\,4p$ configuration of Cu I, who described it as $3d^9\,^2D + 4s\,4p\,^3P$, ^1P [9]. In Yb II "the low levels are given by the three states of $sp\,^3P_{J_{II}}$; each of these states may assume different orientations in the quadrupole field of $f^{13}\,^2F_{3\frac{1}{2}}$, and thus splits into 1, 3, or 5 levels depending on the J_{II} value. The three levels of $^1P_1$ lie somewhat higher, and the whole distribution is repeated 10000 cm^{-1} higher, in the field of $f^{13}\,^2F_{2\frac{1}{2}}$." The interval of the ground term of the grandparent, $4f^{13}\,^2F^\circ$ in Yb IV, 10090 K [10] is clearly reflected in Yb II and "the J-value of the grandparent is very well defined" [8]. The complete $J_I J_{II}$-coupling notation is given in column one of table 1, and the corresponding groups of levels are given in column four. All of the 24 predicted levels of the $4f^{13}\,6s\,6p$ configuration have been found.

Similar notation is used for the levels from the $4f^{13}\,5d\,6p$ configuration (table 1). Of the 113 predicted levels, 108 are known.

Except for the regular terms mentioned above, the identified odd levels (table 2) have the configurations $4f^{13}\,5d\,6s$ or $4f^{13}\,5d^2$. Racah [8] has noted that "the orbital momentum of $sd\,^3D$ in the former group is orientated in the electrostatic field of the core before it is coupled with its own spin. The resulting coupling scheme is a $J_I L_{II}$-coupling." This "is the natural generalization of the jl coupling for configurations with two electrons outside the core." Instead of pairs, there are mostly groups of three levels or isolated levels according to the resultant spin of the outer electrons, and the multiplicity is indicated by the superscript at the left of the brackets in column two. The complete $J_I L_{II}$-coupling notation is given in column one of table 2. All 39 predicted levels from $4f^{13}\,5d\,6s$ are known. Of the 81 predicted levels from $4f^{13}\,5d^2$, 73 have been found.

The two coupling schemes described above are illustrated in figures 1 and 2, which are self-explanatory [8]. Racah noted that the present work on Yb II provides the first example of $J_I L_{II}$-coupling in a complex spectrum. It has already served as a "model" for Tm II, as reported by Spector [11]. Both types of coupling may well be expected in other complex rare-earth spectra.

After tables 1 and 2 had been completed, a final machine search was made by J. Tech for the five missing levels from the $4f^{13}\,5d\,6p$ configuration and for the nine missing levels from $4f^{13}\,5d^2$. The range covered in this search was ±300 K from the predicted values. He succeeded in finding the level $59632.21^\circ_{6\frac{1}{2}}$, which has been included in the tables with a question, since the total number of combinations on which it is based, is five, and one of these may be a blend.

[2] A summary of coupling schemes for one-electron spectra may be found in a paper by Gutman and Levinson [7], which has been translated by J. Tech. This may serve, also, as a useful general guide for the interpretation of spectra having more than one electron outside the core.

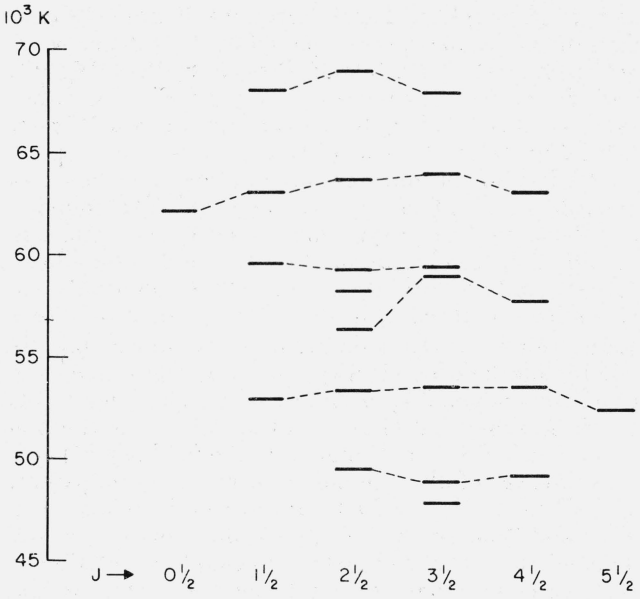

FIGURE 1. *The configuration* $4f^{13}(^2F^{\circ}_{31/2,\,21/2})6s\,6p$ *in* Yb II: $J_I J_{II}$-*coupling.*

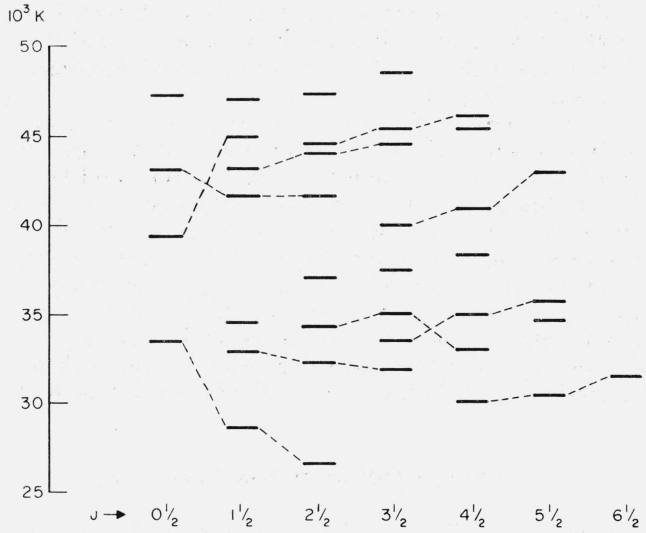

FIGURE 2. *The configuration* $4f^{13}(^2F^{\circ}_{31/2,\,21/2})5d\,6s$ *in* Yb II: $J_I L_{II}$-*coupling.*

The arrays of observed levels as described in the various coupling schemes are presented in table 3, which shows the relation of the various groups to the atomic structure.

In addition there are 58 miscellaneous high odd levels, above 84000 K, in table 2, which have not yet been assigned configurations.

The calculations of the energy matrices for Yb II have been carried out at The Hebrew University in Jerusalem. New diagonalizations including interaction were reported by Racah in August 1965 [12]. After his untimely death a few weeks later, the work was continued by Z. Goldschmidt and others. In fact, the $4f^{13}\,5d\,6p(^1P_1)$ configuration was interpreted by Mrs. Goldschmidt after introducing configuration interaction. She has kindly furnished the final data on the coupling schemes, and on the calculated positions and *g*-values for the individual levels. The observed and calculated values for both levels and *g*-values are in remarkably good agreement. The mean error (o-c) in the level values is 103 K for the even levels, and 144 K for the odd levels. A separate publication on the theoretical interpretation of the spectrum, the exact composition of the levels, and the agreement between observation and theory is in the hands of Mrs. Goldschmidt, who is familiar with the details of the work on Yb II carried on by Racah and his associates over the years.

3. Observations of Zeeman Effect

In a letter to Racah dated July 16, 1965, Meggers writes "I have spent many months of dreary drudgery deriving *g*-factors and classified lines from 98 pages of square array." As stated above, the first Zeeman observations were made at the Massachusetts Institute of Technology in 1939. At this time, Zeeman patterns for 400 Yb lines were obtained by accident, when they appeared as impurities in Tm spectra. "In favorable cases the resolution reached 0.05 Lorentz unit." Further Zeeman observations in the range 2000 to 9000 Å were made in 1959 at the National Bureau of Standards, where a Weiss magnet was used. "The highest resolution achieved was about 0.1 Lorentz unit."

"These investigations extending intermittently over a quarter century" have resulted in observed Zeeman patterns for more than 1000 lines of Yb II. Observed *g*-values have been derived for 136 even levels (column six, table 1) and for 122 odd levels (column six, table 2).

Details of the Zeeman observations are included in the last five columns of table 6. The standard Zeeman Types 4, 5, 6 for even multiplicity, and Type 7, which has "a single undisplaced parallel (*p*) component and two symmetrically displaced normal (*n*) components," are indicated in column seven, labeled "Type." Excellent illustrations of these types may be found in the paper by Meggers and Corliss on an "Improved Description of Hafnium Spectra" [13].

The next two columns, eight and nine, contain the *g*-values of the respective levels of the transition giving rise to the line. The "1st" *g*-value is that of the low level involved, i.e., the first entry in column six of table 6. The "2nd" *g*-value is that of the high level, i.e., the second entry in column six of this table. For example, 8781.96Å is designated as $37516^{\circ}_{31/2}$—$48900_{31/2}$. The *g*-value for 37516° is 1.114; that for 48900 is 1.034. The last two columns of table 6, ten and eleven, give the strongest *p*-component, and the strongest *n*-component, respectively.

All entries in parentheses have been assumed in making the calculations to derive observed *g*-values. For some lines the strongest *p*-component is in parentheses. If Δg is small, it has been assumed that the measurement refers to the weakest *p*-component. The

entry in parentheses is, therefore, the appropriate fraction of the observed value.

The observed g-values in tables 1 and 2 were obtained by averaging the separate values. Many are based on resolved patterns. The average value can generally be used as an assumed value for one level, to derive the g-value for the other level in cases of unresolved patterns. When this has been done, the assumed g-value is in parentheses.

For resolved patterns, an excellent value of Δg can often be determined, which may differ slightly from the one indicated by the strongest p-component. The best value has been used in the calculations, which explains small differences between the value of Δg from the observed g-values and that from column ten.

Most of the final g-values were assigned by Meggers, who had completed the reductions of all Zeeman observations and interpreted practically all of the resolved patterns. A number of g-values from unresolved patterns have been derived by C. E. M. as described above. They have been added in table 6, and used only to supplement the averages adopted by Meggers.

Most of the lines for which the Zeeman Effect has been observed, are classified. The remaining unclassified lines having a known Zeeman Effect, are listed in table 4, which gives in successive columns the wavelength, spark intensity, wave number Type, strongest p-, and strongest n-components. As in table 5 which contains the strongest unclassified lines, the entries are from table 6.

The overall consistency of the individual g-values reveals the painstaking skill and care of the author in making the observations, in reducing them, and in interpreting them.

TABLE 1. *Even levels of* Yb II

Configuration	Desig.	J	Level	Interval	Obs. g	Calc. g	No. Comb.
$4f^{14}(^1S)6s$	$6s\ ^2S$	0½	0.00		1.998	2.000	14
$4f^{14}(^1S)5d$	$5d\ ^2D$	1½	22960.80	1371.89	1.802	0.800	37
		2½	24332.69		1.202	1.200	39
$4f^{13}(^2F^\circ_{3\frac{1}{2}})6s\,6p(^3P_0)$		3½	47912.31		1.280	1.284	26
$4f^{13}(^2F^\circ_{3\frac{1}{2}})6s\,6p(^3P_1)$		4½	49301.16		1.187	1.196	27
		3½	48900.41		1.044	1.051	26
		2½	49498.04		1.145	1.140	24
$4f^{13}(^2F^\circ_{3\frac{1}{2}})6s\,6p(^3P_2)$		5½	52517.35		1.27	1.272	19
		4½	53720.71		1.26	1.270	30
		3½	53715.26		1.181	1.190	26
		2½	53404.96		1.033	1.043	35
		1½	52938.01		0.877	0.879	17
$4f^{14}(^1S)7s$	$7s\ ^2S$	0½	54304.30		2.001	2.000	12
$4f^{13}(^2F^\circ_{3\frac{1}{2}})6s\,6p(^1P_1)$		2½	56375.91		1.226	1.233	34
		3½	59090.13		1.122	1.112	39
		4½	57765.32		1.12	1.112	36
$4f^{13}(^2F^\circ_{2\frac{1}{2}})6s\,6p(^3P_0)$		2½	58283.91		0.77	0.761	25
$4f^{13}(^2F^\circ_{2\frac{1}{2}})6s\,6p(^3P_1)$		3½	59618.90		1.00	1.020	23
		2½	59259.24		1.105	1.114	31
		1½	59710.65		0.82	0.777	22
$4f^{13}(^2F^\circ_{2\frac{1}{2}})6s\,6p(^3P_2)$		0½	62136.94		0.08	0.113	11
		1½	63011.85		0.79	0.812	21
		2½	63702.32		1.07	1.040	29
		3½	63957.80		1.148	1.144	23
		4½	63163.79		1.12	1.138	22

TABLE 1. *Even levels of* Yb II – Continued

Configuration	Desig.	J	Level	Interval	Obs. g	Calc. g	No. Comb.
$4f^{13}(^2F^\circ_{2\frac{1}{2}})6s\,6p\,(^1P_1)$		3½	67938.68		0.960	0.954	42
		2½	69079.88		0.89	0.907	29
		1½	68150.57		0.928	0.927	42
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d\,6p\,(^3F_2)$		1½	55702.07		1.693	1.700	17
		2½	58823.58		1.266	1.278	39
		3½	61051.06		1.18	1.176	35
		4½	61214.66		1.07	1.054	44
		5½	58961.37		0.974	0.985	21
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d\,6p\,(^3F_3)$		0½	61120.49		1.661	1.661	13
		1½	60586.46		1.323	1.339	26
		2½	64055.82		1.108	1.062	42
		3½	65093.14		0.973	1.006	37
		4½	64923.11		1.10	1.125	49
		5½	66082.25		1.141	1.147	29
		6½	61873.40		1.10	1.114	16
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d\,6p\,(^3F_4)$		7½	64891.30		1.19	1.200	8
		6½	68720.44		1.157	1.155	23
		5½	68148.88		1.20	1.207	29
		4½	68549.23		1.157	1.147	49
		3½	68450.11		1.08	1.100	39
		2½	66395.72		1.235	1.249	37
		1½	65888.46		1.206	1.212	30
		0½	66462.86		1.11	1.084	16
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d\,6p\,(^3D_1)$		2½	61374.49		1.299	1.298	34
		3½	64598.28		1.223	1.217	48
		4½	63726.83		1.005	1.009	47
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d\,6p\,(^3D_2)$		5½	63944.18		1.115	1.102	33
		4½	65950.95		1.09	1.074	46
		3½	66558.00		1.100	1.105	47
		2½	66351.21		1.125	1.106	41
		1½	64461.08		1.176	1.164	25
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d\,6p\,(^3D_3)$		6½	65875.77		1.205	1.198	26
		5½	66571.58		1.189	1.189	44
		4½	67416.03		1.26	1.262	50
		3½	68756.04		1.32	1.343	48
		2½	68135.00		1.087	1.087	39
		1½	67204.97		1.04	1.064	29
		0½	67955.23		0.895	0.880	18
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d\,6p\,(^3P_0)$		3½	69395.20		0.94	0.944	43
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d\,6p\,(^3P_1)$		2½	69607.54		1.210	1.202	45
		3½	61822.58		1.327	1.338	39
		4½	69957.49		1.112	1.115	53
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d\,6p\,(^3P_2)$		5½	70793.96		1.20	1.214	39
		4½	70858.18		1.28	1.284	46
		3½	71222.36		1.15	1.149	43
		2½	70954.27		1.014	1.017	43
		1½	71113.84		0.967	0.955	33

TABLE 1. *Even levels of* Yb II – Continued

Configuration	Desig.	J	Level	Interval	Obs. g	Calc. g	No. Comb.
$4f^{14}(^1S)6d$	$6d\,^2D$	1½	62174.10	384.92	0.80	0.800	17
		2½	62559.02		1.22	1.200	19
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d\,6p(^1D_2)$		5½	62861.27		1.140	1.139	30
		4½	65199.54		1.08	1.078	42
		3½	65577.11		1.055	1.050	44
		2½	63234.11		1.208	1.282	37
		1½	63647.73		1.149	1.133	31
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d\,6p(^1F_3)$		0½	65566.72		1.43	1.460	20
		1½	69443.52		1.15	1.175	35
		2½	71468.70		1.02	0.996	34
		3½	72779.99		1.10	1.105	41
		4½	73283.35		1.04	1.011	43
		5½	73291.95		1.09	1.084	38
		6½	70136.24		1.12	1.150	26
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d\,6p(^1P_1)$		2½	77606.58		1.14	1.169	30
		3½	79628.71		1.11	1.126	29
		4½	78070.19		1.10	1.114	33
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d\,6p(^3F_2)$		4½	68943.65		0.89	0.881	23
		3½	72202.03		0.86	0.864	29
		2½	71270.01		0.91	0.912	39
		1½	71763.67		1.11	1.101	31
		0½	75905.77		1.28	1.308	15
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d\,6p(^3F_3)$		5½	72615.74		0.99	0.996	24
		4½	76516.11		1.01	0.999	24
		3½	75640.06		0.81	0.830	29
		2½	74270.48		0.92	0.910	32
		1½	73657.29		1.04	1.071	22
		0½	73636.83		0.70	0.692	17
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d\,6p(^3F_4)$		6½	76233.60		1.07	1.108	10
		5½					
		4½	79126.83		1.15?	1.140	17
		3½	77882.04		1.13	1.142	28
		2½	76170.25		1.12	1.093	31
		1½	76517.21		0.85	0.792	14
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d\,6p(^1D_2)$		0½	70029.04		0.68	0.670	16
		1½	73116.71		0.863	0.797	21
		2½	75550.94		0.91	0.945	38
		3½	74973.41		1.07	1.040	26
		4½	73750.90		1.07	1.007	37
$4f^{14}\,8s$	$8s\,^2S$	0½	73039.61			2.000	7
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d\,6p(^3D_1)$		3½	73966.81		0.763	0.765	23
		2½	76676.31		1.10	1.048	39
		1½	77284.02		0.90	0.964	23

TABLE 1. *Even levels of* Yb II—Continued

Configuration	Desig.	J	Level	Interval	Obs. g	Calc. g	No. Comb.
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d\,6p(^3D_2)$		4½	74568.58		1.04	1.032	22
		3½	76323.49		1.00	0.960	37
		2½	79583.11		0.68	0.671	15
		1½	74991.36		1.05	1.060	30
		0½	74989.49		0.52	0.511	15
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d\,6p(^3D_3)$		5½	76649.80		1.08	1.083	14
		4½	77747.40		1.07	1.087	25
		3½	77449.32		1.16	1.161	29
		2½	78814.86		1.22	1.210	22
		1½	79605.95		1.16	1.129	24
		0½	77887.30		2.20	2.170	12
$4f^{14}(^1S)7d$	$7d\,^2D$	1½	76799.07	39.93	0.84	0.800	15
		2½	76839.00		1.11	1.200	35
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d\,6p(^3P_0)$		2½	81657.13			1.051	26
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d\,6p(^3P_1)$		3½	80457.71		0.99	0.984	23
		2½	75058.11		0.76	0.732	29
		1½	81512.62		0.48	0.502	12
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d\,6p(^3P_2)$		0½					
		1½	78464.76		1.18	1.193	22
		2½	81312.65		1.11?	1.049	29
		3½	81692.92		1.16	1.164	18
		4½	81205.27		1.09	1.115	17
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d\,6p(^1F_3)$		5½	80679.18		1.00?	1.019	13
		4½					
		3½	83363.88		0.97	0.956	21
		2½	82891.80		1.03?	1.066	27
		1½	82398.98		1.042	1.061	18
		0½	82091.32			1.223	7
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d\,6p(^1P_1)$		1½					
		2½	89713.17			0.869	14
		3½					

TABLE 2. *Odd levels of* Yb II

Configuration	Desig.	J	Level	Interval	Obs. g	Calc. g	No. Comb.
$4f^{13}\,6s^2$	$6s^2\,^2F^\circ$	3½	*21418.75*	−10149.33	1.145	1.143	30
		2½	*31568.08*		0.862	0.866	50
$4f^{14}(^1S)6p$	$6p\,^2P^\circ$	0½	*27061.82*	3330.41	0.667	0.667	13
		1½	*30392.23*		1.333	1.333	28
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d\,6s(^3D^\circ)$	$^3[1\frac{1}{2}]^\circ$	2½	*26759.02*		1.570	1.576	27
		1½	*28757.98*		1.440	1.447	30
		0½	*33653.86*		1.320	1.318	22

TABLE 2. *Odd levels of* Yb II—Continued

Configuration	Desig.	J	Level	Interval	Obs. g	Calc. g	No. Comb.
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d\,6s(^3D^\circ)$ *Continued*	$^3[5\frac{1}{2}]^\circ$	$4\frac{1}{2}$	*30224.33*		0.935	0.936	31
		$5\frac{1}{2}$	*30562.79*		1.112	1.124	25
		$6\frac{1}{2}$	*31631.59*		1.230	1.231	12
	$^3[2\frac{1}{2}]^\circ$	$3\frac{1}{2}$	*31979.90*		1.331	1.336	43
		$2\frac{1}{2}$	*32371.10*		1.170	1.157	44
		$1\frac{1}{2}$	*32981.59*		0.866	0.908	40
	$^3[3\frac{1}{2}]^\circ$	$4\frac{1}{2}$	*33052.29*		1.264	1.267	36
		$3\frac{1}{2}$	*35059.00*		1.124	1.112	51
		$2\frac{1}{2}$	*34389.76*		1.007	1.017	47
	$^3[4\frac{1}{2}]^\circ$	$3\frac{1}{2}$	*33494.68*		0.991	1.003	48
		$4\frac{1}{2}$	*35019.13*		1.158	1.159	38
		$5\frac{1}{2}$	*35831.68*		1.214	1.219	29
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d\,6s(^1D^\circ)$	$^1[1\frac{1}{2}]^\circ$	$1\frac{1}{2}$	*34575.37*		1.434	1.395	41
	$^1[5\frac{1}{2}]^\circ$	$5\frac{1}{2}$	*34784.95*		1.119	1.120	29
	$^1[2\frac{1}{2}]^\circ$	$2\frac{1}{2}$	*37077.59*		1.113	1.113	52
	$^1[3\frac{1}{2}]^\circ$	$3\frac{1}{2}$	*37516.59*		1.119	1.126	59
	$^1[4\frac{1}{2}]^\circ$	$4\frac{1}{2}$	*38342.02*		1.093	1.090	42
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d\,6s(^3D^\circ)$	$^3[0\frac{1}{2}]^\circ$	$0\frac{1}{2}$	*39378.89*		1.850	1.859	21
		$1\frac{1}{2}$	*44940.61*		1.244	1.248	53
	$^3[4\frac{1}{2}]^\circ$	$3\frac{1}{2}$	*40035.82*		0.720	0.714	53
		$4\frac{1}{2}$	*40917.91*		0.967	0.978	40
		$5\frac{1}{2}$	*42915.13*		1.115	1.125	20
	$^3[1\frac{1}{2}]^\circ$	$2\frac{1}{2}$	*41678.73*		1.193	1.182	43
		$1\frac{1}{2}$	*41688.45*		0.784	0.784	39
		$0\frac{1}{2}$	*43007.79*		0.15	0.148	21
	$^3[2\frac{1}{2}]^\circ$	$1\frac{1}{2}$	*43075.09*		0.96	0.928	49
		$2\frac{1}{2}$	*43956.41*		0.99	0.967	47
		$3\frac{1}{2}$	*44438.03*		1.10	1.091	55
	$^3[3\frac{1}{2}]^\circ$	$2\frac{1}{2}$	*44497.51*		0.734	0.770	45
		$3\frac{1}{2}$	*45429.82*		1.150	1.128	51
		$4\frac{1}{2}$	*46169.78*		1.10	1.104	45
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d\,6s(^1D^\circ)$	$^1[4\frac{1}{2}]^\circ$	$4\frac{1}{2}$	*45335.03*		1.01	0.981	39
	$^1[1\frac{1}{2}]^\circ$	$1\frac{1}{2}$	*47005.46*		0.990	0.971	45
	$^1[0\frac{1}{2}]^\circ$	$0\frac{1}{2}$	*47228.96*		0.74	0.806	26
	$^1[2\frac{1}{2}]^\circ$	$2\frac{1}{2}$	*47329.44*		0.990	0.974	56
	$^1[3\frac{1}{2}]^\circ$	$3\frac{1}{2}$	*48556.57*		0.941	0.921	50

TABLE 2. *Odd levels of* Yb II – Continued

Configuration	Desig.	J	Level	Interval	Obs. g	Calc. g	No. Comb.
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d^2(^3F^\circ)$	$^3[2\frac{1}{2}]^\circ$	$3\frac{1}{2}$	*47758.54*		1.08	1.123	43
		$2\frac{1}{2}$	*45012.79*		1.281	1.298	38
		$1\frac{1}{2}$	*50832.65*		0.956	0.977	22
	$^3[3\frac{1}{2}]^\circ$	$4\frac{1}{2}$	*46354.55*		1.29	1.284	32
		$3\frac{1}{2}$	*45273.02*		1.18	1.209	56
		$2\frac{1}{2}$	*51248.86*		1.034	1.052	44
	$^3[1\frac{1}{2}]^\circ$	$0\frac{1}{2}$	*46902.71*		1.30	1.201	20
		$1\frac{1}{2}$	*45737.29*		1.333	1.384	50
		$2\frac{1}{2}$	*48272.77*		1.14	1.147	55
	$^3[6\frac{1}{2}]^\circ$	$5\frac{1}{2}$	*46547.72*		0.97	0.971	21
		$6\frac{1}{2}$	*47680.40*		1.12	1.118	13
		$7\frac{1}{2}$	*48923.30*		1.20	1.195	6
	$^3[5\frac{1}{2}]^\circ$	$4\frac{1}{2}$	*47663.52*		0.98	1.011	38
		$5\frac{1}{2}$	*48503.82*		1.10	1.129	25
		$6\frac{1}{2}$	*49727.19*		1.20	1.200	12
	$^3[0\frac{1}{2}]^\circ$	$1\frac{1}{2}$	*48024.70*		1.38	1.354	30
		$0\frac{1}{2}$	*49419.13*		1.41	1.432	16
	$^3[4\frac{1}{2}]^\circ$	$3\frac{1}{2}$	*49008.93*		1.03	1.046	43
		$4\frac{1}{2}$	*49916.50*		1.090	1.062	27
		$5\frac{1}{2}$	*50468.05*		1.213	1.198	22
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d^2(^1G^\circ)$	$^1[0\frac{1}{2}]^\circ$	$0\frac{1}{2}$	*52067.87*		0.54	0.530	21
	$^1[1\frac{1}{2}]^\circ$	$1\frac{1}{2}$	*52987.76*		1.131	1.116	28
	$^1[7\frac{1}{2}]^\circ$	$7\frac{1}{2}$	*53322.89*		1.04	1.072	5
	$^1[2\frac{1}{2}]^\circ$	$2\frac{1}{2}$	*53716.38*		1.183	1.154	42
	$^1[3\frac{1}{2}]^\circ$	$3\frac{1}{2}$	*57103.02*		1.10	1.078	25
	$^1[6\frac{1}{2}]^\circ$	$6\frac{1}{2}$	*57561.62*		1.04	1.042	7
	$^1[4\frac{1}{2}]^\circ$	$4\frac{1}{2}$	*58484.54*		1.02	1.061	17
	$^1[5\frac{1}{2}]^\circ$	$5\frac{1}{2}$	*59753.84*		1.11	1.082	11
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d^2(^3P^\circ)$	$^3[3\frac{1}{2}]^\circ$	$4\frac{1}{2}$	*52880.75*		1.26	1.268	26
		$3\frac{1}{2}$	*52921.62*		1.15	1.173	35
		$2\frac{1}{2}$	*53120.58*		0.944	0.950	34
	$^3[4\frac{1}{2}]^\circ$	$3\frac{1}{2}$	*55462.68*		0.878	0.874	28
		$4\frac{1}{2}$	*56088.39*		1.11	1.100	20
		$5\frac{1}{2}$	*56621.15*		1.16	1.215	15
	$^3[2\frac{1}{2}]^\circ$	$3\frac{1}{2}$	*56500.64*		1.352	1.360	20
		$2\frac{1}{2}$	*57798.51*		1.151	1.152	30
		$1\frac{1}{2}$	*58162.75*		0.94	0.930	17

TABLE 2. *Odd levels of* Yb II — continued

Configuration	Desig.	J	Level	Interval	Obs. g	Calc. g	No. Comb.
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d^2(^1D^\circ)$	$^1[3\frac{1}{2}]^\circ$	$3\frac{1}{2}$	*53644.89*		1.18	1.181	38
	$^1[5\frac{1}{2}]^\circ$	$5\frac{1}{2}$	*54192.51*		1.11	1.110	19
	$^1[4\frac{1}{2}]^\circ$	$4\frac{1}{2}$	*54640.82*		1.13	1.128	30
	$^1[1\frac{1}{2}]^\circ$	$1\frac{1}{2}$	*55221.46*		1.11	1.069	27
	$^1[2\frac{1}{2}]^\circ$	$2\frac{1}{2}$	*56056.91*		1.12	1.131	22
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d^2(^1S^\circ)$	$^1[3\frac{1}{2}]^\circ$	$3\frac{1}{2}$					
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d^2(^3F^\circ)$	$^3[5\frac{1}{2}]^\circ$	$4\frac{1}{2}$	*56480.77*		0.76	0.767	23
		$5\frac{1}{2}$	*58051.51*		0.95	0.966	10
		$6\frac{1}{2}$	*59632.21?*			1.087	5
	$^3[2\frac{1}{2}]^\circ$	$1\frac{1}{2}$	*56840.04*		0.90	0.930	20
		$2\frac{1}{2}$	*62163.92*			1.082	24
		$3\frac{1}{2}$	*62046.07*		1.14	1.134	17
	$^3[0\frac{1}{2}]^\circ$	$0\frac{1}{2}$	*56977.71*		2.19	2.174	11
		$1\frac{1}{2}$	*59777.07*		1.63	1.623	12
	$^3[4\frac{1}{2}]^\circ$	$3\frac{1}{2}$	*57534.45*		0.87	0.837	27
		$4\frac{1}{2}$	*59046.89*		1.08	1.051	14
		$5\frac{1}{2}$	*61442.82*		1.11	1.134	12
	$^3[3\frac{1}{2}]^\circ$	$2\frac{1}{2}$	*58661.13*		0.86	0.821	25
		$3\frac{1}{2}$	*59624.66*			0.964	19
		$4\frac{1}{2}$	*60649.86*		1.10	1.123	13
	$^3[1\frac{1}{2}]^\circ$	$0\frac{1}{2}$	*58672.53*		0.538	0.522	13
		$1\frac{1}{2}$	*60910.14*		1.00	1.095	17
		$2\frac{1}{2}$	*59439.08*		0.994	1.054	22
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d^2(^3P^\circ)$	$^3[2\frac{1}{2}]^\circ$	$1\frac{1}{2}$	*63028.26*		0.51	0.531	11
		$2\frac{1}{2}$	*63417.03*		1.01	1.019	16
		$3\frac{1}{2}$	*64169.39*			1.078	17
	$^3[3\frac{1}{2}]^\circ$	$2\frac{1}{2}$?	*65594.06*		1.19?	0.809	8
		$3\frac{1}{2}$	*66796.03*			0.970	7
		$4\frac{1}{2}$					
	$^3[1\frac{1}{2}]^\circ$	$2\frac{1}{2}$	*67933.51*		1.17	1.203	8
		$1\frac{1}{2}$	*67789.60?*			1.051	5
		$0\frac{1}{2}$					
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d^2(^1G^\circ)$	$^1[6\frac{1}{2}]^\circ$	$6\frac{1}{2}$					
	$^1[1\frac{1}{2}]^\circ$	$1\frac{1}{2}$	*64191.97*		1.193	1.105	8
	$^1[2\frac{1}{2}]^\circ$	$2\frac{1}{2}$	*65739.47*		0.879	0.896	11

TABLE 2. *Odd levels of* Yb II – Continued

Configuration	Desig.	J	Level	Interval	Obs. g	Calc. g	No. Comb.
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d^2(^1G^\circ)$ *Continued*	$^1[3\frac{1}{2}]^\circ$	$3\frac{1}{2}$					
	$^1[5\frac{1}{2}]^\circ$	$5\frac{1}{2}$					
	$^1[4\frac{1}{2}]^\circ$	$4\frac{1}{2}$					
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d^2(^1D^\circ)$	$^1[4\frac{1}{2}]^\circ$	$4\frac{1}{2}$	*64365.00*			0.959	11
	$^1[3\frac{1}{2}]^\circ$	$3\frac{1}{2}$	*64970.74*			1.051	11
	$^1[0\frac{1}{2}]^\circ$	$0\frac{1}{2}$	*65149.31*			0.484	4
	$^1[2\frac{1}{2}]^\circ$	$2\frac{1}{2}$	*66205.87*			0.924	9
	$^1[1\frac{1}{2}]^\circ$	$1\frac{1}{2}$	*66189.00*		0.91	0.888	8
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d^2(^1S^\circ)$	$^1[2\frac{1}{2}]^\circ$	$2\frac{1}{2}$					
		$4\frac{1}{2}$	*84217.85*		1.19		14
		$3\frac{1}{2}$	*84444.07*				15
		$2\frac{1}{2}$	*84632.71*				9
		$2\frac{1}{2}$	*86148.67*		1.575		14
		$1\frac{1}{2}$	*86226.31*		1.35		16
		$3\frac{1}{2}$	*87385.74*		1.14		17
		$5\frac{1}{2}$	*88702.97*		1.08?		16
		$3\frac{1}{2}$	*88721.12*		1.17		19
		$4\frac{1}{2}$	*89605.80*		0.94?		13
		$2\frac{1}{2}$	*89615.59*				19
		$1\frac{1}{2}$	*89897.55*		1.01		20
		$3\frac{1}{2}$	*90142.74*				20
		$4\frac{1}{2}$	*90209.67*				21
		$5\frac{1}{2}$	*90279.08*		1.12		17
		$4\frac{1}{2}$	*90717.54*				25
		$2\frac{1}{2}$	*90859.07*				19
		$3\frac{1}{2}$	*91237.94*				17
		$6\frac{1}{2}$	*91301.57*		1.22		8

TABLE 2. *Odd levels of* Yb II — Continued

Configuration	Desig.	J	Level	Interval	Obs. g	Calc. g	No. Comb.
		3½	*91536.40*		1.13?		16
		2½	*91602.54*		1.17		16
		4½	*92015.76*				20
		1½	*92278.27*		1.49?		10
		3½	*92303.24*				17
		5½	*92647.34*				14
		4½	*92914.15*				15
		3½	*92919.10*				17
		3½	*92976.50*				13
		5½	*93096.30*		1.23		14
		3½	*93195.03*				13
		5½	*93242.39*				15
		6½	*93246.19*		1.21?		8
		3½	*93463.01*				15
		4½	*93503.89*				16
		2½	*93546.00*				16
		2½	*93864.57*				11
		4½	*93867.22*				16
		1½	*93998.52*				17
		3½	*94008.96*				22
		3½	*94303.58*		1.12		23
		5½	*94335.70*				18
		4½	*94360.00*				12
		1½	*94428.80*				6
		1½	*94823.18*				11
		4½	*95550.55*				14
		3½	*95691.32*				19
		5½	*95754.30*		0.89?		8

TABLE 2. *Odd levels of* Yb II – Continued

Configuration	Desig.	J	Level	Interval	Obs. g	Calc. g	No. Comb.
		5½	*96382.06*		1.23		10
		4½	*96482.44*				13
		5½	*96898.03*				12
		6½	*97043.28*				7
		4½	*97086.51*				14
		4½	*98521.73*				15
		6½	*98620.02*				8
		5½	*98802.66*				15
		6½	*98829.49*				6
		5½	*99246.37*				7
		4½	*99414.42*				12
		5½	*100025.57*				11

4. Ionization Potential

In the 1937 paper [1] Meggers refers to the collaboration with H. N. Russell on the interpretation of Yb spectra. As early as 1932 [14], Russell derived an ionization potential of 12.1 eV for Yb II from the three-member series $ns^2S(n=6, 7, 8)$, reported in 1947 by Meggers [2]. Since then the third member of the series has been corrected. From a modified Ritz formula the revised limit 98150 has been determined, giving an ionization potential 12.17 eV [15] from multiplication by the present conversion factor (cm^{-1} to eV) 0.000123981.

A semi-empirical method of deriving ionization potentials by a smooth run of Δn^* was suggested by Russell and Meggers in their analyses of La spectra [16]. Sugar and Reader [15] discuss the details of the method and the general run of ionization potentials for second spectra of the lanthanon group of rare earths.

5. Classified Lines

All observed lines of Yb II in the 1966 description of the spectrum [3] are listed in table 6. Column one contains the wavelength. With the exception of the first four entries, which are from Humphreys and Paul [6], practically all wavelengths are from [3], although a few additions and corrections to the published list noted by Meggers, have been included.

Columns two and three contain, respectively, estimated intensities of the lines as observed with the Meggers lamp and with the Thomson lamp. These sources are described in detail in [3]. "Literal symbols following intensity numbers have the following meanings:

A = nearly all absorbed in the pulsed arc.
R = wide reversal in the pulsed arc.
r = narrow reversal in the pulsed arc.
d = double but not resolved.
e = enhanced near wall of Thomson tube.
h = hazy as distinguished from sharp.
H = very hazy.
l = shaded or displaced to longer waves.
s = shaded or displaced to shorter waves."

The wave number is in column four. The next column, "o-c," gives the difference between the observed wave number and that calculated from the energy levels listed in tables 1 and 2. The levels giving rise to the transitions producing the lines are designated numerically in column six. They are the whole numbers of the levels tabulated in tables 1 and 2. The respective J-values are entered as subscripts. Odd levels are printed in italics. The last five columns contain Zeeman data, as explained in detail in section 3.

The total number of known Yb II lines is 5129. Of these, 3907 have been classified. There are 145 lines entered as blends, i.e., having more than one classifi-

TABLE 3. Yb II *Observed Levels*

Configuration	Observed Terms			
$1s^2\,2s^2\,2p^6\,3s^2\,3p^6\,3d^{10}\,4s^2\,4p^6\,4d^{10}\,5s^2\,5p^6+$				
$4f^{13}\,6s^2$	$6s^2\,{}^2F^\circ$			
	$ns(n \geq 6)$	$np(n \geq 6)$	$nd(n \geq 5)$	
$4f^{14}(^1S)nl$	6, 7, 8s ^2S	6p $^2P^\circ$	5, 6, 7d ^2D	

J_1J_{II}—Coupling Notation

$4f^{13}(^2F^\circ_{3\frac{1}{2}})6s\ 6p(^3P_0)$	3½
$(^3P_1)$	2½ 3½ 4½
$(^3P_2)$	1½ 2½ 3½ 4½ 5½
$(^1P_1)$	2½ 3½ 4½
$4f^{13}(^2F^\circ_{2\frac{1}{2}})6s\ 6p(^3P_0)$	2½
$(^3P_1)$	1½ 2½ 3½
$(^3P_2)$	0½ 1½ 2½ 3½ 4½
$(^1P_1)$	1½ 2½ 3½
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d\ 6p(^3F_2)$	1½ 2½ 3½ 4½ 5½
$(^3F_3)$	0½ 1½ 2½ 3½ 4½ 5½ 6½
$(^3F_4)$	0½ 1½ 2½ 3½ 4½ 5½ 6½ 7½
$(^1F_3)$	0½ 1½ 2½ 3½ 4½ 5½ 6½
$(^3D_1)$	2½ 3½ 4½
$(^3D_2)$	1½ 2½ 3½ 4½ 5½
$(^3D_3)$	0½ 1½ 2½ 3½ 4½ 5½ 6½
$(^1D_2)$	1½ 2½ 3½ 4½ 5½
$(^3P_0)$	3½
$(^3P_1)$	2½ 3½ 4½
$(^3P_2)$	1½ 2½ 3½ 4½ 5½
$(^1P_1)$	2½ 3½ 4½
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d\ 6p(^3F_2)$	0½ 1½ 2½ 3½ 4½
$(^3F_3)$	0½ 1½ 2½ 3½ 4½ 5½
$(^3F_4)$	1½ 2½ 3½ 4½ 6½
$(^1F_3)$	0½ 1½ 2½ 3½ 5½
$(^3D_1)$	1½ 2½ 3½
$(^3D_2)$	0½ 1½ 2½ 3½ 4½
$(^3D_3)$	0½ 1½ 2½ 3½ 4½ 5½
$(^1D_2)$	0½ 1½ 2½ 3½ 4½
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d\ 6p(^3P_0)$	2½
$(^3P_1)$	1½ 2½ 3½
$(^3P_2)$	1½ 2½ 3½ 4½
$(^1P_1)$	2½

J_1L_{II}—Coupling Notation

$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d\ 6s(^3D^\circ)$	^{3}[1½]° ^{3}[2½]° ^{3}[3½]° ^{3}[4½]° ^{3}[5½]°
$(^1D^\circ)$	^{1}[1½]° ^{1}[2½]° ^{1}[3½]° ^{1}[4½]° ^{1}[5½]°
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d\ 6s(^3D^\circ)$	^{3}[0½]° ^{3}[1½]° ^{3}[2½]° ^{3}[3½]° ^{3}[4½]°
$(^1D^\circ)$	^{1}[0½]° ^{1}[1½]° ^{1}[2½]° ^{1}[3½]° ^{1}[4½]°
$4f^{13}(^2F^\circ_{3\frac{1}{2}})5d^2$ $(^3F^\circ)$	^{3}[0½]° ^{3}[1½]° ^{3}[2½]° ^{3}[3½]° ^{3}[4½]° ^{3}[5½]° ^{3}[6½]°
$(^3P^\circ)$	^{3}[2½]° ^{3}[3½]° ^{3}[4½]°
$(^1G^\circ)$	^{1}[0½]° ^{1}[1½]° ^{1}[2½]° ^{1}[3½]° ^{1}[4½]° ^{1}[5½]° ^{1}[6½]° ^{1}[7½]°
$(^1D^\circ)$	^{1}[1½]° ^{1}[2½]° ^{1}[3½]° ^{1}[4½]° ^{1}[5½]°
$4f^{13}(^2F^\circ_{2\frac{1}{2}})5d^2$ $(^3F^\circ)$	^{3}[0½]° ^{3}[1½]° ^{3}[2½]° ^{3}[3½]° ^{3}[4½]° ^{3}[5½]°
$(^3P^\circ)$	^{3}[1½]° ^{3}[2½]° ^{3}[3½]°
$(^1G^\circ)$	^{1}[1½]° ^{1}[2½]°
$(^1D^\circ)$	^{1}[0½]° ^{1}[1½]° ^{1}[2½]° ^{1}[3½]° ^{1}[4½]°

cation, thus bringing the total number of classifications to 4054. In addition, 49 classifications which are considered to be masked, are entered in parentheses in table 6; these have not been included in the counts. In most cases the Zeeman pattern has been used as the deciding factor regarding masked lines. The number of computed combinations in the square array totals 10360. These numbers are, however, somewhat misleading. Nearly all of the strong lines are classified and "95 percent of the total intensity is accounted for." The strongest unclassified lines are listed in table 5, which includes all remaining lines having an estimated spark intensity of 15 or greater. The wavelengths and intensities are from table 6.

The present Monograph brings to a conclusion an accomplishment that is a lasting tribute to W. F. Meggers. In this work an ambition of more than 30 years of his distinguished career is realized. It is characteristic that he collaborated with the late Professor Racah and his associates for over 15 years on the interpretation of this complex rare-earth spectrum. The writer is deeply indebted to these eminent spectroscopists for their unfailing and expert work. The success of that part of the project of the "Atomic Energy Levels" program concerned with rare-earth spectra depends entirely on such contributions. Difficult ground-breaking research is required for this success.

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TABLE 4. *Unclassified lines of* Yb II *having an observed Zeeman effect*

Wavelength Air	Intensity		Wave Number	Zeeman Type	Zeeman Components	
	Meggers lamp	Thomson lamp			Strongest *p*	Strongest *n*
Å			K			
8263.640	4	150	12097.88	4	0.16*w*	1.03
8192.400		30	12203.08	4	*w*	1.03
8171.820	1	30	12233.81	5	*w*	1.40
8149.080		15	12267.95	6	1.150	1.20
8093.030		8	12352.91	6	0.512	1.478
7803.650	20	300	12810.99	6?	0.938	0.938
7362.920	2	15	13577.83	5?	0.11	0.99
7339.800		60	13620.60	7?	0	1.12
7317.740		30	13661.66	7?	0	0.963
7306.630	1	100	13682.43	5?		
7086.080		20	14108.29	4	*w*	0.96
6582.790	2	250	15186.93	7	0	0.97
5042.982	3	20	19824.01	7	0	1.20
3573.750	1	10	27973.82	7	0	1.013
3443.587	30	20	29031.17	?	0	1.18
3337.171	30	100	29956.89	7	0	1.019
3014.526	10	60	33163.05	7	0	1.12
2963.460	40	300	33734.49	6	0.16	1.08
2940.517	25	150	33997.68	5	*w*	1.44
2881.930	7	60	34688.79	5	*w*	1.24
2864.725	4	40	34897.12	4	*w*	0.94
2830.880	4	30	35314.32	7	0	0.99
2594.200	3	15	38536.01	6	0.22	
2516.820	50	300	39720.72	7	0	1.348
2515.600	2	7	39739.99	7	0	0.91

In Israel, warmest thanks are due Mrs. Z. B. Goldschmidt and her associates for their collaboration in providing the theoretical calculations of the configurations and matrices. The theses by S. Aberbach and D. Sperber in 1953 were useful contributions to earlier calculations for Yb II. At this Bureau, the cooperation of the Spectroscopy Section is appreciated. Special thanks are due W. C. Martin, J. Sugar, C. H. Corliss, N. Spector, and J. Tech.

The writer is deeply indebted to Mrs. Isabel D. Murray for her extreme competence and painstaking care in preparing for publication the enormous amount of tabular data on Yb II.

It is most regrettable that the author did not live to see his Monograph on Yb II thru publication, after his long years of labor. The writer has attempted to present the material as accurately as possible, with the aid of his beautifully kept records of work. In spite of her inability to do justice to the description of his accomplishment, she hopes that this monumental contribution will serve as the model he had in mind over the years.

Washington, D.C.
May 26, 1967

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TABLE 5. *Strongest unclassified lines of* Yb II

Wavelength Air	Intensity		Wave number	Wavelength Air	Intensity		Wave number
	Meggers Lamp	Thomson Lamp			Meggers Lamp	Thomson Lamp	
Å			K	Å			K
10830.36		100	9230.77	5042.982	3	20	19824.01
10829.11		40	9231.84	4965.43	3	15	20133.62
10711.60		80*h*	9333.12	4837.045	500	1000	20668.00
10516.65		40	9506.13	4350.801		15	22977.81
9893.90		100*H*	10104.47	4281.972	20	50	23347.16
9693.72		50	10313.13	4215.519	6	20	23715.19
9664.23		20	10344.60	4202.44	15	30*hl*	23789.00
9482.44		20	10542.92	4177.40	2	50	23931.59
9428.10		30	10603.68	4119.25	20	30	24269.42
9380.18		15	10657.85	4077.713	10	20	24516.63
9325.68		20*h*	10720.14	3857.586	10	20	25915.60
9314.88	2	40	10732.57	3807.574	50	500	26255.99
9272.68	3	30	10781.41	3779.184	1	15	26453.22
9253.57	7	70	10803.68	3743.138		15*h*	26707.96
9196.50		20*H*	10870.72	3716.139	10	40	26902.00
9167.06	3	40	10905.63	3574.58		30*h*	27967.33
9163.69		15	10909.64	3482.564	5	30*h*	28706.26
9105.95		15*h*	10978.82	3477.022	20	30	28752.01
9096.88		20	10989.76	3472.324	5	20	28790.91
9080.35	1	60	11009.77	3390.421	1*h*	30*h*	29486.40
8985.71	8	60	11125.73	3390.246	1*h*	40*h*	29487.92
8980.74		20	11131.88	3376.623	3	30	29606.89
8855.12	50	300	11289.80	3363.645	10	20	29721.11
8291.01		20	12057.94	3362.438	10	70	29731.78
8263.64	4	150	12097.88	3352.491	10	30	29820.00
8192.40		30	12203.08	3342.93	20*h*	100*h*	29905.28
8171.82	1	30	12233.81	3337.171	30	100	29956.89
8149.08		15	12267.95	3315.101	1*h*	15*h*	30156.31
8124.50		15	12305.07	3179.344	30	70	31443.93
8023.46	1	20	12460.02	3166.727	2	20	31569.21
7803.65	20	300	12810.99	3114.905	3	20	32094.40
7362.92	2	15	13577.83	3014.526	10	60	33163.05
7339.80		60	13620.60	3007.923	5	30	33235.85
7317.74		30	13661.66	3004.642	1	15	33272.14
7306.63	1	100	13682.43	2963.46	40	300	33734.49
7086.08		20	14108.29	2950.52	2	20	33882.43
6829.80	1	70	14637.68	2940.517	25	150	33997.68
6670.18		50	14987.96	2881.93	7	60	34688.79
6616.40	2	40	15109.79	2864.725	4	40	34897.12
6582.79	2	250	15186.93	2830.880	4	30	35314.32
6485.55	10	200*h*	15414.63	2594.20	3	15	38536.01
6453.11	10	150	15492.12	2516.82	50	300	39720.72
6150.62		70*h*	16254.03	2369.42		50	42191.53
6120.30	5	250	16334.55	2284.99		30	43750.37
5833.99	5*h*	200*h*	17136.18	2161.60	10	40	46247.50
5581.05	2	40	17912.80	2155.50		30	46378.37
5331.536		20	18751.10	2102.73	5	20	47542.14
5256.85		20	19017.51				
5074.609		80	19700.46				

TABLE 6. Yb II—*Observed and classified lines*

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st *g*	2nd *g*	Zeeman components	
	Meggers lamp	Thomson lamp							Strong *p*	Strong *n*
Å			*K*	*K*						
24377.26	250		4101.06	+0.04	$22960_{1\frac{1}{2}} - 27061^{\circ}_{0\frac{1}{2}}$					
16498.42	1500		6059.53	−0.01	$24332_{2\frac{1}{2}} - 30392^{\circ}_{1\frac{1}{2}}$					
13452.62	300		7431.46	+0.03	$22960_{1\frac{1}{2}} - 30392^{\circ}_{1\frac{1}{2}}$					
12692.48	450		7876.53	+0.04	$40035^{\circ}_{3\frac{1}{2}} - 47912_{3\frac{1}{2}}$					
11559.05		5	8648.86	−0.04	$24332_{2\frac{1}{2}} - 32981^{\circ}_{1\frac{1}{2}}$					
11442.70		1	8736.80							
11299.78		5*h*	8847.31							
11277.83		1	8864.53	−0.06	$40035^{\circ}_{3\frac{1}{2}} - 48900_{3\frac{1}{2}}$					
11060.25		2*h*	9038.91							
11051.05		2	9046.44	−0.03	$47329^{\circ}_{2\frac{1}{2}} - 56375_{2\frac{1}{2}}$					
11035.15		1*h*	9059.47							
11023.37		1*h*	9069.15							
11002.95		4	9085.98	−0.03	$54640^{\circ}_{4\frac{1}{2}} - 63726_{4\frac{1}{2}}$					
10980.47		3*h*	9104.58							
10959.94		1*h*	9121.64							
10943.17		1	9135.62	+0.02	$55462^{\circ}_{3\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
10882.92		1*h*	9186.19							
10856.25		1	9208.76	+0.01	$48556^{\circ}_{3\frac{1}{2}} - 57765_{4\frac{1}{2}}$					
10845.53		3*h*	9217.86							
10830.36		100	9230.77							
10829.11		40	9231.84							
10810.82		5*h*	9247.46							
10802.47		4	9254.61	−0.01	$56621^{\circ}_{5\frac{1}{2}} - 65875_{6\frac{1}{2}}$					
10776.11		1	9277.25	+0.02	$44438^{\circ}_{3\frac{1}{2}} - 53715_{3\frac{1}{2}}$					
10774.38		1	9278.73							
10754.99		1	9295.46	−0.01	$53716^{\circ}_{2\frac{1}{2}} - 63011_{1\frac{1}{2}}$					
10745.87		3	9303.35	−0.01	$54640^{\circ}_{4\frac{1}{2}} - 63944_{5\frac{1}{2}}$					
10731.94		3	9315.43							
10721.68		3*h*	9324.34							
10717.07		2	9328.35							
10711.60		80*h*	9333.12							
10691.02		1*h*	9351.08	−0.06	$61442^{\circ}_{5\frac{1}{2}} - 70793_{5\frac{1}{2}}$					
10689.20		2*h*	9352.67							
10678.64		1	9361.92	−0.02	$66189^{\circ}_{1\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
10676.73		30	9363.60	−0.09 +0.04	$44940^{\circ}_{1\frac{1}{2}} - 54304_{0\frac{1}{2}}$ $56375_{2\frac{1}{2}} - 65739^{\circ}_{2\frac{1}{2}}$					
10666.30		2*h*	9372.75							
10651.36		5	9385.90	0.00 −0.06	$64365^{\circ}_{4\frac{1}{2}} - 73750_{4\frac{1}{2}}$ $75058_{2\frac{1}{2}} - 84444^{\circ}_{3\frac{1}{2}}$					
10638.35		1	9397.38	+0.08	$65594^{\circ}_{2\frac{1}{2}} - 74991_{1\frac{1}{2}}$					

See footnotes at end of table.

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
10628.11		4	9406.43	−0.03	$57798^{\circ}_{2\frac{1}{2}} - 67204_{1\frac{1}{2}}$					
10602.75		2h	9428.93							
10584.87		1	9444.86	0.00	$64191^{\circ}_{1\frac{1}{2}} - 73636_{0\frac{1}{2}}$					
10580.74		1	9448.55	0.00	$43956^{\circ}_{2\frac{1}{2}} - 53404_{2\frac{1}{2}}$					
10574.50		2h	9454.12	−0.02	$58484^{\circ}_{4\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
10570.51		1	9457.69							
10567.42		3	9460.46	+0.03	$55462^{\circ}_{3\frac{1}{2}} - 64923_{4\frac{1}{2}}$					
10565.46		4	9462.21	−0.01	$40035^{\circ}_{3\frac{1}{2}} - 49498_{2\frac{1}{2}}$					
10556.48		2h	9470.26	+0.08	$56480^{\circ}_{4\frac{1}{2}} - 65950_{4\frac{1}{2}}$					
10547.78		4	9478.07	+0.03	$58672^{\circ}_{0\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
10546.24		1	9479.46							
10516.65		40	9506.13							
10502.56		1	9518.88	−0.02	$53644^{\circ}_{3\frac{1}{2}} - 63163_{4\frac{1}{2}}$					
10501.08		4	9520.22	+0.02	$56056^{\circ}_{2\frac{1}{2}} - 65577_{3\frac{1}{2}}$					
10490.03		1	9530.25							
10485.56		2	9534.31	−0.01	$54192^{\circ}_{5\frac{1}{2}} - 63726_{4\frac{1}{2}}$					
10477.15		1h	9541.97							
10456.88		1	9560.46							
10455.88		2	9561.38							
10446.15		1	9570.28	−0.01	$38342^{\circ}_{4\frac{1}{2}} - 47912_{3\frac{1}{2}}$					
10445.27		4h	9571.09							
10425.42		2	9589.31	+0.09	$53644^{\circ}_{3\frac{1}{2}} - 63234_{2\frac{1}{2}}$					
10416.16		5	9597.84	0.00	$64970^{\circ}_{3\frac{1}{2}} - 74568_{4\frac{1}{2}}$					
10414.15		1	9599.69	−0.06	$62163^{\circ}_{2\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
10411.40		10	9602.23	+0.01	$42915^{\circ}_{5\frac{1}{2}} - 52517_{5\frac{1}{2}}$					
10397.98		3	9614.62							
10391.64		1h	9620.48							
10388.85		2h	9623.07							
10363.89		3	9646.24							
10345.62		1h	9663.28							
10343.99		4h	9664.80							
10339.49		2h	9669.01							
10337.35		1h	9671.01							
10328.74		2h	9679.07							
10327.33		1	9680.39							
10293.40		2h	9712.30							
10283.38		2	9721.76							
10275.82		1	9728.92							
10259.93		3h	9743.98							
10257.97		1h	9745.85							

TABLE 6. Yb II — *Observed and classified lines* — Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
10251.85		10	9751.66	−0.01	$54192^{\circ}_{5\frac{1}{2}} - 63944_{5\frac{1}{2}}$					
10242.30		1*h*	9760.76	+0.04	$48900_{3\frac{1}{2}} - 58661^{\circ}_{2\frac{1}{2}}$					
10222.98		2*h*	9779.20	+0.04	$77606_{2\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}}$					
10212.34		1*h*	9789.39							
10198.92		1*h*	9802.27	+0.07	$51248^{\circ}_{2\frac{1}{2}} - 61051_{3\frac{1}{2}}$					
10189.53		10*h*	9811.31							
10186.03		5	9814.68	+0.03	$49008^{\circ}_{3\frac{1}{2}} - 58823_{2\frac{1}{2}}$					
10172.39		2	9827.84							
10168.71		1*h*	9831.39							
10167.42		1*h*	9832.64							
10157.63		1	9842.12	+0.07	$65149^{\circ}_{0\frac{1}{2}} - 74991_{1\frac{1}{2}}$?					
10148.91		3	9850.57	0.00	$56500^{\circ}_{3\frac{1}{2}} - 66351_{2\frac{1}{2}}$					
10145.30		4*h*	9854.08							
10136.34		3*h*	9862.79							
10107.09		1	9891.33	+0.06	$53120^{\circ}_{2\frac{1}{2}} - 63011_{1\frac{1}{2}}$					
10103.24		3	9895.10	+0.02	$56500^{\circ}_{3\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
10100.39		1*h*	9897.89							
10086.67		1	9911.36							
10068.79		2*h*	9928.96							
10067.47		1	9930.26	+0.04	$43007^{\circ}_{0\frac{1}{2}} - 52938_{1\frac{1}{2}}$					
10066.30		5	9931.41	+0.06	$53716^{\circ}_{2\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
10063.22		2*h*	9934.45							
10046.95		2	9950.54							
10039.90		1	9957.53	+0.07	$54640^{\circ}_{4\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
10032.55		50	9964.82	+0.04	$45737^{\circ}_{1\frac{1}{2}} - 55702_{1\frac{1}{2}}$					
10020.70		1	9976.61							
10016.78		15	9980.51	−0.01	$52880^{\circ}_{4\frac{1}{2}} - 62861_{5\frac{1}{2}}$					
10007.96		3	9989.31							
10003.38		4	9993.88	+0.02	$56088^{\circ}_{4\frac{1}{2}} - 66082_{5\frac{1}{2}}$					
9994.64		1	10002.62	−0.05	$64970^{\circ}_{3\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
9992.75		1	10004.51	+0.07	$59439^{\circ}_{2\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
9990.47		6	10006.80	+0.02	$47758^{\circ}_{3\frac{1}{2}} - 57765_{4\frac{1}{2}}$					
9984.66		1	10012.62							
9976.50	2	30	10020.81	+0.02	$22960_{1\frac{1}{2}} - 32981^{\circ}_{1\frac{1}{2}}$					
9970.10		200*H*	10027.24	−0.06	$82891_{2\frac{1}{2}} - 92919^{\circ}_{3\frac{1}{2}}$					
9959.25		2	10038.16	+0.05	$62163^{\circ}_{2\frac{1}{2}} - 72202_{3\frac{1}{2}}$					
9953.32		4	10044.15	+0.02	$60910^{\circ}_{1\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
9945.98		4	10051.56							

TABLE 6. Yb II — *Observed and classified lines* — Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st *g*	2nd *g*	Zeeman components	
	Meggers lamp	Thomson lamp							Strong *p*	Strong *n*
Å			*K*	*K*						
9940.23		3	10057.37	−0.06 +0.01	$53644^{\circ}_{3\frac{1}{2}} - 63702_{2\frac{1}{2}}$ $56500^{\circ}_{3\frac{1}{2}} - 66558_{3\frac{1}{2}}$					
9932.98		1	10064.71	+0.02	$58484^{\circ}_{4\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
9915.99		6	10081.96	+0.02	$53644^{\circ}_{3\frac{1}{2}} - 63726_{4\frac{1}{2}}$					
9914.02		2	10083.96							
9904.50		3	10093.65							
9896.50		20	10101.81	+0.01	$47663^{\circ}_{4\frac{1}{2}} - 57765_{4\frac{1}{2}}$					
9893.90		100*H*	10104.47							
9892.20		4*h*	10106.20	−0.03	$52067^{\circ}_{0\frac{1}{2}} - 62174_{1\frac{1}{2}}$					
9885.02		1	10113.54	+0.01	$53120^{\circ}_{2\frac{1}{2}} - 63234_{2\frac{1}{2}}$					
9884.09		3	10114.50	+0.07	$55462^{\circ}_{3\frac{1}{2}} - 65577_{3\frac{1}{2}}$					
9881.04		1	10117.62	0.00	$66205^{\circ}_{2\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
9849.25		2*h*	10150.27							
9837.89		2*h*	10161.99							
9830.09		2	10170.06							
9826.25		2	10174.03							
9818.33		6*h*	10182.24							
9816.25		2*h*	10184.40							
9800.41		1	10200.86							
9797.67		6	10203.71	+0.06 +0.01	$59753^{\circ}_{5\frac{1}{2}} - 69957_{4\frac{1}{2}}$ $60910^{\circ}_{1\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
9770.61		2*h*	10231.97							
9760.38	200	1000	10242.69	+0.01	$24332_{2\frac{1}{2}} - 34575^{\circ}_{1\frac{1}{2}}$					
9745.39		7	10258.45							
9735.10		1	10269.29							
9717.58		2	10287.81	−0.03	$50832^{\circ}_{1\frac{1}{2}} - 61120_{0\frac{1}{2}}$					
9716.88		8	10288.55							
9711.44		5	10294.31	+0.01	$56056^{\circ}_{2\frac{1}{2}} - 66351_{2\frac{1}{2}}$					
9706.65		10	10299.39							
9705.60		3*h*	10300.51							
9700.26		2*h*	10306.18							
9694.33		2	10312.48	−0.01	$52921^{\circ}_{3\frac{1}{2}} - 63234_{2\frac{1}{2}}$					
9693.72		50	10313.13							
9678.00	1	5	10329.88	+0.01	$43075^{\circ}_{1\frac{1}{2}} - 53404_{2\frac{1}{2}}$					
9677.56		1	10330.35							
9671.78		1	10336.52	+0.03	$57798^{\circ}_{2\frac{1}{2}} - 68135_{2\frac{1}{2}}$					
9669.62		1	10338.83	+0.02	$56056^{\circ}_{2\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
9669.03		2	10339.46	+0.02	$53716^{\circ}_{2\frac{1}{2}} - 64055_{2\frac{1}{2}}$					
9664.23		20	10344.60							
9663.60		1	10345.27	+0.01	$55221^{\circ}_{1\frac{1}{2}} - 65566_{0\frac{1}{2}}$					
9663.09		2	10345.82							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
9661.01		6h	10348.05							
9657.25		3	10352.08	+0.02	$57798^{\circ}_{2\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
9648.86		3	10361.08							
9644.92		2h	10365.31							
9637.59		3h	10373.19							
9630.97		5	10380.32							
9629.04		2	10382.40	0.00	$59753^{\circ}_{5\frac{1}{2}} - 70136_{6\frac{1}{2}}$					
9623.60		9h	10388.27							
9619.82		3h	10392.35							
9613.49		1	10399.20	+0.01	$64169^{\circ}_{3\frac{1}{2}} - 74568_{4\frac{1}{2}}$					
9611.30		2	10401.57							
9610.77		2	10402.14							
9608.81		2	10404.26	+0.03	$57534^{\circ}_{3\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
9602.64		20	10410.95	+0.02	$53644^{\circ}_{3\frac{1}{2}} - 64055_{2\frac{1}{2}}$					
9600.55		2h	10413.21							
9595.60		2h	10418.59							
9594.26		2h	10420.04	−0.08	$56375_{2\frac{1}{2}} - 66796^{\circ}_{3\frac{1}{2}}$					
9589.14		7h	10425.60							
9578.21		1	10437.50							
9577.45		3	10438.33							
9564.64		3	10452.31	−0.01	$54640^{\circ}_{4\frac{1}{2}} - 65093_{3\frac{1}{2}}$					
9559.83		5	10457.57	+0.02	$48503^{\circ}_{5\frac{1}{2}} - 58961_{5\frac{1}{2}}$					
9555.55		5	10462.25							
9536.43		3	10483.23	+0.04	$56088^{\circ}_{4\frac{1}{2}} - 66571_{5\frac{1}{2}}$					
9532.71		8h	10487.32	+0.01	$66189^{\circ}_{1\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
9531.83		20	10488.29	+0.02	$55462^{\circ}_{3\frac{1}{2}} - 65950_{4\frac{1}{2}}$					
9527.91		3h	10492.60							
9522.68		4h	10498.37							
9520.19		3	10501.11	+0.02	$56056^{\circ}_{2\frac{1}{2}} - 66558_{3\frac{1}{2}}$					
9511.61		3	10510.58							
9504.03		1	10518.97							
9498.90		3	10524.65							
9496.63		10	10527.16	+0.01	$53120^{\circ}_{2\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
9490.85		2	10533.57	+0.01	$48556^{\circ}_{3\frac{1}{2}} - 59090_{3\frac{1}{2}}$					
9482.44		20	10542.92							
9475.35		1	10550.81	0.00	$48272^{\circ}_{2\frac{1}{2}} - 58823_{2\frac{1}{2}}$					
9474.20		2h	10552.09							
9468.54[a]	2	3	10558.39							
9468.20		10h	10558.77	+0.05	$54640^{\circ}_{4\frac{1}{2}} - 65199_{4\frac{1}{2}}$					
9464.03		4h	10563.43							

TABLE 6. Yb II — *Observed and classified lines* — Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st *g*	2nd *g*	Zeeman components	
	Meggers lamp	Thomson lamp							Strong *p*	Strong *n*
Å			*K*	*K*						
9457.07		6*h*	10571.20	−0.01	$82891_{2\frac{1}{2}} - 93463^{\circ}_{3\frac{1}{2}}$					
9445.45		6*h*	10584.20							
9442.75		7	10587.23	−0.03	$57561^{\circ}_{6\frac{1}{2}} - 68148_{5\frac{1}{2}}$					
9428.10		30	10603.68							
9423.79		3*d*	10608.53	−0.04	$63028^{\circ}_{1\frac{1}{2}} - 73636_{0\frac{1}{2}}$					
9417.09		5	10616.08	+0.01	$62163^{\circ}_{2\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
9408.11		4	10626.21							
9405.75		3	10628.88							
9404.73		10	10630.03							
9397.79		2*h*	10637.88							
9390.61		8*h*	10646.01							
9388.32		2	10648.61							
9380.18		15	10657.85							
9378.29		3	10660.00	+0.03	$52987^{\circ}_{1\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
9372.12		3	10667.02	+0.02	$55221^{\circ}_{1\frac{1}{2}} - 65888_{1\frac{1}{2}}$					
9367.86		1	10671.87							
9367.21		2	10672.61							
9352.58	8	80	10689.30	+0.02	$45012^{\circ}_{2\frac{1}{2}} - 55702_{1\frac{1}{2}}$					
9349.25	80	300	10693.11	+0.05	$22960_{1\frac{1}{2}} - 33653^{\circ}_{0\frac{1}{2}}$					
9341.89		4*h*	10701.54							
9334.67		3	10709.81							
9328.56		3*h*	10716.83							
9325.68		20*h*	10720.14							
9324.60		2*h*	10721.38							
9321.14		2*h*	10725.36							
9320.30		1	10726.33	+0.02	$24332_{2\frac{1}{2}} - 35059^{\circ}_{3\frac{1}{2}}$					
9316.58		1	10730.61	+0.01	$54192^{\circ}_{5\frac{1}{2}} - 64923_{4\frac{1}{2}}$					
9314.88	2	40	10732.57							
9302.74		2	10746.57	−0.04	$50468^{\circ}_{5\frac{1}{2}} - 61214_{4\frac{1}{2}}$					
9301.33		3	10748.20							
9299.67		1	10750.12							
9298.74		6	10751.20							
9289.87	4	100	10761.46	0.00	$44940^{\circ}_{1\frac{1}{2}} - 55702_{1\frac{1}{2}}$					
9287.36		1	10764.37	−0.06	$53404_{2\frac{1}{2}} - 64169^{\circ}_{3\frac{1}{2}}$					
9272.68	3	30	10781.41							
9271.84		2	10782.39	0.00	$58661^{\circ}_{2\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
9263.73		4*h*	10791.83							
9261.11		4*h*	10794.88	0.00	$56621^{\circ}_{5\frac{1}{2}} - 67416_{4\frac{1}{2}}$					
9257.70		8	10798.86	−0.02	$48024^{\circ}_{1\frac{1}{2}} - 58823_{2\frac{1}{2}}$					
9253.57	7	70	10803.68							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
9252.27		3	10805.19	−0.02	$52921^{\circ}_{3\frac{1}{2}} - 63726_{4\frac{1}{2}}$					
9251.95	1	5	10805.57	−0.01	$42915^{\circ}_{5\frac{1}{2}} - 53720_{4\frac{1}{2}}$					
9245.69		2*h*	10812.88							
9241.86		2	10817.36	0.00	$48272^{\circ}_{2\frac{1}{2}} - 59090_{3\frac{1}{2}}$					
9226.17		6*h*	10835.76	+0.10	$57103^{\circ}_{3\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
9220.77		7*h*	10842.11							
9218.26		1	10845.06	+0.05	$54304_{0\frac{1}{2}} - 65149^{\circ}_{0\frac{1}{2}}$?					
9217.40		6	10846.07	−0.01	$52880^{\circ}_{4\frac{1}{2}} - 63726_{4\frac{1}{2}}$					
9215.28		5	10848.57							
9211.07		2	10853.52	−0.01 +0.07	$60910^{\circ}_{1\frac{1}{2}} - 71763_{1\frac{1}{2}}$ $63417^{\circ}_{2\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
9207.65		7*h*	10857.56							
9196.50		20*H*	10870.72							
9192.40		3*h*	10875.57							
9191.41		3	10876.74							
9190.18		5*h*	10878.19							
9187.53		4	10881.33	−0.02	$67933^{\circ}_{2\frac{1}{2}} - 78814_{2\frac{1}{2}}$					
9187.01		1	10881.95	+0.05	$53716^{\circ}_{2\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
9182.32		5*h*	10887.51							
9178.52		5	10892.01							
9175.76		2*h*	10895.29							
9172.59		2*h*	10899.06							
9170.70		3*h*	10901.30							
9168.70		2*h*	10903.68							
9167.06	3	40	10905.63							
9163.69		15	10909.64							
9162.85		2	10910.64	−0.02 +0.04	$58484^{\circ}_{4\frac{1}{2}} - 69395_{3\frac{1}{2}}$ $59046^{\circ}_{4\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
9158.62		15	10915.68	+0.02	$57534^{\circ}_{3\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
9152.45		8*H*	10923.04	−0.11	$65594^{\circ}_{2\frac{1}{2}} - 76517_{1\frac{1}{2}}$?					
9150.60		1*h*	10925.25	+0.01	$51248^{\circ}_{2\frac{1}{2}} - 62174_{1\frac{1}{2}}$					
9149.57		2*h*	10926.48							
9142.22		7	10935.26	+0.02 0.00	$53120^{\circ}_{2\frac{1}{2}} - 64055_{2\frac{1}{2}}$ $56480^{\circ}_{4\frac{1}{2}} - 67416_{4\frac{1}{2}}$					
9141.37		15	10936.28	−0.01	$54640^{\circ}_{4\frac{1}{2}} - 65577_{3\frac{1}{2}}$					
9133.17	3	60	10946.10	+0.01	$45429^{\circ}_{3\frac{1}{2}} - 56375_{2\frac{1}{2}}$					
9127.08		1	10953.40	+0.01	$53644^{\circ}_{3\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
9126.00		7*h*	10954.70							
9123.62		2	10957.55	+0.02	$57798^{\circ}_{2\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
9122.30		15	10959.14	0.00	$38342^{\circ}_{4\frac{1}{2}} - 49301_{4\frac{1}{2}}$					
9120.52		5*h*	10961.28							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
9113.24		7h	10970.03							
9105.95		15h	10978.82							
9096.88		20	10989.76							
9094.57		4	10992.55							
9083.98		3h	11005.37							
9082.61		7	11007.03	0.00	$54192^{\circ}_{5\frac{1}{2}} - 65199_{4\frac{1}{2}}$					
9080.35	1	60	11009.77							
9077.91		4	11012.73							
9076.21		2	11014.79	+0.01	$57534^{\circ}_{3\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
9066.47		1	11026.62							
9062.06		15	11031.99	+0.01	$57103^{\circ}_{3\frac{1}{2}} - 68135_{2\frac{1}{2}}$					
9057.08		3h	11038.06							
9055.35		2	11040.17	+0.05	$59753^{\circ}_{5\frac{1}{2}} - 70793_{5\frac{1}{2}}$					
9040.38		3h	11058.45							
9035.02	2	20	11065.01	−0.03	$47758^{\circ}_{3\frac{1}{2}} - 58823_{2\frac{1}{2}}$					
9029.62		2	11071.62							
9021.00		100hl	11082.20	−0.05	$65594^{\circ}_{2\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
9017.02		5h	11087.09							
9014.27		2	11090.48	−0.08	$75058_{2\frac{1}{2}} - 86148^{\circ}_{2\frac{1}{2}}$					
9004.83		3	11102.10							
9004.21	10	150	11102.87	−0.02	$45273^{\circ}_{3\frac{1}{2}} - 56375_{2\frac{1}{2}}$					
8985.71	8	60	11125.73							
8982.45		2	11129.76	+0.01	$55221^{\circ}_{1\frac{1}{2}} - 66351_{2\frac{1}{2}}$					
8980.74		20	11131.88							
8978.58		6	11134.56	−0.02 0.00	$47912_{3\frac{1}{2}} - 59046^{\circ}_{4\frac{1}{2}}$ $49916^{\circ}_{4\frac{1}{2}} - 61051_{3\frac{1}{2}}$					
8971.65		3h	11143.16							
8967.71		5	11148.06	0.00	$56056^{\circ}_{2\frac{1}{2}} - 67204_{1\frac{1}{2}}$					
8959.06	2	70	11158.82	0.00	$57561^{\circ}_{6\frac{1}{2}} - 68720_{6\frac{1}{2}}$					
8956.72		9	11161.74	−0.01	$59632^{\circ}_{6\frac{1}{2}} - 70793_{5\frac{1}{2}}$?					
8952.23		6	11167.34	+0.01	$49419^{\circ}_{0\frac{1}{2}} - 60586_{1\frac{1}{2}}$					
8947.78		6	11172.89	+0.03 −0.03	$56977^{\circ}_{0\frac{1}{2}} - 68150_{1\frac{1}{2}}$ $61442^{\circ}_{5\frac{1}{2}} - 72615_{5\frac{1}{2}}$					
8946.66		5	11174.29	+0.03	$55221^{\circ}_{1\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
8942.87		3	11179.02							
8930.12		1	11194.98							
8927.38		4	11198.42							
8922.56		100	11204.47	−0.09	$44497^{\circ}_{2\frac{1}{2}} - 55702_{1\frac{1}{2}}$?					
8912.14	4	60	11217.57	−0.03	$46547^{\circ}_{5\frac{1}{2}} - 57765_{4\frac{1}{2}}$					
8907.81		2h	11223.02							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
8902.92		7h	11229.19	−0.02	$43075^{\circ}_{1\frac{1}{2}} - 54304_{0\frac{1}{2}}$					
8897.61		1	11235.89							
8896.50		4	11237.29	+0.01	$62046^{\circ}_{3\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
8890.45	5	50	11244.94	0.00	$65594^{\circ}_{2\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
8874.53		9	11265.11							
8873.33		4	11266.63							
8867.40		1	11274.17							
8865.65		1	11276.39							
8864.18		1	11278.26	+0.04	$53644^{\circ}_{3\frac{1}{2}} - 64923_{4\frac{1}{2}}$					
8863.98		4	11278.52	+0.07	$47005^{\circ}_{1\frac{1}{2}} - 58283_{2\frac{1}{2}}$					
8862.12		3	11280.88	−0.09	$47680^{\circ}_{3\frac{1}{2}} - 58961_{5\frac{1}{2}}$					
8861.70		1	11281.42	+0.05	$57798^{\circ}_{2\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
8855.12	50	300	11289.80							
8851.05		1	11294.99	+0.03	$56840^{\circ}_{1\frac{1}{2}} - 68135_{2\frac{1}{2}}$					
8849.52		1	11296.95							
8848.83	4	60	11297.83	−0.02	$47663^{\circ}_{4\frac{1}{2}} - 58961_{5\frac{1}{2}}$					
8842.64		2	11305.74							
8839.24		10	11310.08	−0.08 −0.05	$51248^{\circ}_{2\frac{1}{2}} - 62559_{2\frac{1}{2}}$ $54640^{\circ}_{4\frac{1}{2}} - 65950_{4\frac{1}{2}}$					
8825.52		2	11327.67	+0.03	$56088^{\circ}_{4\frac{1}{2}} - 67416_{4\frac{1}{2}}$					
8822.45		7	11331.61	+0.02	$47758^{\circ}_{3\frac{1}{2}} - 59090_{3\frac{1}{2}}$					
8815.52		9	11340.52	+0.02	$53120^{\circ}_{2\frac{1}{2}} - 64461_{1\frac{1}{2}}$					
8806.05		2	11352.71	−0.04	$64970^{\circ}_{3\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
8800.32		2h	11360.10							
8797.99	5	100	11363.11	−0.01	$45012^{\circ}_{2\frac{1}{2}} - 56375_{2\frac{1}{2}}$					
8783.76		2	11381.52	−0.03	$64169^{\circ}_{3\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
8781.96	1	10	11383.85	+0.03	$37516^{\circ}_{3\frac{1}{2}} - 48900_{3\frac{1}{2}}$	6	1.114	1.034	0.28	1.074
8762.42		5	11409.24	+0.04	$57534^{\circ}_{3\frac{1}{2}} - 68943_{4\frac{1}{2}}$	5	0.874	0.904	(0.015)	1.007
8761.26		2	11410.75	−0.02	$46354^{\circ}_{4\frac{1}{2}} - 57765_{4\frac{1}{2}}$					
8750.88		1h	11424.28							
8749.10		40	11426.61	0.00	$47663^{\circ}_{4\frac{1}{2}} - 59090_{3\frac{1}{2}}$	4	0.970	1.100	0.065	0.514
8744.27		1	11432.92							
8742.84		7	11434.79							
8742.45		10	11435.30	0.00	$44940^{\circ}_{1\frac{1}{2}} - 56375_{2\frac{1}{2}}$	7	1.23	(1.226)	0	1.226
8740.48		5	11437.88	0.00 +0.02	$48272^{\circ}_{2\frac{1}{2}} - 59710_{1\frac{1}{2}}$ $72779_{3\frac{1}{2}} - 84217^{\circ}_{4\frac{1}{2}}$					
8737.78		10	11441.41	−0.02	$54640^{\circ}_{4\frac{1}{2}} - 66082_{5\frac{1}{2}}$	7	1.14	(1.141)	0	1.165
8735.23		1	11444.75	−0.04	$58162^{\circ}_{1\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
8725.19		10	11457.92	+0.01	$56480^{\circ}_{4\frac{1}{2}} - 67938_{3\frac{1}{2}}$					

TABLE 6. Yb II – *Observed and classified lines* – Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
8723.33		1	11460.36							
8710.15		4	11477.71	+0.01	$53120^{\circ}_{2\frac{1}{2}} - 64598_{3\frac{1}{2}}$	4	(0.944)	1.224	0.140	?
8699.84		1	11491.31							
8697.67		1	11494.18	+0.04	$47329^{\circ}_{2\frac{1}{2}} - 58823_{2\frac{1}{2}}$					
8691.24		1	11502.68							
8672.34		20	11527.75	+0.02	$56621^{\circ}_{5\frac{1}{2}} - 68148_{5\frac{1}{2}}$	7	1.20	1.20	0	1.205
8671.53		1	11528.82							
8659.04		15	11545.45	+0.02 +0.08	$57534^{\circ}_{3\frac{1}{2}} - 69079_{2\frac{1}{2}}$ $(64970^{\circ}_{3\frac{1}{2}} - 76516_{4\frac{1}{2}})$[b]	4	0.80?	0.86	(0.03)	0.65
8641.86		15	11568.41	0.00	$53322^{\circ}_{7\frac{1}{2}} - 64891_{7\frac{1}{2}}$					
8633.25		1	11579.94	+0.08	$52067^{\circ}_{0\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
8621.62		2	11595.56	+0.02	$46169^{\circ}_{4\frac{1}{2}} - 57765_{4\frac{1}{2}}$	6	1.179	1.205	0.12	1.192
8620.75		1	11596.73	+0.04	$57798^{\circ}_{2\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
8607.49	200	400	11614.60	+0.03	$22960_{1\frac{1}{2}} - 34575^{\circ}_{1\frac{1}{2}}$	6	0.801	1.433	0.948	1.118
8594.57		8	11632.06							
8592.85		10	11634.39	+0.03	$56500^{\circ}_{3\frac{1}{2}} - 68135_{2\frac{1}{2}}$	5	1.348	1.091	0.128	1.994
8587.89		1	11641.11	+0.03	$63417^{\circ}_{2\frac{1}{2}} - 75058_{2\frac{1}{2}}$					
8585.00		1	11645.02	+0.01	$57798^{\circ}_{2\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
8579.08		7	11653.06	+0.04	$57103^{\circ}_{3\frac{1}{2}} - 68756_{3\frac{1}{2}}$	6	1.21?	1.41?	0.74	1.31
8566.83		2	11669.72							
8561.74		20	11676.66	0.00	$52921^{\circ}_{3\frac{1}{2}} - 64598_{3\frac{1}{2}}$	6	1.135	1.215	0.28	1.175
8556.90		4	11683.27	+0.01	$54192^{\circ}_{5\frac{1}{2}} - 65875_{6\frac{1}{2}}$					
8554.92		2	11685.97	+0.02	$48024^{\circ}_{1\frac{1}{2}} - 59710_{1\frac{1}{2}}$	6	(1.38)	0.81	0.86	?
8548.15		1	11695.22	+0.02	$67933^{\circ}_{2\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
8543.66		5	11701.37	+0.01	$49419^{\circ}_{0\frac{1}{2}} - 61120_{0\frac{1}{2}}$					
8532.59		1	11716.55	+0.04	$41688^{\circ}_{1\frac{1}{2}} - 53404_{2\frac{1}{2}}$					
8527.65		1	11723.34							
8525.54		1	11726.24	+0.01	$41678^{\circ}_{2\frac{1}{2}} - 53404_{2\frac{1}{2}}$					
8517.54		2*h*	11737.25							
8503.56		1*h*	11756.55							
8502.18		3	11758.46	+0.02	$54192^{\circ}_{5\frac{1}{2}} - 65950_{4\frac{1}{2}}$	4	1.10	(1.08)	*w*	1.15
8500.55		2	11760.71	+0.02	$47329^{\circ}_{2\frac{1}{2}} - 59090_{3\frac{1}{2}}$					
8483.31		2	11784.61	+0.04	$37516^{\circ}_{3\frac{1}{2}} - 49301_{4\frac{1}{2}}$					
8481.03		2	11787.78							
8480.27		2*h*	11788.84							
8477.79		2*h*	11792.29							
8473.35		2	11798.47							
8465.75		15	11809.06	+0.03	$57798^{\circ}_{2\frac{1}{2}} - 69607_{2\frac{1}{2}}$	6	1.155	1.215	0.15	1.185
8460.54		2	11816.33	−0.02	$67789^{\circ}_{1\frac{1}{2}} - 79605_{1\frac{1}{2}}$?					

TABLE 6. Yb II – *Observed and classified lines* – Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
8458.72		1	11818.87							
8455.87	4	30	11822.86	+0.04	$37077^{\circ}_{2\frac{1}{2}} - 48900_{3\frac{1}{2}}$	4	1.09	1.04	(0.025)	0.91
8446.32		6	11836.22							
8438.92		1	11846.60							
8438.42		2	11847.30							
8437.07		3	11849.20	+0.07	$61442^{\circ}_{5\frac{1}{2}} - 73291_{5\frac{1}{2}}$					
8435.61		3	11851.25							
8428.83		15	11860.78	+0.05 +0.03	$53716^{\circ}_{2\frac{1}{2}} - 65577_{3\frac{1}{2}}$ $(57534^{\circ}_{3\frac{1}{2}} - 69395_{3\frac{1}{2}})$	4	1.192	1.068	0.062	0.758
8427.26		3	11862.99							
8424.89		1	11866.33	+0.04	$58162^{\circ}_{1\frac{1}{2}} - 70029_{0\frac{1}{2}}$	4	1.992	0.908	0.542	0.366
8411.84	1	100	11884.74	+0.04	$54304_{0\frac{1}{2}} - 66189^{\circ}_{1\frac{1}{2}}$					
8408.89		3	11888.91	+0.04	$81657_{2\frac{1}{2}} - 93546^{\circ}_{2\frac{1}{2}}$					
8403.58		2	11896.42							
8400.61		1	11900.63							
8396.79		8	11906.04	−0.04 +0.06	$49916^{\circ}_{4\frac{1}{2}} - 61822_{3\frac{1}{2}}$ $(58051^{\circ}_{5\frac{1}{2}} - 69957_{4\frac{1}{2}})$	4	(1.09)	1.35	0.13	?
8381.26		20	11928.10	+0.02	$56621^{\circ}_{5\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
8380.03		3	11929.85	+0.05	$47329^{\circ}_{2\frac{1}{2}} - 59259_{2\frac{1}{2}}$					
8379.39		8	11930.76	0.00	$54640^{\circ}_{4\frac{1}{2}} - 66571_{5\frac{1}{2}}$					
8378.34		3	11932.26	+0.04	$53644^{\circ}_{3\frac{1}{2}} - 65577_{3\frac{1}{2}}$					
8374.40		15	11937.87	−0.01	$44438^{\circ}_{3\frac{1}{2}} - 56375_{2\frac{1}{2}}$	4	1.080	1.20	0.060	0.780
8371.77		2*h*	11941.62							
8356.75'		5	11963.09	−0.01	$63028^{\circ}_{1\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
8352.37		4	11969.36	+0.02	$56480^{\circ}_{4\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
8350.15		9	11972.54	−0.02	$53120^{\circ}_{2\frac{1}{2}} - 65093_{3\frac{1}{2}}$					
8347.14		2*h*	11976.86	0.00	$57103^{\circ}_{3\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
8343.49		2	11982.10							
8342.51		8	11983.51	0.00	$55221^{\circ}_{1\frac{1}{2}} - 67204_{1\frac{1}{2}}$					
8341.30		2	11985.25	0.00	$51248^{\circ}_{2\frac{1}{2}} - 63234_{2\frac{1}{2}}$					
8336.34		5	11992.38							
8334.43		10	11995.12							
8331.71		2*h*	11999.04							
8318.01		1	12018.80	−0.03	$66796^{\circ}_{3\frac{1}{2}} - 78814_{2\frac{1}{2}}$					
8310.53		2	12029.62	0.00	$59439^{\circ}_{2\frac{1}{2}} - 71468_{2\frac{1}{2}}$	7	0.98?	(1.02)	0	1.00
8310.38		2	12029.84	−0.01 +0.02	$63028^{\circ}_{1\frac{1}{2}} - 75058_{2\frac{1}{2}}$ $82398_{1\frac{1}{2}} - 94428^{\circ}_{1\frac{1}{2}}$					
8308.40		1	12032.70							
8307.67		2	12033.76							
8301.74		15	12042.36	0.00	$52880^{\circ}_{4\frac{1}{2}} - 64923_{4\frac{1}{2}}$	6	1.262	1.110	0.688	1.186
8291.01		20	12057.94							

TABLE 6. Yb II – *Observed and classified lines* – Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
8289.25		3	12060.50	+0.01	$56088^{\circ}_{4\frac{1}{2}} - 68148_{5\frac{1}{2}}$					
8283.78		15	12068.47	+0.01	$56480^{\circ}_{4\frac{1}{2}} - 68549_{4\frac{1}{2}}$	6	0.758?	1.160	1.815	(0.959?)
8282.14		2	12070.86							
8280.60		2	12073.10	+0.01	$57534^{\circ}_{3\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
8276.29		2*h*	12079.39							
8267.90		2	12091.65							
8266.52		7	12093.66	0.00	$56056^{\circ}_{2\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
8263.64	4	150	12097.88			4			0.16*w*	1.03
8261.70		1	12100.72							
8246.48		1*h*	12123.05							
8241.66		5	12130.14	+0.01	$60649^{\circ}_{4\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
8240.01		1	12132.57							
8237.20		2	12136.71							
8230.78		1	12146.18	−0.03	$49727^{\circ}_{6\frac{1}{2}} - 61873_{6\frac{1}{2}}$					
8227.41		1	12151.15	+0.04	$64365^{\circ}_{4\frac{1}{2}} - 76516_{4\frac{1}{2}}$					
8225.41		5	12154.11	+0.01	$64169^{\circ}_{3\frac{1}{2}} - 76323_{3\frac{1}{2}}$	6			0.35	
8213.64		30	12171.52	0.00	$52921^{\circ}_{3\frac{1}{2}} - 65093_{3\frac{1}{2}}$	6	1.150	0.972	0.625	1.060
8213.24		10	12172.12	+0.04	$53716^{\circ}_{2\frac{1}{2}} - 65888_{1\frac{1}{2}}$	6?	1.16	(1.206)	*d*?	1.10
8206.55		3	12182.04							
8199.08		1	12193.14							
8194.83		2	12199.46							
8192.40		30	12203.08			4			*w*	1.03
8190.61		10	12205.75	+0.02	$49008^{\circ}_{3\frac{1}{2}} - 61214_{4\frac{1}{2}}$	7			0	1.050
8189.53		2	12207.36							
8183.28		1	12216.68							
8180.34		2*h*	12221.07							
8179.01		4	12223.06	+0.03	$63417^{\circ}_{2\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
8178.46		4	12223.88							
8178.14		3	12224.36	−0.05	$62046^{\circ}_{3\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
8173.60		3*h*	12231.15							
8171.82	1	30	12233.81			5			*w*	1.40
8169.69		1*h*	12237.00							
8169.29		2*h*	12237.60							
8166.73		4*h*	12241.44							
8166.05		1	12242.46							
8162.00		2*h*	12248.53							
8158.49	5	80	12253.80	+0.02	$47005^{\circ}_{1\frac{1}{2}} - 59259_{2\frac{1}{2}}$	5	0.982	1.100	0.059	1.276
8157.40		150	12255.44	+0.04	$56500^{\circ}_{3\frac{1}{2}} - 68756_{3\frac{1}{2}}$	6	(1.352)	1.316	*w*	1.334
8155.12		3	12258.86	−0.03	$66205^{\circ}_{2\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
8149.08		15	12267.95			6			0.150	1.20

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
8148.83		3	12268.33							
8146.64		1	12271.63							
8143.81		2*h*	12275.89							
8142.47		20	12277.91	−0.01	$52921^{\circ}_{3\frac{1}{2}} - 65199_{4\frac{1}{2}}$	4	1.11	1.05	(0.032)	0.82
8137.92		2	12284.77	−0.03	$64365^{\circ}_{4\frac{1}{2}} - 76649_{5\frac{1}{2}}$					
8133.01		8	12292.19	+0.01	$57103^{\circ}_{3\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
8131.92		2	12293.84							
8124.50		15	12305.07							
8123.85		9	12306.05	−0.01	$53644^{\circ}_{3\frac{1}{2}} - 65950_{4\frac{1}{2}}$					
8122.49		5	12308.11	+0.03	$61442^{\circ}_{5\frac{1}{2}} - 73750_{4\frac{1}{2}}$	5?	1.13	(1.02)	0.057	?
8121.35		3*h*	12309.84							
8121.12		2	12310.19							
8118.80	5	150	12313.71	+0.02	$48272^{\circ}_{2\frac{1}{2}} - 60586_{1\frac{1}{2}}$	4	1.127	1.313	0.093	0.848
8115.46		6	12318.77	−0.02	$52880^{\circ}_{4\frac{1}{2}} - 65199_{4\frac{1}{2}}$					
8111.61		9	12324.62	+0.03	$59439^{\circ}_{2\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
8111.19	2	10	12325.26	+0.02	$64191^{\circ}_{1\frac{1}{2}} - 76517_{1\frac{1}{2}}$	6	1.198	0.838	0.538	1.018
8104.44		5	12335.52	+0.02	$45429^{\circ}_{3\frac{1}{2}} - 57765_{4\frac{1}{2}}$	4	(1.15)	1.13	*w*	1.05
8103.22		1	12337.38							
8101.64		1	12339.79							
8100.20		3*h*	12341.98							
8097.06		1	12346.77	+0.05	$64169^{\circ}_{3\frac{1}{2}} - 76516_{4\frac{1}{2}}$					
8093.03		8	12352.91			6[c]	1.990	0.966	0.512	1.478
8084.74		9	12365.58	+0.02	$49008^{\circ}_{3\frac{1}{2}} - 61374_{2\frac{1}{2}}$	4	1.045	1.295	0.125	0.420
8079.47		5	12373.65	+0.01	$58484^{\circ}_{4\frac{1}{2}} - 70858_{4\frac{1}{2}}$	6	(1.02)	1.25	1.025	?
8078.10		2	12375.75							
8076.95		1	12377.51							
8075.92	2	40	12379.09	+0.02	$54192^{\circ}_{5\frac{1}{2}} - 66571_{5\frac{1}{2}}$	6	1.10	1.18	0.44	1.14
8074.53		7	12381.22	+0.01	$47329^{\circ}_{2\frac{1}{2}} - 59710_{1\frac{1}{2}}$	5	0.991	0.815	0.088	1.255
				−0.02	$50468^{\circ}_{5\frac{1}{2}} - 62861_{5\frac{1}{2}}$	6	1.212	1.140	0.40	1.176
8066.72	2	50	12393.20	−0.01	$(52067^{\circ}_{0\frac{1}{2}} - 64461_{1\frac{1}{2}})$					
				0.00	$(56056^{\circ}_{2\frac{1}{2}} - 68450_{3\frac{1}{2}})$					
8063.02	2	60	12398.89	+0.02	$51248^{\circ}_{2\frac{1}{2}} - 63647_{1\frac{1}{2}}$	4	1.028	1.144	0.058	0.854
8053.43	50	500	12413.66	+0.01	$46547^{\circ}_{5\frac{1}{2}} - 58961_{5\frac{1}{2}}$	6	0.952	0.972	0.104	0.962
8049.03	5	30	12420.44	−0.01	$37077^{\circ}_{2\frac{1}{2}} - 49498_{2\frac{1}{2}}$	6	(1.113)	1.145	0.08	
8042.63		5	12430.33	+0.04	$45335^{\circ}_{4\frac{1}{2}} - 57765_{4\frac{1}{2}}$					
8038.16		10	12437.24							
8035.53		4	12441.31	0.00	$58672^{\circ}_{0\frac{1}{2}} - 71113_{1\frac{1}{2}}$	5	0.536	0.966	0.215	1.181
8034.43		1	12443.01	0.00	$56500^{\circ}_{3\frac{1}{2}} - 68943_{4\frac{1}{2}}$					
8023.46	1	20	12460.02							
8022.93		10	12460.85	+0.01	$56088^{\circ}_{4\frac{1}{2}} - 68549_{4\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
8021.62	3	150	12462.88	0.00	$56480^{\circ}_{4\frac{1}{2}} - 68943_{4\frac{1}{2}}$	6	0.747	0.859	0.508	0.803
8013.17		15	12476.02	+0.02	$55462^{\circ}_{3\frac{1}{2}} - 67938_{3\frac{1}{2}}$	6	0.878	0.954	0.263	0.916
8009.53	4	50	12481.69	0.00	$47228^{\circ}_{0\frac{1}{2}} - 59710_{1\frac{1}{2}}$	4	1.035	0.917	0.059	0.858?
8007.83	15	300	12484.34	0.00	$64191^{\circ}_{1\frac{1}{2}} - 76676_{2\frac{1}{2}}$	4	1.190	1.088	0.051	0.935
8002.73	1	20	12492.30	0.00	$45273^{\circ}_{3\frac{1}{2}} - 57765_{4\frac{1}{2}}$	4	1.053?	1.001?	(0.026)	0.818?
8001.30		2*h*	12494.53	+0.04	$48556^{\circ}_{3\frac{1}{2}} - 61051_{3\frac{1}{2}}$					
7994.90		30	12504.53	+0.01	$57103^{\circ}_{3\frac{1}{2}} - 69607_{2\frac{1}{2}}$	4	1.084	1.208	0.062	0.774
7984.31		4	12521.12							
7968.09	1	6	12546.61	−0.01	$45737^{\circ}_{1\frac{1}{2}} - 58283_{2\frac{1}{2}}$					
7964.12	2	80	12552.86	−0.02	$53322^{\circ}_{7\frac{1}{2}} - 65875_{6\frac{1}{2}}$	4	1.090	1.222	0.066	0.232
7958.80		3	12561.25	+0.02	$58661^{\circ}_{2\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
7958.48	2	40	12561.76	0.00	$48024^{\circ}_{1\frac{1}{2}} - 60586_{1\frac{1}{2}}$	6	1.35	1.31	0.070	1.33
7950.35	2	60	12574.60	−0.02	$57561^{\circ}_{6\frac{1}{2}} - 70136_{6\frac{1}{2}}$	6				
7950.01		2	12575.14							
7947.60	1	40	12578.95	−0.01	$52987^{\circ}_{1\frac{1}{2}} - 65566_{0\frac{1}{2}}$	4	1.129	1.423	0.147	0.982
7930.04		8	12606.81	−0.01	$46354^{\circ}_{4\frac{1}{2}} - 58961_{5\frac{1}{2}}$	4	1.28	0.98	0.146	0.37
7928.71		7	12608.92	+0.04 −0.07	$58661^{\circ}_{2\frac{1}{2}} - 71270_{2\frac{1}{2}}$ $(66205^{\circ}_{2\frac{1}{2}} - 78814_{2\frac{1}{2}})$					
7913.30		6	12633.48	−0.01	$60649^{\circ}_{4\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
7912.46		10	12634.82	−0.01	$53716^{\circ}_{2\frac{1}{2}} - 66351_{2\frac{1}{2}}$					
7906.25		2*h*	12644.74							
7904.82	10	200	12647.03	0.00	$64191^{\circ}_{1\frac{1}{2}} - 76839_{2\frac{1}{2}}$	4	1.200	1.108	0.046	0.970
7899.54		5	12655.48	−0.01	$52921^{\circ}_{3\frac{1}{2}} - 65577_{3\frac{1}{2}}$	6	1.17	(1.055)	0.407	?
7897.90		2	12658.11	+0.02	$48556^{\circ}_{3\frac{1}{2}} - 61214_{4\frac{1}{2}}$					
7891.93		1	12667.69	+0.04	$56088^{\circ}_{4\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
7874.10	1	20	12696.37	+0.01	$52880^{\circ}_{4\frac{1}{2}} - 65577_{3\frac{1}{2}}$	5	1.261	1.049	0.106	2.003
7865.13		7	12710.85	+0.01	$48503^{\circ}_{5\frac{1}{2}} - 61214_{4\frac{1}{2}}$	5	1.151	1.093	(0.029)	1.414
7856.20		4	12725.30	+0.01	$65739^{\circ}_{2\frac{1}{2}} - 78464_{1\frac{1}{2}}$	4	0.880	1.176	0.148	0.436
7849.85		6	12735.59	+0.01	$46354^{\circ}_{4\frac{1}{2}} - 59090_{3\frac{1}{2}}$					
7848.49		15	12737.80	−0.02	$58484^{\circ}_{4\frac{1}{2}} - 71222_{3\frac{1}{2}}$	4	1.040	1.122	(0.041)	0.751
7840.45	1	40	12750.86	+0.03	$53644^{\circ}_{3\frac{1}{2}} - 66395_{2\frac{1}{2}}$	4	1.179	1.231	(0.026)	1.048
7839.17		1*h*	12752.94							
7833.02		9	12762.96	+0.01	$59439^{\circ}_{2\frac{1}{2}} - 72202_{3\frac{1}{2}}$	4	0.991	0.855	0.068	0.515
7825.52	1	50	12775.19	−0.02	$54640^{\circ}_{4\frac{1}{2}} - 67416_{4\frac{1}{2}}$	6	1.132	1.260	0.582	1.195
7824.64		3	12776.63	−0.03 +0.04	$64970^{\circ}_{3\frac{1}{2}} - 77747_{4\frac{1}{2}}$ $76839_{2\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$					
7815.52		5	12791.53	+0.01 −0.06	$58162^{\circ}_{1\frac{1}{2}} - 70954_{2\frac{1}{2}}$ $(46169^{\circ}_{4\frac{1}{2}} - 58961_{5\frac{1}{2}})$	5	0.95	(1.014)	*w*	1.107
7811.96	1	8	12797.36	+0.01	$40917^{\circ}_{4\frac{1}{2}} - 53715_{3\frac{1}{2}}$	4	0.965	1.175	0.105	0.230
7808.64		4	12802.80	0.00	$40917^{\circ}_{4\frac{1}{2}} - 53720_{4\frac{1}{2}}$	6	(0.967)	1.265	1.338	?

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TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
7806.11		3	12806.95	−0.01	$51248^{\circ}_{2\frac{1}{2}} - 64055_{2\frac{1}{2}}$					
7804.57		6	12809.48	−0.01	$62163^{\circ}_{2\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
7803.65	20	300	12810.99			6?			0.938	0.938
7802.01		9	12813.68	+0.03	$49008^{\circ}_{3\frac{1}{2}} - 61822_{3\frac{1}{2}}$					
7801.17		8	12815.06	−0.02	$50832^{\circ}_{1\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
7799.44		3	12817.91	−0.01	$48556^{\circ}_{3\frac{1}{2}} - 61374_{2\frac{1}{2}}$					
7785.02		3	12841.65	+0.03	$53716^{\circ}_{2\frac{1}{2}} - 66558_{3\frac{1}{2}}$	4	(1.18)	1.11	w	0.95
7777.96	1	7	12853.30	−0.01	$35059^{\circ}_{3\frac{1}{2}} - 47912_{3\frac{1}{2}}$	6	(1.12)	1.28	0.57	?
7777.49		6	12854.08	−0.01	$45429^{\circ}_{3\frac{1}{2}} - 58283_{2\frac{1}{2}}$	5	1.140	0.774	0.183	2.055
7772.78		2	12861.87	−0.03	$59753^{\circ}_{5\frac{1}{2}} - 72615_{5\frac{1}{2}}$					
7767.43		2	12870.73	+0.03	$65594^{\circ}_{2\frac{1}{2}} - 78464_{1\frac{1}{2}}$	?	1.19?	(1.18)	d	1.21
7766.02		2	12873.07							
7753.91	2	5	12893.17	−0.01	$35019^{\circ}_{4\frac{1}{2}} - 47912_{3\frac{1}{2}}$					
7753.29		6	12894.20	+0.01	$62163^{\circ}_{2\frac{1}{2}} - 75058_{2\frac{1}{2}}$					
7749.38		1	12900.71	+0.01	$52987^{\circ}_{1\frac{1}{2}} - 65888_{1\frac{1}{2}}$					
7745.93		5	12906.45	−0.01	$63417^{\circ}_{2\frac{1}{2}} - 76323_{3\frac{1}{2}}$	5?	1.06?	(1.02)	w	0.93
7741.94		3	12913.11	0.00	$53644^{\circ}_{3\frac{1}{2}} - 66558_{3\frac{1}{2}}$					
7741.66		2	12913.57	+0.03	$55221^{\circ}_{1\frac{1}{2}} - 68135_{2\frac{1}{2}}$	7	1.10?	(1.087)	0	1.07
7741.15		2	12914.42	−0.01	$56480^{\circ}_{4\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
7737.59	1	8	12920.37	+0.02	$46169^{\circ}_{4\frac{1}{2}} - 59090_{3\frac{1}{2}}$	4	1.040	1.066	(0.013)	0.950
7732.46		4*h*	12928.94							
7732.35		6	12929.12	+0.01	$55221^{\circ}_{1\frac{1}{2}} - 68150_{1\frac{1}{2}}$	6	1.110	0.922	0.284	1.016
7719.82		15	12950.11	+0.01	$48923^{\circ}_{7\frac{1}{2}} - 61873_{6\frac{1}{2}}$					
7719.23		40	12951.10	+0.01	$58162^{\circ}_{1\frac{1}{2}} - 71113_{1\frac{1}{2}}$	6	0.93	0.97	0.062	0.952
7697.62		5	12987.45	+0.02	$55462^{\circ}_{3\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
7683.77		9	13010.86	−0.03	$45273^{\circ}_{3\frac{1}{2}} - 58283_{2\frac{1}{2}}$	5	1.187	0.761	0.213	2.252
7678.20		1	13020.30							
7676.62		8	13022.98	+0.01	$56056^{\circ}_{2\frac{1}{2}} - 69079_{2\frac{1}{2}}$	6	1.120	0.890	0.575	1.005
7666.57		1	13040.05							
7655.71		5	13058.55	0.00	$76839_{2\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$	4	0.89	1.01	0.06	0.713
7648.88		4	13070.21	+0.01	$52880^{\circ}_{4\frac{1}{2}} - 65950_{4\frac{1}{2}}$	6	1.25	(1.08)	0.76	?
7645.84		8	13075.41	+0.02 +0.09	$65739^{\circ}_{2\frac{1}{2}} - 78814_{2\frac{1}{2}}$ $(53720_{4\frac{1}{2}} - 66796^{\circ}_{3\frac{1}{2}})$	6	0.878	1.222	0.866	1.150
7640.63		1	13084.32	0.00	$64365^{\circ}_{4\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
7639.47		4	13086.31	+0.02	$45737^{\circ}_{1\frac{1}{2}} - 58823_{2\frac{1}{2}}$	4	(1.33)	1.27	w	1.18
7636.65		3	13091.14	0.00	$58672^{\circ}_{0\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
7634.62		6	13094.62							
7633.95	6	100	13095.77	−0.02	$48024^{\circ}_{1\frac{1}{2}} - 61120_{0\frac{1}{2}}$	4	1.371	1.659	0.144	1.227
7631.81		4	13099.45	0.00	$64970^{\circ}_{3\frac{1}{2}} - 78070_{4\frac{1}{2}}$					

TABLE 6. Yb II – *Observed and classified lines* – Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
7630.87		1	13101.06	+0.02	$60649^{\circ}_{4\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
7630.48		9	13101.73	+0.01	$48272^{\circ}_{2\frac{1}{2}} - 61374_{2\frac{1}{2}}$					
7630.00		8	13102.55	+0.01	$58661^{\circ}_{2\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
7627.45	1	50	13106.93	+0.03	$56500^{\circ}_{3\frac{1}{2}} - 69607_{2\frac{1}{2}}$	5	1.355	1.221	0.067	1.690
7627.24	1	70	13107.29	+0.03	$58162^{\circ}_{1\frac{1}{2}} - 71270_{2\frac{1}{2}}$	7	0.93	(0.91)	0	0.88
7616.50		2	13125.78	+0.02	$61442^{\circ}_{5\frac{1}{2}} - 74568_{4\frac{1}{2}}$					
7611.69		15	13134.07	−0.01	$49727^{\circ}_{6\frac{1}{2}} - 62861_{5\frac{1}{2}}$	5	1.200	(1.140)	?	1.530
7607.09		2	13142.01	+0.02	$63028^{\circ}_{1\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
7599.13		20	13155.78	+0.02	$57798^{\circ}_{2\frac{1}{2}} - 70954_{2\frac{1}{2}}$	6	1.148	1.000	0.368	1.074
7582.93		40	13183.88	−0.02	$24332_{2\frac{1}{2}} - 37516^{\circ}_{3\frac{1}{2}}$	4	1.184	1.120	(0.032)	0.960
7579.97	1	60	13189.03	+0.03	$56840^{\circ}_{1\frac{1}{2}} - 70029_{0\frac{1}{2}}$	5	0.910	0.682	0.115	1.024
7572.81		5	13201.50	0.00	$52880^{\circ}_{4\frac{1}{2}} - 66082_{5\frac{1}{2}}$					
7566.65		15	13212.25	+0.03	$51248^{\circ}_{2\frac{1}{2}} - 64461_{1\frac{1}{2}}$	4	1.034	1.178	0.072	0.818
7560.18		1	13223.56	+0.04	$54192^{\circ}_{5\frac{1}{2}} - 67416_{4\frac{1}{2}}$					
7556.13	1	40	13230.65	+0.02	$53120^{\circ}_{2\frac{1}{2}} - 66351_{2\frac{1}{2}}$	6	0.819?	0.645?	0.438	0.732?
7555.14	1	60	13232.38	+0.04	$57561^{\circ}_{6\frac{1}{2}} - 70793_{5\frac{1}{2}}$	4	1.032	1.204	0.086	0.086?
7541.10	5	80	13257.01	−0.01	$47329^{\circ}_{2\frac{1}{2}} - 60586_{1\frac{1}{2}}$	4	0.980	1.314	0.167	0.480
7537.40		1	13263.52	+0.01	$48900_{3\frac{1}{2}} - 62163^{\circ}_{2\frac{1}{2}}$					
7533.09		3	13271.11	−0.01	$45012^{\circ}_{2\frac{1}{2}} - 58283_{2\frac{1}{2}}$					
7530.78		3	13275.18	+0.04	$53120^{\circ}_{2\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
7528.07		8	13279.96	+0.03	$64169^{\circ}_{3\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
7520.94		4	13292.55	+0.03	$47758^{\circ}_{3\frac{1}{2}} - 61051_{3\frac{1}{2}}$					
7520.46		15	13293.40	+0.04	$55462^{\circ}_{3\frac{1}{2}} - 68756_{3\frac{1}{2}}$	6	0.88	1.32	1.560	1.10
7517.94		2	13297.85	−0.01	$54640^{\circ}_{4\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
7516.24		2	13300.86	+0.04	$43075^{\circ}_{1\frac{1}{2}} - 56375_{2\frac{1}{2}}$					
7512.86		15	13306.85	+0.04	$56088^{\circ}_{4\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
7508.07		8	13315.34	+0.01	$57798^{\circ}_{2\frac{1}{2}} - 71113_{1\frac{1}{2}}$	5	1.150	0.970	0.090	1.420
7503.32		1*h*	13323.76	+0.03	$57534^{\circ}_{3\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
7501.33		1*h*	13327.30	+0.01	$44438^{\circ}_{3\frac{1}{2}} - 57765_{4\frac{1}{2}}$					
7500.09		3*h*	13329.50							
7496.24		20	13336.35	+0.01	$56621^{\circ}_{5\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
7495.15		2	13338.29	0.00	$56056^{\circ}_{2\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
7494.37		3	13339.68	+0.04	$59777^{\circ}_{1\frac{1}{2}} - 73116_{1\frac{1}{2}}$					
7492.34	1	6	13343.29	−0.01	$44940^{\circ}_{1\frac{1}{2}} - 58283_{2\frac{1}{2}}$	4	1.237	0.767	0.235	0.062
7483.19		2	13359.61	−0.06	$70858_{4\frac{1}{2}} - 84217^{\circ}_{4\frac{1}{2}}$					
7482.80		1	13360.30	−0.04	$60910^{\circ}_{1\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
7481.04		6	13363.45	0.00	$52987^{\circ}_{1\frac{1}{2}} - 66351_{2\frac{1}{2}}$	7	1.13?	(1.125)	0	1.12
7477.86	1	5	13369.13	−0.01	$40035^{\circ}_{3\frac{1}{2}} - 53404_{2\frac{1}{2}}$					
7477.61	7	200	13369.58	0.00	$48503^{\circ}_{5\frac{1}{2}} - 61873_{6\frac{1}{2}}$	7	(1.10)	1.10	0	1.08

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
7475.24		2	13373.81							
7473.32		5	13377.25	+0.01	$66205^{\circ}_{2\frac{1}{2}} - 79583_{2\frac{1}{2}}$					
7468.09		8	13386.62	+0.01	$56056^{\circ}_{2\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
7467.58[a]	40	30	13387.53							
7464.10	5	60	13393.77	+0.01	$45429^{\circ}_{3\frac{1}{2}} - 58823_{2\frac{1}{2}}$	4	1.149	1.275	0.063	0.834
7456.20		2	13407.96	0.00	$52987^{\circ}_{1\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
7451.21		1	13416.94	−0.01	$66189^{\circ}_{1\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
7449.60		1	13419.84	+0.02	$57534^{\circ}_{3\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
7447.37	1	60	13423.86	+0.01 −0.03	$57798^{\circ}_{2\frac{1}{2}} - 71222_{3\frac{1}{2}}$ $(70793_{5\frac{1}{2}} - 84217^{\circ}_{4\frac{1}{2}})$	7	1.16	(1.15)	0	1.136
7444.20		2	13429.58	−0.01	$52921^{\circ}_{3\frac{1}{2}} - 66351_{2\frac{1}{2}}$					
7439.84	1	80	13437.45	+0.03	$53120^{\circ}_{2\frac{1}{2}} - 66558_{3\frac{1}{2}}$	5	0.943	1.098	0.078	1.485
7433.39	4	30	13449.11	−0.01	$46169^{\circ}_{4\frac{1}{2}} - 59618_{3\frac{1}{2}}$	5	1.115	1.057	(0.028)	1.315
7429.51	2	40	13456.13	+0.01	$47758^{\circ}_{3\frac{1}{2}} - 61214_{4\frac{1}{2}}$	4	1.067	1.029	(0.019)	0.896
7429.10		2	13456.87	+0.02	$56500^{\circ}_{3\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
7422.15	40	200	13469.48	0.00	$35831^{\circ}_{5\frac{1}{2}} - 49301_{4\frac{1}{2}}$	5	(1.214)	1.20	w	1.295
7421.04		2	13471.49	−0.01	$57798^{\circ}_{2\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
7419.60	1	40	13474.10	0.00	$52921^{\circ}_{3\frac{1}{2}} - 66395_{2\frac{1}{2}}$	4	1.155	1.233	(0.039)	0.96
7419.06		8	13475.09	−0.01	$52987^{\circ}_{1\frac{1}{2}} - 66462_{0\frac{1}{2}}$					
7418.49		4	13476.12	−0.01 −0.02	$50468^{\circ}_{5\frac{1}{2}} - 63944_{5\frac{1}{2}}$ $62163^{\circ}_{2\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
7418.15		3	13476.74	+0.02	$56480^{\circ}_{4\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
7411.63		4	13488.59	0.00	$53716^{\circ}_{2\frac{1}{2}} - 67204_{1\frac{1}{2}}$	5	1.17	1.05	0.061	1.35
7406.00	10	150	13498.85	0.00	$52067^{\circ}_{0\frac{1}{2}} - 65566_{0\frac{1}{2}}$	6	0.51	1.41	0.45	0.96
7402.70		2	13504.86	−0.01	$62046^{\circ}_{3\frac{1}{2}} - 73550_{2\frac{1}{2}}$					
7402.45		1	13505.32							
7400.97		5	13508.02	−0.04	$54640^{\circ}_{4\frac{1}{2}} - 68148_{5\frac{1}{2}}$					
7397.10	1	40	13515.09	0.00	$56621^{\circ}_{5\frac{1}{2}} - 70136_{6\frac{1}{2}}$	4	1.126	1.076	(0.025)	0.800
7396.04		1	13517.03	−0.01	$64365^{\circ}_{4\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
7393.34	4	30	13521.96	+0.01	$45737^{\circ}_{1\frac{1}{2}} - 59259_{2\frac{1}{2}}$	4	1.333	1.099	0.117	0.748
7393.03		1	13522.53	−0.02	$34389^{\circ}_{2\frac{1}{2}} - 47912_{3\frac{1}{2}}$					
7389.22	6	150	13529.50	−0.01	$59753^{\circ}_{5\frac{1}{2}} - 73283_{4\frac{1}{2}}$	5	1.112	1.050	(0.031)	1.395
7384.50	7	150	13538.15	+0.04	$59753^{\circ}_{5\frac{1}{2}} - 73291_{5\frac{1}{2}}$	6	(1.08)	1.08?	0	1.08
7383.00		2	13540.90	0.00	$58661^{\circ}_{2\frac{1}{2}} - 72202_{3\frac{1}{2}}$					
7377.73	20	400	13550.57	+0.01 −0.06	$45273^{\circ}_{3\frac{1}{2}} - 58823_{2\frac{1}{2}}$ $56056^{\circ}_{2\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
7377.43	10	300	13551.12	−0.02	$47663^{\circ}_{4\frac{1}{2}} - 61214_{4\frac{1}{2}}$					
7373.06	3	15	13559.15	+0.03	$39378^{\circ}_{0\frac{1}{2}} - 52938_{1\frac{1}{2}}$	4	1.833	0.873	0.48	0.393
7367.78		20	13568.87	+0.02	$59046^{\circ}_{4\frac{1}{2}} - 72615_{5\frac{1}{2}}$	4	(1.08)	1.01?	?	0.70
7362.92	2	15	13577.83			5	0.88[e]	0.66[e]	0.11	0.99

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
7362.83		60	13577.99	−0.02	$64169^{\circ}_{3\frac{1}{2}} - 77747_{4\frac{1}{2}}$					
7354.17		4	13593.98	−0.01	$62046^{\circ}_{3\frac{1}{2}} - 75640_{3\frac{1}{2}}$	6	1.14	(0.81)	1.16	?
7350.42		15	13600.92	0.00	$58162^{\circ}_{1\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
7342.30	10	400	13615.96	+0.01	$47758^{\circ}_{3\frac{1}{2}} - 61374_{2\frac{1}{2}}$	4	1.098	1.294	0.098	0.608
7341.64		4	13617.18	−0.02	$55462^{\circ}_{3\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
7339.80		60	13620.60			7			0	1.12
7331.31	1	80	13636.37	−0.01	$52921^{\circ}_{3\frac{1}{2}} - 66558_{3\frac{1}{2}}$	6	1.15	1.09	0.21	1.12
7329.29		2	13640.13							
7323.05		2	13651.75							
7318.77		1	13659.73	−0.01	$59632^{\circ}_{6\frac{1}{2}} - 73291_{5\frac{1}{2}}$					
7317.74		30	13661.66			7			0	0.963
7313.18		15	13670.18	−0.01	$57798^{\circ}_{2\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
7309.19		40	13677.64	+0.01	$59439^{\circ}_{2\frac{1}{2}} - 73116_{1\frac{1}{2}}$	5	0.998	0.862	0.068	1.202
7306.63	1	100	13682.43			5?				
7305.92		8	13683.76	+0.01	$46902^{\circ}_{0\frac{1}{2}} - 60586_{1\frac{1}{2}}$					
7302.15		15	13690.82	−0.01	$52880^{\circ}_{4\frac{1}{2}} - 66571_{5\frac{1}{2}}$	4	1.244	1.188	(0.028)	0.934
7294.50		1	13705.18	−0.01	$64365^{\circ}_{4\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
7290.56		3	13712.59	−0.06	$64169^{\circ}_{3\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
7287.96		2	13717.48	−0.01	$58484^{\circ}_{4\frac{1}{2}} - 72202_{3\frac{1}{2}}$					
7285.02		1	13723.02	0.00	$67789^{\circ}_{1\frac{1}{2}} - 81512_{1\frac{1}{2}}$?					
7284.70		1	13723.62	0.00	$67933^{\circ}_{2\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
7279.67		5	13733.10	0.00	$59046^{\circ}_{4\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
7278.37		30	13735.56	0.00	$57534^{\circ}_{3\frac{1}{2}} - 71270_{2\frac{1}{2}}$	4	0.86?	(0.91)	(0.027)	0.638?
7268.03		4	13755.10	0.00 −0.06	$45335^{\circ}_{4\frac{1}{2}} - 59090_{3\frac{1}{2}}$ $57103^{\circ}_{3\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
7265.76		10	13759.39	−0.02	$67933^{\circ}_{2\frac{1}{2}} - 81692_{3\frac{1}{2}}$	7	1.16	(1.16)	0	1.15
7259.76		6	13770.77	−0.04	$63028^{\circ}_{1\frac{1}{2}} - 76799_{1\frac{1}{2}}$					
7259.56		3	13771.14	0.00	$53644^{\circ}_{3\frac{1}{2}} - 67416_{4\frac{1}{2}}$					
7251.55	30	200	13786.36	−0.04	$44497^{\circ}_{2\frac{1}{2}} - 58283_{2\frac{1}{2}}$	6	0.730	0.764	0.084	0.747
7238.95	1	80	13810.35	+0.02	$49916^{\circ}_{4\frac{1}{2}} - 63726_{4\frac{1}{2}}$					
7238.73	4	80	13810.77	−0.02 +0.03	$45012^{\circ}_{2\frac{1}{2}} - 58823_{2\frac{1}{2}}$ $63028^{\circ}_{1\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
7235.42	1	40	13817.09	−0.02	$45273^{\circ}_{3\frac{1}{2}} - 59090_{3\frac{1}{2}}$	6	1.19	1.13	0.218	1.16
7228.98		2	13829.40	−0.02	$45429^{\circ}_{3\frac{1}{2}} - 59259_{2\frac{1}{2}}$	5	1.14	(1.105)	w	1.22
7222.72	20	150	13841.39	−0.02	$35059^{\circ}_{3\frac{1}{2}} - 48900_{3\frac{1}{2}}$	6	1.10	1.03	0.245	1.065
7221.50		10	13843.72	+0.08	$65739^{\circ}_{2\frac{1}{2}} - 79583_{2\frac{1}{2}}$					
7221.21	1	60	13844.28	0.00	$51248^{\circ}_{2\frac{1}{2}} - 65093_{3\frac{1}{2}}$	7	(1.034)	0.99	0	0.90
7220.38	2	50	13845.87	−0.01 0.00	$44438^{\circ}_{3\frac{1}{2}} - 58283_{2\frac{1}{2}}$ $(80457_{3\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}})$	5	1.10	0.76	0.168	1.94
7217.57		60	13851.26	+0.01	$57103^{\circ}_{3\frac{1}{2}} - 70954_{2\frac{1}{2}}$	5	1.11	1.05	(0.03)	1.265

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
7209.65		1	13866.48	0.00	$65739^{\circ}_{2\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
7209.38		2	13867.00	+0.01	$63417^{\circ}_{2\frac{1}{2}} - 77284_{1\frac{1}{2}}$					
7209.10		8	13867.54	+0.01	$67789^{\circ}_{1\frac{1}{2}} - 81657_{2\frac{1}{2}}$?					
7208.29	4	200	13869.09	−0.01	$56088^{\circ}_{4\frac{1}{2}} - 69957_{4\frac{1}{2}}$	7	1.09?	(1.11)	0	1.10
7201.09		20	13882.96	−0.01	$44940^{\circ}_{1\frac{1}{2}} - 58823_{2\frac{1}{2}}$	7	(1.244)	1.260	0	1.285
7191.87		1	13900.76	−0.04	$64169^{\circ}_{3\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
7182.60		2	13918.70	−0.02	$60649^{\circ}_{4\frac{1}{2}} - 74568_{4\frac{1}{2}}$					
7175.48		300	13932.51	−0.01	$55462^{\circ}_{3\frac{1}{2}} - 69395_{3\frac{1}{2}}$	6	0.878	0.924	0.165	0.90
7174.60		8	13934.22	−0.03	$57534^{\circ}_{3\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
7154.52		5	13973.33	−0.03	$45737^{\circ}_{1\frac{1}{2}} - 59710_{1\frac{1}{2}}$	6	1.32	0.80	0.800	1.060
7148.16		2	13985.76							
7147.94		8	13986.19	−0.03	$45273^{\circ}_{3\frac{1}{2}} - 59259_{2\frac{1}{2}}$					
7145.13		4	13991.69	−0.09	$75905_{0\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$	7			0	0.86
7142.39	1	120	13997.06	0.00	$59753^{\circ}_{5\frac{1}{2}} - 73750_{4\frac{1}{2}}$	5	1.145	1.077	(0.034)	1.450
7137.67		2	14006.31	−0.02	$62163^{\circ}_{2\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
7134.83		2	14011.89	0.00	$65594^{\circ}_{2\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
7128.94		2	14023.47	+0.13	$41678^{\circ}_{2\frac{1}{2}} - 55702_{1\frac{1}{2}}$					
7126.81	2	100	14027.66	−0.02	$49916^{\circ}_{4\frac{1}{2}} - 63944_{5\frac{1}{2}}$	5	1.087	1.113	(0.013)	1.230
7124.46		5	14032.28	−0.01	$63417^{\circ}_{2\frac{1}{2}} - 77449_{3\frac{1}{2}}$	5	1.011	1.161	0.075	1.536
7117.99		10	14045.04	−0.01	$47329^{\circ}_{2\frac{1}{2}} - 61374_{2\frac{1}{2}}$	6	0.986	1.298	0.780	1.142
7108.37		6	14064.05	+0.01	$47758^{\circ}_{3\frac{1}{2}} - 61822_{3\frac{1}{2}}$	6	1.104	1.326	0.774	1.215
7101.66		10	14077.33	−0.01	$45012^{\circ}_{2\frac{1}{2}} - 59090_{3\frac{1}{2}}$	4	1.279	1.102	0.088	0.662
7099.70		2	14081.22	0.00	$60910^{\circ}_{1\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
7098.11		6	14084.37	−0.02	$53120^{\circ}_{2\frac{1}{2}} - 67204_{1\frac{1}{2}}$	4	0.95	1.04	(0.045)	0.815
7089.40		1	14101.68							
7086.08		20	14108.29			4			w	0.96
7082.61		80	14115.20	−0.02	$54640^{\circ}_{4\frac{1}{2}} - 68756_{3\frac{1}{2}}$	4	1.129	1.325	0.098	0.443
7081.81		4	14116.79	0.00	$22960_{1\frac{1}{2}} - 37077^{\circ}_{2\frac{1}{2}}$					
7080.77		1	14118.87	+0.01	$58661^{\circ}_{2\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
7080.53		40	14119.34	0.00	$57103^{\circ}_{3\frac{1}{2}} - 71222_{3\frac{1}{2}}$	6	1.10	1.16	0.212	1.127
7078.11		5	14124.17	−0.01	$62046^{\circ}_{3\frac{1}{2}} - 76170_{2\frac{1}{2}}$	7	(1.14)	1.13?	0	1.170
7077.07		1	14126.25	+0.01	$59624^{\circ}_{3\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
7074.60		2	14131.18	−0.02	$58484^{\circ}_{4\frac{1}{2}} - 72615_{5\frac{1}{2}}$					
7072.12		4	14136.13	0.00	$56977^{\circ}_{0\frac{1}{2}} - 71113_{1\frac{1}{2}}$	4	2.188	0.968	0.611	0.358
7066.20		10	14147.98	+0.01	$60910^{\circ}_{1\frac{1}{2}} - 75058_{2\frac{1}{2}}$					
7060.67		60	14159.06	0.00	$47663^{\circ}_{4\frac{1}{2}} - 61822_{3\frac{1}{2}}$	4	0.99	1.32	0.165	−0.165?
7060.41		2	14159.58	+0.01	$62163^{\circ}_{2\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
7056.72		4	14166.98	−0.01	$57103^{\circ}_{3\frac{1}{2}} - 71270_{2\frac{1}{2}}$	5	1.115	0.937	0.089	1.560
7053.80	1	200	14172.85	+0.04	$56621^{\circ}_{5\frac{1}{2}} - 70793_{5\frac{1}{2}}$	7	1.20	1.20	0	1.203
7052.58		10	14175.30	−0.03	$38342^{\circ}_{4\frac{1}{2}} - 52517_{5\frac{1}{2}}$	5	1.088	1.273	0.093	2.110

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
7045.75		15	14189.04	−0.04	$45429^{\circ}_{3\frac{1}{2}} - 59618_{3\frac{1}{2}}$					
7045.51		20	14189.52	−0.03	$63417^{\circ}_{2\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
7043.78	30	700	14193.01	+0.01	$47680^{\circ}_{6\frac{1}{2}} - 61873_{6\frac{1}{2}}$	7	1.11	(1.11)	0	1.112
7031.52		30	14217.76	−0.02	$46902^{\circ}_{0\frac{1}{2}} - 61120_{0\frac{1}{2}}$	6	1.30	1.66	0.179	1.482
7029.38		3	14222.08	+0.02	$55221^{\circ}_{1\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
7029.27		2	14222.31	+0.01	$53716^{\circ}_{2\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
7027.84	10	150	14225.20	+0.02	$49008^{\circ}_{3\frac{1}{2}} - 63234_{2\frac{1}{2}}$					
7023.97		6	14233.04	−0.01	$78070_{4\frac{1}{2}} - 92303^{\circ}_{3\frac{1}{2}}$					
7022.27		6	14236.48	+0.02	$59046^{\circ}_{4\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
7022.00	2	200	14237.03	0.00	$56621^{\circ}_{5\frac{1}{2}} - 70858_{4\frac{1}{2}}$	4	1.099	1.144	(0.022)	0.898
7019.48	2	20	14242.14	−0.02	$35059^{\circ}_{3\frac{1}{2}} - 49301_{4\frac{1}{2}}$	5	1.16	1.20	(0.021)	1.35
7012.75		5	14255.81	+0.05	$63028^{\circ}_{1\frac{1}{2}} - 77284_{1\frac{1}{2}}$	6	0.510	0.854	0.507	0.682
7003.90		1	14273.82	+0.02	$56840^{\circ}_{1\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
7002.14		1	14277.41	−0.01	$62046^{\circ}_{3\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
6999.88	50	800	14282.02	−0.01	$35019^{\circ}_{4\frac{1}{2}} - 49301_{4\frac{1}{2}}$	6	1.144	1.170	0.118	1.157
6998.98		2	14283.86	−0.01	$45335^{\circ}_{4\frac{1}{2}} - 59618_{3\frac{1}{2}}$					
6993.31	5	250	14295.44	−0.01	$58484^{\circ}_{4\frac{1}{2}} - 72779_{3\frac{1}{2}}$	4	1.06	(1.10)	w	0.92
6981.99	20	300	14318.61	−0.02	$44940^{\circ}_{1\frac{1}{2}} - 59259_{2\frac{1}{2}}$	4	1.23	1.09	0.07	0.88
6978.36		5	14326.06	−0.01	$44497^{\circ}_{2\frac{1}{2}} - 58823_{2\frac{1}{2}}$					
6977.67	20	150	14327.48	−0.02	$43956^{\circ}_{2\frac{1}{2}} - 58283_{2\frac{1}{2}}$	6	0.989	0.763	0.571	0.876
6977.30		1	14328.24	−0.01	$51248^{\circ}_{2\frac{1}{2}} - 65577_{3\frac{1}{2}}$					
6970.54		7	14342.14	−0.01	$59624^{\circ}_{3\frac{1}{2}} - 73966_{3\frac{1}{2}}$					
6968-73	1	30	14345.86	−0.02	$45273^{\circ}_{3\frac{1}{2}} - 59618_{3\frac{1}{2}}$	6	1.194	1.004	0.670	1.099
6964.47		3	14354.64							
6963.47		10	14356.70	−0.02	$54192^{\circ}_{5\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
6963.10	5	300	14357.46	{+0.01 −0.08	$48503^{\circ}_{5\frac{1}{2}} - 62861_{5\frac{1}{2}}$ $(56500^{\circ}_{3\frac{1}{2}} - 70858_{4\frac{1}{2}})$	6	1.08	1.10	0.11	1.09
6959.11	1	60	14365.69	+0.01	$57103^{\circ}_{3\frac{1}{2}} - 71468_{2\frac{1}{2}}$	5	1.10	1.03	(0.034)	1.27
6952.14		4	14380.09							
6949.50		10	14385.56	+0.01	$44438^{\circ}_{3\frac{1}{2}} - 58823_{2\frac{1}{2}}$	4	1.12	1.29	0.083	0.70
6944.95		30	14394.98	−0.01	$52067^{\circ}_{0\frac{1}{2}} - 66462_{0\frac{1}{2}}$	6	0.531	1.097	0.283	0.814
6934.05	100	600	14417.61	−0.02	$33494^{\circ}_{3\frac{1}{2}} - 47912_{3\frac{1}{2}}$	6	0.980	1.271	1.032	1.125
6926.08	1	30	14434.20	+0.01	$53716^{\circ}_{2\frac{1}{2}} - 68150_{1\frac{1}{2}}$	5	1.177	0.935	0.121	1.540
6923.78		2	14438.99	−0.05	$35059^{\circ}_{3\frac{1}{2}} - 49498_{2\frac{1}{2}}$					
6921.30		5	14444.17	−0.01	$58672^{\circ}_{0\frac{1}{2}} - 73116_{1\frac{1}{2}}$	5	0.53	0.85	0.16	1.01
6916.78		1	14453.61	−0.02	$56500^{\circ}_{3\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
6916.10		3	14455.03	−0.03	$50468^{\circ}_{5\frac{1}{2}} - 64923_{4\frac{1}{2}}$					
6915.84		4	14455.57	−0.01	$58661^{\circ}_{2\frac{1}{2}} - 73116_{1\frac{1}{2}}$	7	0.86	(0.86)	0	0.868
6911.34		1	14464.98	−0.03	$63417^{\circ}_{2\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
6911.11	1	20	14465.47	0.00	$67933^{\circ}_{2\frac{1}{2}} - 82398_{1\frac{1}{2}}$	5	1.168	1.042	0.063	1.357
6908.92		2	14470.05	+0.01	$62046^{\circ}_{3\frac{1}{2}} - 76516_{4\frac{1}{2}}$					

TABLE 6. Yb II – *Observed and classified lines* – Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
6901.06		2	14486.53	−0.05	$69957_{4\frac{1}{2}} - 84444^{\circ}_{3\frac{1}{2}}$					
6897.78		1	14493.42	+0.01	$59777^{\circ}_{1\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
6897.31	1	40	14494.41	0.00	$52921^{\circ}_{3\frac{1}{2}} - 67416_{4\frac{1}{2}}$	5	1.227	1.305	(0.039)	1.577
6889.59	10	100	14510.65	0.00	$34389^{\circ}_{2\frac{1}{2}} - 48900_{3\frac{1}{2}}$	5	(1.007)	1.038	w	1.117
6888.76		2	14512.40	+0.01	$62163^{\circ}_{2\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
6886.95		8	14516.21	0.00	$34784^{\circ}_{5\frac{1}{2}} - 49301_{4\frac{1}{2}}$	4	1.11	1.16	(0.026)	0.87
6886.77		5	14516.59	−0.03 −0.03	$48900_{3\frac{1}{2}} - 63417^{\circ}_{2\frac{1}{2}}$ $66796^{\circ}_{3\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
6881.40	1	100	14527.92	−0.01	$54192^{\circ}_{5\frac{1}{2}} - 68720_{6\frac{1}{2}}$	5	1.123	1.159	(0.018)	1.357
6877.93	2	250	14535.25	−0.03	$52880^{\circ}_{4\frac{1}{2}} - 67416_{4\frac{1}{2}}$	6	1.26	1.26	0	1.26
6871.51		3	14548.83							
6864.27	2	300	14564.17	−0.06	$58051^{\circ}_{5\frac{1}{2}} - 72615_{5\frac{1}{2}}$	6	0.949	0.971	0.117	0.960
6857.64		2	14578.25	−0.07	$63028^{\circ}_{1\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
6844.05		1	14607.20	−0.02	$48556^{\circ}_{3\frac{1}{2}} - 63163_{4\frac{1}{2}}$					
6843.02		2	14609.40	+0.02	$67789^{\circ}_{1\frac{1}{2}} - 82398_{1\frac{1}{2}}$?					
6830.99		2	14635.13	−0.02	$62163^{\circ}_{2\frac{1}{2}} - 76799_{1\frac{1}{2}}$					
6829.80	1	70	14637.68							
6828.90	2	200	14639.61	+0.01	$51248^{\circ}_{2\frac{1}{2}} - 65888_{1\frac{1}{2}}$	4	1.03	1.20	0.090	0.75
6828.35		2	14640.79	−0.01	$60910^{\circ}_{1\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
6826.18		5	14645.44	−0.03	$64169^{\circ}_{3\frac{1}{2}} - 78814_{2\frac{1}{2}}$					
6826.02		10	14645.78	−0.04	$59624^{\circ}_{3\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
6819.41		2	14659.98	+0.01	$48503^{\circ}_{5\frac{1}{2}} - 63163_{4\frac{1}{2}}$					
6816.18		40	14666.93	−0.01	$46547^{\circ}_{5\frac{1}{2}} - 61214_{4\frac{1}{2}}$					
6815.88	1	100	14667.57	−0.01	$57534^{\circ}_{3\frac{1}{2}} - 72202_{3\frac{1}{2}}$	6	0.865	0.831	0.12	0.848
6812.42		2	14675.02	−0.06	$62163^{\circ}_{2\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
6809.30		5	14681.75	−0.03	$49916^{\circ}_{4\frac{1}{2}} - 64598_{3\frac{1}{2}}$	4				
6803.91		20	14693.38	−0.01	$49008^{\circ}_{3\frac{1}{2}} - 63702_{2\frac{1}{2}}$					
6802.47	2	400	14696.49	−0.02	$46354^{\circ}_{4\frac{1}{2}} - 61051_{3\frac{1}{2}}$	5	1.28	1.18	(0.050)	1.63
6798.29		2h	14705.52	−0.05	$56088^{\circ}_{4\frac{1}{2}} - 70793_{5\frac{1}{2}}$					
6796.80		2h	14708.75							
6792.58		30	14717.88	−0.02	$49008^{\circ}_{3\frac{1}{2}} - 63726_{4\frac{1}{2}}$					
6790.82		20	14721.70	−0.02	$56500^{\circ}_{3\frac{1}{2}} - 71222_{3\frac{1}{2}}$	6	1.35	(1.15)	0.69	
6786.32		1	14731.46	−0.03	$50468^{\circ}_{5\frac{1}{2}} - 65199_{4\frac{1}{2}}$					
6785.14	1	150	14734.02	−0.05	$50832^{\circ}_{1\frac{1}{2}} - 65566_{0\frac{1}{2}}$	4	0.94	1.42	0.24	0.70
6775.79		2	14754.35	−0.03 +0.04	$54640^{\circ}_{4\frac{1}{2}} - 69395_{3\frac{1}{2}}$ $73966_{3\frac{1}{2}} - 88721^{c}_{3\frac{1}{2}}$					
6772.42	1	50	14761.70	−0.03	$44497^{\circ}_{2\frac{1}{2}} - 59259_{2\frac{1}{2}}$	6	0.729	1.095	0.920	0.912
6761.31		4	14785.95	−0.01	$56977^{\circ}_{0\frac{1}{2}} - 71763_{1\frac{1}{2}}$	4	2.20	1.10	0.55	0.55
6759.10		15	14790.79	+0.01	$61442^{\circ}_{5\frac{1}{2}} - 76233_{6\frac{1}{2}}$	4	(1.11)	1.10?	w	1.01
6755.44	1	150	14798.80	−0.01	$58484^{\circ}_{4\frac{1}{2}} - 73283^{d}_{4\frac{1}{2}}$	6	0.58	0.62	0.18	0.60?

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
6754.69		3	14800.44	−0.04	$47758^{\circ}_{3\frac{1}{2}} - 62559_{2\frac{1}{2}}$					
6751.45		10	14807.55	−0.03	$55221^{\circ}_{1\frac{1}{2}} - 70029_{0\frac{1}{2}}$					
6746.64		6	14818.10	0.00	$53120^{\circ}_{2\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
6745.23	30	600	14821.20	−0.01	$44438^{\circ}_{3\frac{1}{2}} - 59259_{2\frac{1}{2}}$	7	1.10	1.10	0	1.10
6740.59		8	14831.40	0.00	$59439^{\circ}_{2\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
6738.24		2	14836.57	+0.04	$69607_{2\frac{1}{2}} - 84444^{\circ}_{3\frac{1}{2}}$					
6734.56		1	14844.68	+0.02	$47329^{\circ}_{2\frac{1}{2}} - 62174_{1\frac{1}{2}}$					
6732.53		15	14849.16	−0.01	$45737^{\circ}_{1\frac{1}{2}} - 60586_{1\frac{1}{2}}$	7	1.33	(1.323)	0	1.34
6728.37		1	14858.34							
6727.61	400	2000	14860.02	0.00	$33052^{\circ}_{4\frac{1}{2}} - 47912_{3\frac{1}{2}}$	7	(1.264)	1.27	0	1.24
6727.12		20	14861.10	0.00	$66796^{\circ}_{3\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
6724.36	1	30	14867.20	+0.03	$43956^{\circ}_{2\frac{1}{2}} - 58823_{2\frac{1}{2}}$	6	0.99	1.25	0.67	1.12
6724.19		1	14867.58							
6723.90		1	14868.22	−0.01	$49301_{4\frac{1}{2}} - 64169^{\circ}_{3\frac{1}{2}}$					
6718.00	1	30	14881.27	−0.01	$46169^{\circ}_{4\frac{1}{2}} - 61051_{3\frac{1}{2}}$					
6710.95		1	14896.91	+0.02	$66796^{\circ}_{3\frac{1}{2}} - 81692_{3\frac{1}{2}}$					
6710.73		3	14897.40	+0.04	$56056^{\circ}_{2\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
6707.61		15	14904.33	−0.01	$53644^{\circ}_{3\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
6699.36	100	1000	14922.68	+0.01	$34575^{\circ}_{1\frac{1}{2}} - 49498_{2\frac{1}{2}}$	4	1.430	1.142	0.144	0.710
6698.93		5	14923.64	+0.01	$56840_{1\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
6698.13		3	14925.42	+0.01	$39378^{\circ}_{0\frac{1}{2}} - 54304_{0\frac{1}{2}}$					
6689.84		15	14943.92	0.00	$59624^{\circ}_{3\frac{1}{2}} - 74568_{4\frac{1}{2}}$					
6689.28	10	150	14945.17	+0.03	$47228^{\circ}_{0\frac{1}{2}} - 62174_{1\frac{1}{2}}$	5	0.74	(0.80)	w	0.83
6687.64		1	14948.83	−0.04	$49008^{\circ}_{3\frac{1}{2}} - 63957_{3\frac{1}{2}}$					
6685.34		1	14953.97	+0.01	$58162^{\circ}_{1\frac{1}{2}} - 73116_{1\frac{1}{2}}$					
6683.41		10	14958.29	0.00	$67933^{\circ}_{2\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
6682.06		15	14961.31	−0.03	$48272^{\circ}_{2\frac{1}{2}} - 63234_{2\frac{1}{2}}$					
6680.74		4	14964.27	−0.03	$58672^{\circ}_{0\frac{1}{2}} - 73636_{0\frac{1}{2}}$					
6679.30	1	100	14967.50	+0.03	$52987^{\circ}_{1\frac{1}{2}} - 67955_{0\frac{1}{2}}$					
6673.08		10	14981.45	−0.03	$57798^{\circ}_{2\frac{1}{2}} - 72779_{3\frac{1}{2}}$	4	1.14	(1.10)	w	1.005
6670.57		1	14987.08	−0.07	$48024^{\circ}_{1\frac{1}{2}} - 63011_{1\frac{1}{2}}$					
6670.18		50	14987.96							
6666.78		20	14995.60	−0.03	$60910^{\circ}_{1\frac{1}{2}} - 75905_{0\frac{1}{2}}$					
6666.55		40	14996.12	−0.04	$58661^{\circ}_{2\frac{1}{2}} - 73657_{1\frac{1}{2}}$	4	0.865	1.033	0.084	0.613
6665.08		1	14999.43							
6661.90	2	200	15006.59	−0.02	$49916^{\circ}_{4\frac{1}{2}} - 64923_{4\frac{1}{2}}$	6	1.092	1.054	0.170	1.073
6658.43		60	15014.41	−0.01	$53120^{\circ}_{2\frac{1}{2}} - 68135_{2\frac{1}{2}}$	6	0.944	1.088	0.341	1.016
6657.26		25	15017.05	−0.01	$52921^{\circ}_{3\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
6651.52		4	15030.01	+0.02	$53120^{\circ}_{2\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
6647.25		1	15039.66	0.00	$53716^{\circ}_{2\frac{1}{2}} - 68756_{3\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
6644.94		6	15044.89	+0.01	$46169^{\circ}_{4\frac{1}{2}} - 61214_{4\frac{1}{2}}$					
6644.06	2	200	15046.88	−0.01	$49008^{\circ}_{3\frac{1}{2}} - 64055_{2\frac{1}{2}}$	4	1.02	1.07	(0.024)	0.90
6640.88		15	15054.09	−0.03	$57561^{\circ}_{6\frac{1}{2}} - 72615_{5\frac{1}{2}}$					
6639.62		3	15056.94	+0.01	$56056^{\circ}_{2\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
6639.19		5	15057.92	−0.01	$52880^{\circ}_{4\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
6636.54		2	15063.93	+0.09	$49301_{4\frac{1}{2}} - 64365^{\circ}_{4\frac{1}{2}}$					
6632.40		2	15073.34	+0.05	$61442^{\circ}_{5\frac{1}{2}} - 76516_{4\frac{1}{2}}$					
6619.66		40	15102.35	0.00	$51248^{\circ}_{2\frac{1}{2}} - 66351_{2\frac{1}{2}}$					
6617.72		4	15106.77	−0.01	$66205^{\circ}_{2\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
6617.06	100	1000	15108.28	0.00	$34389^{\circ}_{2\frac{1}{2}} - 49498_{2\frac{1}{2}}$	6	1.00	1.14	0.35	1.07
6616.40	2	40	15109.79							
6615.80	1	80	15111.16	+0.01	$53644^{\circ}_{3\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
6611.87		4	15120.14	+0.04	$62163^{\circ}_{2\frac{1}{2}} - 77284_{1\frac{1}{2}}$					
6611.32		5	15121.40	+0.01	$44497^{\circ}_{2\frac{1}{2}} - 59618_{3\frac{1}{2}}$					
6610.31		1	15123.71	+0.06	$66189^{\circ}_{1\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
6608.68		1	15127.44							
6605.82	4	250	15133.99	+0.02	$56088^{\circ}_{4\frac{1}{2}} - 71222_{3\frac{1}{2}}$	7	1.12	(1.15)	0	1.01
6604.45		50	15137.13	+0.03	$52067^{\circ}_{0\frac{1}{2}} - 67204_{1\frac{1}{2}}$					
6600.68		7	15145.77	+0.02	$48556^{\circ}_{3\frac{1}{2}} - 63702_{2\frac{1}{2}}$					
6600.03		2	15147.26	+0.02	$52987^{\circ}_{1\frac{1}{2}} - 68135_{2\frac{1}{2}}$					
6593.25		50	15162.84	+0.03	$52987^{\circ}_{1\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
6592.69	2	150	15164.13	+0.02	$49727^{\circ}_{6\frac{1}{2}} - 64891_{7\frac{1}{2}}$	7	(1.18)	1.18	0	1.18
6592.12		30	15165.44	−0.01	$56056^{\circ}_{2\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
6590.72	1	15	15168.66	+0.02	$47005^{\circ}_{1\frac{1}{2}} - 62174_{1\frac{1}{2}}$					
6587.26		1	15176.63	−0.01	$49916^{\circ}_{4\frac{1}{2}} - 65093_{3\frac{1}{2}}$					
6585.41	100	1000	15180.89	+0.02 +0.02	$44438^{\circ}_{3\frac{1}{2}} - 59618_{3\frac{1}{2}}$ $(47680^{\circ}_{6\frac{1}{2}} - 62861_{5\frac{1}{2}})$	6	1.079	0.991	0.32	1.035
6582.79	2	250	15186.93			7			0	0.97
6578.10		20	15197.76	+0.01	$47663^{\circ}_{4\frac{1}{2}} - 62861_{5\frac{1}{2}}$					
6574.10	2	200	15207.01	+0.03	$61442^{\circ}_{5\frac{1}{2}} - 76649_{5\frac{1}{2}}$	6	1.10	1.08	0.20	1.08
6573.31		10	15208.83	+0.01 −0.04	$43075^{\circ}_{1\frac{1}{2}} - 58283_{2\frac{1}{2}}$ $79126_{4\frac{1}{2}} - 94335^{\circ}_{5\frac{1}{2}}$					
6571.44	10	400	15213.16	+0.02 +0.06	$44497^{\circ}_{2\frac{1}{2}} - 59710_{1\frac{1}{2}}$ $(56056^{\circ}_{2\frac{1}{2}} - 71270_{2\frac{1}{2}})$	4	(0.734)	0.80	w	0.63
6570.94		9	15214.32	+0.03	$59777^{\circ}_{1\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
6567.60		9	15222.06							
6563.38		2	15231.84	0.00	$58051^{\circ}_{5\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
6562.35		5h	15234.24	+0.01	$46902^{\circ}_{0\frac{1}{2}} - 62136_{0\frac{1}{2}}$					
6560.94		1h	15237.51	0.00	$69395_{3\frac{1}{2}} - 84632^{\circ}_{2\frac{1}{2}}$					
6559.65		2	15240.51	+0.07	$58051^{\circ}_{5\frac{1}{2}} - 73291_{5\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
6557.46		4	15245.60	+0.06	$57534^{\circ}_{3\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
6552.61		2	15256.88							
6548.53	2	200	15266.39	+0.03	$58484^{\circ}_{4\frac{1}{2}} - 73750_{4\frac{1}{2}}$	6	0.96	1.01	0.22	0.99
6547.77		9	15268.16	+0.03	$52880^{\circ}_{4\frac{1}{2}} - 68148_{5\frac{1}{2}}$					
6546.35		2	15271.47	+0.08	$46902^{\circ}_{0\frac{1}{2}} - 62174_{1\frac{1}{2}}$					
6541.38	3	400	15283.07	+0.03	$49916^{\circ}_{4\frac{1}{2}} - 65199_{4\frac{1}{2}}$	6	(1.090)	1.05?	d	1.07
6540.36		1	15285.46	+0.06	$62163^{\circ}_{2\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
6531.71		5	15305.70	+0.02	$58661^{\circ}_{2\frac{1}{2}} - 73966_{3\frac{1}{2}}$					
6531.26		4	15306.75	0.00	$66205^{\circ}_{2\frac{1}{2}} - 81512_{1\frac{1}{2}}$					
6527.01		25	15316.72	+0.05	$54640^{\circ}_{4\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
6526.36		3	15318.24	+0.04	$57798^{\circ}_{2\frac{1}{2}} - 73116_{1\frac{1}{2}}$					
6523.19	2	250	15325.69	+0.01	$46547^{\circ}_{5\frac{1}{2}} - 61873_{6\frac{1}{2}}$					
6521.52		25	15329.61	+0.08	$53120^{\circ}_{2\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
6507.15		1	15363.47	−0.03	$53716^{\circ}_{2\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
6503.01	50	500	15373.25	+0.01	$38342^{\circ}_{4\frac{1}{2}} - 53715_{3\frac{1}{2}}$	4	1.00	1.08	(0.038)	0.734
6502.28		20	15374.97	+0.01	$48272^{\circ}_{2\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
6500.70	2	30	15378.71	+0.02	$38342^{\circ}_{4\frac{1}{2}} - 53720_{4\frac{1}{2}}$					
6498.79	1	20	15383.23	+0.03	$45737^{\circ}_{1\frac{1}{2}} - 61120_{0\frac{1}{2}}$					
6493.58		5	15395.57	+0.07	$55462^{\circ}_{3\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
6492.73	10	700	15397.59	+0.04	$53322^{\circ}_{7\frac{1}{2}} - 68720_{6\frac{1}{2}}$	4	0.98	1.04	(0.032)	0.57
6491.18		5	15401.26	+0.03	$48556^{\circ}_{3\frac{1}{2}} - 63957_{3\frac{1}{2}}$					
6490.32		20	15403.30	+0.05	$62046^{\circ}_{3\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
6488.47		200	15407.70	−0.02	$50468^{\circ}_{5\frac{1}{2}} - 65875_{6\frac{1}{2}}$					
6487.08		10	15411.00	−0.02	$73291_{5\frac{1}{2}} - 88702^{\circ}_{5\frac{1}{2}}$					
6486.74		50	15411.81	+0.02	$56056^{\circ}_{2\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
6485.55	10	200*h*	15414.63							
6477.63		6	15433.48	+0.03	$59624^{\circ}_{3\frac{1}{2}} - 75058_{2\frac{1}{2}}$					
6476.36		1	15436.51	+0.01	$63028^{\circ}_{1\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
6474.74	30	1500	15440.37	+0.01	$48503^{\circ}_{5\frac{1}{2}} - 63944_{5\frac{1}{2}}$	6	1.10	1.12	0.09	1.11
6470.17		1	15451.27	+0.01	$66205^{\circ}_{2\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
6466.79		7	15459.35	+0.03	$64169^{\circ}_{3\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
6465.78		3*h*	15461.77	−0.04	$68756_{3\frac{1}{2}} - 84217^{\circ}_{4\frac{1}{2}}$					
6463.15	50	2000	15468.06	+0.03	$46354^{\circ}_{4\frac{1}{2}} - 61822_{3\frac{1}{2}}$	7	1.30	(1.327)	0	1.21
6456.95	2	150	15482.91	+0.01	$50468^{\circ}_{5\frac{1}{2}} - 65950_{4\frac{1}{2}}$					
6455.23		4	15487.03	+0.06 −0.02	$64970^{\circ}_{3\frac{1}{2}} - 80457_{3\frac{1}{2}}$ $66205^{\circ}_{2\frac{1}{2}} - 81692_{3\frac{1}{2}}$					
6453.30	1	150	15491.67	+0.08	$55462^{\circ}_{3\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
6453.11	10	150	15492.12							
6452.10		15	15494.55	+0.01	$58162^{\circ}_{1\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
6442.10		9	15518.60	+0.04	$50832^{\circ}_{1\frac{1}{2}} - 66351_{2\frac{1}{2}}$					

TABLE 6. Yb II — *Observed and classified lines* — Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
6440.79	5	400	15521.76	+0.07	$59046^{\circ}_{4\frac{1}{2}} - 74568_{4\frac{1}{2}}$	6	1.08	1.05	0.12	1.07w
6437.98	1	150	15528.53	+0.04	$52921^{\circ}_{3\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
6432.73	1000	3000	15541.20	−0.01	$32371^{\circ}_{2\frac{1}{2}} - 47912_{3\frac{1}{2}}$	5	1.172	1.280	0.054	1.550
6427.60	20	400	15553.61	+0.05	$47005^{\circ}_{1\frac{1}{2}} - 62559_{2\frac{1}{2}}$	5	0.98	1.22	0.11	1.53
6423.67		5	15563.12	+0.05	$50832^{\circ}_{1\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
6416.98		7	15579.35							
6412.85		30	15589.38	+0.03	$49008^{\circ}_{3\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
6402.64		50	15614.24	+0.04	$50468^{\circ}_{5\frac{1}{2}} - 66082_{5\frac{1}{2}}$					
6397.15		2	15627.64	+0.03	$52921^{\circ}_{3\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
6396.68		1	15628.79							
6396.09		7	15630.23	+0.02	$50832^{\circ}_{1\frac{1}{2}} - 66462_{0\frac{1}{2}}$					
6393.91		3	15635.56	+0.10	$53120^{\circ}_{2\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
6393.59		8	15636.34							
6393.23	4	150	15637.22	+0.02	$45737^{\circ}_{1\frac{1}{2}} - 61374_{2\frac{1}{2}}$	4	(1.33)	1.30	0	1.26
6389.69		10	15645.89	+0.04	$44940^{\circ}_{1\frac{1}{2}} - 60586_{1\frac{1}{2}}$					
6386.84		25	15652.87	+0.07	$46169^{\circ}_{4\frac{1}{2}} - 61822_{3\frac{1}{2}}$					
6382.92	20	200	15662.48	−0.01	$43956^{\circ}_{2\frac{1}{2}} - 59618_{3\frac{1}{2}}$	7	1.00	(1.00)	0	0.99
6380.47		3	15668.50	+0.02	$52880^{\circ}_{4\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
6377.01	6	400	15677.00	+0.03	$57103^{\circ}_{3\frac{1}{2}} - 72779_{3\frac{1}{2}}$	7	(1.10)	1.10	0	1.09
6376.74	1	20	15677.66	+0.04	$48024^{\circ}_{1\frac{1}{2}} - 63702_{2\frac{1}{2}}$					
6374.81	4	80	15682.41	0.00	$47329^{\circ}_{2\frac{1}{2}} - 63011_{1\frac{1}{2}}$	5	1.01	0.81	0.10	1.31
6367.91		4	15699.40	+0.01	$58051^{\circ}_{5\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
6364.92		3	15706.77	+0.01	$56056^{\circ}_{2\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
6360.33		4	15718.11	−0.01	$62163^{\circ}_{2\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
6356.67	2	200	15727.16	+0.02	$53716^{\circ}_{2\frac{1}{2}} - 69443_{1\frac{1}{2}}$	5	(1.183)	1.16	0	1.22
6355.38	20	1000	15730.35	+0.02	$57561^{\circ}_{6\frac{1}{2}} - 73291_{5\frac{1}{2}}$	5	1.06?	(1.09)	w	0.92?
6354.39		20	15732.80	−0.01	$55221^{\circ}_{1\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
6348.05		10	15748.51	+0.02	$43075^{\circ}_{1\frac{1}{2}} - 58823_{2\frac{1}{2}}$					
6347.32		20	15750.33	+0.02	$53644^{\circ}_{3\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
6345.74	40	400	15754.25	+0.01	$43956^{\circ}_{2\frac{1}{2}} - 59710_{1\frac{1}{2}}$					
6343.54		7	15759.71	+0.03	$55462^{\circ}_{3\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
6342.65		1	15761.92							
6341.41		6	15765.00	+0.02	$54192^{\circ}_{5\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
6340.93		15	15766.20	+0.03	$60910^{\circ}_{1\frac{1}{2}} - 76676_{2\frac{1}{2}}$	7	1.10	(1.10)	0	1.10
6338.10		7	15773.24	+0.09	$65739^{\circ}_{2\frac{1}{2}} - 81512_{1\frac{1}{2}}$					
6334.20		5	15782.95	+0.06 −0.10	$47228^{\circ}_{0\frac{1}{2}} - 63011_{1\frac{1}{2}}$ $48272^{\circ}_{2\frac{1}{2}} - 64055_{2\frac{1}{2}}$					
6333.45	1	70	15784.82	−0.02	$45429^{\circ}_{3\frac{1}{2}} - 61214_{4\frac{1}{2}}$					
6324.77	40	400	15806.48	0.00	$33494^{\circ}_{3\frac{1}{2}} - 49301_{4\frac{1}{2}}$	5	0.995	1.195	0.10	1.895

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
6324.43	1	90	15807.33	0.00	$55462^{\circ}_{3\frac{1}{2}} - 71270_{2\frac{1}{2}}$	4	(0.878)	0.89	0	0.85
6313.61		1	15834.42	0.00	$52921^{\circ}_{3\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
6312.99		20	15835.98	+0.01	$62046^{\circ}_{3\frac{1}{2}} - 77882_{3\frac{1}{2}}$	7	1.14	(1.12)	0	1.13
6308.15	400	2000	15848.13	+0.01	$33052^{\circ}_{4\frac{1}{2}} - 48900_{3\frac{1}{2}}$	5	1.260	1.030	0.115	2.07
6303.91		5	15858.79	+0.01	$57798^{\circ}_{2\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
6303.27	50	400	15860.40	−0.02	$37077^{\circ}_{2\frac{1}{2}} - 52938_{1\frac{1}{2}}$	5	1.12	0.90	0.11	1.45
6300.94		8	15866.26	+0.01	$60649^{\circ}_{4\frac{1}{2}} - 76516_{4\frac{1}{2}}$					
6297.35	5	400	15875.31	+0.02	$52880^{\circ}_{4\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
6292.56		2	15887.39	+0.03	$52067^{\circ}_{0\frac{1}{2}} - 67955_{0\frac{1}{2}}$					
6292.17	2	20	15888.37	0.00	$37516^{\circ}_{3\frac{1}{2}} - 53404_{2\frac{1}{2}}$					
6291.06		5	15891.18	+0.02	$53716^{\circ}_{2\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
6285.72		3	15904.68	+0.01	$47329^{\circ}_{2\frac{1}{2}} - 63234_{2\frac{1}{2}}$					
6281.96		4	15914.20	+0.02	$49008^{\circ}_{3\frac{1}{2}} - 64923_{4\frac{1}{2}}$					
6280.60		2	15917.64	−0.02	$65739^{\circ}_{2\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
6277.08	2	150	15926.57	+0.05	$59046^{\circ}_{4\frac{1}{2}} - 74973_{3\frac{1}{2}}$	7	1.08	1.07	0	1.07
6274.78	2000	10000	15932.41	0.00	$31979^{\circ}_{3\frac{1}{2}} - 47912_{3\frac{1}{2}}$	6	1.326	1.280	0.16	1.303
6271.15	6	250	15941.63	−0.01	$45273^{\circ}_{3\frac{1}{2}} - 61214_{4\frac{1}{2}}$	4	(1.18)	1.04	*w*	0.57
6270.31	3	100	15943.77	−0.01 +0.04	$47758^{\circ}_{3\frac{1}{2}} - 63702_{2\frac{1}{2}}$ $(54192^{\circ}_{5\frac{1}{2}} - 70136_{6\frac{1}{2}})$	5	(1.08)	1.01	*w*	1.26
6269.95	1	40	15944.68	+0.01	$45429^{\circ}_{3\frac{1}{2}} - 61374_{2\frac{1}{2}}$					
6265.45	1	80	15956.13	+0.02	$51248^{\circ}_{2\frac{1}{2}} - 67204_{1\frac{1}{2}}$	7	(1.034)	1.04	0	1.02
6262.89		15	15962.65	0.00	$53644^{\circ}_{3\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
6260.79	30	1500	15968.01	+0.01	$48923^{\circ}_{7\frac{1}{2}} - 64891_{7\frac{1}{2}}$	6?	1.20	1.20	0	1.20
6250.39		1	15994.58	−0.01	$56621^{\circ}_{5\frac{1}{2}} - 72615_{5\frac{1}{2}}$					
6249.54		1	15996.75							
6248.29		20	15999.95	+0.01	$60649^{\circ}_{4\frac{1}{2}} - 76649_{5\frac{1}{2}}$					
6246.97	500	4000	16003.33	−0.03	$33494^{\circ}_{3\frac{1}{2}} - 49498_{2\frac{1}{2}}$	4	0.990	1.140	(0.08)	0.60
6245.93		6	16006.00	−0.02	$55462^{\circ}_{3\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
6244.39		1	16009.95							
6242.25	1	30	16015.43	+0.03	$59624^{\circ}_{3\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
6239.67		3	16022.06	+0.03	$52921^{\circ}_{3\frac{1}{2}} - 68943_{4\frac{1}{2}}$					
6236.13	3	150	16031.15	+0.03	$48024^{\circ}_{1\frac{1}{2}} - 64055_{2\frac{1}{2}}$	4	1.36	1.12	0.12	0.76
6234.85	3	250	16034.44	−0.01	$49916^{\circ}_{4\frac{1}{2}} - 65950_{4\frac{1}{2}}$	6	1.08	1.06	0.11	1.07
6233.37	5	250	16038.25	−0.02	$45012^{\circ}_{2\frac{1}{2}} - 61051_{3\frac{1}{2}}$	4	1.20	1.12	(0.042)	0.91
6232.02		2	16041.72	+0.01	$48556^{\circ}_{3\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
6229.36		10	16048.57	+0.02	$55221^{\circ}_{1\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
6223.63	15	500	16063.35	+0.04	$47663^{\circ}_{4\frac{1}{2}} - 63726_{4\frac{1}{2}}$	7	1.00	(1.005)	0	1.000
6216.14		9	16082.70	0.00	$52067^{\circ}_{0\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
6215.56	6	200	16084.20	−0.01	$49008^{\circ}_{3\frac{1}{2}} - 65093_{3\frac{1}{2}}$	6	1.01	0.96	0.19	0.99
6213.74		3	16088.92	−0.03	$44497^{\circ}_{2\frac{1}{2}} - 60586_{1\frac{1}{2}}$					

TABLE 6. Yb II – *Observed and classified lines* – Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
6212.28		2	16092.70	−0.01	$64365^{\circ}_{4\frac{1}{2}} - 80457_{3\frac{1}{2}}$					
6211.10		1	16095.75	−0.02	$66796^{\circ}_{3\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
6208.89	3	70	16101.48	+0.01	$45273^{\circ}_{3\frac{1}{2}} - 61374_{2\frac{1}{2}}$					
6208.10	10	500	16103.53	0.00	$50468^{\circ}_{5\frac{1}{2}} - 66571_{5\frac{1}{2}}$	6	1.22	1.20	0.09	1.21
6206.49		3	16107.71	−0.02	$58162^{\circ}_{1\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
6204.88		4	16111.89	+0.03	$59439^{\circ}_{2\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
6204.20		4	16113.66	+0.02	$56088^{\circ}_{4\frac{1}{2}} - 72202_{3\frac{1}{2}}$					
6196.01		6	16134.95	−0.02	$56480^{\circ}_{4\frac{1}{2}} - 72615_{5\frac{1}{2}}$					
6191.14		7*h*	16147.65	+0.06	$49419^{\circ}_{0\frac{1}{2}} - 65566_{0\frac{1}{2}}$					
6190.78	15	1000	16148.59	+0.01	$49727^{\circ}_{6\frac{1}{2}} - 65875_{6\frac{1}{2}}$	7	1.21	(1.205)	0	1.206
6189.03	1	90	16153.15	+0.01	$54640^{\circ}_{4\frac{1}{2}} - 70793_{5\frac{1}{2}}$					
6187.08		20	16158.24	−0.02	$52921^{\circ}_{3\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
6185.43		2	16162.55							
6184.05		1	16166.16	+0.08	$63417^{\circ}_{2\frac{1}{2}} - 79583_{2\frac{1}{2}}$					
6178.81	1	20	16179.87	−0.01 +0.04	$44940^{\circ}_{1\frac{1}{2}} - 61120_{0\frac{1}{2}}$ $75058_{2\frac{1}{2}} - 91237^{\circ}_{3\frac{1}{2}}$					
6178.63		3	16180.34	+0.01	$57103^{\circ}_{3\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
6175.58		90	16188.33	+0.02	$48272^{\circ}_{2\frac{1}{2}} - 64461_{1\frac{1}{2}}$	4	1.15	(1.176)	0	1.11
6175.36		9	16188.91	−0.01	$63417^{\circ}_{2\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
6174.70	1	60	16190.64	+0.03	$49008^{\circ}_{3\frac{1}{2}} - 65199_{4\frac{1}{2}}$					
6173.76		7	16193.10	−0.01	$66205^{\circ}_{2\frac{1}{2}} - 82398_{1\frac{1}{2}}$					
6171.63	30	300	16198.69	+0.02	$37516^{\circ}_{3\frac{1}{2}} - 53715_{3\frac{1}{2}}$	6	1.13	1.18	0.17	1.16
6169.55	100	200	16204.15	+0.03	$37516^{\circ}_{3\frac{1}{2}} - 53720_{4\frac{1}{2}}$					
6164.53		2	16217.35	−0.01	$54640^{\circ}_{4\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
6152.57	800	4000	16248.87	0.00	$33052^{\circ}_{4\frac{1}{2}} - 49301_{4\frac{1}{2}}$	6	1.262	1.190	0.336	1.23
6150.62		70*h*	16254.03							
6149.44		1	16257.14	+0.06	$47912_{3\frac{1}{2}} - 64169^{\circ}_{3\frac{1}{2}}$					
6146.91	10	400	16263.84	+0.06	$47680^{\circ}_{6\frac{1}{2}} - 63944_{5\frac{1}{2}}$	7	1.12	(1.115)	0	1.14
6146.29		3	16265.48	−0.03	$78070_{4\frac{1}{2}} - 94335^{\circ}_{5\frac{1}{2}}$					
6142.83	1	60	16274.64	+0.02	$53120^{\circ}_{2\frac{1}{2}} - 69395_{3\frac{1}{2}}$	7	(0.944)	0.94	0	0.95
6141.70		1	16277.63							
6141.05		3	16279.35	0.00	$56500^{\circ}_{3\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
6140.55		2	16280.68	+0.02	$47663^{\circ}_{4\frac{1}{2}} - 63944_{5\frac{1}{2}}$					
6135.41		2	16294.32	+0.04	$47663^{\circ}_{4\frac{1}{2}} - 63957_{3\frac{1}{2}}$					
6134.28	7	200	16297.32	+0.04	$47758^{\circ}_{3\frac{1}{2}} - 64055_{2\frac{1}{2}}$	7	1.10	(1.108)	0	1.09
6133.55		3	16299.26	+0.04	$56480^{\circ}_{4\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
6132.94		25	16300.88	+0.04	$62163^{\circ}_{2\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
6131.53	1	80	16304.63	+0.05	$61442^{\circ}_{5\frac{1}{2}} - 77747_{4\frac{1}{2}}$	5	1.11	(1.07)	*w*	1.30
6128.51		5	16312.67	+0.07	$53644^{\circ}_{3\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
6128.18	10	300	16313.54	−0.01	$46547^{\circ}_{5\frac{1}{2}} - 62861_{5\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
6127.92		10	16314.24	+0.06	$64365^{\circ}_{4\frac{1}{2}} - 80679_{5\frac{1}{2}}$					
6126.89		1	16316.98	+0.02	$58672^{\circ}_{0\frac{1}{2}} - 74989_{0\frac{1}{2}}$					
6126.39	3	100	16318.31	+0.02	$47329^{\circ}_{2\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
6124.63		3	16323.00	+0.06	$53120^{\circ}_{2\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
6123.67	1	30	16325.56	+0.05	$48272^{\circ}_{2\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
6122.98	40	250	16327.40	+0.03	$37077^{\circ}_{2\frac{1}{2}} - 53404_{2\frac{1}{2}}$	6	1.118	1.052	0.164	1.085
6121.91		9	16330.25	+0.02	$58661^{\circ}_{2\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
6120.30	5	250	16334.55							
6117.54	2	10	16341.92	+0.01	$64970^{\circ}_{3\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
6116.67	10	70	16344.24	+0.01	$31568^{\circ}_{2\frac{1}{2}} - 47912_{3\frac{1}{2}}$					
6110.13	6	200	16361.74	+0.04	$45012^{\circ}_{2\frac{1}{2}} - 61374_{2\frac{1}{2}}$	7	1.30	(1.299)	0	1.30
6108.32		2	16366.58	+0.04	$48556^{\circ}_{3\frac{1}{2}} - 64923_{4\frac{1}{2}}$					
6106.18	5	200	16372.32	0.00	$50832^{\circ}_{1\frac{1}{2}} - 67204_{1\frac{1}{2}}$	6	0.957	1.043	0.129	1.000
6105.58	1	10	16373.93	+0.05	$60910^{\circ}_{1\frac{1}{2}} - 77284_{1\frac{1}{2}}$					
6098.89		7	16391.89	+0.05 −0.05	$73750_{4\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$ $77606_{2\frac{1}{2}} - 93998^{\circ}_{1\frac{1}{2}}$					
6098.54	3	250	16392.83	+0.07	$45429^{\circ}_{3\frac{1}{2}} - 61822_{3\frac{1}{2}}$					
6096.98	1	30	16397.02	+0.04	$58661^{\circ}_{2\frac{1}{2}} - 75058_{2\frac{1}{2}}$					
6095.98		3	16399.71	+0.06	$45737^{\circ}_{1\frac{1}{2}} - 62136_{0\frac{1}{2}}$					
6089.14	20	100	16418.14	+0.05	$22960_{1\frac{1}{2}} - 39378^{\circ}_{0\frac{1}{2}}$					
6088.70	3	200	16419.32	+0.03	$48503^{\circ}_{5\frac{1}{2}} - 64923_{4\frac{1}{2}}$	7	1.11	(1.10)	0	1.16
6083.86	1	30	16432.38	+0.02	$57534^{\circ}_{3\frac{1}{2}} - 73966_{3\frac{1}{2}}$					
6083.29	5	200	16433.92	+0.04	$44940^{\circ}_{1\frac{1}{2}} - 61374_{2\frac{1}{2}}$	5	1.26	(1.299)	w	1.36
6082.37	6	500	16436.41	+0.03	$48024^{\circ}_{1\frac{1}{2}} - 64461_{1\frac{1}{2}}$	6	1.39	1.19	0.30	1.28
6082.21		10	16436.84	+0.03	$45737^{\circ}_{1\frac{1}{2}} - 62174_{1\frac{1}{2}}$					
6075.21	3	200	16455.78	+0.02	$52987^{\circ}_{1\frac{1}{2}} - 69443_{1\frac{1}{2}}$	7	1.14	(1.145)	0	1.14
6074.10		1	16458.79	+0.02	$73750_{4\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
6070.19		20	16469.39	+0.06	$49419^{\circ}_{0\frac{1}{2}} - 65888_{1\frac{1}{2}}$					
6068.64	1	60	16473.60	+0.02	$52921^{\circ}_{3\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
6063.01		4	16488.89	+0.02	$58484^{\circ}_{4\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
6059.93		3	16497.27							
6056.46	10	500	16506.72	0.00	$46354^{\circ}_{4\frac{1}{2}} - 62861_{5\frac{1}{2}}$	4	1.288	(1.140)	w	0.475
6053.61		3	16514.50	+0.05	$52880^{\circ}_{4\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
6052.88	100	900	16516.49	+0.04	$32981^{\circ}_{1\frac{1}{2}} - 49498_{2\frac{1}{2}}$	5	0.87	1.15	0.14	1.57
6052.66		250	16517.09	+0.02	$58051^{\circ}_{5\frac{1}{2}} - 74568_{4\frac{1}{2}}$					
6048.87		2	16527.44	+0.09	$56088^{\circ}_{4\frac{1}{2}} - 72615_{5\frac{1}{2}}$					
6048.18	5	50	16529.32	+0.01	$32371^{\circ}_{2\frac{1}{2}} - 48900_{3\frac{1}{2}}$					
6045.52		6	16536.60	+0.03	$48556^{\circ}_{3\frac{1}{2}} - 65093_{3\frac{1}{2}}$					
6043.45		1	16542.26	+0.05	$55221^{\circ}_{1\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
6042.22	2	100	16545.63	+0.04	$59624^{\circ}_{3\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
6040.77	15	500	16549.60	+0.04	$45273^{\circ}_{3\frac{1}{2}} - 61822_{3\frac{1}{2}}$	6	1.19	1.31	0.43	1.25

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
6038.82		9	16554.94	+0.09	$63028^{\circ}_{1\frac{1}{2}} - 79583_{2\frac{1}{2}}$					
6029.76		1	16579.82							
6024.08	40	400	16595.45	−0.01	$41688^{\circ}_{1\frac{1}{2}} - 58283_{2\frac{1}{2}}$	7	(0.784)	0.77	0	0.76
6021.92	10	400	16601.40	−0.05 +0.01	$54192^{\circ}_{5\frac{1}{2}} - 70793_{5\frac{1}{2}}$ $59632^{\circ}_{6\frac{1}{2}} - 76233_{6\frac{1}{2}}$	6	1.08	1.10	0.11	1.09
6020.55	40	400	16605.18	0.00	$41678^{\circ}_{2\frac{1}{2}} - 58283_{2\frac{1}{2}}$					
6017.70		2	16613.04	+0.01	$44438^{\circ}_{3\frac{1}{2}} - 61051_{3\frac{1}{2}}$					
6016.62	5	50	16616.03	−0.04	$46547^{\circ}_{5\frac{1}{2}} - 63163_{4\frac{1}{2}}$					
6012.51		9	16627.38	+0.01	$61442^{\circ}_{5\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
6012.16	1	15	16628.35	−0.01	$47329^{\circ}_{2\frac{1}{2}} - 63957_{3\frac{1}{2}}$					
6011.55		8	16630.04	−0.01	$43956^{\circ}_{2\frac{1}{2}} - 60586_{1\frac{1}{2}}$					
6009.56	1	10	16635.55	−0.01	$43075^{\circ}_{1\frac{1}{2}} - 59710_{1\frac{1}{2}}$					
6008.80	5	50	16637.65	−0.02	$37077^{\circ}_{2\frac{1}{2}} - 53715_{3\frac{1}{2}}$					
6007.41	20	1000	16641.50	0.00	$49916^{\circ}_{4\frac{1}{2}} - 66558_{3\frac{1}{2}}$	4	1.08	(1.100)	w	0.99
6004.015		10	16650.91	−0.03	$62163^{\circ}_{2\frac{1}{2}} - 78814_{2\frac{1}{2}}$					
6002.52	3	90	16655.06	−0.02	$49916^{\circ}_{4\frac{1}{2}} - 66571_{5\frac{1}{2}}$					
6001.05	1	30	16659.14	+0.02	$56977^{\circ}_{0\frac{1}{2}} - 73636_{0\frac{1}{2}}$	6	2.20	0.71	0.745	1.45
6000.91		8	16659.53	+0.02	$65739^{\circ}_{2\frac{1}{2}} - 82398_{1\frac{1}{2}}$					
5999.95	1	30	16662.19	−0.01	$56621^{\circ}_{5\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
5998.71		25	16665.64	−0.03	$54192^{\circ}_{5\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
5996.84		1	16670.83	+0.03	$56621^{\circ}_{5\frac{1}{2}} - 73291_{5\frac{1}{2}}$					
5993.95		1	16678.87	−0.05	$76516_{4\frac{1}{2}} - 93195^{\circ}_{3\frac{1}{2}}$					
5993.704		15	16679.55	−0.03	$56977^{\circ}_{0\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
5991.51	2000	6000	16685.66	−0.01	$35831^{\circ}_{5\frac{1}{2}} - 52517_{5\frac{1}{2}}$	6	1.213	1.260	0.26	1.236
5990.01		10	16689.84	+0.02	$51248^{\circ}_{2\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
5987.91	15	500	16695.69	−0.03	$48503^{\circ}_{5\frac{1}{2}} - 65199_{4\frac{1}{2}}$					
5986.78	1	40	16698.84	+0.01	$59624^{\circ}_{3\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
5985.35	20	300	16702.83	−0.03 +0.03	$43007^{\circ}_{0\frac{1}{2}} - 59710_{1\frac{1}{2}}$ $(66189^{\circ}_{1\frac{1}{2}} - 82891_{2\frac{1}{2}})$	5	0.16	0.82	0.32	1.15
5978.11		10	16723.06	−0.02	$56056^{\circ}_{2\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
5976.93		2	16726.36	−0.02	$47329^{\circ}_{2\frac{1}{2}} - 64055_{2\frac{1}{2}}$					
5973.49	2	20	16736.00	−0.03	$57534^{\circ}_{3\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
5972.29		1	16739.36	+0.01	$55462^{\circ}_{3\frac{1}{2}} - 72202_{3\frac{1}{2}}$					
5972.02		2	16740.12	−0.02	$59777^{\circ}_{1\frac{1}{2}} - 76517_{1\frac{1}{2}}$					
5970.26		5	16745.05	+0.03	$46902^{\circ}_{0\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
5964.12		1	16762.29	+0.02	$59753^{\circ}_{5\frac{1}{2}} - 76516_{4\frac{1}{2}}$					
5961.83	1	60	16768.73	−0.06	$62046^{\circ}_{3\frac{1}{2}} - 78814_{2\frac{1}{2}}$	4	1.15	(1.22)	w	0.99
5959.03		7	16776.61	−0.02	$44438^{\circ}_{3\frac{1}{2}} - 61214_{4\frac{1}{2}}$					
5956.86		7	16782.72	−0.07 +0.01	$69443_{1\frac{1}{2}} - 86226^{\circ}_{1\frac{1}{2}}$ $56500^{\circ}_{3\frac{1}{2}} - 73283_{4\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
5950.93	5	250	16799.44	−0.02	$60649^{\circ}_{4\frac{1}{2}} - 77449_{3\frac{1}{2}}$	7?	1.13	(1.16)	w	1.03
5949.83		20	16802.55	−0.03	$56480^{\circ}_{4\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
5948.98		5	16804.95	+0.03	$65594^{\circ}_{2\frac{1}{2}} - 82398_{1\frac{1}{2}}$					
5947.26	15	500	16809.81	+0.02	$45012^{\circ}_{2\frac{1}{2}} - 61822_{3\frac{1}{2}}$	5	1.32	(1.327)	0	1.34
5946.00	40	2000	16813.37	+0.02	$53322^{\circ}_{7\frac{1}{2}} - 70136_{6\frac{1}{2}}$	4	1.01	1.07	(0.03)	0.61
5944.63	1	10	16817.25	0.00	$56840^{\circ}_{1\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
5943.55	5	200	16820.30	−0.07	$48272^{\circ}_{2\frac{1}{2}} - 65093_{3\frac{1}{2}}$					
5943.05	20	250	16821.72	−0.01	$45737^{\circ}_{1\frac{1}{2}} - 62559_{2\frac{1}{2}}$					
5941.29		2	16826.70	−0.04	$58162^{\circ}_{1\frac{1}{2}} - 74989_{0\frac{1}{2}}$					
5940.63		1	16828.57	−0.04	$58162^{\circ}_{1\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
5939.35	2	8	16832.20							
5938.15	1	10	16835.60	0.00	$72779_{3\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$					
5936.68		20	16839.77	+0.03	$47758^{\circ}_{3\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
5935.05	20	1000	16844.39	0.00	$49727^{\circ}_{6\frac{1}{2}} - 66571_{5\frac{1}{2}}$	5	1.20	(1.19)	0	1.24
5934.01		1	16847.34	−0.07	$40917^{\circ}_{4\frac{1}{2}} - 57765_{4\frac{1}{2}}$					
5929.77		10	16859.39	0.00	$73283_{4\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
5928.24		2	16863.74	−0.05	$57103^{\circ}_{3\frac{1}{2}} - 73966_{3\frac{1}{2}}$					
5920.98		2	16884.42	+0.01	$59439^{\circ}_{2\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
5920.38	5	300	16886.13	−0.01	$51248^{\circ}_{2\frac{1}{2}} - 68135_{2\frac{1}{2}}$	6	1.029	1.081	(0.128)	1.06
5919.10		7	16889.78	−0.03	$58661^{\circ}_{2\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
5916.95		2	16895.92	−0.04	$59753^{\circ}_{5\frac{1}{2}} - 76649_{5\frac{1}{2}}$					
5914.912	2	20	16901.74	+0.03	$51248^{\circ}_{2\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
5909.33	2	10	16917.70	−0.02	$73291_{5\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
5908.36	400	1500	16920.48	−0.03	$31979^{\circ}_{3\frac{1}{2}} - 48900_{3\frac{1}{2}}$	6	1.335	1.045	1.015	1.190
5906.33		2	16926.30	−0.02	$73283_{4\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
5903.38	3	90	16934.76	0.00	$47663^{\circ}_{4\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
5902.80		3	16936.42	−0.04	$44438^{\circ}_{3\frac{1}{2}} - 61374_{2\frac{1}{2}}$					
5900.85		20	16942.02	0.00 +0.01	$49008^{\circ}_{3\frac{1}{2}} - 65950_{4\frac{1}{2}}$ $65149^{\circ}_{0\frac{1}{2}} - 82091_{0\frac{1}{2}}$					
5898.77	15	800	16947.99	+0.01	$50468^{\circ}_{5\frac{1}{2}} - 67416_{4\frac{1}{2}}$	4	1.21	1.25	(0.021)	1.02
5897.21	50	2500	16952.47	0.00	$48923^{\circ}_{7\frac{1}{2}} - 65875_{6\frac{1}{2}}$	7	1.20	(1.205)	0	1.174
5896.63		6*d*	16954.14							
5892.30		2	16966.60	−0.04	$73750_{4\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
5888.02		4	16978.93	0.00	$58661^{\circ}_{2\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
5882.80	100	600	16994.00	−0.01	$46169^{\circ}_{4\frac{1}{2}} - 63163_{4\frac{1}{2}}$					
5874.67	2	200	17017.52	−0.07	$59632^{\circ}_{6\frac{1}{2}} - 76649_{5\frac{1}{2}}$	7			0	1.08
5873.12		10	17022.01	+0.01	$59777^{\circ}_{1\frac{1}{2}} - 76799_{1\frac{1}{2}}$					
5872.15		1	17024.82	+0.04	$76170_{2\frac{1}{2}} - 93195^{\circ}_{3\frac{1}{2}}$					
5868.94		7	17034.13	0.00	$57534^{\circ}_{3\frac{1}{2}} - 74568_{4\frac{1}{2}}$					

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TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zeeman type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
5868.34	2	100	17035.87	0.00 −0.01	$52921^{\circ}_{3\frac{1}{2}} - 69957_{4\frac{1}{2}}$ $(64169^{\circ}_{3\frac{1}{2}} - 81205_{4\frac{1}{2}})$	4	1.14	(1.112)	w	1.00
5866.69		6	17040.66	−0.02	$63417^{\circ}_{2\frac{1}{2}} - 80457_{3\frac{1}{2}}$					
5866.48		1	17041.27	−0.01	$52987^{\circ}_{1\frac{1}{2}} - 70029_{0\frac{1}{2}}$					
5865.63	1	70	17043.74	+0.01	$49419^{\circ}_{0\frac{1}{2}} - 66462_{0\frac{1}{2}}$	6	1.42	1.12	0.15	1.27
5863.86		3	17048.89							
5863.37		1	17050.31	−0.05	$47005^{\circ}_{1\frac{1}{2}} - 64055_{2\frac{1}{2}}$					
5862.90	1	15	17051.68	+0.03	$59624^{\circ}_{3\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
5854.89		3	17075.01							
5854.30	5	70	17076.73	−0.01	$52880^{\circ}_{4\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
5853.84		3	17078.07	−0.06	$59439^{\circ}_{2\frac{1}{2}} - 76517_{1\frac{1}{2}}$					
5852.92		5	17080.75	−0.01	$62046^{\circ}_{3\frac{1}{2}} - 79126_{4\frac{1}{2}}$					
5847.18	1	40	17097.52	−0.02	$60649^{\circ}_{4\frac{1}{2}} - 77747_{4\frac{1}{2}}$	6	1.10	1.08	0.08	1.09
5839.56		1	17119.83							
5838.62	2	70	17122.59	+0.01	$50832^{\circ}_{1\frac{1}{2}} - 67955_{0\frac{1}{2}}$	5	(0.956)	0.90	0	0.98
5837.14	600	4000	17126.93	−0.01	$32371^{\circ}_{2\frac{1}{2}} - 49498_{2\frac{1}{2}}$	6	1.172	1.148	0.06	1.160
5836.18	1	50	17129.75	0.00	$56621^{\circ}_{5\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
5835.53	1	30	17131.65	+0.01	$47329^{\circ}_{2\frac{1}{2}} - 64461_{1\frac{1}{2}}$					
5833.99	5*h*	200*h*	17136.18							
5831.58		5	17143.26	0.00	$64169^{\circ}_{3\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
5831.04		15	17144.85	0.00	$41678^{\circ}_{2\frac{1}{2}} - 58823_{2\frac{1}{2}}$					
5828.49		1	17152.35	+0.02	$65739^{\circ}_{2\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
5824.33	2	50	17164.60	+0.03	$47758^{\circ}_{3\frac{1}{2}} - 64923_{4\frac{1}{2}}$	7	1.09	(1.10)	0	1.14
5823.36		2	17167.46	0.00	$57103^{\circ}_{3\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
5819.99		3	17177.40							
5819.41	50	1500	17179.11	0.00	$46547^{\circ}_{5\frac{1}{2}} - 63726_{4\frac{1}{2}}$	4	0.98	(1.005)	w	0.84w
5814.76		2	17192.85	0.00	$57798^{\circ}_{2\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
5813.58	3	40	17196.34	+0.01	$44940^{\circ}_{1\frac{1}{2}} - 62136_{0\frac{1}{2}}$	5	1.26	0.08	0.59	1.85
5811.90	1	40	17201.31	+0.06	$51248^{\circ}_{2\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
5811.13	1	20	17203.59	+0.03	$56088^{\circ}_{4\frac{1}{2}} - 73291_{5\frac{1}{2}}$					
5808.66	3	120	17210.90	0.00	$47680^{\circ}_{6\frac{1}{2}} - 64891_{7\frac{1}{2}}$					
5807.86		30	17213.27	−0.02	$53644^{\circ}_{3\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
5807.51	1	7	17214.31	−0.03	$59624^{\circ}_{3\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
5801.50		8	17232.14	+0.02 −0.04	$47228^{\circ}_{0\frac{1}{2}} - 64461_{1\frac{1}{2}}$ $60649^{\circ}_{4\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
5801.13	1	15	17233.24	0.00	$58672^{\circ}_{0\frac{1}{2}} - 75905_{0\frac{1}{2}}$					
5801.04	1	10	17233.51	+0.02	$44940^{\circ}_{1\frac{1}{2}} - 62174_{1\frac{1}{2}}$					
5799.57	1	40	17237.88	−0.01	$53716^{\circ}_{2\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
5792.28	1	10	17259.57	−0.02 −0.03	$47663^{\circ}_{4\frac{1}{2}} - 64923_{4\frac{1}{2}}$ $57798^{\circ}_{2\frac{1}{2}} - 75058_{2\frac{1}{2}}$					
5789.17	2	50	17268.84	0.00	$47329^{\circ}_{2\frac{1}{2}} - 64598_{3\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
5788.74	1	15	17270.13	0.00	$56480^{\circ}_{4\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
5786.59	20	150	17276.54	−0.06	$59046^{\circ}_{4\frac{1}{2}} - 76323_{3\frac{1}{2}}$	5	1.08	(1.02)	w	1.30
5777.95	3	100	17302.38	+0.03	$50832^{\circ}_{1\frac{1}{2}} - 68135_{2\frac{1}{2}}$	5	(0.956)	1.08	w	1.27
5777.29	1	10	17304.35	+0.01	$48272_{2\frac{1}{2}} - 65577_{3\frac{1}{2}}$					
5775.61	1	50	17309.39	+0.01	$53644^{\circ}_{3\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
5772.76		3	17317.93	+0.01	$50832^{\circ}_{1\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
5771.66	500	2000	17321.23	−0.03	$31979^{\circ}_{3\frac{1}{2}} - 49301_{4\frac{1}{2}}$	4	1.32	1.19	(0.066)	0.72
5769.44		6	17327.90	−0.02	$64365^{\circ}_{4\frac{1}{2}} - 81692_{3\frac{1}{2}}$					
5767.95	3	30	17332.38	+0.05	$31568^{\circ}_{2\frac{1}{2}} - 48900_{3\frac{1}{2}}$					
5767.20	20	800	17334.63	+0.03	$47758^{\circ}_{3\frac{1}{2}} - 65093_{3\frac{1}{2}}$	6	1.073	0.968	0.37	1.020
5764.65	1	40	17342.30	+0.02	$49008^{\circ}_{3\frac{1}{2}} - 66351_{2\frac{1}{2}}$					
5760.18	30	20	17355.76	0.00	$24332_{2\frac{1}{2}} - 41688^{\circ}_{1\frac{1}{2}}$					
5757.84	2	15	17362.81	+0.06	$72779_{3\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
5754.80	2	70	17371.98	+0.03	$48503^{\circ}_{5\frac{1}{2}} - 65875_{6\frac{1}{2}}$					
5753.57	1	25	17375.69	+0.04 −0.06	$52067^{\circ}_{0\frac{1}{2}} - 69443_{1\frac{1}{2}}$ $76170_{2\frac{1}{2}} - 93546^{\circ}_{2\frac{1}{2}}$					
5750.62		8	17384.61	+0.06	$44438^{\circ}_{3\frac{1}{2}} - 61822_{3\frac{1}{2}}$					
5749.91[a]	1000	400	17386.75	−0.04	$49008^{\circ}_{3\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
5746.703		3	17396.46	0.00	$46547^{\circ}_{5\frac{1}{2}} - 63944_{5\frac{1}{2}}$					
5746.36	1	15	17397.50	+0.04	$53716^{\circ}_{2\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
5741.75		2	17411.46	+0.06	$41678^{\circ}_{2\frac{1}{2}} - 59090_{3\frac{1}{2}}$					
5738.82		5	17420.35	+0.02	$60649^{\circ}_{4\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
5737.09		20	17425.61	+0.02 +0.05	$73291_{5\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$ $75550_{2\frac{1}{2}} - 92976^{\circ}_{3\frac{1}{2}}$					
5735.773	10	600	17429.61	−0.01 −0.07	$47663^{\circ}_{4\frac{1}{2}} - 65093_{3\frac{1}{2}}$ $(72779_{3\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}})$	7	0.98	(0.973)	0	1.00
5735.50		5	17430.44	0.00	$56840^{\circ}_{1\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
5734.26		3	17434.21	+0.02	$73283_{4\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
5731.69		3	17442.02	−0.01	$62163^{\circ}_{2\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
5730.001	20	1500	17447.16	+0.03 −0.02	$48503^{\circ}_{5\frac{1}{2}} - 65950_{4\frac{1}{2}}$ $(74568_{4\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}})$	5	1.10	(1.08)	w	1.22
5727.21		5	17455.67	+0.05	$47005^{\circ}_{1\frac{1}{2}} - 64461_{1\frac{1}{2}}$					
5726.49		2	17457.86	+0.06	$79628_{3\frac{1}{2}} - 97086^{\circ}_{4\frac{1}{2}}$					
5724.21		3	17464.81	+0.02	$62163^{\circ}_{2\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
5722.743		8	17469.29	+0.07	$59046^{\circ}_{4\frac{1}{2}} - 76516_{4\frac{1}{2}}$					
5717.25	10	300	17486.08	+0.04	$56480^{\circ}_{4\frac{1}{2}} - 73966_{3\frac{1}{2}}$	7	0.75	(0.763)	0	0.72
5716.70		2	17487.76	+0.02	$64169^{\circ}_{3\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
5713.73	20	500	17496.85	+0.03	$45737^{\circ}_{1\frac{1}{2}} - 63234_{2\frac{1}{2}}$	4	(1.33)	1.21	w	1.03
5713.270	4	15	17498.26	+0.04	$35019^{\circ}_{4\frac{1}{2}} - 52517_{5\frac{1}{2}}$					
5712.844		15	17499.56	+0.03	$49916^{\circ}_{4\frac{1}{2}} - 67416_{4\frac{1}{2}}$					

TABLE 6. Yb II – *Observed and classified lines* – Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
5710.733		25	17506.03	+0.05	$53716^{\circ}_{2\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
5710.403	1	15	17507.04	+0.09	$59777^{\circ}_{1\frac{1}{2}} - 77284_{1\frac{1}{2}}$					
5709.715		2	17509.15	+0.03	$58661^{\circ}_{2\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
5706.773	10	100	17518.18	+0.04	$31979^{\circ}_{3\frac{1}{2}} - 49498_{2\frac{1}{2}}$					
5704.98	2	70	17523.68	+0.02	$57534^{\circ}_{3\frac{1}{2}} - 75058_{2\frac{1}{2}}$	5	0.81	(0.76)	w	0.92
5704.14		3	17526.26	+0.02	$45335^{\circ}_{4\frac{1}{2}} - 62861_{5\frac{1}{2}}$					
5699.02		15	17542.01	−0.01	$48024^{\circ}_{1\frac{1}{2}} - 65566_{0\frac{1}{2}}$					
5697.65		2	17546.23	0.00	$45012^{\circ}_{2\frac{1}{2}} - 62559_{2\frac{1}{2}}$					
5696.717		5	17549.10	+0.03	$49008^{\circ}_{3\frac{1}{2}} - 66558_{3\frac{1}{2}}$					
5695.22		2	17553.71	+0.08	$53716^{\circ}_{2\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
5694.906		15	17554.68	+0.06	$60910^{\circ}_{1\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
5694.13		1	17557.07	+0.02	$46169^{\circ}_{4\frac{1}{2}} - 63726_{4\frac{1}{2}}$					
5693.694	10	400	17558.42	+0.05	$46902^{\circ}_{0\frac{1}{2}} - 64461_{1\frac{1}{2}}$	7	1.25	(1.176)	0	1.14
5689.67	3	70	17570.84	+0.05	$41688^{\circ}_{1\frac{1}{2}} - 59259_{2\frac{1}{2}}$					
5687.14	1*d*	20*d*	17578.65	−0.02	$43007^{\circ}_{0\frac{1}{2}} - 60586_{1\frac{1}{2}}$					
5686.53	80	800	17580.54	+0.03	$41678^{\circ}_{2\frac{1}{2}} - 59259_{2\frac{1}{2}}$	6	1.12	1.06	0.17	1.09
5685.832	1	9	17582.70	+0.06	$62046^{\circ}_{3\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
5683.56	10	300	17589.73	+0.10 −0.07	$46354^{\circ}_{4\frac{1}{2}} - 63944_{5\frac{1}{2}}$ $(76839_{2\frac{1}{2}} - 94428^{\circ}_{1\frac{1}{2}})$					
5679.270	1	15	17603.01	+0.10	$59046^{\circ}_{4\frac{1}{2}} - 76649_{5\frac{1}{2}}$?					
5679.180	2	8	17603.29	+0.04	$46354^{\circ}_{4\frac{1}{2}} - 63957_{3\frac{1}{2}}$					
5675.180	2	50	17615.70	+0.01	$48272^{\circ}_{2\frac{1}{2}} - 65888_{1\frac{1}{2}}$					
5674.31	10	150	17618.40	−0.01	$44940^{\circ}_{1\frac{1}{2}} - 62559_{2\frac{1}{2}}$	7	(1.244)	1.22	0	1.18
5672.37		2	17624.42	+0.01	$65739^{\circ}_{2\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
5672.16		8	17625.08	−0.04	$53644^{\circ}_{3\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
5665.34		1	17646.29	+0.02	$66571_{5\frac{1}{2}} - 84217^{\circ}_{4\frac{1}{2}}$					
5660.152		4	17662.47	−0.04	$56088^{\circ}_{4\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
5654.27	2	150	17680.84	+0.01	$50468^{\circ}_{5\frac{1}{2}} - 68148_{5\frac{1}{2}}$	7	(1.213)	1.19	0	1.20
5653.24	3	200	17684.06	+0.05 −0.05	$61442^{\circ}_{5\frac{1}{2}} - 79126_{4\frac{1}{2}}$ $78070_{4\frac{1}{2}} - 95754^{\circ}_{5\frac{1}{2}}$	7			0	1.14
5651.985	1000	4000	17687.99	+0.01	$30224^{\circ}_{4\frac{1}{2}} - 47912_{3\frac{1}{2}}$	4	0.93	1.29	0.18	−0.36
5637.812	80	600	17732.46	+0.06	$34784^{\circ}_{5\frac{1}{2}} - 52517_{5\frac{1}{2}}$	6	1.11	1.26	0.84	1.18
5637.33	1	6	17733.97	0.00	$45429^{\circ}_{3\frac{1}{2}} - 63163_{4\frac{1}{2}}$					
5634.45		1	17743.04	+0.02	$58162^{\circ}_{1\frac{1}{2}} - 75905_{0\frac{1}{2}}$					
5631.496	2	90	17752.34	+0.02 −0.09	$53716^{\circ}_{2\frac{1}{2}} - 71468_{2\frac{1}{2}}$ $57798^{\circ}_{2\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
5627.89	4	200	17763.72	+0.02	$47329^{\circ}_{2\frac{1}{2}} - 65093_{3\frac{1}{2}}$	7	(0.990)	0.99	0	0.99
5624.494		10	17774.44	+0.04	$46169^{\circ}_{4\frac{1}{2}} - 63944_{5\frac{1}{2}}$					
5620.88	1	70	17785.87	+0.03	$49419^{\circ}_{0\frac{1}{2}} - 67204_{1\frac{1}{2}}$					
5620.19	50	700	17788.05	+0.03	$46169^{\circ}_{4\frac{1}{2}} - 63957_{3\frac{1}{2}}$	4	1.09	(1.148)	w	0.88

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
5618.55		1	17793.25							
5609.89		1	17820.71	+0.04	$55462^{\circ}_{3\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
5608.914	1	50	17823.82	+0.01	$53644^{\circ}_{3\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
5608.64		2	17824.69	+0.03	$59624^{\circ}_{3\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
5607.91		1	17827.01							
5607.345	10	150	17828.80	+0.04	$45335^{\circ}_{4\frac{1}{2}} - 63163_{4\frac{1}{2}}$					
5607.124		4	17829.51	0.00	$59777^{\circ}_{1\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
5606.64		1	17831.04	+0.02	$51248^{\circ}_{2\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
5604.145		9	17838.98	+0.03	$58484^{\circ}_{4\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
5602.35	2	20	17844.70	+0.02	$58672^{\circ}_{0\frac{1}{2}} - 76517_{1\frac{1}{2}}$					
5602.264	3	40	17844.97	+0.03	$59439^{\circ}_{2\frac{1}{2}} - 77284_{1\frac{1}{2}}$					
5588.452	500	4000	17889.08	+0.05	$35831^{\circ}_{5\frac{1}{2}} - 53720_{4\frac{1}{2}}$					
5585.248		20	17899.34	−0.01	$64191^{\circ}_{1\frac{1}{2}} - 82091_{0\frac{1}{2}}$					
5583.57		1	17904.72	0.00	$60910^{\circ}_{1\frac{1}{2}} - 78814_{2\frac{1}{2}}$					
5582.236		2	17909.00	−0.01	$70793_{5\frac{1}{2}} - 88702^{\circ}_{5\frac{1}{2}}$					
5581.778		8	17910.47	+0.03	$45737^{\circ}_{1\frac{1}{2}} - 63467_{1\frac{1}{2}}$					
5581.05	2	40	17912.80							
5580.79	20	700	17913.64	+0.05	$47663^{\circ}_{4\frac{1}{2}} - 65577_{3\frac{1}{2}}$					
5578.483		4	17921.04	−0.02	$64970^{\circ}_{3\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
5575.705	10	100	17929.97	+0.01	$31568^{\circ}_{2\frac{1}{2}} - 49498_{2\frac{1}{2}}$					
5573.64		1	17936.62	+0.06	$52921^{\circ}_{3\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
5572.528	30	300	17940.20	+0.03	$41678^{\circ}_{2\frac{1}{2}} - 59618_{3\frac{1}{2}}$					
5566.04		3	17961.11	+0.02 −0.06	$45273^{\circ}_{3\frac{1}{2}} - 63234_{2\frac{1}{2}}$ $52067^{\circ}_{0\frac{1}{2}} - 70029_{0\frac{1}{2}}$					
5564.352		3	17966.56	+0.05	$52987^{\circ}_{1\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
5559.58		1	17981.98	+0.06	$59624^{\circ}_{3\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
5554.30		4	17999.07	+0.01	$45012^{\circ}_{2\frac{1}{2}} - 63011_{1\frac{1}{2}}$					
5551.69		2	18007.53	+0.03	$58162^{\circ}_{1\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
5550.37		7	18011.81	+0.03	$56977^{\circ}_{0\frac{1}{2}} - 74989_{0\frac{1}{2}}$					
5549.79		20	18013.70	+0.03 +0.05	$68135_{2\frac{1}{2}} - 86148^{c}_{2\frac{1}{2}}$ $56977^{\circ}_{0\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
5549.32		1	18015.22	+0.04	$58661^{\circ}_{2\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
5548.918		50	18016.53	+0.04	$57534^{\circ}_{3\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
5547.16	50	500	18022.24	+0.04 +0.06	$41688^{\circ}_{1\frac{1}{2}} - 59710_{1\frac{1}{2}}$ $49916^{\circ}_{4\frac{1}{2}} - 67938_{3\frac{1}{2}}$	7			0	0.75
5544.17		1*h*	18031.96	+0.04	$41678^{\circ}_{2\frac{1}{2}} - 59710_{1\frac{1}{2}}$					
5543.96		8	18032.64	−0.01	$52921^{\circ}_{3\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
5540.03		10	18045.43	+0.03	$43075^{\circ}_{1\frac{1}{2}} - 61120_{0\frac{1}{2}}$					
5533.21		7	18067.67	−0.09	$48503^{\circ}_{5\frac{1}{2}} - 66571_{5\frac{1}{2}}$					
5533.14		10	18067.90	−0.04	$56500^{\circ}_{3\frac{1}{2}} - 74568_{4\frac{1}{2}}$					
5532.111		3	18071.26	+0.02	$44940^{\circ}_{1\frac{1}{2}} - 63011_{1\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
5530.73	1	1	18075.78	+0.04	$68150_{1\frac{1}{2}} - 86226^{\circ}_{1\frac{1}{2}}$					
5529.92	4	150	18078.42	−0.02	$48272^{\circ}_{2\frac{1}{2}} - 66351_{2\frac{1}{2}}$	7	1.12	(1.125)	0	1.12
5529.08	5	250	18081.17	−0.01	$50468^{\circ}_{5\frac{1}{2}} - 68549_{4\frac{1}{2}}$	5	1.21	(1.157)	w	1.44
5521.61		3	18105.63	+0.02	$57534^{\circ}_{3\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
5520.22	1	50	18110.19	−0.04	$59777^{\circ}_{1\frac{1}{2}} - 77887_{0\frac{1}{2}}$	4	1.63	2.21	0.29	1.34
5519.83		2	18111.47							
5516.334		10	18122.95	0.00	$48272^{\circ}_{2\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
5515.38		3	18126.08	0.00	$52987^{\circ}_{1\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
5511.764	1	30	18137.97	+0.03	$58661^{\circ}_{2\frac{1}{2}} - 76799_{1\frac{1}{2}}$	7	(0.86)	0.83	0	0.90
5511.401	2	70	18139.17	0.00	$54640^{\circ}_{4\frac{1}{2}} - 72779_{3\frac{1}{2}}$				0	1.20
5509.198		20	18146.42	+0.08	$51248^{\circ}_{2\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
5509.046		3	18146.92	+0.03 +0.05	$71468_{2\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$ $76676_{2\frac{1}{2}} - 94823^{\circ}_{1\frac{1}{2}}$					
5508.266		20	18149.49	+0.04 +0.06	$56840^{\circ}_{1\frac{1}{2}} - 74989_{0\frac{1}{2}}$ $(53120^{\circ}_{2\frac{1}{2}} - 71270_{2\frac{1}{2}})$	5	0.83	0.27	0.28?	1.11
5507.70		1	18151.36	+0.04	$56840^{\circ}_{1\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
5502.802	1	10	18167.51	+0.01	$59439^{\circ}_{2\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
5501.37	2	20	18172.24	+0.02	$40917^{\circ}_{4\frac{1}{2}} - 59090_{3\frac{1}{2}}$					
5499.65		2	18177.93	+0.06	$58661^{\circ}_{2\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
5498.390		3	18182.09	0.00	$58051^{\circ}_{5\frac{1}{2}} - 76233_{6\frac{1}{2}}$					
5494.58		1	18194.70	+0.04	$51248^{\circ}_{2\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
5494.364	1	10	18195.41	+0.04	$47680^{\circ}_{6\frac{1}{2}} - 65875_{6\frac{1}{2}}$					
5490.847		3	18207.07	+0.06	$64191^{\circ}_{1\frac{1}{2}} - 82398_{1\frac{1}{2}}$					
5488.883		8	18213.58	+0.01	$56056^{\circ}_{2\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
5487.512	1	9	18218.13	+0.06	$56840^{\circ}_{1\frac{1}{2}} - 75058_{2\frac{1}{2}}$					
5486.535	7	150	18221.38	+0.06	$45012^{\circ}_{2\frac{1}{2}} - 63234_{2\frac{1}{2}}$	6	1.286	1.214	0.18	1.25
5483.212		3	18232.42	+0.04	$49916^{\circ}_{4\frac{1}{2}} - 68148_{5\frac{1}{2}}$					
5479.806	1	50	18243.75	+0.02	$46354^{\circ}_{4\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
5479.122		2*d*	18246.03							
5478.50	100	1500	18248.10	+0.01	$40035^{\circ}_{3\frac{1}{2}} - 58283_{2\frac{1}{2}}$	4	(0.72)	0.77	w	0.60
5477.206		9	18252.41	+0.02	$50468^{\circ}_{5\frac{1}{2}} - 68720_{6\frac{1}{2}}$					
5475.706		10	18257.41	+0.03	$59624^{\circ}_{3\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
5475.132		4	18259.33							
5471.17	30	400	18272.55	+0.05	$45429^{\circ}_{3\frac{1}{2}} - 63702_{2\frac{1}{2}}$	5	1.15	1.08	(0.036)	1.33
5468.260		3	18282.27	+0.02	$52987^{\circ}_{1\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
5467.495	1	9	18284.83							
5466.714	1	25	18287.44	+0.01	$47663^{\circ}_{4\frac{1}{2}} - 65950_{4\frac{1}{2}}$					
5464.894	6	200	18293.53	+0.03 −0.03	$44940^{\circ}_{1\frac{1}{2}} - 63234_{2\frac{1}{2}}$ $(47912_{3\frac{1}{2}} - 66205^{\circ}_{2\frac{1}{2}})$	7	1.21	(1.208)	0	1.21

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
5463.850		3	18297.03	+0.02	$45429^{\circ}_{3\frac{1}{2}}-63726_{4\frac{1}{2}}$					
5463.12		10	18299.47	−0.06 +0.07	$42915^{\circ}_{5\frac{1}{2}}-61214_{4\frac{1}{2}}$ $43075^{\circ}_{1\frac{1}{2}}-61374_{2\frac{1}{2}}$					
5458.088	2	60	18316.34	−0.01	$59753^{\circ}_{5\frac{1}{2}}-78070_{4\frac{1}{2}}$					
5457.427	4	150	18318.56	+0.03	$45737^{\circ}_{1\frac{1}{2}}-64055_{2\frac{1}{2}}$					
5455.046	5	250	18326.56	+0.05	$48024^{\circ}_{1\frac{1}{2}}-66351_{2\frac{1}{2}}$	4	1.365	1.119	0.123	0.75
5449.84		1	18344.06							
5449.270	500	2500	18345.98	+0.02	$35059^{\circ}_{3\frac{1}{2}}-53404_{2\frac{1}{2}}$	5	(1.124)	1.04	w	1.33
5448.565		4	18348.36	−0.03	$52921^{\circ}_{3\frac{1}{2}}-71270_{2\frac{1}{2}}$					
5445.492	1	40	18358.71	+0.03	$51248^{\circ}_{2\frac{1}{2}}-69607_{2\frac{1}{2}}$					
5441.615	2	5	18371.79	+0.05	$57798^{\circ}_{2\frac{1}{2}}-76170_{2\frac{1}{2}}$					
5440.548	10	200	18375.39	0.00	$46547^{\circ}_{5\frac{1}{2}}-64923_{4\frac{1}{2}}$					
5435.27		6	18393.24	+0.10 +0.01	$64970^{\circ}_{3\frac{1}{2}}-83363_{3\frac{1}{2}}$ $71222_{3\frac{1}{2}}-89615^{\circ}_{2\frac{1}{2}}$					
5432.71	60	1500	18401.91	+0.06	$47680^{\circ}_{6\frac{1}{2}}-66082_{5\frac{1}{2}}$	4	1.12	(1.141)	0	0.985
5431.167	2	80	18407.13	+0.03	$49008^{\circ}_{3\frac{1}{2}}-67416_{4\frac{1}{2}}$					
5429.838		8	18411.64	0.00	$62046^{\circ}_{3\frac{1}{2}}-80457_{3\frac{1}{2}}$					
5426.867	30	900	18421.72	+0.03	$49727^{\circ}_{6\frac{1}{2}}-68148_{5\frac{1}{2}}$	7	(1.20)	1.20	0	1.175
5424.627	30	300	18429.32	+0.02	$45273^{\circ}_{3\frac{1}{2}}-63702_{2\frac{1}{2}}$	5	1.20	1.08	(0.06)	1.51
5422.715		1	18435.82	−0.01	$55221^{\circ}_{1\frac{1}{2}}-73657_{1\frac{1}{2}}$					
5420.608		7	18442.99	+0.03	$59439^{\circ}_{2\frac{1}{2}}-77882_{3\frac{1}{2}}$					
5417.421		9	18453.84	+0.03	$45273^{\circ}_{3\frac{1}{2}}-63726_{4\frac{1}{2}}$					
5414.258	6	200	18464.62	+0.02	$58051^{\circ}_{5\frac{1}{2}}-76516_{4\frac{1}{2}}$	7	0.98	(1.01)	0	0.87
5411.038	1	40	18475.61	+0.01	$50468^{\circ}_{5\frac{1}{2}}-68943_{4\frac{1}{2}}$					
5410.635		15	18476.98	+0.01	$60649^{\circ}_{4\frac{1}{2}}-79126_{4\frac{1}{2}}$					
5409.473	2	60	18480.95	+0.01	$52987^{\circ}_{1\frac{1}{2}}-71468_{2\frac{1}{2}}$	4	(1.13)	1.02	w	0.86
5408.092		4	18485.67	+0.02	$53716^{\circ}_{2\frac{1}{2}}-72202_{3\frac{1}{2}}$					
5402.706		3	18504.10	−0.03	$55462^{\circ}_{3\frac{1}{2}}-73966_{3\frac{1}{2}}$					
5399.71	50	500	18514.37	+0.03	$44497^{\circ}_{2\frac{1}{2}}-63011_{1\frac{1}{2}}$	7	(0.734)	0.78	0	0.67
5397.23		1	18522.87							
5395.73	20	300	18528.02	+0.04	$45429^{\circ}_{3\frac{1}{2}}-63957_{3\frac{1}{2}}$	7	(1.150)	1.17	0	1.16
5394.084		3	18533.68	+0.07	$49916^{\circ}_{4\frac{1}{2}}-68450_{3\frac{1}{2}}$					
5393.37	5	150	18536.13	+0.03	$49419^{\circ}_{0\frac{1}{2}}-67955_{0\frac{1}{2}}$	6	1.40	0.90	0.25	1.15
5390.18		6	18547.10	+0.02	$52921^{\circ}_{3\frac{1}{2}}-71468_{2\frac{1}{2}}$					
5389.84	200	800	18548.27	+0.02	$34389^{\circ}_{2\frac{1}{2}}-52938_{1\frac{1}{2}}$	5	(1.007)	0.90	w	1.17
5386.72	1	50	18559.01	−0.01	$47329^{\circ}_{2\frac{1}{2}}-65888_{1\frac{1}{2}}$					
5386.07		10	18561.25	−0.01	$47005^{\circ}_{1\frac{1}{2}}-65566_{0\frac{1}{2}}$					
5384.48	5	50	18566.73	0.00	$70136_{6\frac{1}{2}}-88702^{\circ}_{5\frac{1}{2}}$	5	(1.07)	1.03	w	1.32
5383.95	3	60	18568.56	0.00	$46354^{\circ}_{4\frac{1}{2}}-64923_{4\frac{1}{2}}$					
5376.97	5	250	18592.66	−0.01	$47758^{\circ}_{3\frac{1}{2}}-66351_{2\frac{1}{2}}$	7	1.11	(1.125)	0	1.07

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
5371.53		4	18611.49	0.00	$58672^{\circ}_{0\frac{1}{2}} - 77284_{1\frac{1}{2}}$					
5370.47		9	18615.17							
5368.28	50	400	18622.76	−0.01	$45335^{\circ}_{4\frac{1}{2}} - 63957_{3\frac{1}{2}}$	4	0.875	0.969	(0.047)	0.546
5367.78	10	100	18624.50	+0.02	$37077^{\circ}_{2\frac{1}{2}} - 55702_{1\frac{1}{2}}$					
5367.35	4	60	18625.99	−0.01	$45429^{\circ}_{3\frac{1}{2}} - 64055_{2\frac{1}{2}}$	7	1.11	(1.108)	0	1.17
5365.41	1	50	18632.72	−0.01	$49916^{\circ}_{4\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
5364.78		15	18634.91	−0.03	$45012^{\circ}_{2\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
5364.12		15	18637.20	+0.02	$47758^{\circ}_{3\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
5362.43	1	20	18643.08	−0.01	$53120^{\circ}_{2\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
5360.85		1	18648.57	−0.05	$74270_{2\frac{1}{2}} - 92919^{\circ}_{3\frac{1}{2}}$					
5360.10	1	30	18651.18	+0.05	$54640^{\circ}_{4\frac{1}{2}} - 73291_{5\frac{1}{2}}$					
5359.91	6	200	18651.84	+0.02	$46547^{\circ}_{5\frac{1}{2}} - 65199_{4\frac{1}{2}}$					
5358.64	400	2000	18656.26	0.00	$35059^{\circ}_{3\frac{1}{2}} - 53715_{3\frac{1}{2}}$	6	1.11	1.17	0.20	1.14
5357.71		3	18659.50	0.00	$47228^{\circ}_{0\frac{1}{2}} - 65888_{1\frac{1}{2}}$					
5357.08	20	200	18661.70	−0.01	$35059^{\circ}_{3\frac{1}{2}} - 53720_{4\frac{1}{2}}$					
5356.54	1	2	18663.58	+0.06	$75640_{3\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
5356.41		10	18664.03	+0.02	$46902^{\circ}_{0\frac{1}{2}} - 65566_{0\frac{1}{2}}$					
5352.95	1000	6000	18676.09	+0.01	$30224^{\circ}_{4\frac{1}{2}} - 48900_{3\frac{1}{2}}$	4	0.934	1.048	0.057	0.535
5350.474	2	40	18684.74	−0.04	$45273^{\circ}_{3\frac{1}{2}} - 63957_{3\frac{1}{2}}$					
5349.626		5	18687.70	+0.01	$59777^{\circ}_{1\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
5349.10	1	6	18689.54	+0.01	$45012^{\circ}_{2\frac{1}{2}} - 63702_{2\frac{1}{2}}$					
5347.22	1000	3000	18696.11	−0.02	$35019^{\circ}_{4\frac{1}{2}} - 53715_{3\frac{1}{2}}$	4	1.16	1.19	(0.014)	1.06
5345.83	200	900	18700.97	−0.02	$40917^{\circ}_{4\frac{1}{2}} - 59618_{3\frac{1}{2}}$					
5345.66	400	1500	18701.56	−0.02	$35019^{\circ}_{4\frac{1}{2}} - 53720_{4\frac{1}{2}}$					
5342.99		7	18710.91	+0.01	$56840^{\circ}_{1\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
5339.69		1	18722.47	+0.06	$64169^{\circ}_{3\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
5339.312		15	18723.80	+0.01 −0.01	$45737^{\circ}_{1\frac{1}{2}} - 64461_{1\frac{1}{2}}$ $73291_{5\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$					
5338.75	10	100	18725.77	+0.01	$44438^{\circ}_{3\frac{1}{2}} - 63163_{4\frac{1}{2}}$	7	1.10	1.13	0	1.22
5337.11		7	18731.52	+0.08	$49419^{\circ}_{0\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
5335.15	2000	7000	18738.40	+0.03	$30562^{\circ}_{5\frac{1}{2}} - 49301_{4\frac{1}{2}}$	4	1.10	1.16	(0.03)	0.83
5334.02	100	200	18742.37	−0.03	$24332_{2\frac{1}{2}} - 43075^{\circ}_{1\frac{1}{2}}$					
5331.536		20	18751.10							
5330.92		1	18753.27	−0.06	$46169^{\circ}_{4\frac{1}{2}} - 64923_{4\frac{1}{2}}$					
5328.526	3	50	18761.70	−0.01	$44940^{\circ}_{2\frac{1}{2}} - 63702_{2\frac{1}{2}}$					
5324.778		7	18774.90	+0.01	$50832^{\circ}_{1\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
5324.486		9	18775.93	+0.02	$52987^{\circ}_{1\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
5322.541		8	18782.79	−0.01	$45273^{\circ}_{3\frac{1}{2}} - 64055_{2\frac{1}{2}}$					
5321.14	10	250	18787.74	−0.02	$40035^{\circ}_{3\frac{1}{2}} - 58823_{2\frac{1}{2}}$					

TABLE 6. Yb II — *Observed and classified lines* — Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
5320.774		15	18789.03	−0.01	$57534^{\circ}_{3\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
5318.79		1	18796.04	−0.04	$44438^{\circ}_{3\frac{1}{2}} - 63234_{2\frac{1}{2}}$					
5315.462		6	18807.81	+0.01	$55462^{\circ}_{3\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
5309.31	30	200	18829.60	+0.01	$34575^{\circ}_{1\frac{1}{2}} - 53404_{2\frac{1}{2}}$	4	1.43	1.03	0.20	0.43
5307.74		6	18835.17	+0.02	$59046^{\circ}_{4\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
5306.506		40	18839.55	+0.01	$49916^{\circ}_{4\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
5300.935	100	2000	18859.35	+0.03	$37516^{\circ}_{3\frac{1}{2}} - 56375_{2\frac{1}{2}}$	4	1.10	1.20	(0.05)	0.85
5295.755		5	18877.80	0.00 −0.06	$57798^{\circ}_{2\frac{1}{2}} - 76676_{2\frac{1}{2}}$ $75550_{2\frac{1}{2}} - 94428^{\circ}_{1\frac{1}{2}}$					
5293.726		3	18885.03	+0.01	$56088^{\circ}_{4\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
5291.99		10	18891.23	+0.05	$47680^{\circ}_{6\frac{1}{2}} - 66571_{5\frac{1}{2}}$					
5291.077		5	18894.49	+0.01	$47663^{\circ}_{4\frac{1}{2}} - 66558_{3\frac{1}{2}}$					
5290.08	2	20	18898.05	+0.04	$41688^{\circ}_{1\frac{1}{2}} - 60586_{1\frac{1}{2}}$					
5289.45		2	18900.30							
5289.178	1	5	18901.27							
5287.285	5	100	18908.04	−0.02	$47663^{\circ}_{4\frac{1}{2}} - 66571_{5\frac{1}{2}}$					
5286.12	2	100	18912.20	−0.01	$48503^{\circ}_{5\frac{1}{2}} - 67416_{4\frac{1}{2}}$					
5283.825		3	18920.42	+0.04	$71222_{3\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
5283.00		1	18923.37	+0.01	$46169^{\circ}_{4\frac{1}{2}} - 65093_{3\frac{1}{2}}$					
5281.210		20	18929.79	+0.04	$49008^{\circ}_{3\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
5280.522	1	50	18932.25	+0.05	$48272^{\circ}_{2\frac{1}{2}} - 67204_{1\frac{1}{2}}$					
5279.53	1000	5000	18935.81	+0.05	$34784^{\circ}_{5\frac{1}{2}} - 53720_{4\frac{1}{2}}$	4	1.10	1.23	(0.066)	1.51
5265.63		8	18985.80	+0.05	$46902^{\circ}_{0\frac{1}{2}} - 65888_{1\frac{1}{2}}$					
5263.570	6	200	18993.23	−0.02	$49727^{\circ}_{6\frac{1}{2}} - 68720_{6\frac{1}{2}}$	6	1.20	1.16	0.26	1.18
5262.012	1	30	18998.85	−0.03	$64365^{\circ}_{4\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
5261.52		1	19000.63	+0.07	$57798^{\circ}_{2\frac{1}{2}} - 76799_{1\frac{1}{2}}$					
5259.65		1	19007.38							
5257.490	800	3000	19015.19	−0.01	$34389^{\circ}_{2\frac{1}{2}} - 53404_{2\frac{1}{2}}$	6	1.01	1.03	0.06	1.02
5256.85		20	19017.51							
5255.680	4	150	19021.74	−0.03	$47329^{\circ}_{2\frac{1}{2}} - 66351_{2\frac{1}{2}}$					
5254.60		3	19025.65	−0.03	$59439^{\circ}_{2\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
5254.20	1	20	19027.10	−0.05	$49916^{\circ}_{4\frac{1}{2}} - 68943_{4\frac{1}{2}}$					
5250.51	1	8	19040.47	−0.02	$57798^{\circ}_{2\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
5249.80	5	150	19043.04	+0.01	$45012^{\circ}_{2\frac{1}{2}} - 64055_{2\frac{1}{2}}$					
5248.99		6	19045.98	+0.01	$52067^{\circ}_{0\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
5248.17		1	19048.96	−0.06	$55221^{\circ}_{1\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
5246.39	4	40	19055.42	−0.02	$43956^{\circ}_{2\frac{1}{2}} - 63011_{1\frac{1}{2}}$					
5244.61	100	300	19061.89	+0.04	$43075^{\circ}_{1\frac{1}{2}} - 62136_{0\frac{1}{2}}$	5	0.96	0.08	0.44	1.40
5243.56		1	19065.71	−0.02	$56840^{\circ}_{1\frac{1}{2}} - 75905_{0\frac{1}{2}}$					
5243.41		4	19066.25	−0.03	$47329^{\circ}_{2\frac{1}{2}} - 66395_{2\frac{1}{2}}$					

TABLE 6. Yb II — *Observed and classified lines* — Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong t
Å			K	K						
5243.15		2	19067.20	−0.03	$57103^{\circ}_{3\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
5240.51	300	1000	19076.80	−0.03	$30224^{\circ}_{4\frac{1}{2}} - 49301_{4\frac{1}{2}}$	6	0.94	1.20	1.15	1.07?
5239.25		2	19081.39	−0.06	$53120^{\circ}_{2\frac{1}{2}} - 72202_{3\frac{1}{2}}$					
5236.66	3	150	19090.83	−0.01	$54192^{\circ}_{5\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
5234.28		2	19099.51	+0.07	$54192^{\circ}_{5\frac{1}{2}} - 73291_{5\frac{1}{2}}$					
5232.537	6	40	19105.87	+0.06 −0.03	$30392^{\circ}_{1\frac{1}{2}} - 49498_{2\frac{1}{2}}$ $55462^{\circ}_{3\frac{1}{2}} - 74568_{4\frac{1}{2}}$					
5229.963	1	60	19115.27	+0.06	$44940^{\circ}_{1\frac{1}{2}} - 64055_{2\frac{1}{2}}$					
5227.01	1	70	19126.07	0.00	$49008^{\circ}_{3\frac{1}{2}} - 68135_{2\frac{1}{2}}$					
5226.18	20	150	19129.11	−0.04	$43007^{\circ}_{0\frac{1}{2}} - 62136_{0\frac{1}{2}}$					
5222.68		3	19141.93	+0.07	$57534^{\circ}_{3\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
5220.82		5	19148.75	+0.02	$62163^{\circ}_{2\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
5220.41		10	19150.25	+0.03	$44497^{\circ}_{2\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
5217.936	3	70	19159.33	+0.04	$56480^{\circ}_{4\frac{1}{2}} - 75640_{3\frac{1}{2}}$	7	0.77	(0.81)	0	0.63h
5215.44	4	100	19168.50	+0.04	$45429^{\circ}_{3\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
5212.232		25	19180.30	+0.03	$48024^{\circ}_{1\frac{1}{2}} - 67204_{1\frac{1}{2}}$					
5209.54		1	19190.21	+0.01	$59624^{\circ}_{3\frac{1}{2}} - 78814_{2\frac{1}{2}}$					
5205.574	4	30	19204.83	+0.02	$44497^{\circ}_{2\frac{1}{2}} - 63702_{2\frac{1}{2}}$					
5204.57		1	19208.53							
5202.87		1	19214.81	+0.04	$58672^{\circ}_{0\frac{1}{2}} - 77887_{0\frac{1}{2}}$					
5201.32		1	19220.54	+0.07	$57103^{\circ}_{3\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
5201.21		2	19220.94	+0.03	$58661^{\circ}_{2\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
5200.75		4	19222.64	+0.08	$46354^{\circ}_{4\frac{1}{2}} - 65577_{3\frac{1}{2}}$					
5200.54	50	500	19223.42	0.00	$40035^{\circ}_{3\frac{1}{2}} - 59259_{2\frac{1}{2}}$	4	(0.720)	1.110	0.195	?
5199.14		1	19228.60	+0.04	$47329^{\circ}_{2\frac{1}{2}} - 66558_{3\frac{1}{2}}$					
5189.89		7	19262.87	+0.01	$58484^{\circ}_{4\frac{1}{2}} - 77747_{4\frac{1}{2}}$					
5189.50		8	19264.31	+0.02	$44438^{\circ}_{3\frac{1}{2}} - 63702_{2\frac{1}{2}}$					
5188.89		9	19266.58	0.00	$62046^{\circ}_{3\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
5187.33		3	19272.37							
5185.15		1	19280.48	+0.07	$52921^{\circ}_{3\frac{1}{2}} - 72202_{3\frac{1}{2}}$					
5184.66		1	19282.30							
5184.15	150	1000	19284.19	+0.04	$33653^{\circ}_{0\frac{1}{2}} - 52938_{1\frac{1}{2}}$	4	1.34	0.90	0.22	0.68
5180.355	15	150	19298.32	0.00	$37077^{\circ}_{2\frac{1}{2}} - 56375_{2\frac{1}{2}}$	6	1.116	1.224	0.27	1.17
5173.11	2	200	19325.35	+0.09	$45273^{\circ}_{3\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
5173.064	10	100	19325.52	+0.02	$34389^{\circ}_{2\frac{1}{2}} - 53715_{3\frac{1}{2}}$					
5172.40		1	19328.00	−0.05	$46547^{\circ}_{5\frac{1}{2}} - 65875_{6\frac{1}{2}}$					
5167.660		3	19345.73	−0.02	$47005^{\circ}_{1\frac{1}{2}} - 66351_{2\frac{1}{2}}$					
5160.99		1	19370.73	+0.01 +0.04	$63028^{\circ}_{1\frac{1}{2}} - 82398_{1\frac{1}{2}}$ $75058_{2\frac{1}{2}} - 94428^{\circ}_{1\frac{1}{2}}$					
5159.655		3	19375.74	−0.04	$59439^{\circ}_{2\frac{1}{2}} - 78814_{2\frac{1}{2}}$					

TABLE 6. Yb II — *Observed and classified lines* — Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
5157.962	3	100	19382.10	−0.01	$48556^{\circ}_{3\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
5152.34	7	200	19403.25	+0.02	$46547^{\circ}_{5\frac{1}{2}} - 65950_{4\frac{1}{2}}$					
5151.25		4	19407.36	+0.03	$46169^{\circ}_{4\frac{1}{2}} - 65577_{3\frac{1}{2}}$					
5149.04		1	19415.69	−0.02	$70793_{5\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
5147.02	50	700	19423.31	+0.01	$38342^{\circ}_{4\frac{1}{2}} - 57765_{4\frac{1}{2}}$	6	(1.093)	1.13	w	1.11
5142.28	3	100	19441.21	+0.03	$49008^{\circ}_{3\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
5141.61		3	19443.74	−0.09	$58162^{\circ}_{1\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
5138.01		1	19457.37	−0.03	$47005^{\circ}_{1\frac{1}{2}} - 66462_{0\frac{1}{2}}$					
5137.43	2	4	19459.56							
5137.23		1	19460.32	+0.03	$44497^{\circ}_{2\frac{1}{2}} - 63957_{3\frac{1}{2}}$					
5136.49		1	19463.12							
5135.98	200	1500	19465.06	0.00	$33052^{\circ}_{4\frac{1}{2}} - 52517_{5\frac{1}{2}}$	7	(1.264)	1.25	0	1.29
5133.42		1	19474.76	−0.01	$63417^{\circ}_{2\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
5132.40	1	60	19478.64	−0.06	$49916^{\circ}_{4\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
5131.01	1	10	19483.91	−0.02	$43075^{\circ}_{1\frac{1}{2}} - 62559_{2\frac{1}{2}}$					
5130.711		2	19485.05	−0.07	$70793_{5\frac{1}{2}} - 90279^{\circ}_{5\frac{1}{2}}$					
5130.56		1	19485.62	+0.11	$57798^{\circ}_{2\frac{1}{2}} - 77284_{1\frac{1}{2}}$					
5129.56		60	19489.42	−0.02	$50468^{\circ}_{5\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
5128.55	3	100	19493.26	−0.03 +0.05	$45429^{\circ}_{3\frac{1}{2}} - 64923_{4\frac{1}{2}}$ $62163^{\circ}_{2\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
5121.58	30	300	19519.79	+0.02	$44438^{\circ}_{3\frac{1}{2}} - 63957_{3\frac{1}{2}}$	6	1.11	1.15	0.13	1.13
5117.72	1	25	19534.51	−0.02	$46547^{\circ}_{5\frac{1}{2}} - 66082_{5\frac{1}{2}}$					
5116.200		10	19540.31	+0.01	$49008^{\circ}_{3\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
5111.47	1	60	19558.39	+0.08 0.00	$44497^{\circ}_{2\frac{1}{2}} - 64055_{2\frac{1}{2}}$ $54192^{\circ}_{5\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
5107.58		1	19573.29	0.00	$57103^{\circ}_{3\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
5106.12		1	19578.89							
5105.028	10	150	19583.07	−0.01 −0.08	$40035^{\circ}_{3\frac{1}{2}} - 59618_{3\frac{1}{2}}$ $56056^{\circ}_{2\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
5104.42	20	400	19585.41	−0.08	$45012^{\circ}_{2\frac{1}{2}} - 64598_{3\frac{1}{2}}$	?	(1.28)	1.23	w	1.12h
5101.810		3	19595.43	0.00	$55462^{\circ}_{3\frac{1}{2}} - 75058_{2\frac{1}{2}}$					
5101.57	3	80	19596.35	−0.05	$46354^{\circ}_{4\frac{1}{2}} - 65950_{4\frac{1}{2}}$					
5099.11		3	19605.80							
5097.75		2	19611.03	−0.03	$62046^{\circ}_{3\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
5095.99		3	19617.80	+0.01	$44438^{\circ}_{3\frac{1}{2}} - 64055_{2\frac{1}{2}}$					
5090.628		15	19638.47	+0.01	$53644^{\circ}_{3\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
5088.92	1	30	19645.06	0.00	$48503^{\circ}_{5\frac{1}{2}} - 68148_{5\frac{1}{2}}$					
5087.61	10	150	19650.12	+0.03	$45273^{\circ}_{3\frac{1}{2}} - 64923_{4\frac{1}{2}}$	4	1.17	(1.10)	w	0.86
5085.70	2	80	19657.50	+0.01	$47758^{\circ}_{3\frac{1}{2}} - 67416_{4\frac{1}{2}}$					
5085.22		1	19659.35	−0.06	$53120^{\circ}_{2\frac{1}{2}} - 72779_{3\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
5083.52		2	19665.93	+0.02	$48272^{\circ}_{2\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
5082.934		7	19668.19	0.00	$50468^{\circ}_{5\frac{1}{2}} - 70136_{6\frac{1}{2}}$					
5076.957		6	19691.35	+0.03	$43956^{\circ}_{2\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
5075.813		8	19695.79	+0.03 −0.01	$41678^{\circ}_{2\frac{1}{2}} - 61374_{2\frac{1}{2}}$ $52067^{\circ}_{0\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
5074.609		80	19700.46							
5073.35		1	19705.35	−0.06	$51248^{\circ}_{2\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
5067.600		10	19727.71	+0.01	$46354^{\circ}_{4\frac{1}{2}} - 66082_{5\frac{1}{2}}$					
5067.297	200	800	19728.89	−0.04	$34575^{\circ}_{1\frac{1}{2}} - 54304_{0\frac{1}{2}}$	4	1.435	2.005	0.285	1.150
5065.74		1	19734.95	−0.04	$52880^{\circ}_{4\frac{1}{2}} - 72615_{5\frac{1}{2}}$					
5065.488		4	19735.93	−0.05	$57103^{\circ}_{3\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
5062.938	30	300	19745.87	−0.04	$43956^{\circ}_{2\frac{1}{2}} - 63702_{2\frac{1}{2}}$	6	(0.99)	1.01	d	1.00
5062.634		15	19747.06	−0.05	$49008^{\circ}_{3\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
5061.24		1	19752.50	−0.01	$47663^{\circ}_{4\frac{1}{2}} - 67416_{4\frac{1}{2}}$					
5058.71		8	19762.38	−0.07	$61442^{\circ}_{5\frac{1}{2}} - 81205_{4\frac{1}{2}}$					
5057.275		2	19767.98	−0.05	$55221^{\circ}_{1\frac{1}{2}} - 74989_{0\frac{1}{2}}$					
5051.096		2	19792.17	−0.06	$58672^{\circ}_{0\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
5049.832	5	250	19797.12	−0.02	$48923^{\circ}_{7\frac{1}{2}} - 68720_{6\frac{1}{2}}$	5	1.19	(1.157)	w	1.42
5047.08		15d	19807.91	−0.16 +0.06	$57798^{\circ}_{2\frac{1}{2}} - 77606_{2\frac{1}{2}}$ $60649^{\circ}_{4\frac{1}{2}} - 80457_{3\frac{1}{2}}$					
5043.28		1	19822.84	−0.01	$56500^{\circ}_{3\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
5042.982	3	20	19824.01			7			0	1.20
5041.756		4	19828.83	−0.05	$59777^{\circ}_{1\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
5039.86		2	19836.29	+0.02	$56840^{\circ}_{1\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
5038.240		15	19842.67	−0.05	$56480^{\circ}_{4\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
5033.289	1	20	19862.19	−0.04	$48272^{\circ}_{2\frac{1}{2}} - 68135_{2\frac{1}{2}}$					
5032.586	1	25	19864.96	−0.02	$51248^{\circ}_{2\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
5029.342		3	19877.77	−0.03	$48272^{\circ}_{2\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
5025.356	1	6	19893.54	0.00	$48556^{\circ}_{3\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
5023.925	1	9	19899.21	−0.03	$52880^{\circ}_{4\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
5021.13	50	400	19910.28	0.00	$33494^{\circ}_{3\frac{1}{2}} - 53404_{2\frac{1}{2}}$	7	(0.99)	1.02	0	0.90
5017.80		3	19923.50	−0.08	$70793_{5\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
5014.98		2	19934.70	−0.02	$49008^{\circ}_{3\frac{1}{2}} - 68943_{4\frac{1}{2}}$					
5014.472	20	250	19936.72	−0.04	$43075^{\circ}_{1\frac{1}{2}} - 63011_{1\frac{1}{2}}$	6	0.97	0.79	0.26	0.70
5013.76		1	19939.55							
5010.04		1	19954.35	+0.11	$73291_{5\frac{1}{2}} - 93246^{\circ}_{6\frac{1}{2}}$					
5009.525	500	2000	19956.41	−0.01	$32981^{\circ}_{1\frac{1}{2}} - 52938_{1\frac{1}{2}}$	7	0.88	0.88	0	0.88
5009.025		2	19958.40	−0.05	$59624^{\circ}_{3\frac{1}{2}} - 79583_{2\frac{1}{2}}$					
5008.876	1	15	19958.99	−0.04 −0.05	$56840^{\circ}_{1\frac{1}{2}} - 76799_{1\frac{1}{2}}$ $73283_{4\frac{1}{2}} - 93242^{\circ}_{5\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
5007.75		1	19963.48	−0.09	$44497^{\circ}_{2\frac{1}{2}} - 64461_{1\frac{1}{2}}$					
5005.25		1	19973.45	−0.05	$51248^{\circ}_{2\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
5004.63		1	19975.93	−0.08	$47228^{\circ}_{0\frac{1}{2}} - 67204_{1\frac{1}{2}}$					
5002.98	5	70	19982.51	−0.02	$68720_{6\frac{1}{2}} - 88702^{\circ}_{5\frac{1}{2}}$	5	(1.157)	1.12	w	1.38
5000.452		2	19992.62	−0.04	$48556^{\circ}_{3\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
4998.87		3	19998.94	−0.02	$56840^{\circ}_{1\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
4998.266	3	15	20001.36	−0.03	$43956^{\circ}_{2\frac{1}{2}} - 63957_{3\frac{1}{2}}$					
4996.604		4	20008.01	−0.04	$69607_{2\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$					
4994.74		1	20015.48	+0.01	$56500^{\circ}_{3\frac{1}{2}} - 76516_{4\frac{1}{2}}$					
4993.32		1	20021.17	−0.03 +0.02	$47912_{3\frac{1}{2}} - 67933^{\circ}_{2\frac{1}{2}}$ $51248^{\circ}_{2\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
4992.654		6	20023.84	−0.02	$46547^{\circ}_{5\frac{1}{2}} - 66571_{5\frac{1}{2}}$					
4992.520		7	20024.38	−0.01	$49419^{\circ}_{0\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
4989.794		4	20035.32	−0.02	$56480^{\circ}_{4\frac{1}{2}} - 76516_{4\frac{1}{2}}$					
4988.383	1	15	20040.99	0.00	$49916^{\circ}_{4\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
4988.022		1	20042.44							
4987.292	1	15	20045.37	−0.04	$48503^{\circ}_{5\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
4986.88[a]	6	3	20047.02	+0.03	$22960_{1\frac{1}{2}} - 43007^{\circ}_{0\frac{1}{2}}$					
4978.62	1	9	20080.28	−0.07	$45012^{\circ}_{2\frac{1}{2}} - 65093_{3\frac{1}{2}}$					
4976.65		2	20088.23	−0.03	$55462^{\circ}_{3\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
4973.90		15	20099.34	−0.07	$43956^{\circ}_{2\frac{1}{2}} - 64055_{2\frac{1}{2}}$					
4972.26	1	20	20105.97	−0.04	$53644^{\circ}_{3\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
4971.20		8	20110.26	−0.04	$48024^{\circ}_{1\frac{1}{2}} - 68135_{2\frac{1}{2}}$					
4970.203	3	4	20114.29	0.00	$22960_{1\frac{1}{2}} - 43075^{\circ}_{1\frac{1}{2}}$					
4967.35		2	20125.84	−0.03	$48024^{\circ}_{1\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
4965.43	3	15	20133.62							
4963.18		2	20142.75	−0.09	$70136_{6\frac{1}{2}} - 90279^{\circ}_{5\frac{1}{2}}$					
4961.124		3	20151.10	−0.07	$45737^{\circ}_{1\frac{1}{2}} - 65888_{1\frac{1}{2}}$					
4958.895		2	20160.16	−0.09	$44438^{\circ}_{3\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
4957.262		7	20166.80	−0.07	$59439^{\circ}_{2\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
4955.98		1	20172.01	−0.06	$69443_{1\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$					
4954.68	3	50	20177.31	−0.03 −0.07	$48272^{\circ}_{2\frac{1}{2}} - 68450_{3\frac{1}{2}}$ $55462^{\circ}_{3\frac{1}{2}} - 75640_{3\frac{1}{2}}$	7	0.98	0.98	0	0.98
4953.622		3	20181.62							
4952.740		2	20185.21	−0.04	$69957_{4\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
4949.24		2	20199.48	−0.03 +0.01	$47005^{\circ}_{1\frac{1}{2}} - 67204_{1\frac{1}{2}}$ $48556^{\circ}_{3\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
4946.524		1	20210.58	−0.02	$69395_{3\frac{1}{2}} - 89605^{\circ}_{4\frac{1}{2}}$					
4946.19		1	20211.94	0.00	$73291_{5\frac{1}{2}} - 93503^{\circ}_{4\frac{1}{2}}$					
4945.944		3	20212.95	0.00	$57534^{\circ}_{3\frac{1}{2}} - 77747_{4\frac{1}{2}}$					
4944.956	5	150	20216.98	−0.05	$46354^{\circ}_{4\frac{1}{2}} - 66571_{5\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4944.080	200	600	20220.57	−0.01 +0.03	$33494^{\circ}_{3\frac{1}{2}} - 53715_{3\frac{1}{2}}$ $(73283_{4\frac{1}{2}} - 93503^{\circ}_{4\frac{1}{2}})$	6	0.98	1.17	0.68	1.07
4942.742	20	200	20226.04	+0.01	$33494^{\circ}_{3\frac{1}{2}} - 53720_{4\frac{1}{2}}$					
4940.53		2	20235.10	0.00 +0.04	$56088^{\circ}_{4\frac{1}{2}} - 76323_{3\frac{1}{2}}$ $62163^{\circ}_{2\frac{1}{2}} - 82398_{1\frac{1}{2}}$					
4938.828		4	20242.07	−0.01	$45335^{\circ}_{4\frac{1}{2}} - 65577_{3\frac{1}{2}}$					
4937.222	100	2000	20248.65	−0.08 −0.01	$37516^{\circ}_{3\frac{1}{2}} - 57765_{4\frac{1}{2}}$ $42915^{\circ}_{5\frac{1}{2}} - 63163_{4\frac{1}{2}}$	7	1.12	1.11	0	1.09
4930.78		1	20275.11	−0.05	$47663^{\circ}_{4\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
4929.31	1	20	20281.15	−0.04	$50832^{\circ}_{1\frac{1}{2}} - 71113_{1\frac{1}{2}}$	7	0.96	0.96	0	0.96
4928.184		4	20285.79							
4927.154		1	20290.03	+0.02	$69607_{2\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$					
4924.187		2	20302.25	−0.01	$46902^{\circ}_{0\frac{1}{2}} - 67204_{1\frac{1}{2}}$					
4923.747		1	20304.07	−0.02	$45273^{\circ}_{3\frac{1}{2}} - 65577_{3\frac{1}{2}}$					
4918.45		10	20325.93	+0.02	$50468^{\circ}_{5\frac{1}{2}} - 70793_{5\frac{1}{2}}$					
4917.044	20	60	20331.75	−0.01	$39378^{\circ}_{0\frac{1}{2}} - 59710_{1\frac{1}{2}}$	4	1.84	0.80	0.52	0.28
4915.42		1	20338.46	+0.10	$56500^{\circ}_{3\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
4909.81		3	20361.70	−0.03 +0.01	$52921^{\circ}_{3\frac{1}{2}} - 73283_{4\frac{1}{2}}$ $73636_{0\frac{1}{2}} - 93998^{\circ}_{1\frac{1}{2}}$					
4906.27		9	20376.39	−0.07	$47758^{\circ}_{3\frac{1}{2}} - 68135_{2\frac{1}{2}}$					
4905.48		2	20379.67	−0.09	$70858_{4\frac{1}{2}} - 91237^{\circ}_{3\frac{1}{2}}$					
4903.89	1	25	20386.28	+0.01	$49008^{\circ}_{3\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
4903.71	3	50	20387.03	−0.05	$48556^{\circ}_{3\frac{1}{2}} - 68943_{4\frac{1}{2}}$	7	0.94	(0.89)	0	0.72
4900.16		4	20401.80	0.00	$46169^{\circ}_{4\frac{1}{2}} - 66571_{5\frac{1}{2}}$					
4899.980		2	20402.55	−0.05 +0.04	$52880^{\circ}_{4\frac{1}{2}} - 73283_{4\frac{1}{2}}$ $60910^{\circ}_{1\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
4898.42		15	20409.05	0.00	$49727^{\circ}_{6\frac{1}{2}} - 70136_{6\frac{1}{2}}$					
4897.90	2	40	20411.21	+0.01	$52880^{\circ}_{4\frac{1}{2}} - 73291_{5\frac{1}{2}}$					
4894.983	50	400	20423.38	+0.01	$32981^{\circ}_{1\frac{1}{2}} - 53404_{2\frac{1}{2}}$	5	0.88	1.03	(0.08)	1.26
4891.654		3	20437.28	−0.08	$50832^{\circ}_{1\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
4891.056	1	8	20439.77	−0.06	$48503^{\circ}_{5\frac{1}{2}} - 68943_{4\frac{1}{2}}$					
4890.07		1	20443.90	−0.08	$56840^{\circ}_{1\frac{1}{2}} - 77284_{1\frac{1}{2}}$					
4888.99		3	20448.41	−0.08	$41688^{\circ}_{1\frac{1}{2}} - 62136_{0\frac{1}{2}}$					
4887.662		2	20453.97	−0.06	$69443_{1\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$					
4884.205		4	20468.44	−0.04	$47680^{\circ}_{6\frac{1}{2}} - 68148_{5\frac{1}{2}}$					
4880.674		8	20483.25	−0.02	$48272^{\circ}_{2\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
4880.190		10	20485.28	−0.08	$47663^{\circ}_{4\frac{1}{2}} - 68148_{5\frac{1}{2}}$					
4875.852		2	20503.51	−0.05	$57103^{\circ}_{3\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
4873.180		2	20514.75	−0.06	$51248^{\circ}_{2\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
4871.670	2	40	20521.11	−0.02	$45429^{\circ}_{3\frac{1}{2}} - 65950_{4\frac{1}{2}}$	7	(1.150)	1.11	0	0.98

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4871.150	10	90	20523.30	−0.01	$48556^{\circ}_{3\frac{1}{2}} - 69079_{2\frac{1}{2}}$	7	0.91	(0.89)	0	0.95
4863.87		3	20554.02	−0.07 −0.08	$68148_{5\frac{1}{2}} - 88702^{\circ}_{5\frac{1}{2}}$ $53716^{\circ}_{2\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
4863.56		1	20555.33	−0.08	$60649^{\circ}_{4\frac{1}{2}} - 81205_{4\frac{1}{2}}$					
4860.84		2	20566.83	−0.08	$32371^{\circ}_{2\frac{1}{2}} - 52938_{1\frac{1}{2}}$					
4859.49		2	20572.54	−0.10	$43075^{\circ}_{1\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
4853.347		7	20598.58	−0.03	$49008^{\circ}_{3\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
4851.150	300	600	20607.91	−0.01	$24332_{2\frac{1}{2}} - 44940^{\circ}_{1\frac{1}{2}}$	4?	(1.20)	1.22	0	1.18
4850.848	1	10	20609.19	−0.05	$47329^{\circ}_{2\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
4849.265		2	20615.92	0.00	$45335^{\circ}_{4\frac{1}{2}} - 65950_{4\frac{1}{2}}$					
4848.455	50	300	20619.37	+0.02 −0.03	$38342^{\circ}_{4\frac{1}{2}} - 58961_{5\frac{1}{2}}$ $56056^{\circ}_{2\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
4846.873	1	15	20626.10	−0.01	$44940^{\circ}_{1\frac{1}{2}} - 65566_{0\frac{1}{2}}$					
4846.612	4	20	20627.21	−0.02	$43075^{\circ}_{1\frac{1}{2}} - 63702_{2\frac{1}{2}}$					
4841.47		2	20649.11	+0.04	$52987^{\circ}_{1\frac{1}{2}} - 73636_{0\frac{1}{2}}$					
4841.153	50	150	20650.47	+0.03	$33653^{\circ}_{0\frac{1}{2}} - 54304_{0\frac{1}{2}}$	6	1.33	2.01	0.34	1.67
4839.279	1	15	20658.46	+0.03	$45737^{\circ}_{1\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
4839.014	1	7	20659.59	0.00	$65566_{0\frac{1}{2}} - 86226^{\circ}_{1\frac{1}{2}}$					
4838.220	10	20	20662.99	+0.02	$33052^{\circ}_{4\frac{1}{2}} - 53715_{3\frac{1}{2}}$					
4837.045	500	1000	20668.00							
4836.96	500	1000	20668.37	−0.05	$33052^{\circ}_{4\frac{1}{2}} - 53720_{4\frac{1}{2}}$	6	1.26	1.28	(0.08)	1.27
4834.926	1	10	20677.06							
4834.72	10	100	20677.94	+0.01	$45273^{\circ}_{3\frac{1}{2}} - 65950_{4\frac{1}{2}}$	4	1.16	(1.08)	w	0.79
4834.23	2	3	20680.04	−0.06	$24332_{2\frac{1}{2}} - 45012^{\circ}_{2\frac{1}{2}}$					
4833.55		1	20682.95	−0.07	$72779_{3\frac{1}{2}} - 93463^{\circ}_{3\frac{1}{2}}$					
4833.24		1	20684.28	−0.03	$55221^{\circ}_{1\frac{1}{2}} - 75905_{0\frac{1}{2}}$					
4831.533	2	20	20691.58	+0.01	$47758^{\circ}_{3\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
4827.81		2	20707.54	−0.03	$55462^{\circ}_{3\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
4826.78		2	20711.96							
4823.615		2	20725.55	−0.02 −0.06	$45737^{\circ}_{1\frac{1}{2}} - 66462_{0\frac{1}{2}}$ $73283_{4\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$					
4822.47		1	20730.47							
4822.010		3	20732.45	−0.02	$78070_{4\frac{1}{2}} - 98802^{\circ}_{5\frac{1}{2}}$					
4820.74		1	20737.91							
4820.242	400	1000	20740.05	−0.01	$28757^{\circ}_{1\frac{1}{2}} - 49498_{2\frac{1}{2}}$	4	1.432	1.145	0.143	0.72
4818.371	100	600	20748.10	−0.01	$38342^{\circ}_{4\frac{1}{2}} - 59090_{3\frac{1}{2}}$	4	(1.093)	1.12	0	1.01
4815.612		6	20759.99	−0.06	$69957_{4\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
4815.28		1	20761.42	−0.09	$44438^{\circ}_{3\frac{1}{2}} - 65199_{4\frac{1}{2}}$					
4813.92	2	7	20767.29	−0.03	$37516^{\circ}_{3\frac{1}{2}} - 58283_{2\frac{1}{2}}$					
4809.451	2	30	20786.58	−0.01	$47663^{\circ}_{4\frac{1}{2}} - 68450_{3\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4808.502	2	50	20790.69	0.00	$47758^{\circ}_{3\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
4803.653		10	20811.67	−0.03	$42915^{\circ}_{5\frac{1}{2}} - 63726_{4\frac{1}{2}}$					
4801.473		2	20821.12	−0.01	$47329^{\circ}_{2\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
4799.96		1	20827.69	−0.05	$66558_{3\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}}$					
4798.72		3	20833.07	+0.02	$59624^{\circ}_{3\frac{1}{2}} - 80457_{3\frac{1}{2}}$					
4792.63		3	20859.54	−0.01	$68756_{3\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$					
4792.336		2	20860.82	+0.01	$55462^{\circ}_{3\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
4790.61	1	15	20868.33	+0.02	$46547^{\circ}_{5\frac{1}{2}} - 67416_{4\frac{1}{2}}$					
4788.924		5	20875.68	+0.01	$45012^{\circ}_{2\frac{1}{2}} - 65888_{1\frac{1}{2}}$					
4786.61	2000	8000	20885.77	+0.01 +0.06	$31631^{\circ}_{6\frac{1}{2}} - 52517_{5\frac{1}{2}}$ $(47663^{\circ}_{4\frac{1}{2}} - 68549_{4\frac{1}{2}})$	4	1.24	1.28	(0.02)	1.02
4781.17		2*d*	20909.54	−0.05	$56977^{\circ}_{0\frac{1}{2}} - 77887_{0\frac{1}{2}}$					
4778.414		1	20921.60	−0.01	$47228^{\circ}_{0\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
4778.35		1	20921.88	−0.10	$58661^{\circ}_{2\frac{1}{2}} - 79583_{2\frac{1}{2}}$					
4777.946		4	20923.65	−0.04	$53644^{\circ}_{3\frac{1}{2}} - 74568_{4\frac{1}{2}}$					
4777.56		1	20925.34	0.00	$59753^{\circ}_{5\frac{1}{2}} - 80679_{5\frac{1}{2}}$					
4774.145	4	8	20940.30	−0.03	$24332_{2\frac{1}{2}} - 45273^{\circ}_{3\frac{1}{2}}$					
4773.839		8	20941.65	−0.03	$49916^{\circ}_{4\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
4773.13		3	20944.76	−0.06	$58661^{\circ}_{2\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
4772.43		2	20947.83	−0.02	$44940^{\circ}_{1\frac{1}{2}} - 65888_{1\frac{1}{2}}$					
4772.23		6	20948.71	−0.08 +0.03	$55221^{\circ}_{1\frac{1}{2}} - 76170_{2\frac{1}{2}}$ $56500^{\circ}_{3\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
4772.000		2	20949.72	−0.05	$47005^{\circ}_{1\frac{1}{2}} - 67955_{0\frac{1}{2}}$					
4768.32		6	20965.88	−0.02	$45429^{\circ}_{3\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
4768.036		3	20967.13	−0.04	$57103^{\circ}_{3\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
4761.139	2	40	20997.51	+0.01	$47758^{\circ}_{3\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
4757.14		1	21015.16	−0.08	$40035^{\circ}_{3\frac{1}{2}} - 61051_{3\frac{1}{2}}$					
4756.36		1	21018.60	−0.03	$59439^{\circ}_{2\frac{1}{2}} - 80457_{3\frac{1}{2}}$					
4752.91	100	400	21033.86	0.00	$32371^{\circ}_{2\frac{1}{2}} - 53404_{2\frac{1}{2}}$	6	1.16	1.02	0.30	1.09
4749.948	2	30	21046.98	+0.01	$59632^{\circ}_{6\frac{1}{2}} - 80679_{5\frac{1}{2}}$					
4749.55		1	21048.74	−0.10	$52067^{\circ}_{0\frac{1}{2}} - 73116_{1\frac{1}{2}}$					
4749.06	1	5	21050.91	−0.06	$48556^{\circ}_{3\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
4748.71		2	21052.46	−0.06	$46902^{\circ}_{0\frac{1}{2}} - 67955_{0\frac{1}{2}}$					
4748.08		2*d*	21055.26	+0.08 0.00	$48024^{\circ}_{1\frac{1}{2}} - 69079_{2\frac{1}{2}}$ $77747_{4\frac{1}{2}} - 98802^{\circ}_{5\frac{1}{2}}$					
4746.68	10	150	21061.47	−0.01	$46354^{\circ}_{4\frac{1}{2}} - 67416_{4\frac{1}{2}}$	6	1.30	(1.26)	*d*	1.28
4745.483	1	20	21066.78	+0.01	$49727^{\circ}_{6\frac{1}{2}} - 70793_{5\frac{1}{2}}$					
4743.57		3	21075.27	−0.05	$58051^{\circ}_{5\frac{1}{2}} - 79126_{4\frac{1}{2}}$					
4739.70	1	10	21092.48	−0.04	$47663^{\circ}_{4\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
4738.656	5	7	21097.13	0.00	$24332_{2\frac{1}{2}} - 45429^{\circ}_{3\frac{1}{2}}$					
4736.69		2	21105.89	−0.05	$56500^{\circ}_{3\frac{1}{2}} - 77606_{2\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4732.935	1	25	21122.63	−0.07	$45273^{\circ}_{3\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
4732.025	30	200	21126.69	−0.01	$34575^{\circ}_{1\frac{1}{2}} - 55702_{1\frac{1}{2}}$	6	1.43	1.69	0.40	1.56
4731.70		2	21128.14	−0.04	$45429^{\circ}_{3\frac{1}{2}} - 66558_{3\frac{1}{2}}$					
4729.25		3	21139.09	+0.01	$44438^{\circ}_{3\frac{1}{2}} - 65577_{3\frac{1}{2}}$					
4728.109		8	21144.19	+0.02	$58484_{4\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
4727.901		7	21145.12	+0.01	$47005^{\circ}_{1\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
4726.54		1	21151.21							
4726.08	1000	3000	21153.27	−0.02	$26759^{\circ}_{2} - 47912_{3\frac{1}{2}}$	4	1.57	1.28	0.15	0.54
4725.14		2	21157.48	−0.10	$70858_{4\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$					
4723.404		4	21165.25	−0.08	$70136_{6\frac{1}{2}} - 91301^{\circ}_{6\frac{1}{2}}$					
4720.390		2	21178.77	−0.07	$40035^{\circ}_{3\frac{1}{2}} - 61214_{4\frac{1}{2}}$					
4715.672		3	21199.95	−0.01	$62163^{\circ}_{2\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
4712.78	40	200	21212.96	+0.02	$48923^{\circ}_{7\frac{1}{2}} - 70136_{6\frac{1}{2}}$	5	(1.20)	1.16	w	1.47
4705.40		4	21246.23	−0.02	$46169^{\circ}_{4\frac{1}{2}} - 67416_{4\frac{1}{2}}$					
4705.04		7	21247.86	0.00	$46902^{\circ}_{0\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
4704.23		1	21251.52	−0.01 +0.04	$69607_{2\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$ $72615_{5\frac{1}{2}} - 93867^{\circ}_{4\frac{1}{2}}$					
4703.012		4	21257.02	−0.01	$53716^{\circ}_{2\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
4699.045		6	21274.97	−0.01	$53716^{\circ}_{2\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
4698.62	10	40	21276.89	+0.01	$38342^{\circ}_{4\frac{1}{2}} - 59618_{3\frac{1}{2}}$					
4697.688		2	21281.11							
4697.34		3	21282.69	−0.03	$52987^{\circ}_{1\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
4696.842	1	15	21284.95	−0.03	$45273^{\circ}_{3\frac{1}{2}} - 66558_{3\frac{1}{2}}$					
4692.41		2	21305.05	−0.04	$67416_{4\frac{1}{2}} - 88721^{\circ}_{3\frac{1}{2}}$					
4691.982		4	21306.99	0.00	$37516^{\circ}_{3\frac{1}{2}} - 58823_{2\frac{1}{2}}$					
4690.810	20	90	21312.32	+0.01	$34389^{\circ}_{2\frac{1}{2}} - 55702_{1\frac{1}{2}}$					
4689.807	1	7	21316.87	−0.04	$35059^{\circ}_{3\frac{1}{2}} - 56375_{2\frac{1}{2}}$					
4688.515	40	100	21322.75	+0.04	$32981^{\circ}_{1\frac{1}{2}} - 54304_{0\frac{1}{2}}$	4	0.84	1.88	0.52	0.32
4688.38	5	20	21323.36	−0.04	$41688^{\circ}_{1\frac{1}{2}} - 63011_{1\frac{1}{2}}$					
4658.876		6	21334.76	−0.01	$48272^{\circ}_{2\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
4685.071		3	21338.42	0.00	$45012^{\circ}_{2\frac{1}{2}} - 66351_{2\frac{1}{2}}$					
4683.810	200	1000	21344.17	+0.01	$32371^{\circ}_{2\frac{1}{2}} - 53715_{3\frac{1}{2}}$	7	(1.17)	1.19	0	1.22
4681.088		3	21356.58	0.00	$62861_{5\frac{1}{2}} - 84217^{\circ}_{4\frac{1}{2}}$					
4678.171	2	6	21369.89	−0.04	$31568^{\circ}_{2\frac{1}{2}} - 52938_{1\frac{1}{2}}$					
4675.66	2	4	21381.37	−0.03	$56500^{\circ}_{3\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
4674.644		1	21386.02	+0.03	$43075^{\circ}_{1\frac{1}{2}} - 64461_{1\frac{1}{2}}$					
4674.493	1	3	21386.71	+0.01	$68756_{3\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
4671.386		3	21400.93	+0.01	$48556^{\circ}_{3\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
4670.586	50	200	21404.60	0.00	$24332_{2\frac{1}{2}} - 45737^{\circ}_{1\frac{1}{2}}$	4	(1.20)	1.30	w	1.06
4669.280		4	21410.58	−0.02	$44940^{\circ}_{1\frac{1}{2}} - 66351_{2\frac{1}{2}}$					
4667.05	1	1	21420.81	−0.03	$74270_{2\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4666.145	2	1	21424.97	−0.09	$31979^{\circ}_{3\frac{1}{2}} - 53404_{2\frac{1}{2}}$					
4660.906		4	21449.05	+0.01	$56621^{\circ}_{5\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
4659.910		5	21453.64	−0.03 +0.01	$48503^{\circ}_{5\frac{1}{2}} - 69957_{4\frac{1}{2}}$ $68756_{3\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
4659.60		1	21455.06	−0.05	$44940^{\circ}_{1\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
4658.746		3	21459.00							
4658.443	2	2	21460.39							
4657.43		1	21465.06	+0.04	$68150_{1\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$					
4654.070	1	5	21480.56	−0.03	$68135_{2\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$					
4652.667		5	21487.03	−0.02	$56977^{\circ}_{0\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
4652.279		2	21488.82	−0.02	$60910^{\circ}_{1\frac{1}{2}} - 82398_{1\frac{1}{2}}$					
4649.756		2	21500.48							
4647.076		2	21512.88	−0.04	$44438^{\circ}_{3\frac{1}{2}} - 65950_{4\frac{1}{2}}$					
4645.05		10	21522.27	+0.02	$44940^{\circ}_{1\frac{1}{2}} - 66462_{0\frac{1}{2}}$					
4643.14		5	21531.12	−0.01	$51248^{\circ}_{2\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
4640.11		15	21545.18	−0.03	$45012^{\circ}_{2\frac{1}{2}} - 66558_{3\frac{1}{2}}$					
4639.04		1	21550.15							
4637.226		3	21558.58	−0.06	$68720_{6\frac{1}{2}} - 90279^{\circ}_{5\frac{1}{2}}$					
4635.01		1	21568.89	−0.07	$52067^{\circ}_{0\frac{1}{2}} - 73636_{0\frac{1}{2}}$					
4634.014	20	200	21573.52	−0.02	$37516^{\circ}_{3\frac{1}{2}} - 59090_{3\frac{1}{2}}$	7			0	1.05?
4630.614		3	21589.36	−0.06 −0.06	$52067^{\circ}_{0\frac{1}{2}} - 73657_{1\frac{1}{2}}$ $56480^{\circ}_{4\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
4629.75		2	21593.39							
4624.93		2	21615.89							
4623.91		1	21620.66	−0.04	$43956^{\circ}_{2\frac{1}{2}} - 65577_{3\frac{1}{2}}$					
4623.060		3	21624.64	−0.08	$56840^{\circ}_{1\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
4621.83		2	21630.39	−0.01	$69607_{2\frac{1}{2}} - 91237^{\circ}_{3\frac{1}{2}}$					
4620.51		2	21636.57	−0.09	$47758^{\circ}_{3\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
4615.740		2	21658.93	−0.08	$56088^{\circ}_{4\frac{1}{2}} - 77747_{4\frac{1}{2}}$					
4614.020	1	3	21667.01	−0.01	$77747_{4\frac{1}{2}} - 99414^{\circ}_{4\frac{1}{2}}$					
4611.90		1	21676.97	+0.06	$67938_{3\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$					
4610.70		1	21682.61	−0.06	$54640^{\circ}_{4\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
4609.600		1	21687.78	−0.05	$52880^{\circ}_{4\frac{1}{2}} - 74568_{4\frac{1}{2}}$					
4608.131		15	21694.69	−0.02	$49419^{\circ}_{0\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
4600.300		2	21731.62	−0.06	$47663^{\circ}_{4\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
4598.85		2	21738.48							
4598.361	300	800	21740.79	−0.02	$31979^{\circ}_{3\frac{1}{2}} - 53720_{4\frac{1}{2}}$ [d]	5	(1.33)	1.29	w	1.16
4597.980	5	30	21742.59	−0.06	$37516^{\circ}_{3\frac{1}{2}} - 59259_{2\frac{1}{2}}$					
4597.279	2	30	21745.90	−0.09	$37077^{\circ}_{2\frac{1}{2}} - 58823_{2\frac{1}{2}}$					
4597.087		1	21746.81							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4596.342		7	21750.34	−0.10	$47329^{\circ}_{2\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
4595.556		1	21754.06	−0.08	$71222_{3\frac{1}{2}} - 92976^{\circ}_{3\frac{1}{2}}$					
4593.214		4	21765.15	−0.08	$64461_{1\frac{1}{2}} - 86226^{\circ}_{1\frac{1}{2}}$					
4592.443		10	21768.80	−0.10	$46169^{\circ}_{4\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
4588.677		1	21786.67	−0.09	$40035^{\circ}_{3\frac{1}{2}} - 61822_{3\frac{1}{2}}$					
4587.075		15	21794.28	−0.05	$46354^{\circ}_{4\frac{1}{2}} - 68148_{5\frac{1}{2}}$					
4585.767		10	21800.49	−0.05	$34575^{\circ}_{1\frac{1}{2}} - 56375_{2\frac{1}{2}}$					
4579.536		6	21830.16	−0.04	$57798^{\circ}_{2\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
4578.620		3	21834.52	−0.04	$53716^{\circ}_{2\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
4578.142		7	21836.80	−0.08	$31568^{\circ}_{2\frac{1}{2}} - 53404_{2\frac{1}{2}}$					
4574.800		2	21852.75	−0.08	$53120^{\circ}_{2\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
4572.740		1	21862.60							
4572.027		1	21866.01							
4571.660		3	21867.76	−0.09	$51248^{\circ}_{2\frac{1}{2}} - 73116_{1\frac{1}{2}}$					
4571.064		1	21870.62							
4570.081		1	21875.32	+0.03	$54640^{\circ}_{4\frac{1}{2}} - 76516_{4\frac{1}{2}}$					
4563.680		3	21906.00	−0.05	$53644^{\circ}_{3\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
4562.440		5	21911.95							
4560.022		3	21923.57	−0.11 0.00	$53716^{\circ}_{2\frac{1}{2}} - 75640_{3\frac{1}{2}}$ $67789^{\circ}_{1\frac{1}{2}} - 89713_{2\frac{1}{2}}$?					
4557.936	20	150	21933.61	−0.03	$35831^{\circ}_{5\frac{1}{2}} - 57765_{4\frac{1}{2}}$					
4555.50		2	21945.34	0.00	$49008^{\circ}_{3\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
4554.032	1	3	21952.41							
4553.576	500	1500	21954.61	+0.05	$30562^{\circ}_{5\frac{1}{2}} - 52517_{5\frac{1}{2}}$	6	1.12	1.26	0.80	1.19
4552.619		8	21959.22	−0.06	$41688^{\circ}_{1\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
4552.175		2	21961.36							
4551.792		2*d*	21963.21							
4550.601		6	21968.96	−0.04	$41678^{\circ}_{2\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
4548.359	40	80	21979.79	−0.02	$22960_{1\frac{1}{2}} - 44940^{\circ}_{1\frac{1}{2}}$					
4547.960		3	21981.72	−0.08 +0.06	$56088^{\circ}_{4\frac{1}{2}} - 78070_{4\frac{1}{2}}$ $60910^{\circ}_{1\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
4547.032	1	20	21986.20	+0.05 −0.01	$34389^{\circ}_{2\frac{1}{2}} - 56375_{2\frac{1}{2}}$ $45429^{\circ}_{3\frac{1}{2}} - 67416_{4\frac{1}{2}}$					
4545.383		1	21994.18							
4545.216		2	21994.99	−0.01	$69607_{2\frac{1}{2}} - 91602^{\circ}_{2\frac{1}{2}}$					
4543.879	2	40	22001.46	−0.05	$46547^{\circ}_{5\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
4543.452		4	22003.53	−0.07	$52987^{\circ}_{1\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
4543.302		3	22004.25	−0.09	$48024^{\circ}_{1\frac{1}{2}} - 70029_{0\frac{1}{2}}$					
4542.588	1*h*	5	22007.71	−0.03	$68135_{2\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
4542.371		1	22008.76							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4541.598		2	22012.51	−0.03	$37077^{\circ}_{2\frac{1}{2}} - 59090_{3\frac{1}{2}}$					
4541.325	20	100	22013.83	−0.04	$41688^{\circ}_{1\frac{1}{2}} - 63702_{2\frac{1}{2}}$	5	0.78	1.04	0.13	1.43
4539.323	5	20	22023.54	−0.05	$41678^{\circ}_{2\frac{1}{2}} - 63702_{2\frac{1}{2}}$					
4538.027		3	22029.83							
4537.494		2	22032.42	−0.05	$59624^{\circ}_{3\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
4536.805		3	22035.77							
4535.718		2	22041.05	−0.04	$54192^{\circ}_{5\frac{1}{2}} - 76233_{6\frac{1}{2}}$					
4534.250		1	22048.18	−0.03	$33653^{\circ}_{0\frac{1}{2}} - 55702_{1\frac{1}{2}}$					
4530.657		3	22065.67	−0.09	$47329^{\circ}_{2\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
4528.882		5	22074.31	−0.11	$47005^{\circ}_{1\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
4527.526		2	22080.93	−0.07	$45335^{\circ}_{4\frac{1}{2}} - 67416_{4\frac{1}{2}}$					
4525.535		1	22090.64							
4525.108		3	22092.72	+0.06	$52880^{\circ}_{4\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
4524.810		2	22094.18	−0.08	$57534^{\circ}_{3\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
4524.549	1	4	22095.45	−0.11	$46354^{\circ}_{4\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
4523.161		2	22102.23	−0.08	$37516^{\circ}_{3\frac{1}{2}} - 59618_{3\frac{1}{2}}$					
4520.746		8	22114.04	−0.04	$47329^{\circ}_{2\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
4517.218		2	22131.31	−0.08	$66571_{5\frac{1}{2}} - 88702^{\circ}_{5\frac{1}{2}}$					
4517.051		1	22132.13							
4516.094	1	2	22136.82							
4515.636		2	22139.07							
4515.161	200	800	22141.40	+0.01	$26759^{\circ}_{2\frac{1}{2}} - 48900_{3\frac{1}{2}}$	4	1.57	1.05	0.26	−0.25
4514.846		10	22142.94	−0.07	$45273^{\circ}_{3\frac{1}{2}} - 67416_{4\frac{1}{2}}$					
4513.990	6	20	22147.14	−0.04	$31568^{\circ}_{2\frac{1}{2}} - 53715_{3\frac{1}{2}}$					
4512.909		1	22152.44							
4511.725		3	22158.26	−0.12	$59046^{\circ}_{4\frac{1}{2}} - 81205_{4\frac{1}{2}}$					
4510.744		3	22163.08	−0.04	$66558_{3\frac{1}{2}} - 88721^{\circ}_{3\frac{1}{2}}$					
4509.700		3	22168.21	−0.10	$68549_{4\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
4508.788	1	9	22172.69	−0.03	$46547^{\circ}_{5\frac{1}{2}} - 68720_{6\frac{1}{2}}$					
4506.95		2*d*	22181.73	+0.08	$37077^{\circ}_{2\frac{1}{2}} - 59259_{2\frac{1}{2}}$					
4506.045	1	4	22186.19	−0.01	$65199_{4\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}}$					
4505.900		5	22186.90							
4505.345		3	22189.63							
4504.850		2	22192.07	−0.11	$45012^{\circ}_{2\frac{1}{2}} - 67204_{1\frac{1}{2}}$					
4504.331	1	9	22194.63	−0.05 −0.01	$46354^{\circ}_{4\frac{1}{2}} - 68549_{4\frac{1}{2}}$ $58484^{\circ}_{4\frac{1}{2}} - 80679_{5\frac{1}{2}}$					
4503.463		5	22198.91	−0.04	$47758^{\circ}_{3\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
4500.542		3	22213.31	−0.12	$49008^{\circ}_{3\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
4500.304		1	22214.49	−0.07	$47228^{\circ}_{0\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
4499.621		3	22217.86	−0.08	$45737^{\circ}_{1\frac{1}{2}} - 67955_{0\frac{1}{2}}$					
4499.462		1	22218.65							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4495.520		1	22238.13							
4493.965	50	150	22245.82	−0.06	$40917^{\circ}_{4\frac{1}{2}} - 63163_{4\frac{1}{2}}$	6	0.964	1.116	0.685	1.04
4493.244		1	22249.39							
4491.422		1	22258.42							
4490.240		1	22264.28	−0.08	$44940^{\circ}_{1\frac{1}{2}} - 67204_{1\frac{1}{2}}$					
4487.266	50	200	22279.03	−0.04	$41678^{\circ}_{2\frac{1}{2}} - 63957_{3\frac{1}{2}}$	7	(1.193)	1.17	0	1.12
4487.03		2*h*	22280.21	−0.12	$46169^{\circ}_{4\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
4486.794		1	22281.38							
4486.225		1	22284.20							
4485.986		1	22285.39							
4485.326		6	22288.67							
4485.040		2	22290.09	−0.05	$48503^{\circ}_{5\frac{1}{2}} - 70793_{5\frac{1}{2}}$					
4484.466	20	60	22292.94	−0.08	$30224^{\circ}_{4\frac{1}{2}} - 52517_{5\frac{1}{2}}$					
4484.280	1	5	22293.87	−0.10	$47663^{\circ}_{4\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
4475.666		2	22336.78	−0.07	$70858_{4\frac{1}{2}} - 93195^{\circ}_{3\frac{1}{2}}$					
4474.115		3	22344.52	−0.02	$49419^{\circ}_{0\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
4473.884		1	22345.67	−0.08	$69957_{4\frac{1}{2}} - 92303^{\circ}_{3\frac{1}{2}}$					
4472.146		8	22354.36	0.00	$48503^{\circ}_{5\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
4470.958		1	22360.30							
4469.566		3	22367.26	−0.11	$41688^{\circ}_{1\frac{1}{2}} - 64055_{2\frac{1}{2}}$					
4467.642		1	22376.89							
4467.128	1	10	22379.47	+0.02	$46169^{\circ}_{4\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
4466.002		7	22385.11	−0.01	$55221^{\circ}_{1\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
4465.663		2	22386.81							
4463.965		2	22395.32	+0.05	$61822_{3\frac{1}{2}} - 84217^{\circ}_{4\frac{1}{2}}$					
4463.855	1	8	22395.88	−0.05	$46547^{\circ}_{5\frac{1}{2}} - 68943_{4\frac{1}{2}}$					
4463.493	1	9	22397.69	−0.02 −0.01	$45737^{\circ}_{1\frac{1}{2}} - 68135_{2\frac{1}{2}}$ $48556^{\circ}_{3\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
4460.923	1	5	22410.60	−0.02	$67204_{1\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$					
4460.405		1	22413.20	−0.08	$45737^{\circ}_{1\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
4459.181		1	22419.35	−0.01	$55462^{\circ}_{3\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
4457.428		2	22428.17							
4457.311		1	22428.76							
4456.994		4	22430.35	−0.01	$53120^{\circ}_{2\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
4452.663		3	22452.17	−0.06	$70793_{5\frac{1}{2}} - 93246^{\circ}_{6\frac{1}{2}}$					
4452.153		1	22454.74							
4451.930		20	22455.86	+0.02	$47680^{\circ}_{6\frac{1}{2}} - 70136_{6\frac{1}{2}}$					
4451.11		2*d*	22460.00							
4450.60		1	22462.58	−0.05	$64923_{4\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}}$					
4444.860		3	22491.58	−0.05	$43075^{\circ}_{1\frac{1}{2}} - 65566_{0\frac{1}{2}}$					
4442.075		3	22505.68	0.00	$56621^{\circ}_{5\frac{1}{2}} - 79126_{4\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4441.484		2	22508.68	−0.06	$70954_{2\frac{1}{2}} - 93463^{\circ}_{3\frac{1}{2}}$					
4438.142		7	22525.63	−0.06	$57103^{\circ}_{3\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
4435.150		5	22540.82	+0.01	$46902^{\circ}_{0\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
4434.178	40	100	22545.76	−0.02	$30392^{\circ}_{1\frac{1}{2}} - 52938_{1\frac{1}{2}}$					
4431.595		1	22558.91	−0.02	$43007^{\circ}_{0\frac{1}{2}} - 65566_{0\frac{1}{2}}$					
4428.153		3*h*	22576.44							
4423.129		1	22602.08	0.00	$47005^{\circ}_{1\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
4422.150		3	22607.09	−0.02	$53716^{\circ}_{2\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
4419.495		1	22620.67	−0.05	$66082_{5\frac{1}{2}} - 88702^{\circ}_{5\frac{1}{2}}$					
4418.132		3	22627.65	−0.02	$58051^{\circ}_{5\frac{1}{2}} - 80679_{5\frac{1}{2}}$					
4417.814		1	22629.27	−0.05	$52921^{\circ}_{3\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
4417.080		3	22633.03	−0.03	$37077^{\circ}_{2\frac{1}{2}} - 59710_{1\frac{1}{2}}$					
4414.548		1	22646.02	−0.04 −0.01	$56480^{\circ}_{4\frac{1}{2}} - 79126_{4\frac{1}{2}}$ $59046^{\circ}_{4\frac{1}{2}} - 81692_{3\frac{1}{2}}$					
4410.740		2*h*	22665.57	−0.09	$45273^{\circ}_{3\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
4409.685		2*h*	22670.99							
4409.346	200	300	22672.73	−0.04	$24332_{2\frac{1}{2}} - 47005^{\circ}_{1\frac{1}{2}}$	5	1.20	1.02	0.09	1.47
4408.220		1	22678.52	−0.08	$53644^{\circ}_{3\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
4407.650	1	4	22681.46	−0.04	$48272^{\circ}_{2\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
4405.496		1	22692.55	−0.03	$67204_{1\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$					
4404.208		1	22699.18	−0.06	$49916^{\circ}_{4\frac{1}{2}} - 72615_{5\frac{1}{2}}$					
4403.037		1	22705.22	+0.04	$45429^{\circ}_{3\frac{1}{2}} - 68135_{2\frac{1}{2}}$					
4402.824		5	22706.32	0.00	$35059^{\circ}_{3\frac{1}{2}} - 57765_{4\frac{1}{2}}$					
4402.300	40	200	22709.02	−0.02	$38342^{\circ}_{4\frac{1}{2}} - 61051_{3\frac{1}{2}}$	4	(1.093)	1.18	*w*	0.80
4401.824		1	22711.48							
4401.445	1	6	22713.43	−0.01	$48556^{\circ}_{3\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
4400.583		1	22717.88	−0.07	$51248^{\circ}_{2\frac{1}{2}} - 73966_{3\frac{1}{2}}$					
4399.391		1	22724.04	−0.03	$68135_{2\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$					
4396.499	10	40	22738.98	−0.04 +0.03	$26759^{\circ}_{2\frac{1}{2}} - 49498_{2\frac{1}{2}}$ $71270_{2\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$					
4392.825	50	100	22758.00	−0.05 +0.05	$39378^{\circ}_{0\frac{1}{2}} - 62136_{0\frac{1}{2}}$ $(56056^{\circ}_{2\frac{1}{2}} - 78814_{2\frac{1}{2}})$	6	1.84	0.08	0.88	0.96
4390.49		1	22770.10	−0.07	$65950_{4\frac{1}{2}} - 88721^{\circ}_{3\frac{1}{2}}$					
4390.43		1	22770.42							
4389.764	50	200	22773.87	0.00	$46169^{\circ}_{4\frac{1}{2}} - 68943_{4\frac{1}{2}}$					
4388.528		8	22780.28	−0.08	$68756_{3\frac{1}{2}} - 91536^{\circ}_{3\frac{1}{2}}$					
4387.46		1	22785.83							
4387.144	1	10	22787.47	+0.01	$64598_{3\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}}$					
4385.97	2	20	22793.57	−0.07	$67416_{4\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
4385.66	3	10	22795.18	−0.03	$39378^{\circ}_{0\frac{1}{2}} - 62174_{1\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4384.72		2	22800.07	−0.01	$47228^{\circ}_{0\frac{1}{2}} - 70029_{0\frac{1}{2}}$					
4383.93		10	22804.18	0.00	$50832^{\circ}_{1\frac{1}{2}} - 73636_{0\frac{1}{2}}$					
4383.11		1	22808.44	−0.06	$54640^{\circ}_{4\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
4383.02		2	22808.91	−0.01	$40917^{\circ}_{4\frac{1}{2}} - 63726_{4\frac{1}{2}}$					
4382.16		1	22813.39	+0.02	$43075^{\circ}_{1\frac{1}{2}} - 65888_{1\frac{1}{2}}$					
4382.08		2	22813.80	−0.05	$45335^{\circ}_{4\frac{1}{2}} - 68148_{5\frac{1}{2}}$					
4381.80		20	22815.26	−0.04	$50468^{\circ}_{5\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
4379.50	20	300	22827.24	+0.04	$65875_{6\frac{1}{2}} - 88702^{\circ}_{5\frac{1}{2}}$					
4377.80		1	22836.11							
4376.851	1	40	22841.06	−0.01	$48272^{\circ}_{2\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
4376.649		2	22842.11							
4374.861		3	22851.45	−0.04	$58661^{\circ}_{2\frac{1}{2}} - 81512_{1\frac{1}{2}}$					
4372.854		1	22861.94	−0.04	$45273^{\circ}_{3\frac{1}{2}} - 68135_{2\frac{1}{2}}$					
4372.65		2	22863.00	−0.05	$67416_{4\frac{1}{2}} - 90279^{\circ}_{5\frac{1}{2}}$					
4372.560	2	30	22863.47	−0.02	$49916^{\circ}_{4\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
4371.083		3	22871.20	−0.02	$53644^{\circ}_{3\frac{1}{2}} - 76516_{4\frac{1}{2}}$					
4371.05		1	22871.37							
4370.810	200	2000	22872.63	−0.01	$38342^{\circ}_{4\frac{1}{2}} - 61214_{4\frac{1}{2}}$	6	1.10	1.07	0.15	1.08
4368.89		1	22882.68							
4368.520		1	22884.62	−0.06	$71113_{1\frac{1}{2}} - 93998^{\circ}_{1\frac{1}{2}}$					
4365.948		2	22898.10							
4364.056		5	22908.02	−0.02	$69395_{3\frac{1}{2}} - 92303^{\circ}_{3\frac{1}{2}}$					
4363.54		1	22910.73	+0.02	$53322^{\circ}_{7\frac{1}{2}} - 76233_{6\frac{1}{2}}$					
4363.280	6	90	22912.10	−0.03	$48556^{\circ}_{3\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
4362.333		4	22917.07	−0.07	$66796^{\circ}_{3\frac{1}{2}} - 89713_{2\frac{1}{2}}$					
4362.156	1	6	22918.00	−0.01	$52987^{\circ}_{1\frac{1}{2}} - 75905_{0\frac{1}{2}}$					
4361.868		2	22919.52	−0.03	$41678^{\circ}_{2\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
4361.468	1	10	22921.62	0.00	$52067^{\circ}_{0\frac{1}{2}} - 74989_{0\frac{1}{2}}$	7	0.50	0.50	0	0.500
4360.663		4	22925.85	−0.04	$45012^{\circ}_{2\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
4360.140	1	2	22928.60							
4359.958		20	22929.56	−0.01	$48024^{\circ}_{1\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
4359.165[a]	3	2	22933.73							
4356.160		3	22949.55	−0.04	$48272^{\circ}_{2\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
4355.58		1	22952.60							
4354.191	3	10	22959.93	0.00 +0.03	$53716^{\circ}_{2\frac{1}{2}} - 76676_{2\frac{1}{2}}$ $59439^{\circ}_{2\frac{1}{2}} - 82398_{1\frac{1}{2}}$					
4350.801		15	22977.81							
4349.952		2	22982.30							
4348.087	3	15	22992.16	−0.04	$63234_{2\frac{1}{2}} - 86226^{\circ}_{1\frac{1}{2}}$					
4347.358		3	22996.01	+0.01	$58661^{\circ}_{2\frac{1}{2}} - 81657_{2\frac{1}{2}}$					

TABLE 6. Yb II – *Observed and classified lines* – Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4347.223	10	20	22996.73	−0.02	$24332_{2\frac{1}{2}} - 47329^{\circ}_{2\frac{1}{2}}$					
4347.13		1	22997.22	−0.02	$48272^{\circ}_{2\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
4346.00		1	23003.20	+0.01	$61214_{4\frac{1}{2}} - 84217^{\circ}_{4\frac{1}{2}}$					
4344.894	1	20	23009.05	+0.01	$70858_{4\frac{1}{2}} - 93867^{\circ}_{4\frac{1}{2}}$					
4344.204	60	300	23012.71	−0.02	$30392^{\circ}_{1\frac{1}{2}} - 53404_{2\frac{1}{2}}$	4	1.320	1.034	0.143	0.605
4343.845		5	23014.61	−0.01	$44940^{\circ}_{1\frac{1}{2}} - 67955_{0\frac{1}{2}}$					
4342.753		3	23020.40	+0.11	$45429^{\circ}_{3\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
4342.151	6	80	23023.59	+0.01	$47005^{\circ}_{1\frac{1}{2}} - 70029_{0\frac{1}{2}}$	5	0.98	0.68	0.15	1.15
4341.646		10	23026.27	0.00	$40917^{\circ}_{4\frac{1}{2}} - 63944_{5\frac{1}{2}}$					
4340.673	2	7	23031.43	+0.01	$53644^{\circ}_{3\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
4340.269		1	23033.57	0.00	$71270_{2\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
4340.147	1	15	23034.22	0.00	$66571_{5\frac{1}{2}} - 89605^{\circ}_{4\frac{1}{2}}$					
4339.082	150	1000	23039.87	−0.02	$40917^{\circ}_{4\frac{1}{2}} - 63957_{3\frac{1}{2}}$	4	0.977	1.147	0.085	0.383
4337.235		2	23049.68	+0.01	$53120^{\circ}_{2\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
4336.30		1	23054.65	−0.04	$70954_{2\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$					
4334.914	3	4	23062.02							
4332.809		4	23073.23	−0.03	$70793_{5\frac{1}{2}} - 93867^{\circ}_{4\frac{1}{2}}$					
4331.942		2	23077.85							
4331.762		3	23078.81	0.00	$69957_{4\frac{1}{2}} - 93036^{\circ}_{5\frac{1}{2}}$					
4331.318		1	23081.17	−0.05	$71222_{3\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
4331.032		5	23082.69	0.00	$53716^{\circ}_{2\frac{1}{2}} - 76799_{1\frac{1}{2}}$					
4329.818		15	23089.17	+0.03	$48024^{\circ}_{1\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
4329.654		1	23090.04	−0.07	$73291_{5\frac{1}{2}} - 96382^{\circ}_{5\frac{1}{2}}$					
4327.853		9	23099.65	+0.01	$47758^{\circ}_{3\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
4327.238		2	23102.93	−0.01	$68135_{2\frac{1}{2}} - 91237^{\circ}_{3\frac{1}{2}}$					
4326.637	1	15	23106.14	−0.01	$70136_{6\frac{1}{2}} - 93242^{\circ}_{5\frac{1}{2}}$					
4326.556		9	23106.57	−0.01	$54640^{\circ}_{4\frac{1}{2}} - 77747_{4\frac{1}{2}}$					
4325.240	6	90	23113.60	+0.04	$47680^{\circ}_{6\frac{1}{2}} - 70793_{5\frac{1}{2}}$					
4325.033		2	23114.71	−0.02	$59777^{\circ}_{1\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
4324.962		1	23115.09	+0.01	$45335^{\circ}_{4\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
4324.500		7	23117.56	0.00	$57561^{\circ}_{6\frac{1}{2}} - 80679_{5\frac{1}{2}}$					
4324.160		1	23119.38	−0.03	$45429^{\circ}_{3\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
4323.630		8	23122.21	0.00	$45012^{\circ}_{2\frac{1}{2}} - 68135_{2\frac{1}{2}}$					
4323.554	1	5	23122.62	0.00	$53716^{\circ}_{2\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
4322.851		1	23126.38	+0.05	$46902^{\circ}_{0\frac{1}{2}} - 70029_{0\frac{1}{2}}$					
4322.56	2	30	23127.93	−0.04	$40035^{\circ}_{3\frac{1}{2}} - 63163_{4\frac{1}{2}}$					
4322.53	1	20	23128.10	+0.03	$56500^{\circ}_{3\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
4322.230	200	2000	23129.70	+0.01	$35831^{\circ}_{5\frac{1}{2}} - 58961_{5\frac{1}{2}}$	6	1.22	0.98	1.30	1.11
4320.723		2	23137.77	−0.01	$45012^{\circ}_{2\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
4319.556	1	9	23144.02	+0.01	$65577_{3\frac{1}{2}} - 88721^{\circ}_{3\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4318.978		1	23147.12	−0.01	$73750_{4\frac{1}{2}} - 96898^{\circ}_{5\frac{1}{2}}$					
4318.820		1	23147.96	+0.02	$56480^{\circ}_{4\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
4318.750		2	23148.34							
4318.459	2	10	23149.90	0.00	$58162^{\circ}_{1\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
4318.010		3	23152.31							
4317.751	1	15	23153.69	−0.07	$58051^{\circ}_{5\frac{1}{2}} - 81205_{4\frac{1}{2}}$					
4316.954	2000	8000	23157.97	+0.05	$30562^{\circ}_{5\frac{1}{2}} - 53720_{4\frac{1}{2}}$	4	1.126	1.276	0.075	0.451
4315.302		3	23166.83	+0.04	$61051_{3\frac{1}{2}} - 84217^{\circ}_{4\frac{1}{2}}$					
4315.15		1	23167.65							
4310.230	1	10	23194.09	−0.02	$53644^{\circ}_{3\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
4310.124		20	23194.66	0.00	$47663^{\circ}_{4\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
4309.886		15	23195.95	+0.02	$48272^{\circ}_{2\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
4309.308		4	23199.06	−0.03	$73283_{4\frac{1}{2}} - 96482^{\circ}_{4\frac{1}{2}}$					
4308.586		7	23202.94	+0.03	$53120^{\circ}_{2\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
4307.583		4	23208.35	−0.03	$58484^{\circ}_{4\frac{1}{2}} - 81692_{3\frac{1}{2}}$					
4307.29		3	23209.93	−0.03	$44940^{\circ}_{1\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
4306.494	2	80	23214.22	+0.02	$45335^{\circ}_{4\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
4304.512		2	23224.90	−0.01	$35059^{\circ}_{3\frac{1}{2}} - 58283_{2\frac{1}{2}}$					
4304.422		2	23225.39	−0.03	$46169^{\circ}_{4\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
4303.675		2	23229.42	+0.01	$61214_{4\frac{1}{2}} - 84444^{\circ}_{3\frac{1}{2}}$					
4301.496	5	15	23241.19	−0.03	$54640^{\circ}_{4\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
4300.736		4	23245.30	−0.01	$48024^{\circ}_{1\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
4298.075		1	23259.69	−0.03	$68756_{3\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$					
4296.696		3	23267.15	+0.01	$59624^{\circ}_{3\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
4296.338		3	23269.09							
4293.421		8	23284.90	0.00	$69957_{4\frac{1}{2}} - 93242^{\circ}_{5\frac{1}{2}}$					
4290.357		7	23301.53	+0.02	$67416_{4\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
4289.91		1	23303.96							
4288.800		9	23309.99							
4286.839		7	23320.65	+0.02	$43075^{\circ}_{1\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
4285.878		9	23325.88							
4285.816		1	23326.22	0.00	$45429^{\circ}_{3\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
4285.258	1	9	23329.25							
4285.127	2	15	23329.97	+0.05	$64055_{2\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}}$					
4284.942	7	80	23330.97	0.00	$32371^{\circ}_{2\frac{1}{2}} - 55702_{1\frac{1}{2}}$					
4283.453		1	23339.08							
4282.808		10	23342.60	+0.01	$45737^{\circ}_{1\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
4281.972	20	50	23347.16							
4281.584		5	23349.27	−0.04	$70954_{2\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
4280.636		2	23354.44	−0.04	$71468_{2\frac{1}{2}} - 94823^{\circ}_{1\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4280.594		1	23354.67	−0.02	$57103^{\circ}_{3\frac{1}{2}} - 80457_{3\frac{1}{2}}$					
4277.092		2	23373.79							
4276.78		1	23375.50	+0.05	$49916^{\circ}_{4\frac{1}{2}} - 73291_{5\frac{1}{2}}$					
4273.340	20	150	23394.32	0.00	$32981^{\circ}_{1\frac{1}{2}} - 56375_{2\frac{1}{2}}$	5	(0.87)	1.23	0.18	?
4271.963		2	23401.86	−0.01	$52921^{\circ}_{3\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
4270.515	4	60	23409.79	+0.02	$46547^{\circ}_{5\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
4268.882		1	23418.75	−0.04	$58672^{\circ}_{0\frac{1}{2}} - 82091_{0\frac{1}{2}}$					
4267.590	50	100	23425.84	−0.01	$24332_{2\frac{1}{2}} - 47758^{\circ}_{3\frac{1}{2}}$					
4266.952	10	100	23429.34	−0.03	$54640^{\circ}_{4\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
4265.976		2	23434.70	+0.01	$66462_{0\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$					
4265.498		1	23437.32	0.00	$45012^{\circ}_{2\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
4264.802	1	30	23441.15	−0.02	$44497^{\circ}_{2\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
4264.520		1	23442.70	−0.04	$52880^{\circ}_{4\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
4264.282		5	23444.01	+0.01	$48024^{\circ}_{1\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
4264.029		6	23445.40	0.00	$70858_{4\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
4262.826	2	5	23452.02	+0.05	$68150_{1\frac{1}{2}} - 91602^{\circ}_{2\frac{1}{2}}$					
4262.691		6	23452.76	+0.04	$59439^{\circ}_{2\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
4262.273		1	23455.06	−0.01	$43007^{\circ}_{0\frac{1}{2}} - 66462_{0\frac{1}{2}}$					
4260.678		7	23463.84	+0.02	$47758^{\circ}_{3\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
4259.17		1	23472.15							
4258.194	2	20	23477.53	+0.01	$70858_{4\frac{1}{2}} - 94335^{\circ}_{5\frac{1}{2}}$					
4257.640	200	2000	23480.58	+0.02	$38342^{\circ}_{4\frac{1}{2}} - 61822_{3\frac{1}{2}}$	4	1.10	1.34	0.12	0.26
4257.198		6	23483.02	0.00	$45273^{\circ}_{3\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
4255.765	500	2000	23490.93	0.00 +0.03	$30224^{\circ}_{4\frac{1}{2}} - 53715_{3\frac{1}{2}}$ $(48272^{\circ}_{2\frac{1}{2}} - 71763_{1\frac{1}{2}})$	4	(0.94)	1.19	0.125	?
4254.775	200	800	23496.39	+0.01	$30224^{\circ}_{4\frac{1}{2}} - 53720_{4\frac{1}{2}}$	6	0.95	1.27	1.50	1.11
4254.000		9	23500.67	+0.02	$44438^{\circ}_{3\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
4253.790		1	23501.83	0.00 +0.01	$66395_{2\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$ $70858_{4\frac{1}{2}} - 94360^{\circ}_{4\frac{1}{2}}$					
4252.806		3	23507.27	−0.03	$66205^{\circ}_{2\frac{1}{2}} - 89713_{2\frac{1}{2}}$					
4252.515	300	3000	23508.88	+0.01	$37077^{\circ}_{2\frac{1}{2}} - 60586_{1\frac{1}{2}}$	4	1.113	1.326	0.107	0.794
4252.040		15	23511.50	+0.03	$47758^{\circ}_{3\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
4250.21		5	23521.63	+0.05	$65199_{4\frac{1}{2}} - 88721^{\circ}_{3\frac{1}{2}}$					
4249.861		2	23523.56	+0.01	$66082_{5\frac{1}{2}} - 89605^{\circ}_{4\frac{1}{2}}$					
4249.81		2	23523.84	−0.06	$69395_{3\frac{1}{2}} - 92919^{\circ}_{3\frac{1}{2}}$					
4249.748		4	23524.18	+0.01	$66189^{\circ}_{1\frac{1}{2}} - 89713_{2\frac{1}{2}}$					
4248.12		2	23533.20							
4247.885	40	300	23534.50	+0.03	$37516^{\circ}_{3\frac{1}{2}} - 61051_{3\frac{1}{2}}$	6	1.11	1.17	0.22	1.14
4247.04		2	23539.18							
4246.835		10	23540.32	0.00	$56088^{\circ}_{4\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
4246.586	4	20	23541.70	−0.04	$70793_{5\frac{1}{2}} - 94335^{\circ}_{5\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4245.740	3	15	23546.39	+0.05 −0.01	$66351_{2\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$ $69957_{4\frac{1}{2}} - 93503^{\circ}_{4\frac{1}{2}}$					
4245.597		2	23547.18	−0.02	$68756_{3\frac{1}{2}} - 92303^{\circ}_{3\frac{1}{2}}$					
4244.73		1	23551.99							
4244.51		8	23553.21	+0.04	$71270_{2\frac{1}{2}} - 94823^{\circ}_{1\frac{1}{2}}$					
4244.21	6	80	23554.88	−0.01	$54192^{\circ}_{5\frac{1}{2}} - 77747_{4\frac{1}{2}}$	5?	1.11	(1.07)	w	1.18
4244.054	6	15	23555.75	+0.02	$53120^{\circ}_{2\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
4243.494		9	23558.85	+0.01	$47663^{\circ}_{4\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
4242.425	4	60	23564.79	+0.03	$49727^{\circ}_{6\frac{1}{2}} - 73291_{5\frac{1}{2}}$					
4242.299		4	23565.49							
4241.67	2	6	23568.98							
4241.24		2	23571.37							
4241.159	1	15	23571.82	+0.02	$56056^{\circ}_{2\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
4241.116		5	23572.06							
4239.455		1	23581.30	0.00	$69395_{3\frac{1}{2}} - 92976^{\circ}_{3\frac{1}{2}}$					
4238.84		1	23584.72	−0.02	$66558_{3\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
4238.345		1	23587.47	−0.02	$69607_{2\frac{1}{2}} - 93195^{\circ}_{3\frac{1}{2}}$					
4238.157	2	30	23588.52	0.00	$46547^{\circ}_{5\frac{1}{2}} - 70136_{6\frac{1}{2}}$					
4237.284		3	23593.38	−0.02	$55221^{\circ}_{1\frac{1}{2}} - 78814_{2\frac{1}{2}}$					
4235.565	1	20	23602.95	+0.01	$46354^{\circ}_{4\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
4235.012	1	20	23606.04	−0.04	$73291_{5\frac{1}{2}} - 96898^{\circ}_{5\frac{1}{2}}$					
4234.545	50	800	23608.64	+0.02	$45335^{\circ}_{4\frac{1}{2}} - 68943_{4\frac{1}{2}}$	6	1.014	0.870	0.667	0.942
4232.427		1	23620.45	−0.03	$49419^{\circ}_{0\frac{1}{2}} - 73039_{0\frac{1}{2}}$					
4231.648		6	23624.80	−0.03	$47329^{\circ}_{2\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
4230.184	200	400	23632.98	+0.02	$39378^{\circ}_{0\frac{1}{2}} - 63011_{1\frac{1}{2}}$	4	1.865	0.775	0.545	0.230
4229.681		3	23635.79							
4229.271	3	30	23638.08	−0.01	$66571_{5\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
4227.952	50	700	23645.45	−0.01	$48556^{\circ}_{3\frac{1}{2}} - 72202_{3\frac{1}{2}}$	6	0.91	0.85	0.22	0.880
4226.85		2	23651.62	−0.05	$66558_{3\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
4226.595		4	23653.05	−0.01	$44497^{\circ}_{2\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
4226.273	1	20	23654.85	0.00	$65950_{4\frac{1}{2}} - 89605^{\circ}_{4\frac{1}{2}}$					
4225.998		8	23656.39	−0.06	$42915^{\circ}_{5\frac{1}{2}} - 66571_{5\frac{1}{2}}$					
4225.548	10	30	23658.91	0.00	$63726_{4\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}}$					
4224.196	20	150	23666.48	−0.02	$40035^{\circ}_{3\frac{1}{2}} - 63702_{2\frac{1}{2}}$	4	(0.720)	1.08	0.18	
4224.064		1	23667.22	−0.07	$62559_{2\frac{1}{2}} - 86226^{\circ}_{1\frac{1}{2}}$					
4223.466		2	23670.57	−0.06	$45273^{\circ}_{3\frac{1}{2}} - 68943_{4\frac{1}{2}}$					
4222.486		10	23676.06							
4222.057		4	23678.47	−0.02	$53120^{\circ}_{2\frac{1}{2}} - 76799_{1\frac{1}{2}}$					
4220.260		1	23688.55	0.00	$52987^{\circ}_{1\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
42[illegible].646		10	23692.00	−0.01	$24332_{2\frac{1}{2}} - 48024^{\circ}_{1\frac{1}{2}}$					
421[illegible].565	1000	5000	23698.07	0.00	$37516^{\circ}_{3\frac{1}{2}} - 61214_{4\frac{1}{2}}$	4	1.115	1.05	(0.035)	0.80

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4217.79		2	23702.42	−0.03	$72779_{3\frac{1}{2}} - 96482^{\circ}_{4\frac{1}{2}}$					
4217.69		2	23702.98							
4217.110		4	23706.24	+0.01	$45737^{\circ}_{1\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
4216.885	6	60	23707.51	+0.01	$66571_{5\frac{1}{2}} - 90279^{\circ}_{5\frac{1}{2}}$					
4216.704	60	300	23708.53	−0.01	$34575^{\circ}_{1\frac{1}{2}} - 58283_{2\frac{1}{2}}$	4	1.432	0.766	0.331	−0.233
4216.569		2	23709.29	−0.05	$71113_{1\frac{1}{2}} - 94823^{\circ}_{1\frac{1}{2}}$					
4216.417		8	23710.14	−0.02	$47758^{\circ}_{3\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
4215.519	6	20	23715.19							
4214.942	2	15	23718.44	+0.02	$53120^{\circ}_{2\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
4213.856		2	23724.55	0.00	$51248^{\circ}_{2\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
4213.407		3	23727.08	−0.05	$65888_{1\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$					
4212.361		6	23732.97	+0.03	$53716^{\circ}_{2\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
4211.957		1	23735.25							
4211.502		2	23737.81	−0.04	$58661^{\circ}_{2\frac{1}{2}} - 82398_{1\frac{1}{2}}$					
4211.298		4	23738.96	−0.01	$48024^{\circ}_{1\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
4210.664	4	40	23742.54	+0.04	$51248^{\circ}_{2\frac{1}{2}} - 74991_{1\frac{1}{2}}$	7	(1.034)	1.05	0	1.01
4209.870		5	23747.01	−0.01	$66395_{2\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
4208.625		4	23754.04	+0.03	$68549_{4\frac{1}{2}} - 92303^{\circ}_{3\frac{1}{2}}$					
4208.519		1	23754.64	−0.05	$52921^{\circ}_{3\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
4207.65		1	23759.54							
4205.608		4	23771.08	+0.02	$49008^{\circ}_{3\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
4204.058		5	23779.84	−0.02	$64923_{4\frac{1}{2}} - 88702^{\circ}_{5\frac{1}{2}}$					
4203.254		2	23784.39	−0.01	$47329^{\circ}_{2\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
4204.666		2	23787.72	+0.01	$46169^{\circ}_{4\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
4202.44	15	30*hl*	23789.00							
4201.991		1	23791.54	+0.01	$66351_{2\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
4201.460	2	20	23794.55	−0.01	$73291_{5\frac{1}{2}} - 97086^{\circ}_{4\frac{1}{2}}$					
4200.841		5	23798.05	+0.04	$64923_{4\frac{1}{2}} - 88721^{\circ}_{3\frac{1}{2}}$					
4199.939		4	23803.16	0.00	$73283_{4\frac{1}{2}} - 97086^{\circ}_{4\frac{1}{2}}$					
4199.713		10	23804.44	+0.01	$53644^{\circ}_{3\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
4198.863		1	23809.26	+0.01	$51248^{\circ}_{2\frac{1}{2}} - 75058_{2\frac{1}{2}}$					
4196.632	1	9	23821.92	+0.01	$67416_{4\frac{1}{2}} - 91237^{\circ}_{3\frac{1}{2}}$					
4193.807	2	10	23837.97	+0.07	$52067^{\circ}_{0\frac{1}{2}} - 75905_{0\frac{1}{2}}$	6	(0.54)	1.30	0.38	
4193.533		4	23839.52							
4192.725		3	23844.12							
4191.473		2	23851.24	0.00	$52987^{\circ}_{1\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
4190.297	200	2000	23857.93	+0.03	$37516^{\circ}_{3\frac{1}{2}} - 61374_{2\frac{1}{2}}$	4	1.13	1.30	0.085	0.73
4188.723		7	23866.90	+0.02	$68148_{1\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$					
4188.371		2	23868.90	−0.01	$70954_{2\frac{1}{2}} - 94823^{\circ}_{1\frac{1}{2}}$					
4188.130	1	20	23870.28	+0.03	$45737^{\circ}_{1\frac{1}{2}} - 69607_{2\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4186.83	15	300	23877.69	+0.01	$54192^{\circ}_{5\frac{1}{2}} - 78070_{4\frac{1}{2}}$	7	(1.11)	1.11	0	1.11
4186.027		2	23882.27							
4185.565	2	30	23884.91	+0.03	$47228^{\circ}_{0\frac{1}{2}} - 71113_{1\frac{1}{2}}$	5	0.74	1.00	0.13	1.13
4184.635	1	20	23890.21	+0.01	$53716^{\circ}_{2\frac{1}{2}} - 77606_{2\frac{1}{2}}$	7	(1.183)	1.12	0	1.15
4184.164		3	23892.90	−0.02	$47329^{\circ}_{2\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
4183.905		1	23894.38	−0.03	$57798^{\circ}_{2\frac{1}{2}} - 81692_{3\frac{1}{2}}$					
4182.553		2	23902.11							
4180.809	10000	20000	23912.08	+0.01	$30392^{\circ}_{1\frac{1}{2}} - 54304_{0\frac{1}{2}}$	4	1.33	2.01	0.34	0.99
4179.084	10	80	23921.95	−0.03	$40035^{\circ}_{3\frac{1}{2}} - 63957_{3\frac{1}{2}}$					
4178.585	4	6	23924.80	0.00	$59439^{\circ}_{2\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
4178.225		8	23926.86	−0.04	$68720_{6\frac{1}{2}} - 92647^{\circ}_{5\frac{1}{2}}$					
4177.81	4	80	23929.24	−0.02	$48272^{\circ}_{2\frac{1}{2}} - 72202_{3\frac{1}{2}}$	4	1.14	0.86	0.144	0.149
4177.40	2	50	23931.59							
4176.204		3	23938.44	−0.02	$69607_{2\frac{1}{2}} - 93546^{\circ}_{2\frac{1}{2}}$					
4175.928	10	90	23940.03	−0.05	$24332_{2\frac{1}{2}} - 48272^{\circ}_{2\frac{1}{2}}$					
4175.835		30	23940.56	−0.01	$47329^{\circ}_{2\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
4175.602	2	30	23941.89	−0.02	$22960_{1\frac{1}{2}} - 46902^{\circ}_{0\frac{1}{2}}$	4	0.80	1.32	0.26	0.54
4175.545	1	20	23942.22	−0.02	$35019^{\circ}_{4\frac{1}{2}} - 58961_{5\frac{1}{2}}$					
4174.399		6	23948.79	−0.02	$47005^{\circ}_{1\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
4172.15		20	23961.70	+0.01	$53644^{\circ}_{3\frac{1}{2}} - 77606_{2\frac{1}{2}}$	7	(1.18)	1.16	0	1.23
4170.106	200	2000	23973.45	−0.02	$37077^{\circ}_{2\frac{1}{2}} - 61051_{3\frac{1}{2}}$	5	1.09	1.15	(0.03)	1.30
4169.499	2	8	23976.94	0.00	$56480^{\circ}_{4\frac{1}{2}} - 80457_{3\frac{1}{2}}$					
4165.692		2	23998.85							
4165.143		6	24002.01							
4164.660	5	50	24004.80	−0.01	$32371^{\circ}_{2\frac{1}{2}} - 56375_{2\frac{1}{2}}$					
4164.587		15	24005.22	+0.02	$40917^{\circ}_{4\frac{1}{2}} - 64923_{4\frac{1}{2}}$					
4162.023		5	24020.01	+0.01	$40035^{\circ}_{3\frac{1}{2}} - 64055_{2\frac{1}{2}}$					
4161.572		1	24022.61							
4160.299		2	24029.96							
4160.090	3	40	24031.17	+0.04	$35059^{\circ}_{3\frac{1}{2}} - 59090_{3\frac{1}{2}}$					
4157.755	100	200	24044.66	0.00	$22960_{1\frac{1}{2}} - 47005^{\circ}_{1\frac{1}{2}}$					
4156.575	1	4	24051.49	+0.02	$69957_{4\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$					
4156.444		1	24052.25	+0.04	$62174_{1\frac{1}{2}} - 86226^{\circ}_{1\frac{1}{2}}$					
4153.88		6	24067.09	0.00	$45012^{\circ}_{2\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
4153.758		4	24067.80	−0.01	$69395_{3\frac{1}{2}} - 93463^{\circ}_{3\frac{1}{2}}$					
4153.197		7	24071.05	+0.05	$35019^{\circ}_{4\frac{1}{2}} - 59090_{3\frac{1}{2}}$					
4152.79		3	24073.41							
4148.440		8	24098.65							
4147.774	1	30	24102.52	+0.01 +0.04	$53644^{\circ}_{3\frac{1}{2}} - 77747_{4\frac{1}{2}}$ $69443_{1\frac{1}{2}} - 93546^{\circ}_{2\frac{1}{2}}$					
4146.984		2	24107.11							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4146.764	1	30	24108.39	+0.01	$47005^{\circ}_{1\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
4146.160		3	24111.90	−0.02	$48503^{\circ}_{5\frac{1}{2}} - 72615_{5\frac{1}{2}}$					
4144.700	1	20	24120.40	−0.03 +0.03	$55462^{\circ}_{3\frac{1}{2}} - 79583_{2\frac{1}{2}}$ $67416_{4\frac{1}{2}} - 91536^{\circ}_{3\frac{1}{2}}$					
4144.273	1	15	24122.88	+0.04	$64598_{3\frac{1}{2}} - 88721^{\circ}_{3\frac{1}{2}}$					
4143.070		4	24129.89	+0.01	$43075^{\circ}_{1\frac{1}{2}} - 67204_{1\frac{1}{2}}$					
4142.364	1	30	24134.00	+0.01	$31568^{\circ}_{2\frac{1}{2}} - 55702_{1\frac{1}{2}}$					
4141.457	2	60	24139.28	+0.01 +0.02	$44940^{\circ}_{1\frac{1}{2}} - 69079_{2\frac{1}{2}}$ $47329^{\circ}_{2\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
4139.332	10	30	24151.68	+0.05	$63234_{2\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}}$					
4138.445		4	24156.85	+0.01	$50832^{\circ}_{1\frac{1}{2}} - 74989_{0\frac{1}{2}}$					
4138.166		3	24158.48	+0.01	$57534^{\circ}_{3\frac{1}{2}} - 81692_{3\frac{1}{2}}$					
4138.13		1	24158.69	−0.02	$50832^{\circ}_{1\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
4138.11		1	24158.81							
4137.985		2	24159.54	0.00	$66558_{3\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
4137.378		4	24163.08	+0.02	$68756_{3\frac{1}{2}} - 92919^{\circ}_{3\frac{1}{2}}$					
4136.930		7	24165.70	+0.04	$53716^{\circ}_{2\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
4136.872		1	24166.04	+0.01	$55462^{\circ}_{3\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
4135.088	500	5000	24176.46	+0.04	$34784^{\circ}_{5\frac{1}{2}} - 58961_{5\frac{1}{2}}$	6	1.126	0.987	0.765	1.062
4134.476	20	80	24180.04	+0.01	$28757^{\circ}_{1\frac{1}{2}} - 52938_{1\frac{1}{2}}$	6	1.46	0.89	0.845	1.180
4132.465		4	24191.81	+0.02	$65950_{4\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
4132.063		2	24194.16	0.00	$43956^{\circ}_{2\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
4131.600	2	20	24196.87	+0.04	$66082_{5\frac{1}{2}} - 90279^{\circ}_{5\frac{1}{2}}$					
4131.325		3	24198.48	+0.07	$56480^{\circ}_{4\frac{1}{2}} - 80679_{5\frac{1}{2}}$					
4131.15		4	24199.51	+0.05	$70136_{6\frac{1}{2}} - 94335^{\circ}_{5\frac{1}{2}}$					
4131.024	6	40	24200.25	+0.01	$35059^{\circ}_{3\frac{1}{2}} - 59259_{2\frac{1}{2}}$					
4130.878	1	4	24201.10							
4129.413		1	24209.69	−0.04 +0.06	$41678^{\circ}_{2\frac{1}{2}} - 65888_{1\frac{1}{2}}$ $57103^{\circ}_{3\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
4129.329		2	24210.18							
4129.157	2	30	24211.19	+0.06	$46902^{\circ}_{0\frac{1}{2}} - 71113_{1\frac{1}{2}}$	4	1.30	0.98	0.16	0.82
4128.046		3	24217.70	0.00	$49419^{\circ}_{0\frac{1}{2}} - 73636_{0\frac{1}{2}}$					
4127.202		4	24222.66	+0.04	$71468_{2\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					
4126.992	20	30	24223.89	+0.01	$24332_{2\frac{1}{2}} - 48556^{\circ}_{3\frac{1}{2}}$					
4126.726	1	15	24225.45	−0.01	$50832^{\circ}_{1\frac{1}{2}} - 75058_{2\frac{1}{2}}$					
4126.030		2	24229.54							
4124.736	2	30	24237.14	−0.01	$53644^{\circ}_{3\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
4124.564		1	24238.15	−0.01	$49419^{\circ}_{0\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
4123.180	1	20	24246.28	+0.04	$46547^{\circ}_{5\frac{1}{2}} - 70793_{5\frac{1}{2}}$					
4122.853	50	500	24248.21	0.00	$34575^{\circ}_{1\frac{1}{2}} - 58823_{2\frac{1}{2}}$	4	1.34	1.18	0.08	0.94
4121.345		3	24257.08	+0.05	$69607_{2\frac{1}{2}} - 93864^{\circ}_{2\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4120.071	1	40	24264.58	+0.03	$47005^{\circ}_{1\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
4119.812		2	24266.11							
4119.464	200	1500	24268.16	0.00	$22960_{1\frac{1}{2}} - 47228^{\circ}_{0\frac{1}{2}}$	5	0.76?	0.56?	0.10w?	0.86
4119.25	20	30	24269.42							
4119.046	3	60	24270.62	−0.02	$33494^{\circ}_{3\frac{1}{2}} - 57765_{4\frac{1}{2}}$					
4118.395		3	24274.46	+0.04	$49008^{\circ}_{3\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
4117.177	1	30	24281.64	+0.01	$40917^{\circ}_{4\frac{1}{2}} - 65199_{4\frac{1}{2}}$					
4116.654		4	24284.72							
4115.454		9	24291.80	+0.05	$45737^{\circ}_{1\frac{1}{2}} - 70029_{0\frac{1}{2}}$					
4114.591	2	30	24296.90	0.00	$37077^{\circ}_{2\frac{1}{2}} - 61374_{2\frac{1}{2}}$					
4113.879	1	20	24301.10	+0.03	$66558_{3\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$					
4113.707		5	24302.12	+0.04	$51248^{\circ}_{2\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
4113.046	40	400	24306.02	+0.03	$37516^{\circ}_{3\frac{1}{2}} - 61822_{3\frac{1}{2}}$	6	1.13	1.33	0.71	1.23
4111.381		6	24315.87	+0.01	$68720_{6\frac{1}{2}} - 93036^{\circ}_{5\frac{1}{2}}$					
4110.448		2	24321.39							
4110.168		10	24323.04	0.00	$67955_{0\frac{1}{2}} - 92278^{\circ}_{1\frac{1}{2}}$					
4109.654		400	24326.08	−0.01	$61822_{3\frac{1}{2}} - 86148^{\circ}_{2\frac{1}{2}}$	4	1.33	1.57	0.12	0.73
4109.306	2	40	24328.14	+0.01 −0.05	$65950_{4\frac{1}{2}} - 90279^{\circ}_{5\frac{1}{2}}$ $71222_{3\frac{1}{2}} - 95550^{\circ}_{4\frac{1}{2}}$					
4108.845	5	15	24330.87	+0.04	$65566_{0\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$					
4106.284		3	24346.05	−0.04	$69957_{4\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
4106.070		5	24347.32							
4103.416	1	10	24363.06							
4103.113		2	24364.86	−0.06	$68549_{4\frac{1}{2}} - 92914^{\circ}_{4\frac{1}{2}}$					
4102.478	20	20	24368.64	0.00	$22960_{1\frac{1}{2}} - 47329^{\circ}_{2\frac{1}{2}}$					
4102.264		5	24369.91	+0.04	$68549_{4\frac{1}{2}} - 92919^{\circ}_{3\frac{1}{2}}$					
4100.877		1	24378.15	−0.06	$69957_{4\frac{1}{2}} - 94335^{\circ}_{5\frac{1}{2}}$					
4100.160		8	24382.41	0.00	$45012^{\circ}_{2\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
4099.820		2	24384.43	−0.06	$55221^{\circ}_{1\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
4099.482		3	24386.44							
4098.848		2	24390.22							
4098.096		2	24394.69							
4097.885	100	600	24395.95	−0.06	$31979^{\circ}_{3\frac{1}{2}} - 56375_{2\frac{1}{2}}$	5	1.34	1.24	0.05	1.59
4096.968		1	24401.41	−0.01	$69607_{2\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$					
4096.785		3	24402.50	−0.01	$69957_{4\frac{1}{2}} - 94360^{\circ}_{4\frac{1}{2}}$					
4096.644	2	20	24403.34	+0.03	$65875_{6\frac{1}{2}} - 90279^{\circ}_{5\frac{1}{2}}$					
4096.156	1	15	24406.24	−0.02	$65199_{4\frac{1}{2}} - 89605^{\circ}_{4\frac{1}{2}}$					
4094.351		2	24417.00							
4093.634	2	20	24421.28	−0.03	$71270_{2\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4092.959		10	24425.31	+0.01	$53644^{\circ}_{3\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
4092.052	1	4	24430.72	−0.01	$45012^{\circ}_{2\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
4091.53	6	100	24433.84	+0.02	$34389^{\circ}_{2\frac{1}{2}} - 58823_{2\frac{1}{2}}$					
4091.466	2	40	24434.22	−0.01	$47329^{\circ}_{2\frac{1}{2}} - 71763_{1\frac{1}{2}}$	4	1.01	1.12	0.053	0.850
4090.594		3	24439.43	+0.02	$46354^{\circ}_{4\frac{1}{2}} - 70793_{5\frac{1}{2}}$					
4088.633		2	24451.15							
4088.528		1	24451.78							
4086.61	7	100	24463.25	+0.01	$47005^{\circ}_{1\frac{1}{2}} - 71468_{2\frac{1}{2}}$	7	(0.990)	1.01	0	1.03
4085.66	1	8	24468.94	−0.05 −0.02	$68450_{3\frac{1}{2}} - 92919^{\circ}_{3\frac{1}{2}}$ $71222_{3\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					
4085.05		3	24472.60	−0.01	$56840^{\circ}_{1\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
4084.845		3	24473.82							
4084.515		1	24475.80							
4083.870		1	24479.67							
4082.814		4	24486.00	0.00 −0.01	$53120^{\circ}_{2\frac{1}{2}} - 77606_{2\frac{1}{2}}$ $54640^{\circ}_{4\frac{1}{2}} - 79126_{4\frac{1}{2}}$					
4082.64		1	24487.04	−0.03	$68549_{4\frac{1}{2}} - 93036^{\circ}_{5\frac{1}{2}}$					
4082.529		1	24487.71							
4081.05		1	24496.58							
4079.991	2	40	24502.94	+0.03	$44940^{\circ}_{1\frac{1}{2}} - 69443_{1\frac{1}{2}}$	6	1.24	1.14	0.14	1.19
4079.88		6	24503.61	−0.02	$46354^{\circ}_{4\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
4079.542		3	24505.64	+0.02	$44438^{\circ}_{3\frac{1}{2}} - 68943_{4\frac{1}{2}}$					
4079.164	2	20	24507.91	+0.05	$66351_{2\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$					
4078.36	7	70	24512.74	+0.08	$65093_{3\frac{1}{2}} - 89605^{\circ}_{4\frac{1}{2}}$	4	(0.973)	0.94	w	0.830
4077.713	10	20	24516.63							
4077.276	200	2000	24519.26	+0.01 −0.10	$38342^{\circ}_{4\frac{1}{2}} - 62861_{5\frac{1}{2}}$ $(68943_{4\frac{1}{2}} - 93463^{\circ}_{3\frac{1}{2}})$	5	1.06	1.10	(0.022)	1.30
4076.82		1	24522.00	+0.05	$68720_{6\frac{1}{2}} - 93242^{\circ}_{5\frac{1}{2}}$					
4076.198		3	24525.74	−0.01	$68720_{6\frac{1}{2}} - 93246^{\circ}_{6\frac{1}{2}}$					
4076.09		3	24526.39	0.00	$68450_{3\frac{1}{2}} - 92976^{\circ}_{3\frac{1}{2}}$					
4075.873		3	24527.70	+0.03 0.00	$45429^{\circ}_{3\frac{1}{2}} - 69957_{4\frac{1}{2}}$ $52921^{\circ}_{3\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
4074.705	8	60	24534.73	+0.02	$47228^{\circ}_{0\frac{1}{2}} - 71763_{1\frac{1}{2}}$	5	0.698	1.098	0.200	1.298
4074.074		1	24538.53	+0.02	$47663^{\circ}_{4\frac{1}{2}} - 72202_{3\frac{1}{2}}$					
4071.442		1	24554.39							
4071.334		3	24555.04	+0.004	$69443_{1\frac{1}{2}} - 93998^{\circ}_{1\frac{1}{2}}$					
4070.527	8	50	24559.91	+0.01	$35059^{\circ}_{3\frac{1}{2}} - 59618_{3\frac{1}{2}}$					
4069.013		4	24569.05							
4068.50		2	24572.14							
4068.229		2	24573.78							
4067.031		2	24581.02							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4066.809		15	24582.36	−0.01	$44497^{\circ}_{2\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
4066.520		2	24584.11	−0.01	$56621^{\circ}_{5\frac{1}{2}} - 81205_{4\frac{1}{2}}$					
4064.757		15	24594.77	+0.02	$45012^{\circ}_{2\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
4063.927	1	30	24599.79	+0.02 +0.06	$35019^{\circ}_{4\frac{1}{2}} - 59618_{3\frac{1}{2}}$ $67416_{4\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$					
4062.35		1	24609.34							
4062.100		2	24610.86							
4061.614		7	24613.80	+0.04	$69395_{3\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$					
4060.180		1	24622.50	+0.04	$45335^{\circ}_{4\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
4060.04		1	24623.34							
4059.893		2	24624.24	+0.06	$46169^{\circ}_{4\frac{1}{2}} - 70793_{5\frac{1}{2}}$					
4058.238		1	24634.28							
4058.065	1	6	24635.33	+0.04	$66082_{5\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
4056.142	500	2000	24647.01	+0.03	$28757^{\circ}_{1\frac{1}{2}} - 53404_{2\frac{1}{2}}$	4	1.44	1.03	0.21	0.42
4055.468		3	24651.10							
4054.588		1	24656.45							
4053.547		2	24662.79	+0.03	$41688^{\circ}_{1\frac{1}{2}} - 66351_{2\frac{1}{2}}$					
4053.235		1*h*	24664.68							
4053.11		10	24665.44							
4052.860		20	24666.97	+0.04	$44940^{\circ}_{1\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
4051.339	20	60	24676.23	−0.01	$24332_{2\frac{1}{2}} - 49008^{\circ}_{3\frac{1}{2}}$	4	1.19	1.04	0.074	0.67
4050.083	20	150	24683.88	+0.01	$34575^{\circ}_{1\frac{1}{2}} - 59259_{2\frac{1}{2}}$	4	1.446	1.110	0.168	0.606
4049.982		5	24684.49	+0.02	$45273^{\circ}_{3\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
4049.335		7	24688.44	+0.04	$46169^{\circ}_{4\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
4048.683		5	24692.41	+0.04	$70858_{4\frac{1}{2}} - 95550^{\circ}_{4\frac{1}{2}}$					
4048.554		2	24693.20	+0.04	$68549_{4\frac{1}{2}} - 93242^{\circ}_{5\frac{1}{2}}$					
4048.21		1	24695.30							
4048.090		2	24696.03	−0.01	$69607_{2\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
4047.38	20	200	24700.36	−0.01	$34389^{\circ}_{2\frac{1}{2}} - 59090_{3\frac{1}{2}}$	5	1.000	1.122	0.061	1.427
4046.998		2	24702.70	−0.05	$58661^{\circ}_{2\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
4046.56		1	24705.37							
4046.52		1	24705.61							
4046.297		4	24706.97	0.00	$68756_{3\frac{1}{2}} - 93463^{\circ}_{3\frac{1}{2}}$					
4045.605		1	24711.20							
4045.302	6	80	24713.05	+0.02	$33052^{\circ}_{4\frac{1}{2}} - 57765_{4\frac{1}{2}}$					
4044.657		2	24716.99	0.00	$41678^{\circ}_{2\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
4043.426		4	24724.52	+0.02	$56480^{\circ}_{4\frac{1}{2}} - 81205_{4\frac{1}{2}}$					
4043.05	20	300	24726.82	+0.04	$48556^{\circ}_{3\frac{1}{2}} - 73283_{4\frac{1}{2}}$	5	1.00	1.07	(0.037)	1.33
4042.532	3	40	24729.99	0.00	$66571_{5\frac{1}{2}} - 91301^{\circ}_{6\frac{1}{2}}$					
4042.328		4	24731.23	+0.03	$52067^{\circ}_{0\frac{1}{2}} - 76799_{1\frac{1}{2}}$					

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TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4040.563	1	30	24742.04	+0.07	$49008^{\circ}_{3\frac{1}{2}} - 73750_{4\frac{1}{2}}$	4	1.023	0.987	(0.018)	0.861
4040.498		8	24742.43	0.00	$64970^{\circ}_{3\frac{1}{2}} - 89713_{2\frac{1}{2}}$					
4040.29		1	24743.71							
4040.08	60	1000	24744.99	0.00 +0.07	$37077^{\circ}_{2\frac{1}{2}} - 61882_{3\frac{1}{2}}$ $(68450_{3\frac{1}{2}} - 93195^{\circ}_{3\frac{1}{2}})$	5	1.120	1.334	0.107	1.87
4039.613		4	24747.85	0.00	$68756_{3\frac{1}{2}} - 93503^{\circ}_{4\frac{1}{2}}$					
4039.140		3	24750.75							
4038.187		6	24756.59	0.00	$70793_{5\frac{1}{2}} - 95550^{\circ}_{4\frac{1}{2}}$					
4037.916		9	24758.25	+0.04	$47005^{\circ}_{1\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
4037.822	20	50	24758.83	+0.04	$63944_{5\frac{1}{2}} - 88702^{\circ}_{5\frac{1}{2}}$	7	(1.115)	1.095	0	1.105
4036.772[a]	20	15	24765.27							
4036.550	1	15	24766.63	+0.04	$65950_{4\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
4035.315	9	90	24774.21	+0.03	$61374_{2\frac{1}{2}} - 86148^{\circ}_{2\frac{1}{2}}$	6	1.304	1.578	0.685	1.441
4034.438		6	24779.60	+0.07	$48503^{\circ}_{5\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
4033.695		4	24784.16	+0.06	$68135_{2\frac{1}{2}} - 92919^{\circ}_{3\frac{1}{2}}$					
4032.869	10	100	24789.24	+0.01	$33494^{\circ}_{3\frac{1}{2}} - 58283_{2\frac{1}{2}}$	5	1.000	0.784	0.109	1.540
4032.756		2	24789.93	−0.03	$68756_{3\frac{1}{2}} - 93546^{\circ}_{2\frac{1}{2}}$					
4032.441		2	24791.87							
4030.712		1	24802.50							
4029.844	2	60	24807.85	+0.02	$31568^{\circ}_{2\frac{1}{2}} - 56375_{2\frac{1}{2}}$					
4027.580		10	24821.79	+0.02	$38342^{\circ}_{4\frac{1}{2}} - 63163_{4\frac{1}{2}}$					
4027.19		1	24824.19							
4026.922		2	24825.85	+0.07	$52921^{\circ}_{3\frac{1}{2}} - 77747_{4\frac{1}{2}}$					
4025.740		2	24833.14	0.00	$70858_{4\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					
4024.375		4	24841.56	+0.06	$68135_{2\frac{1}{2}} - 92976^{\circ}_{3\frac{1}{2}}$					
4023.987	6	30	24843.95	+0.01	$48272^{\circ}_{2\frac{1}{2}} - 73116_{1\frac{1}{2}}$	5	1.141	0.861	0.140	1.561
4022.712	3	40	24851.83	+0.01	$61374_{2\frac{1}{2}} - 86226^{\circ}_{1\frac{1}{2}}$					
4021.956		1	24856.50							
4020.310		2	24866.68	+0.03	$52880^{\circ}_{4\frac{1}{2}} - 77747_{4\frac{1}{2}}$					
4019.852	1	10	24869.51	+0.03	$34389^{\circ}_{2\frac{1}{2}} - 59259_{2\frac{1}{2}}$					
4019.35	6	150	24872.61	+0.02	$47329^{\circ}_{2\frac{1}{2}} - 72202_{3\frac{1}{2}}$	4	0.989	0.859	0.065	0.534
4018.264		2	24879.34	+0.07 0.00	$41678^{\circ}_{2\frac{1}{2}} - 66558_{3\frac{1}{2}}$ $58484^{\circ}_{4\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
4018.134		2	24880.14	0.00	$43075^{\circ}_{1\frac{1}{2}} - 67955_{0\frac{1}{2}}$					
4017.94		1	24881.34							
4017.060		3	24886.79	+0.06	$66351_{2\frac{1}{2}} - 91237^{\circ}_{3\frac{1}{2}}$					
4016.976		9	24887.31	+0.02	$40035^{\circ}_{3\frac{1}{2}} - 64923_{4\frac{1}{2}}$					
4015.296		4	24897.73	+0.04	$44497^{\circ}_{2\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
4015.004		1	24899.54	0.00	$52987^{\circ}_{1\frac{1}{2}} - 77887_{0\frac{1}{2}}$					
4013.579	1	15	24908.38	0.00	$69395_{3\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
4013.464		3	24909.09							
4012.704		1	24913.81	+0.03	$68549_{4\frac{1}{2}} - 93463^{\circ}_{3\frac{1}{2}}$					
4012.204		1	24916.91							
4010.84		2	24925.39							
4009.237		20	24935.35	+0.01	$47680^{\circ}_{6\frac{1}{2}} - 72615_{5\frac{1}{2}}$					
4008.94	4	1	24937.20							
4008.775		3	24938.23							
4007.518		20	24946.05	+0.04	$44497^{\circ}_{2\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
4006.962		2	24949.51							
4006.672		1	24951.32							
4006.53		2	24952.20	−0.02	$47663^{\circ}_{4\frac{1}{2}} - 72615_{5\frac{1}{2}}$					
4005.619		1	24957.87	−0.01	$49008^{\circ}_{3\frac{1}{2}} - 73966_{3\frac{1}{2}}$					
4005.218		1	24960.37	+0.03 −0.05	$70793_{5\frac{1}{2}} - 95754^{\circ}_{5\frac{1}{2}}$ $52921^{\circ}_{3\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
4003.574		1	24970.62	+0.01	$65888_{1\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$					
4003.224		2	24972.81							
4002.798		2	24975.46							
4002.68		1	24976.20	+0.06	$63726_{4\frac{1}{2}} - 88702^{\circ}_{5\frac{1}{2}}$					
4002.326		10	24978.41	+0.01	$66558_{3\frac{1}{2}} - 91536^{\circ}_{3\frac{1}{2}}$					
4002.002		1	24980.43	+0.01	$67938_{3\frac{1}{2}} - 92919^{\circ}_{3\frac{1}{2}}$					
4000.808	5	150	24987.89	0.00	$54640^{\circ}_{4\frac{1}{2}} - 79628_{3\frac{1}{2}}$	7	1.12	(1.11)	0	1.15
3999.777	2	40	24994.33	+0.04	$63726_{4\frac{1}{2}} - 88721^{\circ}_{3\frac{1}{2}}$					
3998.430		7	25002.75							
3998.38		1	25003.06							
3997.244		4	25010.17	+0.04	$65199_{4\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
3995.859		1	25018.83	+0.03	$63702_{2\frac{1}{2}} - 88721^{\circ}_{3\frac{1}{2}}$					
3995.432	1	20	25021.51	+0.06	$47758^{\circ}_{3\frac{1}{2}} - 72779_{3\frac{1}{2}}$	7	(1.08)	1.12	0	1.10
3994.563		2	25026.95							
3994.300		1	25028.60							
3992.826		1	25037.84	+0.02	$67938_{3\frac{1}{2}} - 92976^{\circ}_{3\frac{1}{2}}$					
3992.09		8	25042.45	+0.02	$37516^{\circ}_{3\frac{1}{2}} - 62559_{2\frac{1}{2}}$					
3991.09		1	25048.73							
3990.603		2	25051.78	+0.02	$73750_{4\frac{1}{2}} - 98802^{\circ}_{5\frac{1}{2}}$					
3990.473		2	25052.60	+0.02	$46169^{\circ}_{4\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
3990.280		1	25053.81	+0.03	$68450_{3\frac{1}{2}} - 93503^{\circ}_{4\frac{1}{2}}$					
3989.717		6	25057.35	+0.03	$40035^{\circ}_{3\frac{1}{2}} - 65093_{3\frac{1}{2}}$					
3988.666		70	25063.95	+0.05	$22960_{1\frac{1}{2}} - 48024^{\circ}_{1\frac{1}{2}}$					
3986.962		5	25074.66	+0.03	$51248^{\circ}_{2\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
3986.830		5	25075.49	+0.01	$43075^{\circ}_{1\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
3986.179		10	25079.59	+0.05	$65199_{4\frac{1}{2}} - 90279^{\circ}_{5\frac{1}{2}}$					
3985.125		1	25086.22							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3984.765		3	25088.49	+0.06	$44940^{\circ}_{1\frac{1}{2}} - 70029_{0\frac{1}{2}}$					
3983.748		1	25094.89							
3983.314	2	60	25097.63	+0.02	$61051_{3\frac{1}{2}} - 86148^{\circ}_{2\frac{1}{2}}$	4	1.17	1.55	0.187	0.240
3983.179		1	25098.48	0.00	$53716^{\circ}_{2\frac{1}{2}} - 78814_{2\frac{1}{2}}$					
3982.009	2	20	25105.85	+0.03	$61120_{0\frac{1}{2}} - 86226^{\circ}_{1\frac{1}{2}}$	4	1.699	1.365	0.167	1.198
3981.574		1	25108.59	+0.06	$68756_{3\frac{1}{2}} - 93864^{\circ}_{2\frac{1}{2}}$					
3981.160		5	25111.20	+0.02	$68756_{3\frac{1}{2}} - 93867^{\circ}_{4\frac{1}{2}}$					
3980.78		1	25113.60	−0.01	$56977^{\circ}_{0\frac{1}{2}} - 82091_{0\frac{1}{2}}$					
3980.318		10	25116.52	+0.05 −0.01	$47663^{\circ}_{4\frac{1}{2}} - 72779_{3\frac{1}{2}}$ $65093_{3\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
3978.543	2	10	25127.72	0.00	$59090_{3\frac{1}{2}} - 84217^{\circ}_{4\frac{1}{2}}$					
3977.342	2	20	25135.31	+0.03	$34575^{\circ}_{1\frac{1}{2}} - 59710_{1\frac{1}{2}}$					
3977.113		1	25136.76							
3976.527		1	25140.46	+0.03	$65577_{3\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
3976.148		7	25142.86	+0.08	$43007^{\circ}_{0\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
3974.91		1	25150.69							
3974.30		2	25154.55	+0.04	$64461_{1\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$					
3972.91		1	25163.35							
3972.848		3	25163.74	+0.02	$40035^{\circ}_{3\frac{1}{2}} - 65199_{4\frac{1}{2}}$					
3972.517		4	25165.84							
3972.267		3	25167.42							
3972.08		1	25168.61							
3971.739		2	25170.77							
3971.014		2*h*	25175.36							
3969.519		1	25184.84	+0.01	$59259_{2\frac{1}{2}} - 84444^{\circ}_{3\frac{1}{2}}$					
3969.461		1	25185.21	+0.02	$66351_{2\frac{1}{2}} - 91536^{\circ}_{3\frac{1}{2}}$					
3969.082		3	25187.62							
3968.79		20	25189.47	+0.03	$52880^{\circ}_{4\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
3968.68		1	25190.17							
3968.024	10	100	25194.33	0.00	$48556^{\circ}_{3\frac{1}{2}} - 73750_{4\frac{1}{2}}$	5	1.00	1.06	(0.03)	1.27
3966.062		2	25206.80	−0.02	$66395_{2\frac{1}{2}} - 91602^{\circ}_{2\frac{1}{2}}$					
3964.584		1	25216.19	+0.04	$52067^{\circ}_{0\frac{1}{2}} - 77284_{1\frac{1}{2}}$					
3964.459	1	20	25216.99	+0.01	$45737^{\circ}_{1\frac{1}{2}} - 70954_{2\frac{1}{2}}$	4	1.360	1.016	0.172	0.500
3963.301		2	25224.36							
3962.457		4	25229.73	−0.05	$73291_{5\frac{1}{2}} - 98521^{\circ}_{4\frac{1}{2}}$					
3961.832		4	25233.71	−0.04	$42915^{\circ}_{5\frac{1}{2}} - 68148_{5\frac{1}{2}}$					
3961.288		1	25237.17							
3961.104		2	25238.35	−0.03	$73283_{4\frac{1}{2}} - 98521^{\circ}_{4\frac{1}{2}}$					
3960.866		2	25239.86							
3960.34		1	25243.21							
3960.27		1	25243.66							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3959.730		1	25247.10	+0.02	$48503^{\circ}_{5\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
3959.060	1	9	25251.38	{+0.10 +0.05	$56840^{\circ}_{1\frac{1}{2}} - 82091_{0\frac{1}{2}}$ $66351_{2\frac{1}{2}} - 91602^{\circ}_{2\frac{1}{2}}$					
3958.818		2	25252.92	0.00	$68756_{3\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$					
3958.376		3	25255.74	0.00	$56056^{\circ}_{2\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
3954.266		4	25281.99	+0.03	$65577_{3\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$					
3953.546		1	25286.59	+0.03	$64923_{4\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
3951.08		10	25302.37	+0.05	$32981^{\circ}_{1\frac{1}{2}} - 58283_{2\frac{1}{2}}$					
3949.91	10	100	25309.87	+0.03	$30392^{\circ}_{1\frac{1}{2}} - 55702_{1\frac{1}{2}}$	6	1.339	1.701	0.545	1.520
3949.58	100	200	25311.98	+0.01	$22960_{1\frac{1}{2}} - 48272^{\circ}_{2\frac{1}{2}}$	5	0.774	1.132	0.179	1.669
3948.64		4	25318.01	+0.02	$68549_{4\frac{1}{2}} - 93867^{\circ}_{4\frac{1}{2}}$					
3948.18	20	100	25320.96	+0.07	$34389^{\circ}_{2\frac{1}{2}} - 59710_{1\frac{1}{2}}$	5	1.047	0.857	0.095	1.332
3946.94	20	150	25328.91	+0.01	$33494^{\circ}_{3\frac{1}{2}} - 58823_{2\frac{1}{2}}$	4	0.989	1.261	0.137	0.309
3945.577		2	25337.66	+0.06	$50832^{\circ}_{1\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
3944.55		1	25344.26	+0.08	$53120^{\circ}_{2\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
3944.509		1	25344.52							
3943.692		2	25349.77							
3942.72		6	25356.02	+0.05	$64923_{4\frac{1}{2}} - 90279^{\circ}_{5\frac{1}{2}}$					
3939.517	1	20	25376.64	+0.09	$45737^{\circ}_{1\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
3938.53	40	400	25383.00	+0.02	$35831^{\circ}_{5\frac{1}{2}} - 61214_{4\frac{1}{2}}$					
3938.25	40	500	25384.80	−0.01	$38342^{\circ}_{4\frac{1}{2}} - 63726_{4\frac{1}{2}}$	6	1.095	1.005	0.41	1.05
3937.984		1	25386.52							
3936.596		2	25395.47	+0.04	$68150_{1\frac{1}{2}} - 93546^{\circ}_{2\frac{1}{2}}$					
3936.385		5	25396.83							
3935.086		3	25405.21							
3934.30	4	100	25410.29	+0.05	$48556^{\circ}_{3\frac{1}{2}} - 73966_{3\frac{1}{2}}$					
3933.87		2	25413.07							
3933.25		2*h*	25417.07	−0.04	$68450_{3\frac{1}{2}} - 93867^{\circ}_{4\frac{1}{2}}$					
3931.90	10	100	25425.80	0.00	$65875_{6\frac{1}{2}} - 91301^{\circ}_{6\frac{1}{2}}$	6	1.21	1.23	0.164	1.22
3931.634		2	25427.52	+0.07	$51248^{\circ}_{2\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
3931.44		1	25428.77							
3930.900		1	25432.27							
3930.004		2	25438.06							
3929.885		1	25438.83	+0.04	$43956^{\circ}_{2\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
3929.053		6	25444.22	+0.04	$66571_{5\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$					
3928.068		10	25450.60	+0.05	$47329^{\circ}_{2\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
3927.60		1	25453.63							
3926.962		1	25457.77	+0.01	$66558_{3\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$					
3926.651		2	25459.79	+0.06	$68549_{4\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$					
3924.656		2	25472.73							
3923.230		4	25481.99	+0.05	$53644^{\circ}_{3\frac{1}{2}} - 79126_{4\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3922.443	1	15	25487.10	−0.01	$43956^{\circ}_{2\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
3921.201		2	25495.17							
3920.745		4	25498.14	+0.02	$67416_{4\frac{1}{2}} - 92914^{\circ}_{4\frac{1}{2}}$					
3920.602		2*h*	25499.07							
3919.980	1	15	25503.11	+0.04	$67416_{4\frac{1}{2}} - 92919^{\circ}_{3\frac{1}{2}}$					
3918.804		9	25510.77	+0.06	$73291_{5\frac{1}{2}} - 98802^{\circ}_{5\frac{1}{2}}$					
3917.685		3	25518.05	+0.05	$65199_{4\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
3917.473		5	25519.43	−0.03	$44438^{\circ}_{3\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
3916.892		2	25523.22	+0.07	$45335^{\circ}_{4\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
3916.783	2	15	25523.93	+0.05	$70858_{4\frac{1}{2}} - 96382^{\circ}_{5\frac{1}{2}}$					
3916.702		1	25524.46	+0.01	$45429^{\circ}_{3\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
3916.425		10	25526.26	+0.02	$41678^{\circ}_{2\frac{1}{2}} - 67204_{1\frac{1}{2}}$					
3916.316		1	25526.97							
3916.268		1	25527.28							
3915.427		10	25532.77	+0.05	$45737^{\circ}_{1\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
3914.690		3	25537.57	+0.03	$73291_{5\frac{1}{2}} - 98829^{\circ}_{6\frac{1}{2}}$					
3913.923		7	25542.58	0.00	$59090_{3\frac{1}{2}} - 84632^{\circ}_{2\frac{1}{2}}$					
3913.729		7	25543.84	+0.06	$64169^{\circ}_{3\frac{1}{2}} - 89713_{2\frac{1}{2}}$					
3913.347	30	200	25546.34	+0.02	$28757^{\circ}_{1\frac{1}{2}} - 54304_{0\frac{1}{2}}$	4	1.441	2.001	0.280	1.161
3910.911		6	25562.25	+0.04	$60586_{1\frac{1}{2}} - 86148^{\circ}_{2\frac{1}{2}}$					
3910.429		2	25565.40	+0.03	$57798^{\circ}_{2\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
3910.364		4	25565.83							
3909.98		1	25568.34							
3909.186		1	25573.53							
3908.020		5	25581.16							
3907.355	2	40	25585.51	+0.06	$65950_{4\frac{1}{2}} - 91536^{\circ}_{3\frac{1}{2}}$	4	(1.09)	1.13	*w*	0.955
3906.960	4	30	25588.10	0.00	$70793_{5\frac{1}{2}} - 96382^{\circ}_{5\frac{1}{2}}$	6	1.21	1.23	0.07	1.22
3906.64		3	25590.20	+0.06	$51248^{\circ}_{2\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
3906.196	4	30	25593.10	+0.04	$69957_{4\frac{1}{2}} - 95550^{\circ}_{4\frac{1}{2}}$					
3905.832	20	200	25595.49	+0.04	$33494^{\circ}_{3\frac{1}{2}} - 59090_{3\frac{1}{2}}$	6	0.926	1.060	0.474	0.992
3904.812	100	1500	25602.18	+0.02	$38342^{\circ}_{4\frac{1}{2}} - 63944_{5\frac{1}{2}}$	5	(1.093)	1.13	*w*	1.30
3904.537		2	25603.98	+0.02	$68756_{3\frac{1}{2}} - 94360^{\circ}_{4\frac{1}{2}}$					
3904.447		1	25604.57	+0.04	$56088^{\circ}_{4\frac{1}{2}} - 81692_{3\frac{1}{2}}$					
3903.74		1*h*	25609.21							
3903.397		4	25611.46	−0.09 +0.07	$47680^{\circ}_{6\frac{1}{2}} - 73291_{5\frac{1}{2}}$ $64598_{3\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
3903.288		3	25612.17	+0.04	$48024^{\circ}_{1\frac{1}{2}} - 73636_{0\frac{1}{2}}$					
3902.814		5	25615.28	+0.02	$68720_{6\frac{1}{2}} - 94335^{\circ}_{5\frac{1}{2}}$					
3902.43		3*h*	25617.80							
3902.109		5	25619.91	+0.08	$47663^{\circ}_{4\frac{1}{2}} - 73283_{4\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3902.042	1	20	25620.35	−0.14 +0.08	$58823_{2\frac{1}{2}} - 84444^{\circ}_{3\frac{1}{2}}$ $67416_{4\frac{1}{2}} - 93036^{\circ}_{5\frac{1}{2}}$					
3901.44		1	25624.30	−0.10 +0.04	$65093_{3\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$ $70858_{4\frac{1}{2}} - 96482^{\circ}_{4\frac{1}{2}}$					
3899.245		3	25638.73							
3899.07	4	80	25639.88	+0.03	$60586_{1\frac{1}{2}} - 86226^{\circ}_{1\frac{1}{2}}$	7	(1.323)	1.36	0	1.34
3898.450		1	25643.96							
3897.946		8	25647.27	+0.07	$37516^{\circ}_{3\frac{1}{2}} - 63163_{4\frac{1}{2}}$					
3897.34		2*d*	25651.26	+0.13	$43956^{\circ}_{2\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
3897.060		1	25653.10							
3896.966		4	25653.72	+0.05	$40917^{\circ}_{4\frac{1}{2}} - 66571_{5\frac{1}{2}}$					
3895.884		2	25660.84	+0.01	$65577_{3\frac{1}{2}} - 91237^{\circ}_{3\frac{1}{2}}$					
3895.758	1	30	25661.67	+0.05	$63944_{5\frac{1}{2}} - 89605^{\circ}_{4\frac{1}{2}}$					
3893.740		2	25674.97							
3892.285		1	25684.57	+0.01	$50832^{\circ}_{1\frac{1}{2}} - 76517_{1\frac{1}{2}}$					
3891.696		1	25688.46	−0.02	$70793_{5\frac{1}{2}} - 96482^{\circ}_{4\frac{1}{2}}$					
3890.850	2	50	25694.04	0.00	$48272^{\circ}_{2\frac{1}{2}} - 73966_{3\frac{1}{2}}$	4	1.117	0.745	0.186	−0.185
3889.664		2	25701.88							
3887.826		10	25714.03	−0.05 +0.03	$65888_{1\frac{1}{2}} - 91602^{\circ}_{2\frac{1}{2}}$ $68150_{1\frac{1}{2}} - 93864^{\circ}_{2\frac{1}{2}}$					
3887.50		1	25716.19							
3887.290	20	300	25717.57	+0.05	$37516^{\circ}_{3\frac{1}{2}} - 63234_{2\frac{1}{2}}$	4	1.13	1.20	(0.036)	0.95
3886.63		1	25721.94							
3886.378		4	25723.61	+0.05	$49916^{\circ}_{4\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
3885.647		1	25728.45							
3885.470		1	25729.62	+0.05	$68135_{2\frac{1}{2}} - 93864^{\circ}_{2\frac{1}{2}}$					
3885.195		4	25731.44	+0.03	$45737^{\circ}_{1\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
3884.833		1	25733.84	+0.01	$69957_{4\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					
3883.638		1	25741.76	+0.02	$72779_{3\frac{1}{2}} - 98521^{\circ}_{4\frac{1}{2}}$					
3883.105		1	25745.29	+0.05	$66558_{3\frac{1}{2}} - 92303^{\circ}_{3\frac{1}{2}}$					
3881.738		3	25754.36	+0.01	$68549_{4\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
3880.684		1	25761.35							
3880.332		2	25763.69							
3880.197	5	70	25764.58	+0.02	$33494^{\circ}_{3\frac{1}{2}} - 59259_{2\frac{1}{2}}$	4	(0.991)	1.10	*w*	0.73
3880.044		1	25765.60	+0.05	$50468^{\circ}_{5\frac{1}{2}} - 76233_{6\frac{1}{2}}$					
3879.140		7	25771.61							
3878.023		4	25779.03	+0.03	$67416_{4\frac{1}{2}} - 93195^{\circ}_{3\frac{1}{2}}$					
3877.06	4	60	25785.43	+0.01	$31979^{\circ}_{3\frac{1}{2}} - 57765_{4\frac{1}{2}}$					
3876.902		1	25786.48	+0.01	$68549_{4\frac{1}{2}} - 94335^{\circ}_{5\frac{1}{2}}$					
3876.776	1	20	25787.32	+0.05	$47329^{\circ}_{2\frac{1}{2}} - 73116_{1\frac{1}{2}}$	5	0.995	0.863	0.067	1.193

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3876.33		2h	25790.29							
3874.610		3h	25801.74							
3874.066		10	25805.36	+0.05	$42915^{\circ}_{5\frac{1}{2}} - 68720_{6\frac{1}{2}}$					
3873.497		4	25809.15	+0.02	$58823_{2\frac{1}{2}} - 84632^{\circ}_{2\frac{1}{2}}$					
3872.555		5	25815.43	+0.02	$66462_{0\frac{1}{2}} - 92278^{\circ}_{1\frac{1}{2}}$					
3872.338		8	25816.87	−0.02	$54640^{\circ}_{4\frac{1}{2}} - 80457_{3\frac{1}{2}}$					
3871.946		1	25819.49	+0.06	$52067^{\circ}_{0\frac{1}{2}} - 77887_{0\frac{1}{2}}$					
3870.447		2	25829.49	+0.06	$57534^{\circ}_{3\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
3870.197		2h	25831.16							
3868.838		4	25840.23	+0.04	$45429^{\circ}_{3\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
3868.602	1	9	25841.81	+0.08	$64055_{2\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$					
3868.570	1	20	25842.02	+0.03	$32981^{\circ}_{1\frac{1}{2}} - 58823_{2\frac{1}{2}}$					
3867.75		1	25847.50	+0.02	$46354^{\circ}_{4\frac{1}{2}} - 72202_{3\frac{1}{2}}$					
3867.675		3	25848.00	+0.05	$68150_{1\frac{1}{2}} - 93998^{\circ}_{1\frac{1}{2}}$					
3867.48		5h	25849.30							
3867.378		1	25849.98	+0.01	$55462^{\circ}_{3\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
3866.862		1	25853.43	−0.04	$68450_{3\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
3865.351		1	25863.54	+0.02	$68135_{2\frac{1}{2}} - 93998^{\circ}_{1\frac{1}{2}}$					
3865.255		3	25864.18	+0.03	$71222_{3\frac{1}{2}} - 97086^{\circ}_{4\frac{1}{2}}$					
3863.784		2	25874.03	+0.07	$68135_{2\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$					
3863.455	200	800	25876.23	+0.04	$27061^{\circ}_{0\frac{1}{2}} - 52938_{1\frac{1}{2}}$	5	0.68	0.88	0.10	0.98
3863.046	10	100	25878.97	0.00	$63726_{4\frac{1}{2}} - 89605^{\circ}_{4\frac{1}{2}}$					
3862.511	1	20	25882.56	+0.01	$66395_{2\frac{1}{2}} - 92278^{\circ}_{1\frac{1}{2}}$ [d]	5	(1.235)	1.49	w	0.86
3861.792		3	25887.37	+0.04	$45335^{\circ}_{4\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
3861.730		2	25887.79	+0.04	$47228^{\circ}_{0\frac{1}{2}} - 73116_{1\frac{1}{2}}$					
3861.566		1	25888.89							
3861.467		1	25889.55	−0.02	$53716^{\circ}_{2\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
3860.917		1	25893.24	0.00	$52921^{\circ}_{3\frac{1}{2}} - 78814_{2\frac{1}{2}}$					
3859.887		2	25900.15							
3859.35		2h	25903.75							
3858.555	10	100	25909.09	+0.01	$33052^{\circ}_{4\frac{1}{2}} - 58961_{5\frac{1}{2}}$	4	1.265	0.975	0.145	−0.290
3858.434		1	25909.90	+0.01	$68450_{3\frac{1}{2}} - 94360^{\circ}_{4\frac{1}{2}}$					
3858.07		9	25912.35	+0.02	$53716^{\circ}_{2\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
3857.860		2	25913.76							
3857.586	10	20	25915.60							
3856.514		3	25922.80							
3854.91	4	30	25933.59	+0.08	$66082_{5\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$					
3854.806	20	100	25934.29	+0.03	$37077^{\circ}_{2\frac{1}{2}} - 63011_{1\frac{1}{2}}$	5	1.117	0.787	0.165	1.612
3853.731		3	25941.52	+0.04	$45012^{\circ}_{2\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
3853.238	1	2	25944.84							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3852.562		10	25949.39	+0.05	$45273^{\circ}_{3\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
3852.160	4	40	25952.10	+0.07	$66351_{2\frac{1}{2}} - 92303^{\circ}_{3\frac{1}{2}}$					
3851.80		2	25954.53	+0.11	$73291_{5\frac{1}{2}} - 99246^{\circ}_{5\frac{1}{2}}$?					
3851.242		1	25958.29							
3851.090		2	25959.31	+0.02	$65577_{3\frac{1}{2}} - 91536^{\circ}_{3\frac{1}{2}}$					
3850.366		4	25964.19							
3850.32		2	25964.50	+0.02	$49008^{\circ}_{3\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
3847.473	30	200	25983.72	+0.04 −0.10	$30392^{\circ}_{1\frac{1}{2}} - 56375_{2\frac{1}{2}}$ $(53644^{\circ}_{3\frac{1}{2}} - 79628_{3\frac{1}{2}})$	4	1.32	1.24	(0.04)	1.12
3846.237		4	25992.07	+0.01	$35059^{\circ}_{3\frac{1}{2}} - 61051_{3\frac{1}{2}}$					
3846.186	1	15	25992.41	+0.05	$47758^{\circ}_{3\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
3845.402		4	25997.71	0.00	$48272^{\circ}_{2\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
3844.988	2	6	26000.51							
3844.349	1	15	26004.83	+0.04	$43075^{\circ}_{1\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
3843.811		6	26008.47							
3843.420	5	80	26011.12	+0.03	$34575^{\circ}_{1\frac{1}{2}} - 60586_{1\frac{1}{2}}$	6	1.446	1.334	0.168	1.390
3843.032	1	20	26013.74	+0.08	$44940^{\circ}_{1\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
3842.653		1	26016.31							
3841.950	1	9	26021.07							
3841.296	1	10	26025.50	+0.07	$65577_{3\frac{1}{2}} - 91602^{\circ}_{2\frac{1}{2}}$					
3840.70		1	26029.54							
3840.341	3	70	26031.97	+0.04	$35019^{\circ}_{4\frac{1}{2}} - 61051_{3\frac{1}{2}}$	7	(1.158)	1.17	0	1.10
3840.297	2	40	26032.27	+0.02	$46169^{\circ}_{4\frac{1}{2}} - 72202_{3\frac{1}{2}}$					
3840.013		2	26034.19	+0.04	$47005^{\circ}_{1\frac{1}{2}} - 73039_{0\frac{1}{2}}$					
3839.469	30	300	26037.88	+0.04	$33052^{\circ}_{4\frac{1}{2}} - 59090_{3\frac{1}{2}}$	5	1.259	1.111	0.072	1.777
3839.382	1	20	26038.47	+0.11 +0.07	$54640^{\circ}_{4\frac{1}{2}} - 80679_{5\frac{1}{2}}$ $65199_{4\frac{1}{2}} - 91237^{\circ}_{3\frac{1}{2}}$					
3838.900	10	100	26041.74	+0.02	$35831^{\circ}_{5\frac{1}{2}} - 61873_{6\frac{1}{2}}$	4				
3838.67		2	26043.30	+0.01	$67955_{0\frac{1}{2}} - 93998^{\circ}_{1\frac{1}{2}}$					
3838.123		3	26047.01	+0.03	$67416_{4\frac{1}{2}} - 93463^{\circ}_{3\frac{1}{2}}$					
3837.411		4	26051.85	+0.09	$56840^{\circ}_{1\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
3836.677		2	26056.83	+0.04	$33653^{\circ}_{0\frac{1}{2}} - 59710_{1\frac{1}{2}}$					
3836.541		1	26057.75							
3835.952		2	26061.75							
3835.872		1	26062.30							
3835.495		3	26064.86	+0.10 +0.05	$48503^{\circ}_{5\frac{1}{2}} - 74568_{4\frac{1}{2}}$ $65950_{4\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$					
3833.884		9	26075.81	+0.05	$66571_{5\frac{1}{2}} - 92647^{\circ}_{5\frac{1}{2}}$					
3832.701		4	26083.86	+0.08	$69607_{2\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					
3832.664		1	26084.11							
3832.180		3	26087.41	+0.03	$47663^{\circ}_{4\frac{1}{2}} - 73750_{4\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3832.108		3	26087.90	+0.04	$67416_{4\frac{1}{2}} - 93503^{\circ}_{4\frac{1}{2}}$					
3831.610	3	20	26091.29	+0.10	$55221^{\circ}_{1\frac{1}{2}} - 81312_{2\frac{1}{2}}$	7	(1.11)	1.11	0	1.12
3831.288		1	26093.48							
3831.13		1	26094.56							
3830.178		2	26101.04	−0.01	$45012^{\circ}_{2\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
3829.767		2	26103.84							
3829.736		1	26104.05	−0.02	$70793_{5\frac{1}{2}} - 96898^{\circ}_{5\frac{1}{2}}$					
3827.494		4	26119.34	+0.08	$64598_{3\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
3827.030		2	26122.51	+0.04	$73291_{5\frac{1}{2}} - 99414^{\circ}_{4\frac{1}{2}}$					
3826.768		8	26124.30	+0.08	$33494^{\circ}_{3\frac{1}{2}} - 59618_{3\frac{1}{2}}$					
3826.51		1	26126.06							
3822.216		1	26155.41	+0.06	$69395_{3\frac{1}{2}} - 95550^{\circ}_{4\frac{1}{2}}$					
3822.17		1	26155.73	+0.07	$35059^{\circ}_{3\frac{1}{2}} - 61214_{4\frac{1}{2}}$					
3821.526		1	26160.13	−0.03	$58283_{2\frac{1}{2}} - 84444^{\circ}_{3\frac{1}{2}}$					
3821.224		1	26162.20	+0.10	$62559_{2\frac{1}{2}} - 88721^{\circ}_{3\frac{1}{2}}$					
3820.825		8	26164.93							
3820.288		5	26168.61	+0.03	$68135_{2\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
3819.916	1	15	26171.16	+0.08	$61214_{4\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}}$					
3818.365		1	26181.79	+0.04	$50468^{\circ}_{5\frac{1}{2}} - 76649_{5\frac{1}{2}}$					
3817.777	3	20	26185.82	+0.09	$37516^{\circ}_{3\frac{1}{2}} - 63702_{2\frac{1}{2}}$	5	(1.12)	1.05	w	1.30
3817.624		7	26186.87	+0.05 −0.05	$68148_{5\frac{1}{2}} - 94335^{\circ}_{5\frac{1}{2}}$ $72615_{5\frac{1}{2}} - 98802^{\circ}_{5\frac{1}{2}}$					
3816.345	15	150	26195.65	+0.12 −0.03	$35019^{\circ}_{4\frac{1}{2}} - 61214_{4\frac{1}{2}}$ $(45273^{\circ}_{3\frac{1}{2}} - 71468_{2\frac{1}{2}})$	6				
3816.189	30	300	26196.72	+0.02	$34389^{\circ}_{2\frac{1}{2}} - 60586_{1\frac{1}{2}}$	4	1.007	1.327	0.160	1.166
3815.640		1	26200.49	+0.03	$51248^{\circ}_{2\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
3814.310		10	26209.62	+0.05	$45012^{\circ}_{2\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
3814.215	15	200	26210.28	+0.04	$37516^{\circ}_{3\frac{1}{2}} - 63726_{4\frac{1}{2}}$	4	1.12	1.00	0.06	0.57
3814.084		4	26211.18	+0.06	$68148_{5\frac{1}{2}} - 94360^{\circ}_{4\frac{1}{2}}$					
3813.665		3	26214.06	+0.06	$46902^{\circ}_{0\frac{1}{2}} - 73116_{1\frac{1}{2}}$					
3811.584		2	26228.37	+0.04	$70858_{4\frac{1}{2}} - 97086^{\circ}_{4\frac{1}{2}}$					
3809.04	5	30	26245.88	+0.10 +0.06	$48024^{\circ}_{1\frac{1}{2}} - 74270_{2\frac{1}{2}}$ $70136_{6\frac{1}{2}} - 96382^{\circ}_{5\frac{1}{2}}$					
3808.544		1	26249.30	−0.02	$70793_{5\frac{1}{2}} - 97043^{\circ}_{6\frac{1}{2}}$					
3808.460	1	2	26249.88	+0.06	$63647_{1\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$					
3808.35		2	26250.64							
3808.315		2	26250.88							
3807.574	50	500	26255.99							
3807.545	100	1000	26256.19	−0.07	$38342^{\circ}_{4\frac{1}{2}} - 64598_{3\frac{1}{2}}$	4	1.08	1.23	0.076	0.55
3806.996		3	26259.98	+0.03	$41678^{\circ}_{2\frac{1}{2}} - 67938_{3\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3806.869		1	26260.85	−0.01 +0.06	$57103^{\circ}_{3\frac{1}{2}} - 83363_{3\frac{1}{2}}$ $64598_{3\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$					
3806.818		2	26261.20	+0.01	$46354^{\circ}_{4\frac{1}{2}} - 72615_{5\frac{1}{2}}$					
3806.188	2	20	26265.55	+0.06	$63944_{5\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
3806.011		1	26266.77	−0.01	$41688^{\circ}_{1\frac{1}{2}} - 67955_{0\frac{1}{2}}$					
3804.99		1	26273.82							
3804.431	4	40	26277.68	+0.03	$32981^{\circ}_{1\frac{1}{2}} - 59259_{2\frac{1}{2}}$	5	0.891	1.125	0.117	1.476
3804.35		2	26278.24	+0.01	$68150_{1\frac{1}{2}} - 94428^{\circ}_{1\frac{1}{2}}$					
3803.680		1	26282.87							
3802.47		1	26291.23	+0.07	$55221^{\circ}_{1\frac{1}{2}} - 81512_{1\frac{1}{2}}$					
3802.28		1	26292.54	−0.01	$70793_{5\frac{1}{2}} - 97086^{\circ}_{4\frac{1}{2}}$					
3801.752	1	20	26296.20	+0.06 +0.08	$63417^{\circ}_{2\frac{1}{2}} - 89713_{2\frac{1}{2}}$ $69395_{3\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					
3801.026		3*h*	26301.22							
3800.622	20	80	26304.01	0.00	$31979^{\circ}_{3\frac{1}{2}} - 58283_{2\frac{1}{2}}$	5	1.36	0.80	0.28	2.76
3799.054		1	26314.87	+0.04	$64923_{4\frac{1}{2}} - 91237^{\circ}_{3\frac{1}{2}}$					
3798.960	4	20	26315.52	+0.03	$35059^{\circ}_{3\frac{1}{2}} - 61374_{2\frac{1}{2}}$					
3798.854		1	26316.26							
3797.915		2	26322.76							
3797.219		2	26327.59							
3797.181		3	26327.85	0.00	$47329^{\circ}_{2\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
3796.950		10	26329.45	+0.05	$44940^{\circ}_{1\frac{1}{2}} - 71270_{2\frac{1}{2}}$	4	1.265	0.911	0.177	0.380
3796.157	7	80	26334.95	+0.05	$63944_{5\frac{1}{2}} - 90279^{\circ}_{5\frac{1}{2}}$	6	1.107	1.125	0.098	1.116
3795.916		4	26336.62							
3795.878		3	26336.89	+0.03	$65199_{4\frac{1}{2}} - 91536^{\circ}_{3\frac{1}{2}}$					
3795.061		4	26342.56	−0.01	$66571_{5\frac{1}{2}} - 92914^{\circ}_{4\frac{1}{2}}$					
3794.906		3	26343.63							
3793.934		4	26350.38							
3793.104		3	26356.15	0.00	$66558_{3\frac{1}{2}} - 92914^{\circ}_{4\frac{1}{2}}$					
3792.87		4	26357.78	+0.06	$51248^{\circ}_{2\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
3792.557		1	26359.95	+0.05	$40035^{\circ}_{3\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
3792.39		2	26361.11	+0.01	$66558_{3\frac{1}{2}} - 92919^{\circ}_{3\frac{1}{2}}$					
3791.336		2	26368.44	+0.01	$43075^{\circ}_{1\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
3789.457		6	26381.51	+0.03	$63234_{2\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$					
3789.37		1	26382.12							
3788.267		4	26389.80	−0.01	$65888_{1\frac{1}{2}} - 92278^{\circ}_{1\frac{1}{2}}$					
3787.418	1	5	26395.72							
3787.080	1	10	26398.07	+0.08	$64461_{1\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$					
3786.465		1	26402.36							
3785.960		1	26405.88							
3785.666	1	20	26407.93	+0.06	$47228^{\circ}_{0\frac{1}{2}} - 73636_{0\frac{1}{2}}$	7	0.70	0.70	0	0.70

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3785.330	6	80	26410.28	+0.01	$64891_{7\frac{1}{2}} - 91301^{\circ}_{6\frac{1}{2}}$	4	(1.19)	1.21	?	1.05
3784.512		1	26415.98	+0.07	$63726_{4\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
3784.384	7	100	26416.88	+0.04	$48556^{\circ}_{3\frac{1}{2}} - 74973_{3\frac{1}{2}}$	6	0.935	1.069	0.465	1.002
3784.144	1	10	26418.55	+0.05	$66558_{3\frac{1}{2}} - 92976^{\circ}_{3\frac{1}{2}}$					
3783.914		1	26420.16	+0.01	$44438^{\circ}_{3\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
3782.736		4	26428.39	+0.06	$47228^{\circ}_{0\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
3782.540	70	700	26429.76	+0.05	$34784^{\circ}_{5\frac{1}{2}} - 61214_{4\frac{1}{2}}$	5	1.15	1.09	(0.030)	1.42
3781.684		8	26435.74	+0.01 +0.07	$43007^{\circ}_{0\frac{1}{2}} - 69443_{1\frac{1}{2}}$ $55221^{\circ}_{1\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
3781.268		1	26438.65	0.00	$65577_{3\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$					
3781.046		3	26440.20							
3780.605		1	26443.28	+0.02	$65093_{3\frac{1}{2}} - 91536^{\circ}_{3\frac{1}{2}}$					
3780.217	2	20	26446.00	+0.04	$46169^{\circ}_{4\frac{1}{2}} - 72615_{5\frac{1}{2}}$					
3779.838		1	26448.65							
3779.472		2	26451.21	+0.02	$67416_{4\frac{1}{2}} - 93867^{\circ}_{4\frac{1}{2}}$					
3779.286	20	150	26452.51	+0.03 −0.02	$32371^{\circ}_{2\frac{1}{2}} - 58823_{2\frac{1}{2}}$ $(57765_{4\frac{1}{2}} - 84217^{\circ}_{4\frac{1}{2}})$	6	1.177	1.275	0.244	1.226
3779.184	1	15	26453.22							
3778.800		2	26455.91	0.00	$45012^{\circ}_{2\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
3778.452		3	26458.35	+0.02	$22960_{1\frac{1}{2}} - 49419^{\circ}_{0\frac{1}{2}}$					
3777.906	1	20	26462.17	+0.05	$41688^{\circ}_{1\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
3777.534	2	30	26464.78	+0.06	$66571_{5\frac{1}{2}} - 93036^{\circ}_{5\frac{1}{2}}$	6	(1.189)	1.23	d?	1.21
3776.520	3	40	26471.88	+0.04	$41678^{\circ}_{2\frac{1}{2}} - 68150_{1\frac{1}{2}}$	5	1.197	0.931	0.132	1.595
3776.362		1	26472.99							
3775.906		2	26476.19							
3774.956		2	26482.85	+0.01	$63726_{4\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
3773.625		1	26492.19							
3773.428	200	600	26493.58	+0.02	$21418^{\circ}_{3\frac{1}{2}} - 47912_{3\frac{1}{2}}$	6	1.156	1.300	0.496	1.228
3772.517	20	100	26499.97	+0.01	$24332_{2\frac{1}{2}} - 50832^{\circ}_{1\frac{1}{2}}$	5	1.213	0.963	0.126	1.588
3772.294	3	40	26501.54	0.00	$48556^{\circ}_{3\frac{1}{2}} - 75058_{2\frac{1}{2}}$	5	0.932	0.758	0.087	1.367
3771.596		2	26506.44	+0.03	$49727^{\circ}_{6\frac{1}{2}} - 76233_{6\frac{1}{2}}$					
3771.350		3	26508.17	+0.04	$53120^{\circ}_{2\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
3771.155	1	10	26509.54	−0.03	$39378^{\circ}_{0\frac{1}{2}} - 65888_{1\frac{1}{2}}$					
3770.814		1	26511.94	0.00	$47758^{\circ}_{3\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
3770.28		1	26515.70	+0.04	$59710_{1\frac{1}{2}} - 86226^{\circ}_{1\frac{1}{2}}$					
3770.195	2	40	26516.29	+0.05	$44438^{\circ}_{3\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
3769.35		1	26522.24	+0.06	$40035^{\circ}_{3\frac{1}{2}} - 66558_{3\frac{1}{2}}$					
3769.189		1	26523.37	−0.01	$66395_{2\frac{1}{2}} - 92919^{\circ}_{3\frac{1}{2}}$					
3768.966		2	26524.94	−0.01	$69957_{4\frac{1}{2}} - 96482^{\circ}_{4\frac{1}{2}}$					
3767.891		10	26532.51	+0.06	$43075^{\circ}_{1\frac{1}{2}} - 69607_{2\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3767.175		1	26537.55							
3766.925	2	20	26539.31	+0.08	$37516^{\circ}_{3\frac{1}{2}} - 64055_{2\frac{1}{2}}$	5	(1.12)	1.11	0	1.15
3766.736		8*h*	26540.64							
3766.527		4	26542.12	+0.11	$49008^{\circ}_{3\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
3766.101	20	200	26545.12	0.00	$34575^{\circ}_{1\frac{1}{2}} - 61120_{0\frac{1}{2}}$	4	1.438	1.666	0.112	1.327
3765.080	1	8	26552.32	+0.07	$63726_{4\frac{1}{2}} - 90279^{\circ}_{5\frac{1}{2}}$					
3764.56		3*h*	26555.98							
3764.03		1	26559.72							
3763.35		1	26564.52	+0.07	$54640^{\circ}_{4\frac{1}{2}} - 81205_{4\frac{1}{2}}$					
3763.27		1	26565.09	0.00	$66082_{5\frac{1}{2}} - 92647^{\circ}_{5\frac{1}{2}}$					
3763.045	1	6	26566.67	+0.06	$33052^{\circ}_{4\frac{1}{2}} - 59618_{3\frac{1}{2}}$					
3762.98		1	26567.13							
3762.550	40	400	26570.17	+0.03	$37077^{\circ}_{2\frac{1}{2}} - 63647_{1\frac{1}{2}}$	4	(1.113)	1.14	*w*	1.07
3762.12		1	26573.21							
3761.31		1	26578.93							
3760.999	10	200	26581.13	+0.04	$38342^{\circ}_{4\frac{1}{2}} - 64923_{4\frac{1}{2}}$	6	1.103	1.089	0.06	1.096
3760.23		2*d*	26586.56							
3757.355		1	26606.91	+0.01	$68943_{4\frac{1}{2}} - 95550^{\circ}_{4\frac{1}{2}}$					
3756.888		2	26610.21	0.00	$46169^{\circ}_{4\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
3756.445		6	26613.35	+0.06	$64923_{4\frac{1}{2}} - 91536^{\circ}_{3\frac{1}{2}}$					
3755.762		2	26618.19	0.00	$52987^{\circ}_{1\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
3755.32		1	26621.32							
3754.83		2	26624.80	+0.07	$37077^{\circ}_{2\frac{1}{2}} - 63702_{2\frac{1}{2}}$					
3754.74		1	26625.44							
3754.606	2	6	26626.39							
3753.897	8	100	26631.41	+0.04	$47005^{\circ}_{1\frac{1}{2}} - 73636_{0\frac{1}{2}}$	5	0.990	0.690	0.15	1.15
3753.65		1	26633.17	−0.01	$51248^{\circ}_{2\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
3753.49		2	26634.30							
3753.053	4	60	26637.40	+0.03	$47329^{\circ}_{2\frac{1}{2}} - 73966_{3\frac{1}{2}}$					
3752.730		4	26639.70	+0.04	$64598_{3\frac{1}{2}} - 91237^{\circ}_{3\frac{1}{2}}$					
3752.56		1	26640.90							
3751.847	10	40	26645.97	+0.03	$26759^{\circ}_{2\frac{1}{2}} - 53404_{2\frac{1}{2}}$	6	1.58	1.04	1.36	1.31
3751.206	1	2	26650.52							
3751.030		1	26651.77	−0.06	$47005^{\circ}_{1\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
3750.045		8	26658.77							
3749.688	40	400	26661.31	+0.01	$34389^{\circ}_{2\frac{1}{2}} - 61051_{3\frac{1}{2}}$	5	1.015	1.196	0.452	1.650
3749.388	1	6	26663.44	0.00	$63234_{2\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$					
3748.345	3	10	26670.86	+0.05	$66571_{5\frac{1}{2}} - 93242^{\circ}_{5\frac{1}{2}}$					
3748.204		2	26671.86							
3748.102		1	26672.59	−0.02	$68150_{1\frac{1}{2}} - 94823^{\circ}_{1\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3747.817	2	20	26674.62	+0.01	$66571_{5\frac{1}{2}} - 93246^{\circ}_{6\frac{1}{2}}$					
3747.229		10	26678.80	+0.05	$57765_{4\frac{1}{2}} - 84444^{\circ}_{3\frac{1}{2}}$					
3746.67		1	26682.78							
3744.762		1	26696.38	−0.01	$65950_{4\frac{1}{2}} - 92647^{\circ}_{5\frac{1}{2}}$					
3744.166		4	26700.63	−0.01	$48272^{\circ}_{2\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
3743.97		1	26702.02							
3743.390		3	26706.16							
3743.26		6	26707.09	0.00	$52921^{\circ}_{3\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
3743.138		15*h*	26707.96							
3742.627		1	26711.61	+0.06	$65566_{0\frac{1}{2}} - 92278^{\circ}_{1\frac{1}{2}}$					
3742.358		1	26713.53							
3742.036	4	20	26715.82	−0.01	$31568^{\circ}_{2\frac{1}{2}} - 58283_{2\frac{1}{2}}$					
3741.642	3	15	26718.64	+0.05	$48272^{\circ}_{2\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
3741.59	8	80	26719.01	−0.02	$32371^{\circ}_{2\frac{1}{2}} - 59090_{3\frac{1}{2}}$	4	1.18	1.13	(0.024)	1.01
3740.772		10	26724.85	0.00	$44497^{\circ}_{2\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
3740.59		2	26726.15	+0.02	$65577_{3\frac{1}{2}} - 92303^{\circ}_{3\frac{1}{2}}$					
3739.59		1	26733.30	0.00	$49916^{\circ}_{4\frac{1}{2}} - 76649_{5\frac{1}{2}}$					
3739.56		1	26733.51	−0.11	$73291_{5\frac{1}{2}} - 100025^{\circ}_{5\frac{1}{2}}$					
3738.009		10	26744.61	+0.08	$62861_{5\frac{1}{2}} - 89605^{\circ}_{4\frac{1}{2}}$					
3737.537	1	40	26747.98	+0.02	$52880^{\circ}_{4\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
3737.123		6	26750.95	+0.07	$45012^{\circ}_{2\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
3736.901	7	10	26752.54			4	2.00[e]	1.34[e]	0.33	1.01
3735.606		9	26761.81	+0.02	$70136_{6\frac{1}{2}} - 96898^{\circ}_{5\frac{1}{2}}$					
3735.352		10	26763.63	+0.05	$35059^{\circ}_{3\frac{1}{2}} - 61822_{3\frac{1}{2}}$					
3734.96		1	26766.44							
3734.150		8	26772.24	+0.03	$45429^{\circ}_{3\frac{1}{2}} - 72202_{3\frac{1}{2}}$					
3734.12		2	26772.46	−0.04	$44497^{\circ}_{2\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
3733.989		10	26773.40	+0.04	$63944_{5\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
3733.762		5	26775.03							
3733.19		1	26779.13							
3732.458		5	26784.38	+0.05	$44438^{\circ}_{3\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
3732.33	1	10	26785.30	−0.04	$48272^{\circ}_{2\frac{1}{2}} - 75058_{2\frac{1}{2}}$					
3731.166		7	26793.65	+0.10	$67204_{1\frac{1}{2}} - 93998^{\circ}_{1\frac{1}{2}}$					
3731.044		8	26794.53	+0.02	$68756_{3\frac{1}{2}} - 95550^{\circ}_{4\frac{1}{2}}$					
3730.409	20	200	26799.09	−0.03	$34575^{\circ}_{1\frac{1}{2}} - 61374_{2\frac{1}{2}}$	4	1.44	1.30	0.70	1.10
3729.81	10	100	26803.39	−0.06	$35019^{\circ}_{4\frac{1}{2}} - 61822_{3\frac{1}{2}}$	4	(1.16)	1.32	0.08	
3728.24		2	26814.68							
3727.073		1	26823.08	+0.02	$44940^{\circ}_{1\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
3726.169	1	5	26829.59	+0.02	$61873_{6\frac{1}{2}} - 88702^{\circ}_{5\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3725.84	5	70	26831.95	−0.03 +0.05	$44438^{\circ}_{3\frac{1}{2}} - 71270_{2\frac{1}{2}}$ $66082_{5\frac{1}{2}} - 92914^{\circ}_{4\frac{1}{2}}$					
3724.91		3	26838.65							
3724.213	150	800	26843.68	0.00	$31979^{\circ}_{3\frac{1}{2}} - 58823_{2\frac{1}{2}}$	5	1.32	1.25	(0.034)	1.49
3723.06		2	26851.99							
3722.626		7	26855.12							
3722.296	40	600	26857.50	−0.02	$38342^{\circ}_{4\frac{1}{2}} - 65199_{4\frac{1}{2}}$	7	1.09	1.09	0	1.09
3720.98	6	100	26867.00	0.00	$45335^{\circ}_{4\frac{1}{2}} - 72202_{3\frac{1}{2}}$	5	1.03	0.88	0.075	1.555
3720.846		3	26867.97	+0.02	$67955_{0\frac{1}{2}} - 94823^{\circ}_{1\frac{1}{2}}$					
3720.584		2	26869.86	0.00	$55221^{\circ}_{1\frac{1}{2}} - 82091_{0\frac{1}{2}}$					
3720.192		3	26872.69							
3719.924		3	26874.63							
3719.148		2	26880.23	+0.02	$37077^{\circ}_{2\frac{1}{2}} - 63957_{3\frac{1}{2}}$					
3718.887		1	26882.12							
3718.749		2	26883.12	+0.01	$56480^{\circ}_{4\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
3718.482	1	10	26885.05							
3718.139		4	26887.53	−0.02	$67416_{4\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
3718.052	3	15	26888.16	+0.02	$32371^{\circ}_{2\frac{1}{2}} - 59259_{2\frac{1}{2}}$					
3717.885		2	26889.36	−0.07	$59259_{2\frac{1}{2}} - 86148^{\circ}_{2\frac{1}{2}}$					
3717.412		3	26892.78							
3717.15		1	26894.68							
3716.596		2	26898.69							
3716.139	10	40	26902.00							
3715.725		4	26904.99	−0.07 −0.02	$47663^{\circ}_{4\frac{1}{2}} - 74568_{4\frac{1}{2}}$ $66558_{3\frac{1}{2}} - 93463^{\circ}_{3\frac{1}{2}}$					
3715.440		10	26907.06	+0.02	$70136_{6\frac{1}{2}} - 97043^{\circ}_{6\frac{1}{2}}$					
3714.186	50	150	26916.14	−0.03	$24332_{2\frac{1}{2}} - 51248^{\circ}_{2\frac{1}{2}}$	6	1.207	1.037	0.440	1.122
3713.93		1	26918.00							
3713.70		2	26919.67	0.00	$67416_{4\frac{1}{2}} - 94335^{\circ}_{5\frac{1}{2}}$					
3713.298		2	26922.58	−0.03 −0.04	$49727^{\circ}_{6\frac{1}{2}} - 76649_{5\frac{1}{2}}$ $65093_{3\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$					
3712.438	1	10	26928.82	+0.02	$46354^{\circ}_{4\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
3712.416		4	26928.98	−0.03	$45273^{\circ}_{3\frac{1}{2}} - 72202_{3\frac{1}{2}}$					
3712.06		1	26931.56							
3711.245		6	26937.47	+0.07	$46354^{\circ}_{4\frac{1}{2}} - 73291_{5\frac{1}{2}}$					
3710.825		3	26940.52	−0.02	$69957_{4\frac{1}{2}} - 96898^{\circ}_{5\frac{1}{2}}$					
3710.340	100	1000	26944.04	−0.05 +0.07	$28757^{\circ}_{1\frac{1}{2}} - 55702_{1\frac{1}{2}}$ $(67416_{4\frac{1}{2}} - 94360^{\circ}_{4\frac{1}{2}})$	6	1.443	1.692	0.37	1.57
3710.090		2	26945.86	−0.03	$66558_{3\frac{1}{2}} - 93503^{\circ}_{4\frac{1}{2}}$					
3708.97		10	26953.99	+0.04 −0.06	$43075^{\circ}_{1\frac{1}{2}} - 70029_{0\frac{1}{2}}$ $66082_{5\frac{1}{2}} - 93036^{\circ}_{5\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3708.663	150	600	26956.23	−0.01	$26759^{\circ}_{2\frac{1}{2}} - 53715_{3\frac{1}{2}}$	4	1.57	1.18	0.195	0.221
3708.218		3	26959.46							
3707.707		2	26963.18	−0.02	$65950_{4\frac{1}{2}} - 92914^{\circ}_{4\frac{1}{2}}$					
3707.486	1	7	26964.78	−0.01	$48024^{\circ}_{1\frac{1}{2}} - 74989_{0\frac{1}{2}}$	5	1.374	0.510	0.434	1.806
3707.234		1	26966.62	−0.04	$48024^{\circ}_{1\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
3707.020		4	26968.17	+0.02	$65950_{4\frac{1}{2}} - 92919^{\circ}_{3\frac{1}{2}}$					
3706.833		4	26969.53							
3706.32		1	26973.27							
3705.64	2	30	26978.22	−0.01	$37077^{\circ}_{2\frac{1}{2}} - 64055_{2\frac{1}{2}}$	7	1.12	1.12	0	1.12
3704.750		20	26984.70	−0.03	$34389^{\circ}_{2\frac{1}{2}} - 61374_{2\frac{1}{2}}$					
3704.300		1	26987.97	−0.03	$66558_{3\frac{1}{2}} - 93546^{\circ}_{2\frac{1}{2}}$					
3703.92		7	26990.74	+0.03	$63726_{4\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
3703.423	10	200	26994.37	0.00	$48556^{\circ}_{3\frac{1}{2}} - 75550_{2\frac{1}{2}}$	7	0.94	0.94	0	0.94
3702.94		6	26997.89	+0.03	$43956^{\circ}_{2\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
3702.42	1	5	27001.68							
3702.07		8	27004.23	−0.03	$64598_{3\frac{1}{2}} - 91602^{\circ}_{2\frac{1}{2}}$					
3699.800	5	100	27020.80	+0.03	$40917^{\circ}_{4\frac{1}{2}} - 67938_{3\frac{1}{2}}$	7	(0.967)	0.958	0	0.997
3698.596	40	400	27029.59	0.00	$35831^{\circ}_{5\frac{1}{2}} - 62861_{5\frac{1}{2}}$	6	1.21	1.13	0.42	1.117
3698.446	2	40	27030.69	+0.02	$44438^{\circ}_{3\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
3698.070		2	27033.44	+0.03	$48024^{\circ}_{1\frac{1}{2}} - 75058_{2\frac{1}{2}}$					
3698.012		6	27033.86	0.00	$68720_{6\frac{1}{2}} - 95754^{\circ}_{5\frac{1}{2}}$					
3697.688		2	27036.23							
3694.190	100000*A*	80000	27061.83	+0.01	$0_{0\frac{1}{2}} - 27061^{\circ}_{0\frac{1}{2}}$	6	1.996	0.666	0.666	1.330
3692.072		4	27077.35	+0.04	$41678^{\circ}_{2\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
3691.67	2	6	27080.30							
3691.472	10	200	27081.76	+0.07	$37516^{\circ}_{3\frac{1}{2}} - 64598_{3\frac{1}{2}}$	6	1.113	1.221	0.364	1.167
3691.34		1	27082.72							
3691.230	1	10	27083.53	+0.04	$48556^{\circ}_{3\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
3690.560	30	300	27088.45	0.00	$34784^{\circ}_{5\frac{1}{2}} - 61873_{6\frac{1}{2}}$	7	(1.119)	1.114	0	1.086
3689.99		8	27092.63	−0.02	$64923_{4\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$					
3688.937		4	27100.37	−0.07	$68450_{3\frac{1}{2}} - 95550^{\circ}_{4\frac{1}{2}}$					
3688.490		1	27103.65	−0.05	$65199_{4\frac{1}{2}} - 92303^{\circ}_{3\frac{1}{2}}$					
3687.598	20	150	27110.21	−0.02	$31979^{\circ}_{3\frac{1}{2}} - 59090_{3\frac{1}{2}}$	6	1.337	1.131	0.735	1.234
3687.142	7	80	27113.56	−0.01	$46169^{\circ}_{4\frac{1}{2}} - 73283_{4\frac{1}{2}}$	6	1.10	1.04	0.29	1.07
3685.973		15	27122.16	−0.01	$46169^{\circ}_{4\frac{1}{2}} - 73291_{5\frac{1}{2}}$					
3684.068		1	27136.18							
3683.352	2	30	27141.46	0.00	$64461_{1\frac{1}{2}} - 91602^{\circ}_{2\frac{1}{2}}$	7	(1.176)	1.172	0	1.166
3683.277	1	15	27142.01	−0.08	$68549_{4\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					
3682.777		2	27145.69							
3682.20		1	27149.95							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3681.29		1	27156.66	−0.09	$63702_{2\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$					
3681.195		15	27157.36	−0.07	$43956^{\circ}_{2\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
3680.770		7	27160.50	−0.03	$65875_{6\frac{1}{2}} - 93036^{\circ}_{5\frac{1}{2}}$					
3680.667		4	27161.26	−0.06	$49008^{\circ}_{3\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
3679.521		2	27169.71							
3678.26		1	27179.03							
3678.15		1	27179.84							
3677.906		6	27181.65							
3677.853	1	15	27182.04	−0.08	$64055_{2\frac{1}{2}} - 91237^{\circ}_{3\frac{1}{2}}$					
3676.89		1	27189.16	−0.08	$45012^{\circ}_{2\frac{1}{2}} - 72202_{3\frac{1}{2}}$					
3676.14		2	27194.70	−0.09	$66351_{2\frac{1}{2}} - 93546^{\circ}_{2\frac{1}{2}}$					
3675.085	300	2000	27202.51	−0.02	$30562^{\circ}_{5\frac{1}{2}} - 57765_{4\frac{1}{2}}$	7	(1.112)	1.105	0	1.144
3674.065	2	20	27210.06	−0.04	$65093_{3\frac{1}{2}} - 92303^{\circ}_{3\frac{1}{2}}$					
3673.900		8	27211.28	−0.06	$63647_{1\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$					
3673.423		8	27214.82	−0.05	$47758^{\circ}_{3\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
3673.286		1	27215.83	−0.07	$51248^{\circ}_{2\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
3670.69	50	600	27235.08	−0.01	$38342^{\circ}_{4\frac{1}{2}} - 65577_{3\frac{1}{2}}$	5	1.09	1.04	(0.024)	1.26
3669.69	2000*r*	6000	27242.50	+0.02	$27061^{\circ}_{0\frac{1}{2}} - 54304_{0\frac{1}{2}}$	6	0.668	2.007	0.667	1.340
3668.992	3	50	27247.68	−0.12	$32371^{\circ}_{2\frac{1}{2}} - 59618_{3\frac{1}{2}}$?					
3668.16		1	27253.86							
3667.951		8	27255.42	−0.08	$31568^{\circ}_{2\frac{1}{2}} - 58823_{2\frac{1}{2}}$					
3666.67	1	30	27264.94	−0.08	$47005^{\circ}_{1\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
3666.522		5	27266.04	+0.09	$43956^{\circ}_{2\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
3666.09		10	27269.25							
3664.895	3	40	27278.14	−0.03	$48272^{\circ}_{2\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
3664.744	40	200	27279.27	{−0.07 {−0.08	$31979^{\circ}_{3\frac{1}{2}} - 59259_{2\frac{1}{2}}$ $(50468^{\circ}_{5\frac{1}{2}} - 77747_{4\frac{1}{2}})$	5	1.34	1.12	0.11	1.91
3664.560	8	90	27280.64	−0.07	$45335^{\circ}_{4\frac{1}{2}} - 72615_{5\frac{1}{2}}$	7	0.99	(0.99)	0	0.94
3663.11		6	27291.43	−0.01	$65950_{4\frac{1}{2}} - 93242^{\circ}_{5\frac{1}{2}}$					
3662.545	1	20	27295.64	0.00	$66571_{5\frac{1}{2}} - 93867^{\circ}_{4\frac{1}{2}}$					
3662.297		2	27297.49							
3662.061		7	27299.25	−0.12	$71222_{3\frac{1}{2}} - 98521^{\circ}_{4\frac{1}{2}}$?					
3662.033		5	27299.46	−0.11	$47758^{\circ}_{3\frac{1}{2}} - 75058_{2\frac{1}{2}}$?					
3661.656		2	27302.27	−0.05	$45737^{\circ}_{1\frac{1}{2}} - 73039_{0\frac{1}{2}}$					
3661.135		2	27306.16							
3661.08		6	27306.57	0.00	$66558_{3\frac{1}{2}} - 93864^{\circ}_{2\frac{1}{2}}$					
3660.99		1	27307.24							
3660.73	1	8	27309.18	−0.04	$66558_{3\frac{1}{2}} - 93867^{\circ}_{4\frac{1}{2}}$					
3660.64		1	27309.85	−0.04	$47663^{\circ}_{4\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
3660.58	1	15	27310.30	0.00	$48923^{\circ}_{7\frac{1}{2}} - 76233_{6\frac{1}{2}}$					

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TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3660.42		1	27311.49							
3660.137	1	10	27313.60	0.00	$43956^{\circ}_{2\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
3658.605	5	70	27325.04	−0.05	$58823_{2\frac{1}{2}} - 86148^{\circ}_{2\frac{1}{2}}$					
3657.665		3	27332.06	−0.05	$35831^{\circ}_{5\frac{1}{2}} - 63163_{4\frac{1}{2}}$					
3657.131		1	27336.05							
3657.007		2	27336.98	−0.06	$65577_{3\frac{1}{2}} - 92914^{\circ}_{4\frac{1}{2}}$					
3656.81		1	27338.45	−0.08	$62559_{2\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$					
3656.672		2	27339.48	−0.07	$32371^{\circ}_{2\frac{1}{2}} - 59710_{1\frac{1}{2}}$					
3655.48	1	20	27348.40	0.00	$62861_{5\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
3654.417	1	5	27356.35							
3654.28	1	20	27357.38	−0.01	$63944_{5\frac{1}{2}} - 91301^{\circ}_{6\frac{1}{2}}$					
3653.041	2	20	27366.66	+0.04	$65875_{6\frac{1}{2}} - 93242^{\circ}_{5\frac{1}{2}}$					
3652.953	3	40	27367.32	+0.03	$48272^{\circ}_{2\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
3652.538	1	15	27370.42	0.00	$65875_{6\frac{1}{2}} - 93246^{\circ}_{6\frac{1}{2}}$					
3651.24	1	10	27380.15	−0.06 +0.02	$40035^{\circ}_{3\frac{1}{2}} - 67416_{4\frac{1}{2}}$ $64923_{4\frac{1}{2}} - 92303^{\circ}_{3\frac{1}{2}}$					
3651.15		1	27380.83							
3650.80	4	50	27383.45	−0.04	$37077^{\circ}_{2\frac{1}{2}} - 64461_{1\frac{1}{2}}$	4	(1.113)	1.174	w	1.02
3649.739	10	150	27391.41	−0.02	$41688^{\circ}_{1\frac{1}{2}} - 69079_{2\frac{1}{2}}$	5	0.784	0.911	0.065	1.101
3649.084		6	27396.33	−0.02	$46354^{\circ}_{4\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
3648.827		2	27398.26							
3648.676		1	27399.39	0.00	$65577_{3\frac{1}{2}} - 92976^{\circ}_{3\frac{1}{2}}$					
3648.440	10	100	27401.17	+0.02	$41678^{\circ}_{2\frac{1}{2}} - 69079_{2\frac{1}{2}}$	6	(1.193)	0.90	0.72	?
3648.38	4	50	27401.62	−0.05	$68148_{5\frac{1}{2}} - 95550^{\circ}_{4\frac{1}{2}}$					
3648.29		1	27402.29							
3648.242		2	27402.65	−0.08	$58823_{2\frac{1}{2}} - 86226^{\circ}_{1\frac{1}{2}}$					
3647.730	2	40	27406.50	−0.02	$37516^{\circ}_{3\frac{1}{2}} - 64923_{4\frac{1}{2}}$	7	(1.119)	1.11	0	1.076
3646.277	1	10	27417.42	−0.06	$64598_{3\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$					
3646.24		7	27417.70	−0.11	$62861_{5\frac{1}{2}} - 90279^{\circ}_{5\frac{1}{2}}$?					
3645.72		7	27421.61	−0.03	$66082_{5\frac{1}{2}} - 93503^{\circ}_{4\frac{1}{2}}$					
3644.236	40	400	27432.78	−0.04	$34389^{\circ}_{2\frac{1}{2}} - 61822_{3\frac{1}{2}}$	5	1.013	1.329	0.160	2.13
3643.28	1	10	27439.97							
3642.63		3	27444.87	−0.09	$45335^{\circ}_{4\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
3642.37		7*h*	27446.83							
3642.24		4	27447.81	+0.01	$65199_{4\frac{1}{2}} - 92647^{\circ}_{5\frac{1}{2}}$					
3640.79		1	27458.74							
3639.97		1	27464.93							
3639.746	1	15	27466.62	−0.01	$33653^{\circ}_{0\frac{1}{2}} - 61120_{0\frac{1}{2}}$					
3639.030		2	27472.02							
3637.757	2000*R*	3000	27481.63	−0.03	$21418^{\circ}_{3\frac{1}{2}} - 48900_{3\frac{1}{2}}$	6	1.156	1.064	0.33	1.11

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3636.899		2	27488.12							
3636.23		2	27493.17							
3635.330		1	27499.98	−0.04	$35059^{\circ}_{3\frac{1}{2}} - 62559_{2\frac{1}{2}}$					
3634.86		2	27503.54							
3634.74		1	27504.44							
3634.525 [a]	30	20	27506.07							
3634.40		10	27507.02	+0.05	$45273^{\circ}_{3\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
3634.27		2	27508.00							
3633.858		10	27511.12	+0.01	$63726_{4\frac{1}{2}} - 91237^{\circ}_{3\frac{1}{2}}$					
3633.70	1	20	27512.32	+0.03	$43956^{\circ}_{2\frac{1}{2}} - 71468_{2\frac{1}{2}}$	7	1.01	1.01	0	1.01
3632.595	20	150	27520.68	−0.01	$37077^{\circ}_{2\frac{1}{2}} - 64598_{3\frac{1}{2}}$	5	1.091	1.234	0.070	1.591
3632.415	20	100	27522.05	0.00	$31568^{\circ}_{2\frac{1}{2}} - 59090_{3\frac{1}{2}}$	5	0.875	1.145	0.129	1.820
3631.86		8	27526.25	+0.01	$48024^{\circ}_{1\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
3631.073	7	80	27532.22	+0.02	$40917^{\circ}_{4\frac{1}{2}} - 68450_{3\frac{1}{2}}$	4	0.96	1.04	(0.04)	0.68
3630.621		4	27535.65	+0.03 −0.01	$63702_{2\frac{1}{2}} - 91237^{\circ}_{3\frac{1}{2}}$ $66462_{0\frac{1}{2}} - 93998^{\circ}_{1\frac{1}{2}}$					
3630.337		2	27537.80							
3630.301		4	27538.07	−0.01	$52067^{\circ}_{0\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
3629.919	30	300	27540.97	−0.02	$30224^{\circ}_{4\frac{1}{2}} - 57765_{4\frac{1}{2}}$	6	0.933	1.112	0.803	1.022
3628.340		6	27552.96	+0.02	$65950_{4\frac{1}{2}} - 93503^{\circ}_{4\frac{1}{2}}$					
3627.89	2	30	27556.38	0.00 +0.06	$33494^{\circ}_{3\frac{1}{2}} - 61051_{3\frac{1}{2}}$ $68135_{2\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					
3627.205	2	30	27561.58	+0.01	$34575^{\circ}_{1\frac{1}{2}} - 62136_{0\frac{1}{2}}$	5	1.45	0.07	0.69	2.14
3627.078		1	27562.54							
3626.80	1	6	27564.66							
3625.230	2	60	27576.59	+0.04	$37516^{\circ}_{3\frac{1}{2}} - 65093_{3\frac{1}{2}}$					
3624.634	15	200	27581.13	+0.01	$46169^{\circ}_{4\frac{1}{2}} - 73750_{4\frac{1}{2}}$	6	1.00	1.07	0.33	1.03
3623.627	1	10	27588.79							
3622.320	20	80	27598.75	+0.02	$34575^{\circ}_{1\frac{1}{2}} - 62174_{1\frac{1}{2}}$	6	1.44	0.80	0.96	1.13
3621.873		7	27602.15	+0.01	$50468^{\circ}_{5\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
3621.80		2	27602.71	−0.09	$66395_{2\frac{1}{2}} - 93998^{\circ}_{1\frac{1}{2}}$					
3621.513	1	15	27604.90	+0.03	$32981^{\circ}_{1\frac{1}{2}} - 60586_{1\frac{1}{2}}$					
3621.18		1	27607.44							
3620.988	30	400	27608.90	−0.03	$38342^{\circ}_{4\frac{1}{2}} - 65950_{4\frac{1}{2}}$	7	(1.093)	1.103	0	1.098
3620.362		4	27613.67	−0.01	$48556^{\circ}_{3\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
3619.803	700r	3000	27617.94	+0.01 +0.02	$28757^{\circ}_{1\frac{1}{2}} - 56375_{2\frac{1}{2}}$ $(65577_{3\frac{1}{2}} - 93195^{\circ}_{3\frac{1}{2}})$	4	1.433	1.222	0.105	0.91
3618.887		1	27624.93	−0.03	$63234_{2\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$					
3618.040	50	200	27631.39	+0.07	$40917^{\circ}_{4\frac{1}{2}} - 68549_{4\frac{1}{2}}$	6	0.975	1.151	0.81	1.063
3617.045	1	10	27639.00	0.00	$31979^{\circ}_{3\frac{1}{2}} - 59618_{3\frac{1}{2}}$					
3616.395		10	27643.96	−0.01	$47329^{\circ}_{2\frac{1}{2}} - 74973_{3\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3616.031		3	27646.75							
3615.957		2	27647.31	0.00	$66351_{2\frac{1}{2}} - 93998^{\circ}_{1\frac{1}{2}}$					
3614.63		1	27657.46	−0.08	$65888_{1\frac{1}{2}} - 93546^{\circ}_{2\frac{1}{2}}$					
3614.593		6	27657.74	−0.01	$66351_{2\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$					
3614.048	5	100	27661.92	0.00	$47329^{\circ}_{2\frac{1}{2}} - 74991_{1\frac{1}{2}}$	4	(0.990)	1.04	w	0.91
3613.38		3	27667.03	−0.07	$62046^{\circ}_{3\frac{1}{2}} - 89713_{2\frac{1}{2}}$					
3613.340		3	27667.33	−0.05	$49008^{\circ}_{3\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
3613.295		2	27667.68	−0.08	$53644^{\circ}_{3\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
3612.950		4	27670.32	−0.02	$55221^{\circ}_{1\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
3611.300	60	800	27682.96	+0.01	$37516^{\circ}_{3\frac{1}{2}} - 65199_{4\frac{1}{2}}$	4	1.14	1.10	(0.02)	0.96
3610.233	100	700	27691.15	−0.01	$31568^{\circ}_{2\frac{1}{2}} - 59259_{2\frac{1}{2}}$	6	0.862	1.105	0.613	0.99
3609.24		1	27698.76							
3608.936		3	27701.10							
3608.488	10	150	27704.54	+0.02	$44497^{\circ}_{2\frac{1}{2}} - 72202_{3\frac{1}{2}}$	5	0.711	0.835	0.06	1.145
3607.186		2	27714.54	−0.07	$65199_{4\frac{1}{2}} - 92914^{\circ}_{4\frac{1}{2}}$					
3606.478	300	2000	27719.98	0.00	$33494^{\circ}_{3\frac{1}{2}} - 61214_{4\frac{1}{2}}$	5	0.98	1.04	(0.03)	1.24
3605.347	2	20	27728.67	0.00	$47329^{\circ}_{2\frac{1}{2}} - 75058_{2\frac{1}{2}}$	6	1.00	0.78	0.60	0.88
3605.208		1	27729.74	−0.04	$48503^{\circ}_{5\frac{1}{2}} - 76233_{6\frac{1}{2}}$					
3603.848	20	300	27740.20	−0.03	$38342^{\circ}_{4\frac{1}{2}} - 66082_{5\frac{1}{2}}$	5	1.10	1.14	(0.019)	1.31
3602.237		1	27752.61	−0.03	$67938_{3\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					
3601.917	2	20	27755.08	+0.01	$41688^{\circ}_{1\frac{1}{2}} - 69443_{1\frac{1}{2}}$	6	0.77	1.15	0.58	0.96
3601.209	2	15	27760.53	0.00 −0.08	$47228^{\circ}_{0\frac{1}{2}} - 74989_{0\frac{1}{2}}$ $62136_{0\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$					
3600.966	10	100	27762.41	+0.01	$47228^{\circ}_{0\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
3600.763	20	300	27763.97	−0.03	$44438^{\circ}_{3\frac{1}{2}} - 72202_{3\frac{1}{2}}$					
3600.663	2	30	27764.74	−0.05	$41678^{\circ}_{2\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
3600.383	10	150	27766.90	−0.02 +0.06	$48556^{\circ}_{3\frac{1}{2}} - 76323_{3\frac{1}{2}}$ $(59618_{3\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}})$	6	0.957	1.003	0.16	0.98
3598.87		2*h*	27778.57							
3598.043	2	20	27784.96	−0.01	$66082_{5\frac{1}{2}} - 93867^{\circ}_{4\frac{1}{2}}$					
3597.60		1	27788.38	−0.04	$66571_{5\frac{1}{2}} - 94360^{\circ}_{4\frac{1}{2}}$					
3597.078		10	27792.41	+0.01	$47758^{\circ}_{3\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
3596.488	1	30	27796.97	−0.06	$46169^{\circ}_{4\frac{1}{2}} - 73966_{3\frac{1}{2}}$					
3596.300		4	27798.42	−0.01	$52880^{\circ}_{4\frac{1}{2}} - 80679_{5\frac{1}{2}}$					
3595.844		5	27801.95	−0.05	$66558_{3\frac{1}{2}} - 94360^{\circ}_{4\frac{1}{2}}$					
3595.649		2	27803.46							
3595.162		9	27807.22	−0.04	$43956^{\circ}_{2\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
3594.864	1	10	27809.53	−0.04	$63726_{4\frac{1}{2}} - 91536^{\circ}_{3\frac{1}{2}}$					
3593.882		1	27817.13	−0.06	$64461_{1\frac{1}{2}} - 92278^{\circ}_{1\frac{1}{2}}$					
3593.728		2	27818.32							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3593.060		1	27823.49							
				−0.06	$39378^{\circ}_{0\frac{1}{2}} - 67204_{1\frac{1}{2}}$					
3592.734	1	20	27826.02	+0.06	$65093_{3\frac{1}{2}} - 92919^{\circ}_{3\frac{1}{2}}$					
				−0.04	$70793_{5\frac{1}{2}} - 98620^{\circ}_{6\frac{1}{2}}$					
3592.217	1	10	27830.02	−0.05	$49008^{\circ}_{3\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
3591.24		1	27837.59							
3591.18		2	27838.06	−0.07	$40917^{\circ}_{4\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
3591.141		4	27838.36							
3590.657	5	50	27842.11	−0.03	$35019^{\circ}_{4\frac{1}{2}} - 62861_{5\frac{1}{2}}$	7	(1.158)	1.144	0	1.079
3589.997		1	27847.23	+0.01	$63011_{1\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$					
3589.186		7	27853.52	−0.01	$45429^{\circ}_{3\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
3588.832	1	20	27856.27	0.00	$62861_{5\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
3588.456		2	27859.19							
3587.736		7	27864.78	+0.02	$58283_{2\frac{1}{2}} - 86148^{\circ}_{2\frac{1}{2}}$					
3587.569		1	27866.08							
3586.824	30	90	27871.86	+0.01	$22960_{1\frac{1}{2}} - 50832^{\circ}_{1\frac{1}{2}}$	6	0.795	0.948	0.224	0.876
3586.536		6	27874.10							
3585.878		8	27879.22	+0.04	$43075^{\circ}_{1\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
3585.794	1	20	27879.87	+0.06	$33494^{\circ}_{3\frac{1}{2}} - 61374_{2\frac{1}{2}}$					
3585.466	2000R	4000	27882.42	+0.01	$21418^{\circ}_{3\frac{1}{2}} - 49301_{4\frac{1}{2}}$	5	1.14	1.19	(0.023)	1.35
3583.96		4h	27894.14							
3583.827	7	70	27895.17	+0.02	$35831^{\circ}_{5\frac{1}{2}} - 63726_{4\frac{1}{2}}$					
3583.532		5	27897.47	−0.01	$48272^{\circ}_{2\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
3583.26		7	27899.58	+0.04	$45737^{\circ}_{1\frac{1}{2}} - 73636_{0\frac{1}{2}}$					
3583.180		1	27900.21	−0.01	$63702_{2\frac{1}{2}} - 91602^{\circ}_{2\frac{1}{2}}$					
3582.841	3	40	27902.85	−0.01	$40035^{\circ}_{3\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
3582.20		3	27907.84	−0.02	$66395_{2\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
3580.755		10	27919.10	+0.01	$41688^{\circ}_{1\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
3580.640	1	15	27920.00	0.00	$45737^{\circ}_{1\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
3580.474		1	27921.29							
3579.511	3	40	27928.80	−0.01	$41678^{\circ}_{2\frac{1}{2}} - 69607_{2\frac{1}{2}}$	7	1.23	1.23	0	1.226
3578.95		1	27933.18	−0.03	$68549_{4\frac{1}{2}} - 96482^{\circ}_{4\frac{1}{2}}$					
3577.985		1	27940.72	−0.03	$53716^{\circ}_{2\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
3577.690	1	10	27943.02	−0.03	$42915^{\circ}_{5\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
3577.504		3	27944.47	−0.01	$70858_{4\frac{1}{2}} - 98802^{\circ}_{5\frac{1}{2}}$					
3577.008	30	300	27948.35	+0.03	$45335^{\circ}_{4\frac{1}{2}} - 73283_{4\frac{1}{2}}$	7	0.98	1.04	0	1.009
3576.288		8	27953.97							
3576.188		1	27954.75	−0.06	$63647_{1\frac{1}{2}} - 91602^{\circ}_{2\frac{1}{2}}$					
3575.905	1	20	27956.97	+0.05	$45335^{\circ}_{4\frac{1}{2}} - 73291_{5\frac{1}{2}}$					
3575.704		5	27958.54							
3575.573	3	60	27959.56	+0.02	$48556^{\circ}_{3\frac{1}{2}} - 76516_{4\frac{1}{2}}$	5	(0.941)	1.01	w	1.23

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3574.58		30*h*	27967.33							
3573.750	1	10	27973.82			7			0	1.013
3573.67		1	27974.45							
3573.458[a]	3	3	27976.11							
3573.41		4	27976.49	−0.05 −0.05	$47663^{\circ}_{4\frac{1}{2}} - 75640_{3\frac{1}{2}}$ $53716^{\circ}_{2\frac{1}{2}} - 81692_{3\frac{1}{2}}$					
3572.498	200	800	27983.63	−0.02	$34575^{\circ}_{1\frac{1}{2}} - 62559_{2\frac{1}{2}}$	4			0	1.33?
3572.212	2	15	27985.87	−0.03	$47005^{\circ}_{1\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
3570.987	1	8	27995.47	−0.02	$65199_{4\frac{1}{2}} - 93195^{\circ}_{3\frac{1}{2}}$					
3570.566	200	1000	27998.77	0.00	$33052^{\circ}_{4\frac{1}{2}} - 61051_{3\frac{1}{2}}$	5	1.27	1.20	(0.034)	1.51
3569.925	2	20	28003.80	−0.03	$63234_{2\frac{1}{2}} - 91237^{\circ}_{3\frac{1}{2}}$					
3569.308		2	28008.64	−0.06	$70793_{5\frac{1}{2}} - 98802^{\circ}_{5\frac{1}{2}}$					
3569.094	1	10	28010.32	−0.01	$45273^{\circ}_{3\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
3568.430	5	50	28015.53	−0.02	$37077^{\circ}_{2\frac{1}{2}} - 65093_{3\frac{1}{2}}$	4	(1.113)	1.01	*w*	0.74
3567.130	50	500	28025.74	0.00	$40917^{\circ}_{4\frac{1}{2}} - 68943_{4\frac{1}{2}}$	6	0.97	0.87	0.47	0.92
3566.519		2	28030.54							
3565.891		4	28035.48	−0.05	$70793_{5\frac{1}{2}} - 98829^{\circ}_{6\frac{1}{2}}$					
3565.823		1	28036.01							
3565.477		6	28038.73	−0.02	$43075^{\circ}_{1\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
3565.404		3	28039.31							
3564.955		1	28042.84	−0.01	$65199_{4\frac{1}{2}} - 93242^{\circ}_{5\frac{1}{2}}$					
3563.941	200	800	28050.82	0.00	$31568^{\circ}_{2\frac{1}{2}} - 59618_{3\frac{1}{2}}$	5	0.862	1.010	0.077	1.40
3563.712	2	20	28052.62	−0.03	$47005^{\circ}_{1\frac{1}{2}} - 75058_{2\frac{1}{2}}$					
3562.706	7	80	28060.54	+0.02	$37516^{\circ}_{3\frac{1}{2}} - 65577_{3\frac{1}{2}}$	6	1.132	1.058	0.26	1.095
3561.738	1	10	28068.16	0.00	$56375_{2\frac{1}{2}} - 84444^{\circ}_{3\frac{1}{2}}$					
3561.444	2	6	28070.48							
3561.309		2	28071.55	−0.03	$63944_{5\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$					
3560.704	500*r*	2000	28076.32	0.00	$34784^{\circ}_{5\frac{1}{2}} - 62861_{5\frac{1}{2}}$	6	1.112	1.142	(0.165)	1.127
3560.327	2000*R*	3000	28079.29	0.00	$21418^{\circ}_{3\frac{1}{2}} - 49498_{2\frac{1}{2}}$	7	1.134	1.134	0	1.134
3559.139		4	28088.66	+0.01	$46902^{\circ}_{0\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
3557.825		2	28099.03	+0.03	$44940^{\circ}_{1\frac{1}{2}} - 73039_{0\frac{1}{2}}$					
3557.466		1	28101.87	−0.02	$65093_{3\frac{1}{2}} - 93195^{\circ}_{3\frac{1}{2}}$					
3557.100	2	20	28104.76	−0.03	$35059^{\circ}_{3\frac{1}{2}} - 63163_{4\frac{1}{2}}$	7	(1.124)	1.14	0	1.18
3556.940		4	28106.03	−0.02	$43007^{\circ}_{0\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
3556.435		3	28110.02	−0.04	$65888_{1\frac{1}{2}} - 93998^{\circ}_{1\frac{1}{2}}$					
3556.124		1	28112.47	−0.03	$35831^{\circ}_{5\frac{1}{2}} - 63944_{5\frac{1}{2}}$					
3556.042		1	28113.12	−0.07	$64923_{4\frac{1}{2}} - 93036^{\circ}_{5\frac{1}{2}}$					
3555.204	5	30	28119.75	+0.01	$48556^{\circ}_{3\frac{1}{2}} - 76676_{2\frac{1}{2}}$	4	0.95	1.13	0.091	0.495
3555.055		3	28120.93							
3554.347		5	28126.53	+0.03	$59259_{2\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3553.82		1	28130.70							
3553.340		7	28134.50	−0.02	$67416_{4\frac{1}{2}} - 95550^{\circ}_{4\frac{1}{2}}$					
3553.192		3	28135.67							
3553.153		3	28135.98							
3552.324	100	1000	28142.55	−0.02	$31568^{\circ}_{2\frac{1}{2}} - 59710_{1\frac{1}{2}}$	5	0.854	0.810	(0.022)	0.92
3549.822	200	2000	28162.38	+0.01	$33052^{\circ}_{4\frac{1}{2}} - 61214_{4\frac{1}{2}}$	6	1.264	1.050	0.980	1.167
3548.470		2	28173.11							
3548.096		7	28176.08	−0.02	$44940^{\circ}_{1\frac{1}{2}} - 73116_{1\frac{1}{2}}$					
3546.085		1	28192.06	−0.01 0.00	$53120^{\circ}_{2\frac{1}{2}} - 81312_{2\frac{1}{2}}$ $71222_{3\frac{1}{2}} - 99414^{\circ}_{4\frac{1}{2}}$					
3545.725	1	40*h*	28194.92	0.00	$43075^{\circ}_{1\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
3543.890		1	28209.52							
3543.324	1	10	28214.03	0.00	$46354^{\circ}_{4\frac{1}{2}} - 74568_{4\frac{1}{2}}$					
3543.159	30	200	28215.34	−0.02	$32371^{\circ}_{2\frac{1}{2}} - 60586_{1\frac{1}{2}}$	4	1.202	1.370	0.084	0.960
3542.385	7	100	28221.50		$47329^{\circ}_{2\frac{1}{2}} - 75550_{2\frac{1}{2}}$	6	0.990	0.902	0.22	0.946
3542.272	1	6	28222.40	−0.05	$64055_{2\frac{1}{2}} - 92278^{\circ}_{1\frac{1}{2}}$					
3541.375	7	80	28229.55	−0.01	$38342^{\circ}_{4\frac{1}{2}} - 66571_{5\frac{1}{2}}$	5	(1.093)	1.18	*w*	1.58
3540.926		3	28233.13	−0.05	$68148_{5\frac{1}{2}} - 96382^{\circ}_{5\frac{1}{2}}$					
3540.61		1	28235.65							
3540.21		2	28238.84							
3540.09		1	28239.80							
3540.02		1	28240.36							
3539.932		3	28241.06	−0.04	$61374_{2\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$					
3539.362	20	200	28245.61	−0.01	$43956^{\circ}_{2\frac{1}{2}} - 72202_{3\frac{1}{2}}$	4	0.990	0.865	0.067	0.530
3538.369		2	28253.53	+0.08	$66082_{5\frac{1}{2}} - 94335^{\circ}_{5\frac{1}{2}}$					
3537.964		1	28256.77	−0.03	$56375_{2\frac{1}{2}} - 84632^{\circ}_{2\frac{1}{2}}$					
3537.127		6	28263.45	−0.02	$65199_{4\frac{1}{2}} - 93463^{\circ}_{3\frac{1}{2}}$					
3536.068	1	8	28271.92	0.00	$64923_{4\frac{1}{2}} - 93195^{\circ}_{3\frac{1}{2}}$					
3534.752	4	20	28282.44	−0.04 +0.01	$44497^{\circ}_{2\frac{1}{2}} - 72779_{3\frac{1}{2}}$ $48556^{\circ}_{3\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
3534.13		2	28287.42	−0.04	$65577_{3\frac{1}{2}} - 93864^{\circ}_{2\frac{1}{2}}$					
3534.05	50	100	28288.06	0.00	$22960_{1\frac{1}{2}} - 51248^{\circ}_{2\frac{1}{2}}$	5	0.815	1.041	0.113	1.380
3533.80		3	28290.06	−0.05	$65577_{3\frac{1}{2}} - 93867^{\circ}_{4\frac{1}{2}}$					
3533.107	20	60	28295.61	0.00	$59090_{3\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}}$	6	1.12	1.14	*d*	1.13
3531.24	5	100	28310.57	−0.05	$47329^{\circ}_{2\frac{1}{2}} - 75640_{3\frac{1}{2}}$	4	0.995	0.813	0.091	0.358
3530.58		1	28315.86	−0.01	$64598_{3\frac{1}{2}} - 92914^{\circ}_{4\frac{1}{2}}$					
3530.16		3	28319.23	−0.05	$64923_{4\frac{1}{2}} - 93242^{\circ}_{5\frac{1}{2}}$					
3530.05		1	28320.12	−0.04	$61822_{3\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
3529.715	2	20	28322.80	−0.04	$68720_{6\frac{1}{2}} - 97043^{\circ}_{6\frac{1}{2}}$					
3529.458		2	28324.87	−0.02	$52987^{\circ}_{1\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
3529.085	8	100	28327.86	−0.04	$33494^{\circ}_{3\frac{1}{2}} - 61822_{3\frac{1}{2}}$	6	1.001	1.340	1.185	1.171

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3528.771		2	28330.38	−0.09	$68756_{3\frac{1}{2}} - 97086^{\circ}_{4\frac{1}{2}}$					
3527.501	1	15	28340.58	−0.01	$41688^{\circ}_{1\frac{1}{2}} - 70029_{0\frac{1}{2}}$	7	(0.784)	0.736	0	0.808
3527.332	2	20	28341.94	−0.02	$44438^{\circ}_{3\frac{1}{2}} - 72779_{3\frac{1}{2}}$	7	1.10	1.10	0	1.105
3526.477		1	28348.81	+0.01	$68549_{4\frac{1}{2}} - 96898^{\circ}_{5\frac{1}{2}}$					
3525.722	5	50	28354.88	−0.01	$64891_{7\frac{1}{2}} - 93246^{\circ}_{6\frac{1}{2}}$	7?	(1.19)	1.21	w	1.08
3525.456		3	28357.02	−0.07	$51248^{\circ}_{2\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
3525.171		2	28359.31							
3525.05		1	28360.28	−0.04	$66462_{0\frac{1}{2}} - 94823^{\circ}_{1\frac{1}{2}}$					
3524.82		1	28362.13							
3524.044		1	28368.38	−0.05	$63234_{2\frac{1}{2}} - 91602^{\circ}_{2\frac{1}{2}}$					
3523.734		3h	28370.88							
3523.148[a]	3	2	28375.59							
3522.826		3	28378.19	−0.03	$64598_{3\frac{1}{2}} - 92976^{\circ}_{3\frac{1}{2}}$					
3522.747	1	10	28378.82	−0.02	$34784^{\circ}_{5\frac{1}{2}} - 63163_{4\frac{1}{2}}$					
3522.021		1	28384.67	−0.08	$65950_{4\frac{1}{2}} - 94335^{\circ}_{5\frac{1}{2}}$					
3521.727		3	28387.04	−0.05	$61822_{3\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
3521.664		2	28387.55							
3521.585	1	7	28388.19	0.00	$70858_{4\frac{1}{2}} - 99246^{\circ}_{5\frac{1}{2}}$					
3521.224		7	29391.10	+0.07 −0.04	$52921^{\circ}_{3\frac{1}{2}} - 81312_{2\frac{1}{2}}$ $61214_{4\frac{1}{2}} - 89605^{\circ}_{4\frac{1}{2}}$					
3521.007	5	20	28392.85	−0.05	$32981^{\circ}_{1\frac{1}{2}} - 61374_{2\frac{1}{2}}$					
3520.917		10	28393.57	−0.04	$43075^{\circ}_{1\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
3520.293	600r	3000	28398.61	+0.03	$30562^{\circ}_{5\frac{1}{2}} - 58961_{5\frac{1}{2}}$	6	1.111	0.972	0.770	1.043
3519.690		2	28403.47	−0.07	$48272^{\circ}_{2\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
3519.417	5	50	28405.67	−0.01	$61873_{6\frac{1}{2}} - 90279^{\circ}_{5\frac{1}{2}}$	7	(1.11)	1.11	0	1.096
3519.10		1	28408.23							
3518.89		1	28409.93							
3518.795		3	28410.70	−0.05	$65093_{3\frac{1}{2}} - 93503^{\circ}_{4\frac{1}{2}}$					
3518.674		1	28411.67	−0.04	$47758^{\circ}_{3\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
3518.353	1	10	28414.26	−0.03	$40035^{\circ}_{3\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
3518.156	20	300	28415.86	−0.01	$45335^{\circ}_{4\frac{1}{2}} - 73750_{4\frac{1}{2}}$	7	1.00	1.00	0	1.00
3516.60		1	28428.43							
3516.180		2	28431.82	+0.02 −0.03	$65566_{0\frac{1}{2}} - 93998^{\circ}_{1\frac{1}{2}}$ $65577_{3\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$					
3515.865	30	300	28434.37	+0.01	$37516^{\circ}_{3\frac{1}{2}} - 65950_{4\frac{1}{2}}$	4	(1.119)	1.09	w	0.99
3515.610	10	50	28436.43	−0.05	$34575^{\circ}_{1\frac{1}{2}} - 63011_{1\frac{1}{2}}$	6	1.450	0.780	0.90	1.120
3515.138	1	15	28440.25	−0.05	$62861_{5\frac{1}{2}} - 91301^{\circ}_{6\frac{1}{2}}$					
3513.640		4	28452.38	−0.03	$70793_{5\frac{1}{2}} - 99246^{\circ}_{5\frac{1}{2}}$					
3513.412		2	28454.22							
3512.708	2	20	28459.93	0.00	$65875_{6\frac{1}{2}} - 94335^{\circ}_{5\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3512.441		6	28462.09							
3511.283		8	28471.48							
3510.942		3	28474.24							
3510.500	1	15	28477.83	−0.05	$45273^{\circ}_{3\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
3509.86	1	10	28483.02	−0.06	$33653^{\circ}_{0\frac{1}{2}} - 62136_{0\frac{1}{2}}$					
3509.776		3	28483.70	−0.08	$70136_{6\frac{1}{2}} - 98620^{\circ}_{6\frac{1}{2}}$					
3508.95		1	28490.40							
3507.830	200	2000	28499.50	−0.02	$37077^{\circ}_{2\frac{1}{2}} - 65577_{3\frac{1}{2}}$	4	1.12	1.06	(0.028)	0.92
3506.125	8	200	28513.36	−0.05	$40035^{\circ}_{3\frac{1}{2}} - 68549_{4\frac{1}{2}}$	5	0.714	1.160	0.223	2.72
3505.282	50	150	28520.22	−0.02	$33653^{\circ}_{0\frac{1}{2}} - 62174_{1\frac{1}{2}}$	4	1.30	0.80	0.26	0.54
3504.936	3	15	28523.03	−0.03	$61374_{2\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$					
3504.542	1	15	28526.24	−0.06	$48272^{\circ}_{2\frac{1}{2}} - 76799_{1\frac{1}{2}}$					
3503.690	4	40	28533.18	−0.01	$45737^{\circ}_{1\frac{1}{2}} - 74270_{2\frac{1}{2}}$	4	1.315	0.911	0.202	0.305
3503.277		2	28536.54	−0.01	$53120^{\circ}_{2\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
3503.190		3	28537.25	−0.03	$68549_{4\frac{1}{2}} - 97086^{\circ}_{4\frac{1}{2}}$					
3503.011		1	28538.71							
3502.572		4*h*	28542.28							
3502.180	10	100	28545.48	0.00	$47005^{\circ}_{1\frac{1}{2}} - 75550_{2\frac{1}{2}}$	4	1.00	0.92	(0.04)	0.80
3500.863		5	28556.22	−0.02	$70858_{4\frac{1}{2}} - 99414^{\circ}_{4\frac{1}{2}}$					
3500.131	10	30	28562.19	+0.03	$58823_{2\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}}$					
3499.886		3	28564.19	−0.05	$69957_{4\frac{1}{2}} - 98521^{\circ}_{4\frac{1}{2}}$					
3499.85		1	28564.48	−0.05	$61051_{3\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$					
3499.791		2	28564.96	+0.01	$47758^{\circ}_{3\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
3499.636	1	9	28566.23	0.00	$48272^{\circ}_{2\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
3499.419	5	10	28568.00							
3498.392	2	40	28576.38	+0.04 −0.03	$39378^{\circ}_{0\frac{1}{2}} - 67955_{0\frac{1}{2}}$ $63726_{4\frac{1}{2}} - 92303^{\circ}_{3\frac{1}{2}}$					
3497.86		2	28580.73	−0.05	$64923_{4\frac{1}{2}} - 93503^{\circ}_{4\frac{1}{2}}$					
3496.858	5	20	28588.92	−0.01	$24332_{2\frac{1}{2}} - 52921^{\circ}_{3\frac{1}{2}}$					
3495.90		50	28596.76	+0.01	$64598_{3\frac{1}{2}} - 93195^{\circ}_{3\frac{1}{2}}$					
3495.780		3	28597.74	+0.09	$49008^{\circ}_{3\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
3493.154	1	15	28619.23	+0.03	$44497^{\circ}_{2\frac{1}{2}} - 73116_{1\frac{1}{2}}$					
3492.807	5	30	28622.08	−0.01	$34389^{\circ}_{2\frac{1}{2}} - 63011_{1\frac{1}{2}}$					
3491.624	6	100	28631.77	−0.01	$45335^{\circ}_{4\frac{1}{2}} - 73966_{3\frac{1}{2}}$					
3491.063		3	28636.38	−0.02	$68450_{3\frac{1}{2}} - 97086^{\circ}_{4\frac{1}{2}}$					
3490.880		2*h*	28637.88							
3490.58		1	28640.34	+0.09	$27061^{\circ}_{0\frac{1}{2}} - 55702_{1\frac{1}{2}}$					
3490.213	1	20	28643.35	+0.03	$35059^{\circ}_{3\frac{1}{2}} - 63702_{2\frac{1}{2}}$					
3488.786	200	700	28655.06	−0.01	$24332_{2\frac{1}{2}} - 52987^{\circ}_{1\frac{1}{2}}$	5	1.18	1.12	(0.03)	1.27
3488.43		10*h*	28657.99							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3488.34	6	50	28658.73	−0.01 −0.05	$34575^{\circ}_{1\frac{1}{2}} - 63234_{2\frac{1}{2}}$ $50468^{\circ}_{5\frac{1}{2}} - 79126_{4\frac{1}{2}}$					
3487.402		3	28666.44	+0.02	$70136_{6\frac{1}{2}} - 98802^{\circ}_{5\frac{1}{2}}$					
3487.233	6	100	28667.83	0.00	$35059^{\circ}_{3\frac{1}{2}} - 63726_{4\frac{1}{2}}$					
3487.041		2	28669.40	+0.03	$52987^{\circ}_{1\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
3486.137	1	8	28676.84	+0.03	$47228^{\circ}_{0\frac{1}{2}} - 75905_{0\frac{1}{2}}$					
3485.757	200	1500	28679.96	0.00	$32371^{\circ}_{2\frac{1}{2}} - 61051_{3\frac{1}{2}}$	7	(1.170)	1.18	0	1.21
3484.656		1	28689.03							
3484.38		2	28691.30							
3484.143	1	15	28693.25	0.00	$70136_{6\frac{1}{2}} - 98829^{\circ}_{6\frac{1}{2}}$					
3484.09		2	28693.69	−0.10	$45273^{\circ}_{3\frac{1}{2}} - 73966_{3\frac{1}{2}}$					
3484.06		2	28693.93							
3483.782	1	10	28696.22	0.00	$44940^{\circ}_{1\frac{1}{2}} - 73636_{0\frac{1}{2}}$					
3482.942	1	10	28703.14	−0.02	$63944_{5\frac{1}{2}} - 92647^{\circ}_{5\frac{1}{2}}$					
3482.564	5	30*h*	28706.26							
3482.390		1	28707.69	−0.01	$35019^{\circ}_{4\frac{1}{2}} - 63726_{4\frac{1}{2}}$					
3481.706		2	28713.33							
3481.302	1	20	28716.66	−0.02	$44940^{\circ}_{1\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
3479.912		2	28728.14							
3478.835	3000*r*	10000	28737.03	−0.01	$30224^{\circ}_{4\frac{1}{2}} - 58961_{5\frac{1}{2}}$	5	0.93	0.97	(0.022)	1.17
3477.022	20	30	28752.01							
3476.303	10000*A*	8000	28757.96	−0.02	$0_{0\frac{1}{2}} - 28757^{\circ}_{1\frac{1}{2}}$	4	1.999	1.437	0.281	1.160
3474.82	60	400	28770.23	−0.06	$33052^{\circ}_{4\frac{1}{2}} - 61822_{3\frac{1}{2}}$	4	1.28	1.33	(0.026)	1.10
3474.512		3	28772.78							
3473.996		5	28777.06	0.00	$61120_{0\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$					
3473.75		3	28779.09							
3473.01		2	28785.23							
3472.58		1	28788.79							
3472.324	5	20	28790.91							
3471.891		2	28794.50							
3471.46		1	28798.08							
3470.79	8	80	28803.64	+0.01	$46169^{\circ}_{4\frac{1}{2}} - 74973_{3\frac{1}{2}}$	5	(1.10)	1.09	*w*	1.13
3469.925	5	70	28810.82	−0.05	$37077^{\circ}_{2\frac{1}{2}} - 65888_{1\frac{1}{2}}$	4	1.117	1.209	0.046	0.979
3469.253	3	5	28816.40							
3468.395	1	20	28823.53	−0.05	$43956^{\circ}_{2\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
3468.00		3*h*	28826.81							
3467.066	10	200	28834.57	−0.05	$37516^{\circ}_{3\frac{1}{2}} - 66351_{2\frac{1}{2}}$	7	(1.119)	1.115	0	1.128
3466.346		10	28840.56	−0.10	$45429^{\circ}_{3\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
3465.898	3	40	28844.29	−0.06	$34389^{\circ}_{2\frac{1}{2}} - 63234_{2\frac{1}{2}}$	6	1.00	1.19	0.48	1.090
3465.792		3	28845.17	0.00	$69957_{4\frac{1}{2}} - 98802^{\circ}_{5\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3464.905		1	28852.56	−0.03	$47663^{\circ}_{4\frac{1}{2}} - 76516_{4\frac{1}{2}}$					
3463.325	2	30	28865.72	−0.08	$30224^{\circ}_{4\frac{1}{2}} - 59090_{3\frac{1}{2}}$					
3463.179	2	20	28866.94	−0.07	$30392^{\circ}_{1\frac{1}{2}} - 59259_{2\frac{1}{2}}$					
3462.79		1*h*	28870.18							
3462.338[a]	20	15	28873.95							
3461.719	30	300	28879.11	−0.02	$37516^{\circ}_{3\frac{1}{2}} - 66395_{2\frac{1}{2}}$	4	1.11	1.23	(0.06)	0.82
3461.327		5	28882.38							
3460.137		4	28892.31							
3460.092		10	28892.69	−0.06	$48556^{\circ}_{3\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
3459.902		2	28894.28							
3459.828		4	28894.89	−0.07	$61822_{3\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
3459.183	10	40	28900.28	−0.03	$47005^{\circ}_{1\frac{1}{2}} - 75905_{0\frac{1}{2}}$	4	0.988	1.278	0.145	0.843
3458.792		2	28903.55							
3458.286	200	1500	28907.78	−0.05	$40035^{\circ}_{3\frac{1}{2}} - 68943_{4\frac{1}{2}}$	5	0.73	0.88	0.077	1.47
3457.333		2	28915.75	−0.07	$65093_{3\frac{1}{2}} - 94088^{\circ}_{3\frac{1}{2}}$					
3457.10		2	28917.69	−0.08	$47758^{\circ}_{3\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
3457.04		1	28918.20							
3456.953		1	28918.92							
3456.774		6	28920.42	−0.09	$63726_{4\frac{1}{2}} - 92647^{\circ}_{5\frac{1}{2}}$					
3456.231	5	20	28924.97	−0.08	$35019^{\circ}_{4\frac{1}{2}} - 63944_{5\frac{1}{2}}$					
3455.863		5	28928.05	−0.03	$61214_{4\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
3454.92		3	28935.94							
3454.215	50	300	28941.85	−0.03	$34784^{\circ}_{5\frac{1}{2}} - 63726_{4\frac{1}{2}}$					
3454.080	2000*r*	10000	28942.98	−0.07	$26759^{\circ}_{2\frac{1}{2}} - 55702_{1\frac{1}{2}}$	4	1.560	1.687	0.065	1.370?
3453.524		5	28947.64	−0.08	$64598_{3\frac{1}{2}} - 93546^{\circ}_{2\frac{1}{2}}$					
3453.207		2	28950.29							
3452.264		7	28958.20							
3451.33	1	20	28966.04	+0.01	$67416_{4\frac{1}{2}} - 96382^{\circ}_{5\frac{1}{2}}$					
3451.305		3	28966.25							
3450.929		2	28969.40	0.00	$47680^{\circ}_{6\frac{1}{2}} - 76649_{5\frac{1}{2}}$					
3450.269		5	28974.95							
3449.362		1	28982.56							
3449.15		7*h*	28984.35							
3448.906		1	28986.40	+0.12	$47663^{\circ}_{4\frac{1}{2}} - 76649_{5\frac{1}{2}}$?					
3447.993	4	40	28994.07	+0.02	$47329^{\circ}_{2\frac{1}{2}} - 76323_{3\frac{1}{2}}$	7	(0.990)	0.982	0	0.971
3447.668	1	20	28996.80	−0.02	$35059^{\circ}_{3\frac{1}{2}} - 64055_{2\frac{1}{2}}$	7	(1.124)	1.120	0	1.134
3446.887	100	600	29003.37	−0.02	$32371^{\circ}_{2\frac{1}{2}} - 61374_{2\frac{1}{2}}$	6	1.178	1.306	0.32	1.242
3445.950	7	100	29011.26	+0.01	$48272^{\circ}_{2\frac{1}{2}} - 77284_{1\frac{1}{2}}$	5	1.16	0.93	0.116	1.51
3445.107		3	29018.36	−0.02	$31568^{\circ}_{2\frac{1}{2}} - 60586_{1\frac{1}{2}}$					
3444.544		2	29023.10							
3443.895		2*h*	29028.57							

TABLE 6. Yb II — *Observed and classified lines* — Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3443.587[a]	30	20	29031.17			?			0	1.18
3443.391		6h	29032.82							
3442.586	10	5	29039.61	+0.03	$40917^{\circ}_{4\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
3442.368	3	40	29041.45	+0.04	$37516^{\circ}_{3\frac{1}{2}} - 66558_{3\frac{1}{2}}$	6	1.13	1.11	d	1.12
3442.058	1	10	29044.06	0.00 −0.10	$40035^{\circ}_{3\frac{1}{2}} - 69079_{2\frac{1}{2}}$ $63234_{2\frac{1}{2}} - 92278^{\circ}_{1\frac{1}{2}}$?					
3441.354		7	29050.00	−0.01	$48556^{\circ}_{3\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
3441.30		1	29050.46							
3440.894		8h	29053.89							
3440.016		5	29061.30	+0.04	$49008^{\circ}_{3\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
3439.648	1	20	29064.41	+0.07 −0.01	$33494^{\circ}_{3\frac{1}{2}} - 62559_{2\frac{1}{2}}$ $61214_{4\frac{1}{2}} - 90279^{\circ}_{5\frac{1}{2}}$					
3438.848	400	2000	29071.17	+0.01	$31979^{\circ}_{3\frac{1}{2}} - 61051_{3\frac{1}{2}}$	6	1.337	1.187	0.525	1.262
3438.709	200	1500	29072.35	−0.01	$34575^{\circ}_{1\frac{1}{2}} - 63647_{1\frac{1}{2}}$	6	1.439	1.149	0.435	1.004
3438.516		10	29073.98	−0.03	$38342^{\circ}_{4\frac{1}{2}} - 67416_{4\frac{1}{2}}$					
3437.754		3	29080.42	−0.04	$47758^{\circ}_{3\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
3437.222		2	29084.92	0.00	$64461_{1\frac{1}{2}} - 93546^{\circ}_{2\frac{1}{2}}$					
3437.114		2	29085.84	−0.01	$64923_{4\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$					
3436.452	100	700	29091.44	+0.01	$35831^{\circ}_{5\frac{1}{2}} - 64923_{4\frac{1}{2}}$					
3435.74		4h	29097.47							
3435.516		2	29099.37							
3435.429		3	29100.10							
3434.610	200	600	29107.04	−0.03	$22960_{1\frac{1}{2}} - 52067^{\circ}_{0\frac{1}{2}}$	5	0.810	0.560	0.125	0.936
3434.244	1	10	29110.15	+0.02	$70136_{6\frac{1}{2}} - 99246^{\circ}_{5\frac{1}{2}}$					
3433.650		1	29115.18							
3433.160		10	29119.34							
3432.732	1	3	29122.97							
3432.261	1	30	29126.96	+0.01	$34575^{\circ}_{1\frac{1}{2}} - 63702_{2\frac{1}{2}}$					
3431.780		4h	29131.05							
3431.63		1	29132.32							
3431.512		2	29133.32	0.00	$66558_{3\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					
3431.377	5	9	29134.47							
3430.872		3	29138.76	0.00	$45429^{\circ}_{3\frac{1}{2}} - 74568_{4\frac{1}{2}}$					
3430.65		1	29140.64							
3430.632		2	29140.79							
3429.96		1	29146.50							
3429.80		1	29147.86	+0.03	$67938_{3\frac{1}{2}} - 97086^{\circ}_{4\frac{1}{2}}$					
3428.463	200	2000	29159.23	0.00	$34784^{\circ}_{5\frac{1}{2}} - 63944_{5\frac{1}{2}}$	6	1.12	1.10	0.09	1.11
3427.808	1	20	29164.80	+0.01	$47005^{\circ}_{1\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
3427.508		3	29167.35	−0.04	$70858_{4\frac{1}{2}} - 100025^{\circ}_{5\frac{1}{2}}$					
3426.558		2	29175.44	+0.02	$53716^{\circ}_{2\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
3426.43		1	29176.53	−0.02	$48272^{\circ}_{2\frac{1}{2}} - 77449_{3\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3425.71		1	29182.66	−0.06	$66571_{5\frac{1}{2}} - 95754^{\circ}_{5\frac{1}{2}}$					
3424.750		5	29190.84	+0.01	$48556^{\circ}_{3\frac{1}{2}} - 77747_{4\frac{1}{2}}$					
3424.554	3	15	29192.51	0.00	$32981^{\circ}_{1\frac{1}{2}} - 62174_{1\frac{1}{2}}$					
3424.182		1	29195.68							
3422.454		6	29210.42	−0.02 +0.09	$65093_{3\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$ $49916^{\circ}_{4\frac{1}{2}} - 79126_{4\frac{1}{2}}$					
3421.409		1	29219.34							
3419.742	2	20	29233.59	+0.04	$45335^{\circ}_{4\frac{1}{2}} - 74568_{4\frac{1}{2}}$	7	1.01	(1.04)	0	1.023
3419.606	20	100	29234.75	−0.01	$31979^{\circ}_{3\frac{1}{2}} - 61214_{4\frac{1}{2}}$	4	1.33	1.07	0.13	0.16
3418.571		1	29243.60	+0.02	$48503^{\circ}_{5\frac{1}{2}} - 77747_{4\frac{1}{2}}$					
3417.565	3	30	29252.21	+0.01	$45737^{\circ}_{1\frac{1}{2}} - 74989_{0\frac{1}{2}}$	5	1.36	0.54	0.41	1.77
3417.345	1	10	29254.09	+0.02	$45737^{\circ}_{1\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
3416.894	40	200	29257.95	−0.02	$34389^{\circ}_{2\frac{1}{2}} - 63647_{1\frac{1}{2}}$	4	1.00	1.14	0.070	0.79
3416.314		1	29262.92							
3415.974	10	100	29265.83	+0.01	$41688^{\circ}_{1\frac{1}{2}} - 70954_{2\frac{1}{2}}$	5	0.800	1.028	0.114	1.370
3415.853		2	29266.87	+0.01	$65093_{3\frac{1}{2}} - 94360^{\circ}_{4\frac{1}{2}}$					
3415.610		6	29268.95	+0.01	$64598_{3\frac{1}{2}} - 93867^{\circ}_{4\frac{1}{2}}$					
3415.062	10	80	29273.65	+0.03	$37077^{\circ}_{2\frac{1}{2}} - 66351_{2\frac{1}{2}}$	7	1.125	1.125	0	1.125
3414.838	20	200	29275.57	+0.03	$41678^{\circ}_{2\frac{1}{2}} - 70954_{2\frac{1}{2}}$	6	1.191	1.008	0.454	1.099
3413.357	5	15	29288.27	+0.02	$47228^{\circ}_{0\frac{1}{2}} - 76517_{1\frac{1}{2}}$	5	0.77	0.87	0.05	0.92
3412.507		5	29295.57	+0.01 −0.03	$45273^{\circ}_{3\frac{1}{2}} - 74568_{4\frac{1}{2}}$ $66395_{2\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					
3412.453[a]	80	40	29296.03			7			0	1.13
3411.750		6	29302.07	+0.06	$63944_{5\frac{1}{2}} - 93246^{\circ}_{6\frac{1}{2}}$					
3411.240[a]	10	8	29306.45							
3410.880		4	29309.54	+0.07	$63726_{4\frac{1}{2}} - 93036^{\circ}_{5\frac{1}{2}}$					
3410.689	1	6	29311.18	+0.09	$60586_{1\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$					
3410.566	50	60	29312.24	+0.04	$24332_{2\frac{1}{2}} - 53644^{\circ}_{3\frac{1}{2}}$	7	(1.202)	1.198	0	1.188
3410.487	1	10	29312.92	+0.05	$44438^{\circ}_{3\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
3409.875	6	70	29318.18	+0.05	$37077^{\circ}_{2\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
3409.568	1	10	29320.82	0.00	$45737^{\circ}_{1\frac{1}{2}} - 75058_{2\frac{1}{2}}$					
3409.022		3	29325.51	+0.04	$48556^{\circ}_{3\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
3408.516	10	100	29329.87	0.00	$44940^{\circ}_{1\frac{1}{2}} - 74270_{2\frac{1}{2}}$	4	1.234	0.920	0.157	0.449
3408.20		3	29332.59							
3408.058		7	29333.81	0.00	$48272^{\circ}_{2\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
3406.536	1	6	29346.91	+0.04	$47329^{\circ}_{2\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
3405.79		1	29353.34							
3405.249	5	30	29358.00	+0.01	$33653^{\circ}_{0\frac{1}{2}} - 63011_{1\frac{1}{2}}$					
3405.093		2	29359.35	−0.03	$40035^{\circ}_{3\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
3405.03		1	29359.89							
3404.103	150	800	29367.89	+0.03	$35831^{\circ}_{5\frac{1}{2}} - 65199_{4\frac{1}{2}}$	5	1.23	1.10	(0.065)	1.815

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3402.640		5	29380.51	+0.04	$64923_{4\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
3402.273	200	300	29383.68	−0.01	$24332_{2\frac{1}{2}} - 53716^{\circ}_{2\frac{1}{2}}$	6	1.206	1.180	0.067	1.193
3401.010	200	1000	29394.59	0.00 +0.02	$31979^{\circ}_{3\frac{1}{2}} - 61374_{2\frac{1}{2}}$ $(30224^{\circ}_{4\frac{1}{2}} - 59618_{3\frac{1}{2}})$	5	1.33	(1.30)	w	1.39
3400.603		4d	29398.11							
3400.445		3	29399.48							
3399.548		3	29407.24	+0.05	$64055_{2\frac{1}{2}} - 93463^{\circ}_{3\frac{1}{2}}$					
3398.649	2	10	29415.01							
3397.446	2	20	29425.43	+0.04	$41688^{\circ}_{1\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
3397.125	2	20	29428.21	+0.04	$61873_{6\frac{1}{2}} - 91301^{\circ}_{6\frac{1}{2}}$					
3396.328	40	400	29435.12	+0.01	$41678^{\circ}_{2\frac{1}{2}} - 71113_{1\frac{1}{2}}$	5	1.21	1.00	0.105	1.530
3395.14		5h	29445.41							
3394.437	60	300	29451.51	+0.03	$32371^{\circ}_{2\frac{1}{2}} - 61822_{3\frac{1}{2}}$	5	1.170	1.325	0.077	1.716
3394.152		1	29453.99							
3393.815		1	29456.91	−0.02	$69957_{4\frac{1}{2}} - 99414^{\circ}_{4\frac{1}{2}}$					
3393.636		2	29458.46							
3393.252		1	29461.80	−0.08	$59259_{2\frac{1}{2}} - 88721^{\circ}_{3\frac{1}{2}}$					
3392.390	7	100	29469.28	−0.02	$44497^{\circ}_{2\frac{1}{2}} - 73966_{3\frac{1}{2}}$	5	(0.734)	0.76	w	0.81
3392.356	2	20	29469.58	−0.05	$47329^{\circ}_{2\frac{1}{2}} - 76799_{1\frac{1}{2}}$					
3392.276		4	29470.27	−0.01	$46169^{\circ}_{4\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
3391.104	100r	900	29480.46	+0.01 +0.05	$34575^{\circ}_{1\frac{1}{2}} - 64055_{2\frac{1}{2}}$ $(37077^{\circ}_{2\frac{1}{2}} - 66558_{3\frac{1}{2}})$	4	1.42	1.11	0.15	0.64
3390.817	3	40	29482.95	−0.03	$31568^{\circ}_{2\frac{1}{2}} - 61051_{3\frac{1}{2}}$					
3390.63		1	29484.58	0.00	$61374_{2\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$					
3390.421	1h	30h	29486.40							
3390.246	1h	40h	29487.92							
3389.985		2	29490.19	+0.01	$64055_{2\frac{1}{2}} - 93546^{\circ}_{2\frac{1}{2}}$					
3389.439		4	29494.94							
3388.523		7	29502.91	+0.03	$61214_{4\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
3387.760		3	29509.56	0.00	$47329^{\circ}_{2\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
3387.293	2	20	29513.63	+0.01	$48556^{\circ}_{3\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
3387.120		2	29515.13							
3387.073		3	29515.54	−0.02	$63726_{4\frac{1}{2}} - 93242^{\circ}_{5\frac{1}{2}}$					
3386.560		1	29520.01							
3385.883	20	40	29525.92	−0.01	$28757^{\circ}_{1\frac{1}{2}} - 58283_{2\frac{1}{2}}$					
3385.559	10	100	29528.74	−0.04	$44438^{\circ}_{3\frac{1}{2}} - 73966_{3\frac{1}{2}}$	6	1.098	0.762	1.18	0.930
3384.560		1	29537.46	+0.02	$64461_{1\frac{1}{2}} - 93998^{\circ}_{1\frac{1}{2}}$					
3384.352		4	29539.27	−0.01	$35059^{\circ}_{3\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
3383.862	3	20	29543.55	−0.04 −0.08	$45429^{\circ}_{3\frac{1}{2}} - 74973_{3\frac{1}{2}}$ $(41678^{\circ}_{2\frac{1}{2}} - 71222_{3\frac{1}{2}})$	6	1.16	1.08	0.28	1.12
3381.255		1	29566.33	−0.04	$48503^{\circ}_{5\frac{1}{2}} - 78070_{4\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3381.060	2	15	29568.03	−0.01	$34389^{\circ}_{2\frac{1}{2}} - 63957_{3\frac{1}{2}}$					
3380.820	1	20	29570.13	+0.02	$47228^{\circ}_{0\frac{1}{2}} - 76799_{1\frac{1}{2}}$	5?	0.72	0.84	0.06	0.90
3380.644		1	29571.67	−0.05	$40035^{\circ}_{3\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
3380.340		1	29574.33							
3379.986	40	100	29577.43	0.00	$32981^{\circ}_{1\frac{1}{2}} - 62559_{2\frac{1}{2}}$	5	0.88	1.21	0.165	1.70
3379.788	100	700	29579.16	+0.01	$35019^{\circ}_{4\frac{1}{2}} - 64598_{3\frac{1}{2}}$	4	1.15	1.22	(0.034)	0.91
3379.517	6	70	29581.53	−0.03	$41688^{\circ}_{1\frac{1}{2}} - 71270_{2\frac{1}{2}}$	5	0.78	0.90	(0.06)	1.08
3379.386[a]	2	2	29582.68							
3378.404	10	100	29591.28	0.00	$41678^{\circ}_{2\frac{1}{2}} - 71270_{2\frac{1}{2}}$	6	1.19	0.91	(0.70)	1.05
3377.792	3	40	29596.64	−0.02	$38342^{\circ}_{4\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
3377.456		3	29599.58	−0.02	$65950_{4\frac{1}{2}} - 95550^{\circ}_{4\frac{1}{2}}$					
3376.780		2	29605.51							
3376.623	3	30	29606.89							
3375.483	2000*r*	5000	29616.88	−0.01	$26759^{\circ}_{2\frac{1}{2}} - 56375_{2\frac{1}{2}}$	6	1.580	1.238	0.860	1.410
3375.079	30	70	29620.43	+0.01	$57765_{4\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}}$					
3374.184		1	29628.29	0.00	$45429^{\circ}_{3\frac{1}{2}} - 75058_{2\frac{1}{2}}$					
3374.07		1	29629.29							
3373.873	2	20	29631.02	+0.03	$59090_{3\frac{1}{2}} - 88721^{\circ}_{3\frac{1}{2}}$					
3373.736		1	29632.22							
3373.033	1	10	29638.40	+0.02	$45335^{\circ}_{4\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
3372.00		1	29647.47	−0.03	$53716^{\circ}_{2\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
3369.886	10	80	29666.07	+0.01	$34389^{\circ}_{2\frac{1}{2}} - 64055_{2\frac{1}{2}}$	6	1.006	1.110	0.262	1.058
3369.544	70	200	29669.08	−0.03	$33494^{\circ}_{3\frac{1}{2}} - 63163_{4\frac{1}{2}}$	5	0.98	1.13	0.075	1.65
3369.344	20	60	29670.84	−0.01	$47005^{\circ}_{1\frac{1}{2}} - 76676_{2\frac{1}{2}}$	5	0.990	1.102	(0.056)	1.270
3367.738		6	29684.99	0.00	$63234_{2\frac{1}{2}} - 92919^{\circ}_{3\frac{1}{2}}$					
3367.077		4	29690.82	+0.04	$47758^{\circ}_{3\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
3366.964		3	29691.82							
3365.969	80	800	29700.59	−0.02	$42915^{\circ}_{5\frac{1}{2}} - 72615_{5\frac{1}{2}}$	6	1.126	1.000	0.70	1.063
3365.658		2	29703.34							
3365.444		1	29705.23	−0.07	$64598_{3\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
3365.059		4	29708.63							
3364.471		4	29713.82	0.00	$61822_{3\frac{1}{2}} - 91536^{\circ}_{3\frac{1}{2}}$					
3364.125		2	29716.87							
3363.886		1	29718.98	−0.01	$53644^{\circ}_{3\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
3363.645	10	20	29721.11							
3362.705	4	6	29729.42							
3362.438	10	70	29731.78							
3361.573	15	100	29739.43	0.00	$33494^{\circ}_{3\frac{1}{2}} - 63234_{2\frac{1}{2}}$	4	0.983	1.196	0.106	0.451
3361.467	1	8	29740.37	0.00	$65950_{4\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					
3361.329	3	30	29741.59	−0.01	$58961_{5\frac{1}{2}} - 88702^{\circ}_{5\frac{1}{2}}$					
3359.49		1	29757.87							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3359.193		3h	29760.50							
3358.612		2	29765.65	−0.04	$68756_{3\frac{1}{2}} - 98521^{\circ}_{4\frac{1}{2}}$					
3357.802	5	40	29772.83	+0.07	$56375_{2\frac{1}{2}} - 86148^{\circ}_{2\frac{1}{2}}$					
3356.966	20	200	29780.25	0.00	$41688^{\circ}_{1\frac{1}{2}} - 71468_{2\frac{1}{2}}$	5	0.790	1.027	0.118	1.381
3356.683		1	29782.76							
3356.305	6	40	29786.11	+0.04	$62861_{5\frac{1}{2}} - 92647^{\circ}_{5\frac{1}{2}}$					
3355.870	20	200	29789.97	0.00	$41678^{\circ}_{2\frac{1}{2}} - 71468_{2\frac{1}{2}}$	6	1.189	1.007	0.463	1.098
3354.020		3	29806.40	−0.01	$31568^{\circ}_{2\frac{1}{2}} - 61374_{2\frac{1}{2}}$					
3353.966	2	30	29806.88	+0.02	$38342^{\circ}_{4\frac{1}{2}} - 68148_{5\frac{1}{2}}$					
3353.733	20	150	29808.95	−0.03	$33052^{\circ}_{4\frac{1}{2}} - 62861_{5\frac{1}{2}}$	4	1.260	1.138	0.061	0.589
3353.563	1	6	29810.46	−0.02	$66571_{5\frac{1}{2}} - 96382^{\circ}_{5\frac{1}{2}}$					
3353.200	3	40	29813.69	+0.04	$45737^{\circ}_{1\frac{1}{2}} - 75550_{2\frac{1}{2}}$	4	1.334	0.908	0.213	0.269
3352.491	10	30	29820.00							
3351.265[a]	20	20	29830.90							
3351.087	6	60	29832.49	+0.04	$44438^{\circ}_{3\frac{1}{2}} - 74270_{2\frac{1}{2}}$	5	1.103	0.921	0.091	1.558
3350.967	5	40	29833.56	+0.02	$47005^{\circ}_{1\frac{1}{2}} - 76839_{2\frac{1}{2}}$	5	0.996	1.116	0.06	1.296
3349.942	20	150	29842.69	+0.01	$31979^{\circ}_{3\frac{1}{2}} - 61822_{3\frac{1}{2}}$	7	1.333	1.333	0	1.333
3349.074	10	60	29850.42	+0.02	$56375_{2\frac{1}{2}} - 86226^{\circ}_{1\frac{1}{2}}$	4	(1.226)	1.314	w	1.094
3347.537	150	1000	29864.12	+0.01	$35059^{\circ}_{3\frac{1}{2}} - 64923_{4\frac{1}{2}}$	7	(1.124)	1.117	0	1.092
3346.504[a]	30	30	29873.34							
3346.192		7	29876.13	+0.08	$40917^{\circ}_{4\frac{1}{2}} - 70793_{5\frac{1}{2}}$					
3345.921		7	29878.55	+0.02	$65875_{6\frac{1}{2}} - 95754^{\circ}_{5\frac{1}{2}}$					
3345.187		9	29885.10							
3344.715		3	29889.32	−0.01	$70136_{6\frac{1}{2}} - 100025^{\circ}_{5\frac{1}{2}}$					
3343.78		1	29897.68							
3343.705		2	29898.35	+0.08	$63647_{1\frac{1}{2}} - 93546^{\circ}_{2\frac{1}{2}}$					
3343.566		2	29899.59	+0.01	$68720_{6\frac{1}{2}} - 98620^{\circ}_{6\frac{1}{2}}$					
3343.071	80	400	29904.02	+0.04 −0.02	$35019^{\circ}_{4\frac{1}{2}} - 64923_{4\frac{1}{2}}$ $(52987^{\circ}_{1\frac{1}{2}} - 82891_{2\frac{1}{2}})$	6	1.16	1.11	0.21	1.14
3342.93	20h	100h	29905.28							
3342.310		1	29910.83	−0.03	$66571_{5\frac{1}{2}} - 96482^{\circ}_{4\frac{1}{2}}$					
3341.097	3	40	29921.69	+0.02	$40035^{\circ}_{3\frac{1}{2}} - 69957_{4\frac{1}{2}}$	5	0.66	1.08	0.208	2.54
3340.791		1	29924.43	−0.01	$66558_{3\frac{1}{2}} - 96482^{\circ}_{4\frac{1}{2}}$					
3339.476		3	29936.21							
3339.305		3	29937.74							
3339.274		1	29938.02							
3339.022		1	29940.28	+0.01	$40917^{\circ}_{4\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
3338.749	1	8	29942.73	+0.03	$64055_{2\frac{1}{2}} - 93998^{\circ}_{1\frac{1}{2}}$					
3337.581		1	29953.21	+0.07	$64055_{2\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$					
3337.420	5	20	29954.65	+0.07	$47329^{\circ}_{2\frac{1}{2}} - 77284_{1\frac{1}{2}}$	5	1.00	(0.90)	w	1.14

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3337.171	30	100	29956.89			7			0	1.019
3337.005		5*h*	29958.38							
3336.88		1	29959.50							
3336.718		4	29960.95	+0.03	$63234_{2\frac{1}{2}} - 93195^{\circ}_{3\frac{1}{2}}$					
3335.826	1	10	29968.96	+0.02	$46354^{\circ}_{4\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
3335.435		2	29972.48	−0.02	$68549_{4\frac{1}{2}} - 98521^{\circ}_{4\frac{1}{2}}$					
3335.327		3	29973.45	+0.01	$65577_{3\frac{1}{2}} - 95550^{\circ}_{4\frac{1}{2}}$					
3334.321	1	3	29982.49							
3333.800		4	29987.18							
3333.057	200	1000	29993.86	−0.01	$33653^{\circ}_{0\frac{1}{2}} - 63647_{1\frac{1}{2}}$	4	1.329	1.157	0.086	1.071
3332.774		7	29996.41							
3331.220	5	50	30010.40	0.00	$43956^{\circ}_{2\frac{1}{2}} - 73966_{3\frac{1}{2}}$	4	0.991	0.765	0.113	0.200
3330.238		1	30019.25	+0.03	$69395_{3\frac{1}{2}} - 99414^{\circ}_{4\frac{1}{2}}$					
3329.50	3	5	30025.90							
3329.382	50	100	30026.97	+0.01	$22960_{1\frac{1}{2}} - 52987^{\circ}_{1\frac{1}{2}}$	6	0.806	1.134	0.500	0.970
3329.087		4	30029.63							
3329.017	3	10	30030.26	0.00	$32981^{\circ}_{1\frac{1}{2}} - 63011_{1\frac{1}{2}}$					
3328.584		8	30034.17	+0.03	$35059^{\circ}_{3\frac{1}{2}} - 65093_{3\frac{1}{2}}$					
3328.39		1	30035.92							
3327.756	8	80	30041.64	+0.02	$43075^{\circ}_{1\frac{1}{2}} - 73116_{1\frac{1}{2}}$	6	0.960	0.870	0.135	0.915
3327.485	1	15	30044.08	−0.01	$35831^{\circ}_{5\frac{1}{2}} - 65875_{6\frac{1}{2}}$					
3327.195[a]	3	3	30046.70							
3326.949	2	20	30048.93	+0.05	$44940^{\circ}_{1\frac{1}{2}} - 74989_{0\frac{1}{2}}$	5	1.252	0.512	0.370	1.622
3326.745		4	30050.77	+0.02	$44940^{\circ}_{1\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
3326.266	40	200	30055.09	+0.03	$47228^{\circ}_{0\frac{1}{2}} - 77284_{1\frac{1}{2}}$	5	0.711	0.894	0.091	0.985
3325.104	9	50	30065.60	0.00	$28757^{\circ}_{1\frac{1}{2}} - 58823_{2\frac{1}{2}}$	4	1.440	1.256	0.092	0.980
3324.80		2	30068.35							
3324.470	10	70	30071.33	+0.01	$34389^{\circ}_{2\frac{1}{2}} - 64461_{1\frac{1}{2}}$	4	1.001	1.171	0.085	0.746
3324.172	40	300	30074.03	+0.02	$35019^{\circ}_{4\frac{1}{2}} - 65093_{3\frac{1}{2}}$	5	1.16	0.99	0.083	1.74
3324.043	2	12	30075.19	−0.03	$41688^{\circ}_{1\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
3323.46		3*h*	30080.47							
3322.963	20	250	30084.97	+0.03	$41678^{\circ}_{2\frac{1}{2}} - 71763_{1\frac{1}{2}}$	5	(1.193)	1.10	*w*	1.33?
3322.87	1	2	30085.81							
3322.58		1	30088.44	−0.07	$59624^{\circ}_{3\frac{1}{2}} - 89713_{2\frac{1}{2}}$					
3320.802		1	30104.55							
3320.642		2	30106.00							
3320.314	10	200	30108.97	+0.05 −0.08	$43007^{\circ}_{0\frac{1}{2}} - 73116_{1\frac{1}{2}}$ $(68720_{6\frac{1}{2}} - 98829^{\circ}_{6\frac{1}{2}})$	5	0.158	0.862	0.352	1.213
3320.032	5	30	30111.53	+0.03	$33052^{\circ}_{4\frac{1}{2}} - 63163_{4\frac{1}{2}}$					
3319.737		2	30114.20	−0.01	$65577_{3\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3319.180	80	500	30119.26	−0.01	$35831^{\circ}_{5\frac{1}{2}} - 65950_{4\frac{1}{2}}$	5	1.21	1.08	(0.063)	1.78
3318.973	50	100	30121.13	+0.01	$45429^{\circ}_{3\frac{1}{2}} - 75550_{2\frac{1}{2}}$	5	1.15	0.92	0.115	1.73
3318.590		1	30124.61							
3318.283	3	40	30127.40	+0.02	$37077^{\circ}_{2\frac{1}{2}} - 67204_{1\frac{1}{2}}$	5	(1.113)	1.06	0	1.18
3317.939	2	30	30130.52	−0.03	$44438^{\circ}_{3\frac{1}{2}} - 74568_{4\frac{1}{2}}$					
3317.094		3	30138.20	+0.04	$34784^{\circ}_{5\frac{1}{2}} - 64923_{4\frac{1}{2}}$					
3316.834	10	200	30140.56	+0.02	$35059^{\circ}_{3\frac{1}{2}} - 65199_{4\frac{1}{2}}$	4	(1.124)	1.09	w	0.98
3315.390	20	200	30153.69	−0.02	$46169^{\circ}_{4\frac{1}{2}} - 76323_{3\frac{1}{2}}$	5	1.12	1.03	(0.043)	1.42
3315.101	1h	15h	30156.31							
3314.720	10	20	30159.78	0.00	$22960_{1\frac{1}{2}} - 53120^{\circ}_{2\frac{1}{2}}$					
3314.52		10	30161.60	+0.04	$46354^{\circ}_{4\frac{1}{2}} - 76516_{4\frac{1}{2}}$					
3313.763	5	40	30168.49	+0.01	$45737^{\circ}_{1\frac{1}{2}} - 75905_{0\frac{1}{2}}$	7	(1.333)	1.30	0	1.35
3313.039		3	30175.08	+0.05	$62861_{5\frac{1}{2}} - 93036^{\circ}_{5\frac{1}{2}}$					
3312.450	1	20	30180.45	+0.04	$35019^{\circ}_{4\frac{1}{2}} - 65199_{4\frac{1}{2}}$					
				+0.08	$49419^{\circ}_{0\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
3311.742	2	10	30186.90	0.00	$59710_{1\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$					
				+0.02	$61051_{3\frac{1}{2}} - 91237^{\circ}_{3\frac{1}{2}}$					
3311.630	3	8	30187.92	0.00	$32371^{\circ}_{2\frac{1}{2}} - 62559_{2\frac{1}{2}}$					
3311.180		2	30192.02	+0.03	$48272^{\circ}_{2\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
3311.050	4	30	30193.21	+0.03	$61822_{3\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$					
3310.937	10	80	30194.24	+0.01	$30392^{\circ}_{1\frac{1}{2}} - 60586_{1\frac{1}{2}}$	7	1.320	1.320	0	1.320
3310.815		1	30195.35							
3310.20		1	30200.96							
3309.512	10	70	30207.24	+0.03	$38342^{\circ}_{4\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
3309.470	2	20	30207.62	−0.02	$33494^{\circ}_{3\frac{1}{2}} - 63702_{2\frac{1}{2}}$					
3309.372	70	300	30208.52	0.00	$34389^{\circ}_{2\frac{1}{2}} - 64598_{3\frac{1}{2}}$	5	1.01	1.25	0.119	1.850
3309.185	5	50	30210.22	−0.02	$45429^{\circ}_{3\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
3308.461		2	30216.84	0.00	$63647_{1\frac{1}{2}} - 93864^{\circ}_{2\frac{1}{2}}$					
3308.210		1	30219.13							
3306.783	100	400	30232.17	+0.02	$33494^{\circ}_{3\frac{1}{2}} - 63726_{4\frac{1}{2}}$	7	1.005	1.005	0	1.005
3305.733	500r	2000	30241.77	−0.04	$31631^{\circ}_{6\frac{1}{2}} - 61873_{6\frac{1}{2}}$	6	1.23	1.11	0.76	1.16
3305.252[a]	20	20	30246.17							
3304.770	70	400	30250.58	+0.01	$35831^{\circ}_{5\frac{1}{2}} - 66082_{5\frac{1}{2}}$	6	1.217	1.145	0.40	1.181
3304.558	80	400	30252.52	0.00	$32981^{\circ}_{1\frac{1}{2}} - 63234_{2\frac{1}{2}}$	5	0.865	1.216	0.176	1.742
3304.346		6	30254.46	−0.04	$31568^{\circ}_{2\frac{1}{2}} - 61822_{3\frac{1}{2}}$					
3303.926		1	30258.31	+0.02	$48556^{\circ}_{3\frac{1}{2}} - 78814_{2\frac{1}{2}}$					
3303.864		2	30258.88							
3303.449		1	30262.68							
3303.203		2	30264.93							
3302.202		1	30274.11	+0.02	$59439^{\circ}_{2\frac{1}{2}} - 89713_{2\frac{1}{2}}$					
3301.780	1	10	30277.98	+0.06	$45273^{\circ}_{3\frac{1}{2}} - 75550_{2\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3301.711	10	20	30278.61	+0.05	$47005^{\circ}_{1\frac{1}{2}} - 77284_{1\frac{1}{2}}$	6	1.00	0.88	0.18	0.94
3301.328		1	30282.12	−0.01	$63726_{4\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$					
3299.447		1	30299.38							
3299.400	1	6	30299.82	+0.01	$66082_{5\frac{1}{2}} - 96382^{\circ}_{5\frac{1}{2}}$					
3298.896		8	30304.45	0.00	$40917^{\circ}_{4\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
3298.826	1	10	30305.09	+0.06	$45335^{\circ}_{4\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
3298.102		2	30311.74	+0.09	$47758^{\circ}_{3\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
3297.851	10	100	30314.05	−0.02	$43956^{\circ}_{2\frac{1}{2}} - 74270_{2\frac{1}{2}}$	6	1.00	0.93	0.165	0.970
3296.501		4	30326.46	+0.01	$66571_{5\frac{1}{2}} - 96898^{\circ}_{5\frac{1}{2}}$					
3295.825		4	30332.68							
3294.58		2	30344.14							
3294.341	7	100	30346.35	+0.02	$46169^{\circ}_{4\frac{1}{2}} - 76516_{4\frac{1}{2}}$	6	1.10	1.02	0.34	1.06
3293.836		2	30351.00	−0.01	$65199_{4\frac{1}{2}} - 95550^{\circ}_{4\frac{1}{2}}$					
3293.66		3	30352.62							
3293.25		1	30356.40	+0.05	$59259_{2\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$					
3292.92		1	30359.44							
3292.089	5	20	30367.10	+0.06	$45273^{\circ}_{3\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
3291.967		10	30368.23	+0.01	$42915^{\circ}_{5\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
3291.028		4	30376.89	+0.07	$42915^{\circ}_{5\frac{1}{2}} - 73291_{5\frac{1}{2}}$					
3290.554		8	30381.27	−0.04	$46902^{\circ}_{0\frac{1}{2}} - 77284_{1\frac{1}{2}}$					
3290.14		4	30385.09							
3289.370	60000*A*	40000	30392.20	−0.03	$0_{0\frac{1}{2}} - 30392^{\circ}_{1\frac{1}{2}}$	4	2.000	1.334	0.333	1.001
3287.81		1	30406.62	−0.05	$47663^{\circ}_{4\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
3286.960	10	70	30414.49	−0.10	$34784^{\circ}_{5\frac{1}{2}} - 65199_{4\frac{1}{2}}$	5	(1.119)	1.09	*w*	1.25
3285.78		1	30425.41							
3285.35		1	30429.39							
3285.168		2	30431.08	−0.03	$65950_{4\frac{1}{2}} - 96382^{\circ}_{5\frac{1}{2}}$					
3283.494	4	40	30446.59	−0.01	$55702_{1\frac{1}{2}} - 86148^{\circ}_{2\frac{1}{2}}$	4	1.690	1.568	0.061	1.385
3282.03		5	30460.17							
3281.715	1	7	30463.09	−0.03	$33494^{\circ}_{3\frac{1}{2}} - 63957_{3\frac{1}{2}}$					
3280.850		4	30471.13	−0.01	$68148_{5\frac{1}{2}} - 98620^{\circ}_{6\frac{1}{2}}$					
3280.335	1	10	30475.91	+0.01	$44497^{\circ}_{2\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
3279.89		4	30480.04	+0.02 +0.04	$46169^{\circ}_{4\frac{1}{2}} - 76649_{5\frac{1}{2}}$ $50832^{\circ}_{1\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
3279.32		4	30485.34	0.00	$61051_{3\frac{1}{2}} - 91536^{\circ}_{3\frac{1}{2}}$					
3278.99		1	30488.41							
3278.400	2	20	30493.90	+0.05	$44497^{\circ}_{2\frac{1}{2}} - 74991_{1\frac{1}{2}}$	4	0.74	1.06	0.16	0.26
3278.057	7	70	30497.09	−0.05	$53720_{4\frac{1}{2}} - 84217^{\circ}_{4\frac{1}{2}}$	6	1.25	1.19	0.25	1.21
3277.73		4	30500.13							
3277.607	4	15	30501.27	+0.01	$28757^{\circ}_{1\frac{1}{2}} - 59259_{2\frac{1}{2}}$					

TABLE 6. Yb II — *Observed and classified lines* — Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3277.575		1	30501.57							
3277.07		1	30506.27	−0.02	$65875_{6\frac{1}{2}} - 96382^{\circ}_{5\frac{1}{2}}$					
3275.801	50	200	30518.09	−0.02	$35059^{\circ}_{3\frac{1}{2}} - 65577_{3\frac{1}{2}}$	6	1.12	1.06	0.22	1.09
3275.19		7	30523.78	−0.06	$59618_{3\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
3275.14		1	30524.25	+0.01	$55702_{1\frac{1}{2}} - 86226^{\circ}_{1\frac{1}{2}}$					
3275.01	1	8	30525.46	0.00	$59090_{3\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$					
3274.96		2	30525.93	0.00	$68720_{6\frac{1}{2}} - 99246^{\circ}_{5\frac{1}{2}}$					
3273.940	7	70	30535.44	+0.06	$44438^{\circ}_{3\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
3273.65		1	30538.14	−0.01	$45012^{\circ}_{2\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
3272.98		2	30544.39							
3271.528	20	150	30557.95	−0.03	$35019^{\circ}_{4\frac{1}{2}} - 65577_{3\frac{1}{2}}$					
3271.247	2	20	30560.57	−0.03	$44497^{\circ}_{2\frac{1}{2}} - 75058_{2\frac{1}{2}}$					
3271.190	10	40	30561.11	−0.03	$33494^{\circ}_{3\frac{1}{2}} - 64055_{2\frac{1}{2}}$					
3271.125	3	30	30561.71	−0.03	$43075^{\circ}_{1\frac{1}{2}} - 73636_{0\frac{1}{2}}$					
3270.57		2	30566.90							
3269.265	50	200	30579.10	−0.02	$31979^{\circ}_{3\frac{1}{2}} - 62559_{2\frac{1}{2}}$					
3268.94		2	30582.14	−0.06	$43075^{\circ}_{1\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
3268.84		1	30583.08	+0.03	$67938_{3\frac{1}{2}} - 98521^{\circ}_{4\frac{1}{2}}$					
3266.915		6	30601.10	−0.02	$47005^{\circ}_{1\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
3266.39		4*d*	30606.01	−0.01	$31568^{\circ}_{2\frac{1}{2}} - 62174_{1\frac{1}{2}}$					
3266.163		4	30608.14							
3265.930	3	30	30610.32	−0.01	$44940^{\circ}_{1\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
3265.068	7	60	30618.41	0.00	$37516^{\circ}_{3\frac{1}{2}} - 68135_{2\frac{1}{2}}$					
3264.889	8	80	30620.08	0.00	$44438^{\circ}_{3\frac{1}{2}} - 75058_{2\frac{1}{2}}$					
3264.114		4	30627.35	+0.08 −0.09	$45012^{\circ}_{2\frac{1}{2}} - 75640_{3\frac{1}{2}}$ $64923_{4\frac{1}{2}} - 95550^{\circ}_{4\frac{1}{2}}$					
3263.938	1	10	30629.01	−0.03	$43007^{\circ}_{0\frac{1}{2}} - 73636_{0\frac{1}{2}}$					
3263.79		1	30630.40	−0.06	$63234_{2\frac{1}{2}} - 93864^{\circ}_{2\frac{1}{2}}$					
3262.296	6	60	30644.42	−0.01	$58961_{5\frac{1}{2}} - 89605^{\circ}_{4\frac{1}{2}}$					
3261.759	5	50	30649.47	−0.03	$43007^{\circ}_{0\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
3261.686	20	200	30650.15	0.00	$39378^{\circ}_{0\frac{1}{2}} - 70029_{0\frac{1}{2}}$	6	1.85	0.67	0.59	1.26
3261.508	500	1500	30651.83	−0.04	$30562^{\circ}_{5\frac{1}{2}} - 61214_{4\frac{1}{2}}$	5	1.10	1.04	(0.03)	1.37
3261.02		1	30656.41							
3260.82		5	30658.29	−0.05	$47228^{\circ}_{0\frac{1}{2}} - 77887_{0\frac{1}{2}}$					
3259.99	1	8	30666.10	−0.04	$32981^{\circ}_{1\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
3259.100	100	500	30674.47	−0.07	$33052^{\circ}_{4\frac{1}{2}} - 63726_{4\frac{1}{2}}$	6	1.272	1.008	0.132	1.140
3258.663	1	10	30678.59							
3258.453		8	30680.56	−0.05	$68148_{5\frac{1}{2}} - 98829^{\circ}_{6\frac{1}{2}}$					
3256.86		1	30695.57							
3256.030	5	50	30703.39	+0.01 −0.04	$34389^{\circ}_{2\frac{1}{2}} - 65093_{3\frac{1}{2}}$ $63163_{4\frac{1}{2}} - 93867^{\circ}_{4\frac{1}{2}}$					
3255.24		1	30710.84							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3254.62		2	30716.69							
3254.197	100	300	30720.69	−0.04	$32981^{\circ}_{1\frac{1}{2}} - 63702_{2\frac{1}{2}}$					
3253.911	10	100	30723.39	+0.03	$53720_{4\frac{1}{2}} - 84444^{\circ}_{3\frac{1}{2}}$					
3253.340	20	120	30728.78	−0.03	$53715_{3\frac{1}{2}} - 84444^{\circ}_{3\frac{1}{2}}$					
3252.106	1	10	30740.44	+0.01	$45429^{\circ}_{3\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
3250.505	1	5	30755.58	0.00	$22960_{1\frac{1}{2}} - 53716^{\circ}_{2\frac{1}{2}}$					
3249.80		1	30762.25							
3249.57		1	30764.43	+0.02	$63234_{2\frac{1}{2}} - 93998^{\circ}_{1\frac{1}{2}}$					
3249.17		4	30768.22	+0.01	$64923_{4\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					
3248.446	2	10	30775.07							
3247.932	1	5	30779.94	+0.02	$45737^{\circ}_{1\frac{1}{2}} - 76517_{1\frac{1}{2}}$					
3246.85		1	30790.20	+0.04	$48024^{\circ}_{1\frac{1}{2}} - 78814_{2\frac{1}{2}}$					
3246.657	1	7	30792.03	+0.02	$58823_{2\frac{1}{2}} - 89615^{\circ}_{2\frac{1}{2}}$					
3246.28		1	30795.61							
3246.060		10	30797.69							
3245.70		5	30801.11	+0.01	$61214_{4\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$					
3245.05		6	30807.28	+0.06	$33653^{\circ}_{0\frac{1}{2}} - 64461_{1\frac{1}{2}}$					
3243.46		5	30822.38	+0.02	$40035^{\circ}_{3\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
3243.00	4	30	30826.75	+0.02	$30224^{\circ}_{4\frac{1}{2}} - 61051_{3\frac{1}{2}}$					
3242.12	1	10	30835.12							
3242.048	4	50	30835.80	+0.03	$42915^{\circ}_{5\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
3239.39	1	8	30861.10	+0.01	$37077^{\circ}_{2\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
3239.195	50	200	30862.96	−0.05	$32371^{\circ}_{2\frac{1}{2}} - 63234_{2\frac{1}{2}}$	6	1.18	1.22	0.09	1.20
3237.215		5	30881.84	0.00	$47005^{\circ}_{1\frac{1}{2}} - 77887_{0\frac{1}{2}}$					
3236.488	20	60	30888.77	0.00	$24332_{2\frac{1}{2}} - 55221^{\circ}_{1\frac{1}{2}}$					
3236.160	40	300	30891.91	−0.04 +0.02	$35059^{\circ}_{3\frac{1}{2}} - 65950_{4\frac{1}{2}}$ $(33052_{4\frac{1}{2}} - 63944_{5\frac{1}{2}})$	4	(1.124)	1.10	w	1.03
3235.975	3	30	30893.67	0.00	$45429^{\circ}_{3\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
3235.858		6	30894.79							
3235.61		8	30897.16	−0.07	$45273^{\circ}_{3\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
3234.740	2	10	30905.47	−0.04	$33052_{4\frac{1}{2}} - 63957_{3\frac{1}{2}}$					
3233.487	3	40	30917.44	−0.01	$53715_{3\frac{1}{2}} - 84632^{\circ}_{2\frac{1}{2}}$					
3233.38		1	30918.46	+0.01	$40035^{\circ}_{3\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
3232.29		4	30928.89							
3231.986	50	300	30931.80	−0.02	$35019^{\circ}_{4\frac{1}{2}} - 65950_{4\frac{1}{2}}$	6	1.15	1.07	0.36	1.11
3231.90	1	10	30932.62							
3231.81		10	30933.48	−0.04	$37516^{\circ}_{3\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
3231.376	10	50	30937.64	−0.01	$57765_{4\frac{1}{2}} - 88702^{\circ}_{5\frac{1}{2}}$					
3231.228		2	30939.06	+0.04	$45737^{\circ}_{1\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
3229.814	50	150	30952.60	−0.07	$28757^{\circ}_{1\frac{1}{2}} - 59710_{1\frac{1}{2}}$	6	1.44	0.80	0.96	1.12
3229.475	2	20	30955.85	+0.05	$57765_{4\frac{1}{2}} - 88721^{\circ}_{3\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3228.503	5	40	30965.17	+0.01	$44940^{\circ}_{1\frac{1}{2}} - 75905_{0\frac{1}{2}}$					
3226.725	20	80	30982.23	−0.03	$30392^{\circ}_{1\frac{1}{2}} - 61374_{2\frac{1}{2}}$	4	(1.333)	1.31	0	1.27
3225.885	100	400	30990.30	−0.03	$30224^{\circ}_{4\frac{1}{2}} - 61214_{4\frac{1}{2}}$	6	0.94	1.05	0.50	1.00
3225.78	20	200	30991.31	−0.04	$34575^{\circ}_{1\frac{1}{2}} - 65566_{0\frac{1}{2}}$	7	1.43	1.43	0	1.43
3224.890		4	30999.86							
3224.752		3	31001.19							
3224.43		4	31004.28	+0.02	$66082_{5\frac{1}{2}} - 97086^{\circ}_{4\frac{1}{2}}$					
3224.25		1	31006.01	+0.06	$62861_{5\frac{1}{2}} - 93867^{\circ}_{4\frac{1}{2}}$					
3223.854	4	20	31009.82	−0.01	$56375_{2\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}}$					
3223.105	4	40	31017.03	+0.03	$43956^{\circ}_{2\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
3222.55		1	31022.37	+0.11	$65875_{6\frac{1}{2}} - 96898^{\circ}_{5\frac{1}{2}}$					
3222.11		5	31026.60	+0.06	$48556^{\circ}_{3\frac{1}{2}} - 79583_{2\frac{1}{2}}$					
3221.486	10	70	31032.61	−0.03	$37516^{\circ}_{3\frac{1}{2}} - 68549_{4\frac{1}{2}}$	5	(1.12)	1.15	u	1.24
3221.246	15	150	31034.93	−0.02	$43956^{\circ}_{2\frac{1}{2}} - 74991_{1\frac{1}{2}}$	4	(0.99)	1.04	w	0.92
3220.96		2	31037.68							
3220.814		8	31039.09	−0.02	$53404_{2\frac{1}{2}} - 84444^{\circ}_{3\frac{1}{2}}$					
3219.633		8	31050.47	0.00	$45273^{\circ}_{3\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
3219.408	2	9	31052.64	+0.03	$59090_{3\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
3219.325	1	10	31053.44	+0.01	$44497^{\circ}_{2\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
3218.913	2	15	31057.42	+0.01	$37077^{\circ}_{2\frac{1}{2}} - 68135_{2\frac{1}{2}}$					
3218.323	100	600	31063.11	−0.01	$35019^{\circ}_{4\frac{1}{2}} - 66082_{5\frac{1}{2}}$	7	1.11	1.11	0	1.11
3217.96		1	31066.62							
3217.66		3	31069.51	+0.04	$63234_{2\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
3217.45		1	31071.54							
3217.29	1	7	31073.09	+0.11	$37077^{\circ}_{2\frac{1}{2}} - 68150_{1\frac{1}{2}}$?					
3217.176	200	1000	31074.19	−0.04	$32981^{\circ}_{1\frac{1}{2}} - 64055_{2\frac{1}{2}}$	5	0.862	1.110	0.124	1.482
3215.927	10	100	31086.25	−0.04	$45429^{\circ}_{3\frac{1}{2}} - 76516_{4\frac{1}{2}}$					
3215.68		2	31088.64	+0.06	$61214_{4\frac{1}{2}} - 92303^{\circ}_{3\frac{1}{2}}$					
3215.456	10	60	31090.81	−0.01	$34784^{\circ}_{5\frac{1}{2}} - 65875_{6\frac{1}{2}}$					
3215.38		2	31091.54	−0.03	$61822_{3\frac{1}{2}} - 92914^{\circ}_{4\frac{1}{2}}$					
3214.330	2	20	31101.70	0.00 −0.01	$43956^{\circ}_{2\frac{1}{2}} - 75058_{2\frac{1}{2}}$ $45737^{\circ}_{1\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
3214.14		1	31103.54	−0.06	$33494^{\circ}_{3\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
3213.172		6	31112.91	0.00	$44438^{\circ}_{3\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
3212.485		5	31119.56	+0.02	$59090_{3\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
3210.84		7	31135.50	−0.06	$65950_{4\frac{1}{2}} - 97086^{\circ}_{4\frac{1}{2}}$					
3210.112	20	200	31142.56	+0.01	$44497^{\circ}_{2\frac{1}{2}} - 75640_{3\frac{1}{2}}$	5	0.74	0.80	(0.03)	0.96
3208.01		3	31162.97	+0.07	$61873_{6\frac{1}{2}} - 93036^{\circ}_{5\frac{1}{2}}$					
3207.702	4	30	31165.96	−0.04	$34784^{\circ}_{5\frac{1}{2}} - 65950_{4\frac{1}{2}}$	5	(1.119)	1.10	w	1.19
3207.538	2	10	31167.55	+0.04	$65875_{6\frac{1}{2}} - 97043^{\circ}_{6\frac{1}{2}}$					
3207.40		1	31168.90							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3206.148	20	200	31181.07	−0.01	$45335^{\circ}_{4\frac{1}{2}} - 76516_{4\frac{1}{2}}$	7	1.01	1.01	0	1.01
3205.863	20	50	31183.84	−0.05	$31979^{\circ}_{3\frac{1}{2}} - 63163_{4\frac{1}{2}}$					
3205.58		1	31186.59	+0.05	$40035^{\circ}_{3\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
3204.681	20	200	31195.34	−0.05	$43075^{\circ}_{1\frac{1}{2}} - 74270_{2\frac{1}{2}}$	4	(0.96)	0.93	0	0.89
3203.989	1	10	31202.08	+0.05	$44438^{\circ}_{3\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
3202.76		2	31214.05							
3201.35	5	30	31227.80	+0.05	$53404_{2\frac{1}{2}} - 84632^{\circ}_{2\frac{1}{2}}$					
3201.160	800r	2000	31229.65	−0.03 +0.01	$31631^{\circ}_{6\frac{1}{2}} - 62861_{5\frac{1}{2}}$ $(44940^{\circ}_{1\frac{1}{2}} - 76170_{2\frac{1}{2}})$	5	1.23	1.15	(0.04)	1.69
3200.69		1	31234.24	+0.05	$40035^{\circ}_{3\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
3199.785	5	50	31243.07	−0.02	$45273^{\circ}_{3\frac{1}{2}} - 76516_{4\frac{1}{2}}$					
3199.24		1	31248.39	+0.09	$58961_{5\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
3198.647	400	1000	31254.19	−0.02	$31979^{\circ}_{3\frac{1}{2}} - 63234_{2\frac{1}{2}}$	5	1.320	1.196	0.062	1.630
3196.354	10	50	31276.61	−0.02	$32371^{\circ}_{2\frac{1}{2}} - 63647_{1\frac{1}{2}}$	7	(1.170)	1.16	0	1.18
3196.052	2	20	31279.56	+0.02	$46169^{\circ}_{4\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
3195.585	20	200	31284.13	+0.01	$40917^{\circ}_{4\frac{1}{2}} - 72202_{3\frac{1}{2}}$	5	0.96	0.86	(0.05)	1.31
3194.765	10	100	31292.16	−0.05	$35059^{\circ}_{3\frac{1}{2}} - 66351_{2\frac{1}{2}}$	7	1.11	1.11	0	1.11
3194.242	8	70	31297.28	−0.02	$34784^{\circ}_{5\frac{1}{2}} - 66082_{5\frac{1}{2}}$	6	1.12	1.14	0.09	1.13
3192.885	1000r	3000	31310.59	−0.02	$30562^{\circ}_{5\frac{1}{2}} - 61873_{6\frac{1}{2}}$	7	1.08	1.08	0	1.08
3192.62	4	30	31313.18	+0.09	$34575^{\circ}_{1\frac{1}{2}} - 65888_{1\frac{1}{2}}$					
3192.45	1	8	31314.85	+0.08	$45335^{\circ}_{4\frac{1}{2}} - 76649_{5\frac{1}{2}}$					
3192.15		5	31317.79	+0.08	$58961_{5\frac{1}{2}} - 90279^{\circ}_{5\frac{1}{2}}$					
3190.780	8	30	31331.24	+0.02	$32371^{\circ}_{2\frac{1}{2}} - 63702_{2\frac{1}{2}}$					
3190.58		5	31333.20	+0.02	$48272^{\circ}_{2\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
3188.26		1	31356.00	+0.06	$48272^{\circ}_{2\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
3187.51		2	31363.38							
3187.01		3	31368.30	+0.01	$47758^{\circ}_{3\frac{1}{2}} - 79126_{4\frac{1}{2}}$					
3186.580	10	100	31372.53	+0.01 +0.08	$37077^{\circ}_{2\frac{1}{2}} - 68450_{3\frac{1}{2}}$ $(61822_{3\frac{1}{2}} - 93195^{\circ}_{3\frac{1}{2}})$	4	(1.113)	1.09	w	1.04
3185.64		1	31381.79							
3185.03		1	31387.80							
3184.71		1	31390.96							
3183.498	1	5	31402.91							
3183.46	1	5	31403.28	−0.01	$45273^{\circ}_{3\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
3182.86		4	31409.20	+0.02	$45429^{\circ}_{3\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
3182.52	1	8	31412.56							
3182.165	2	10	31416.06							
3181.64		1	31421.24							
3181.27	1	4	31424.90							
3181.03	1	9	31427.27							
3180.919	200	800	31428.37	−0.06	$33494^{\circ}_{3\frac{1}{2}} - 64923_{4\frac{1}{2}}$	5	(0.99)	1.10	w	1.47
3180.48		1	31432.70	+0.02	$61214_{4\frac{1}{2}} - 92647^{\circ}_{5\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3179.94	1	10	31438.04	+0.06	$41678^{\circ}_{2\frac{1}{2}} - 73116_{1\frac{1}{2}}$					
3179.344	30	70	31443.93							
3178.85		1	31448.82	+0.04	$49008^{\circ}_{3\frac{1}{2}} - 80457_{3\frac{1}{2}}$					
3177.815		1	31459.06							
3177.78		2	31459.41	+0.11	$47005^{\circ}_{1\frac{1}{2}} - 78464_{1\frac{1}{2}}$?					
3176.26		3	31474.46	+0.03	$62861_{5\frac{1}{2}} - 94335^{\circ}_{5\frac{1}{2}}$					
3176.06		1	31476.45	+0.11	$68549_{4\frac{1}{2}} - 100025^{\circ}_{5\frac{1}{2}}$?					
3175.759	25	150	31479.43	−0.06	$32981^{\circ}_{1\frac{1}{2}} - 64461_{1\frac{1}{2}}$	6	0.873	1.177	0.455	1.025
3174.22		2	31494.69							
3173.797	20	150	31498.89	−0.11	$35059^{\circ}_{3\frac{1}{2}} - 66558_{3\frac{1}{2}}$?	7	(1.124)	1.10	0	1.11
3171.176	100	300	31524.92	+0.03	$26759^{\circ}_{2\frac{1}{2}} - 58283_{2\frac{1}{2}}$	6	1.58	0.78	2.00	1.18
3169.056	200	1200	31546.01	+0.02	$33052^{\circ}_{4\frac{1}{2}} - 64598_{3\frac{1}{2}}$	5	(1.264)	1.244	w	1.334
3168.985	3	10	31546.72	−0.01	$45737^{\circ}_{1\frac{1}{2}} - 77284_{1\frac{1}{2}}$					
3168.405	8	60	31552.49	+0.04	$35019^{\circ}_{1\frac{1}{2}} - 66571_{5\frac{1}{2}}$	5	(1.158)	1.18	w	1.27
3167.72		1	31559.31	−0.02	$64923_{4\frac{1}{2}} - 96482^{\circ}_{4\frac{1}{2}}$					
3167.044	1	8	31566.05	+0.07	$45273^{\circ}_{3\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
3166.727	2	20	31569.21							
3165.981	1	5	31576.65	+0.05	$44940^{\circ}_{1\frac{1}{2}} - 76517_{1\frac{1}{2}}$					
3165.875		7	31577.70	+0.08	$46169^{\circ}_{4\frac{1}{2}} - 77747_{4\frac{1}{2}}$					
3165.206	60	500	31584.38	+0.03	$35831^{\circ}_{5\frac{1}{2}} - 67416_{4\frac{1}{2}}$	4	(1.214)	1.25	w	1.065
3164.973	6	15	31586.70	0.00	$32371^{\circ}_{2\frac{1}{2}} - 63957_{3\frac{1}{2}}$					
3163.796	100	600	31598.45	−0.01	$33494^{\circ}_{3\frac{1}{2}} - 65093_{3\frac{1}{2}}$	7	0.987	0.987	0	0.987
3161.80		2	31618.40							
3160.894	1	8	31627.46	+0.05	$59090_{3\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
3160.12		1	31635.21							
3160.01		3	31636.31							
3159.79		2	31638.51							
3159.59		1	31640.52	+0.09	$61822_{3\frac{1}{2}} - 93463^{\circ}_{3\frac{1}{2}}$					
3159.49		2	31641.52							
3159.34		1	31643.02	+0.08	$51248^{\circ}_{2\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
3159.04		2	31646.03							
3158.869	5	10	31647.74							
3158.43	1	7	31652.14							
3158.300	40	300	31653.44	−0.01	$42915^{\circ}_{5\frac{1}{2}} - 74568_{4\frac{1}{2}}$	5	1.12	1.04	(0.04)	1.48
3157.043		7	31666.04	+0.01	$31568^{\circ}_{2\frac{1}{2}} - 63234_{2\frac{1}{2}}$					
3156.365		4	31672.84	+0.10	$44497^{\circ}_{2\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
3155.798	30	40	31678.54	+0.09	$37077^{\circ}_{2\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
3155.52		2	31681.33	+0.02	$61822_{3\frac{1}{2}} - 93503^{\circ}_{4\frac{1}{2}}$					
3155.284	5	50	31683.69	+0.04	$43956^{\circ}_{2\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
3155.183	40	200	31684.71	−0.01	$32371^{\circ}_{2\frac{1}{2}} - 64055_{2\frac{1}{2}}$	6	1.160	1.110	0.125	1.135

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3154.194	5	40	31694.64	−0.06	$52938_{1\frac{1}{2}} - 84632^{\circ}_{2\frac{1}{2}}$					
3153.880	100	700	31697.80	−0.03	$40917^{\circ}_{4\frac{1}{2}} - 72615_{5\frac{1}{2}}$	7	(0.967)	0.978	0	1.028
3153.616	20	100	31700.45	−0.05	$52517_{5\frac{1}{2}} - 84217^{\circ}_{4\frac{1}{2}}$					
3153.180	40	300	31704.84	−0.02	$33494^{\circ}_{3\frac{1}{2}} - 65199_{4\frac{1}{2}}$	5	0.99	1.08	(0.044)	1.38
3152.44	4	40	31712.28	+0.02	$46169^{\circ}_{4\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
3151.90		1	31717.71							
3151.436	15	100	31722.38	−0.04	$31979^{\circ}_{3\frac{1}{2}} - 63702_{2\frac{1}{2}}$					
3151.255	3	8	31724.20	−0.02	$24332_{2\frac{1}{2}} - 56056^{\circ}_{2\frac{1}{2}}$					
3150.46	3	30	31732.21	−0.01	$44438^{\circ}_{3\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
3150.19		6	31734.93	−0.02	$39378^{\circ}_{0\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
3150.12		2	31735.63	−0.07	$44940^{\circ}_{1\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
3148.998	30	200	31746.94	+0.01	$31979^{\circ}_{3\frac{1}{2}} - 63726_{4\frac{1}{2}}$					
3148.43		2	31752.67							
3148.08		1	31756.20	+0.03	$58961_{5\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
3146.134	8	60	31775.84	0.00	$34575^{\circ}_{1\frac{1}{2}} - 66351_{2\frac{1}{2}}$					
3145.540	150	500	31781.84	−0.03	$30392^{\circ}_{1\frac{1}{2}} - 62174_{1\frac{1}{2}}$					
3145.063	80	600	31786.66	+0.03	$34784^{\circ}_{5\frac{1}{2}} - 66571_{5\frac{1}{2}}$	6	1.120	1.188	0.36	1.154
3142.813	1	7	31809.41	+0.01	$47005^{\circ}_{1\frac{1}{2}} - 78814_{2\frac{1}{2}}$					
3142.74		2	31810.15	+0.03	$63944_{5\frac{1}{2}} - 95754^{\circ}_{5\frac{1}{2}}$					
3141.733	60	400	31820.35	0.00	$34575^{\circ}_{1\frac{1}{2}} - 66395_{2\frac{1}{2}}$	4	1.420	1.234	0.093	0.954
3141.17		3	31826.05	+0.07	$44497^{\circ}_{2\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
3140.936	1000*r*	2000	31828.42	−0.06	$28757^{\circ}_{1\frac{1}{2}} - 60586_{1\frac{1}{2}}$	6	1.440	1.320	0.180	1.380
3140.28		2	31835.07							
3139.75	1	6	31840.44	−0.04	$57765_{4\frac{1}{2}} - 89605^{\circ}_{4\frac{1}{2}}$					
3139.27		2	31845.31							
3138.276		5	31855.40							
3138.07		2	31857.49							
3137.622		10	31862.04	−0.04	$40917^{\circ}_{4\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
3137.51		1	31863.18	+0.09	$61051_{3\frac{1}{2}} - 92914^{\circ}_{4\frac{1}{2}}$					
3136.760	80	400	31870.79	−0.03	$33052^{\circ}_{4\frac{1}{2}} - 64923_{4\frac{1}{2}}$	6	1.265	1.105	0.72	1.185
3136.67	1	10	31871.71							
3136.18		2	31876.69	0.00	$68148_{5\frac{1}{2}} - 100025^{\circ}_{5\frac{1}{2}}$					
3135.989		4	31878.63	+0.02	$37516^{\circ}_{3\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
3135.93		1	31879.23							
3135.43		1	31884.31							
3135.316	1	10	31885.47	+0.01	$44438^{\circ}_{3\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
3135.12	4	30	31887.47	−0.02	$34575^{\circ}_{1\frac{1}{2}} - 66462_{0\frac{1}{2}}$					
3133.96		1	31899.27							
3133.845		3	31900.44	+0.03	$46169^{\circ}_{4\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
3133.778		3	31901.12	−0.02	$48556^{\circ}_{3\frac{1}{2}} - 80457_{3\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3132.628	15	150	31912.83	−0.03	$33653^{\circ}_{0\frac{1}{2}} - 65566_{0\frac{1}{2}}$	6	1.32	1.42	(0.05)	1.37
3132.478	2	15	31914.36	−0.04	$43075^{\circ}_{1\frac{1}{2}} - 74989_{0\frac{1}{2}}$					
3132.294	1	8	31916.23	−0.04	$43075^{\circ}_{1\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
3131.397		1	31925.38	−0.06	$61051_{3\frac{1}{2}} - 92976^{\circ}_{3\frac{1}{2}}$					
3131.38		3	31925.55							
3129.145	8	80	31948.35	−0.03	$41688^{\circ}_{1\frac{1}{2}} - 73636_{0\frac{1}{2}}$	5	0.78	0.70	(0.04)	0.82
3128.60		1	31953.92							
3127.866	20	120	31961.41	−0.04	$34389^{\circ}_{2\frac{1}{2}} - 66351_{2\frac{1}{2}}$	6	(1.01)	1.12	0.27	?
3127.64		2	31963.72	−0.01	$66558_{3\frac{1}{2}} - 98521^{\circ}_{4\frac{1}{2}}$					
3127.49		2	31965.26	+0.07	$47663^{\circ}_{4\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
3127.31		2*h*	31967.10							
3127.138	4	40	31968.86	+0.02	$41688^{\circ}_{1\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
3126.25	1	5	31977.94	+0.04	$31979^{\circ}_{3\frac{1}{2}} - 63957_{3\frac{1}{2}}$					
3126.192	4	20	31978.53	−0.03	$41678^{\circ}_{2\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
3125.885	1	10	31981.67	−0.03	$43007^{\circ}_{0\frac{1}{2}} - 74989_{0\frac{1}{2}}$					
3125.700	5	20	31983.56	−0.01 −0.08	$43007^{\circ}_{0\frac{1}{2}} - 74991_{1\frac{1}{2}}$ $59618_{3\frac{1}{2}} - 91602^{c}_{2\frac{1}{2}}$					
3125.443	50	100	31986.19	−0.02	$21418^{\circ}_{3\frac{1}{2}} - 53404_{2\frac{1}{2}}$					
3124.25		2	31998.41	+0.02	$67416_{4\frac{1}{2}} - 99414^{\circ}_{4\frac{1}{2}}$					
3123.870		6	32002.30	+0.01	$37077^{\circ}_{2\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
3123.510	8	60	32005.99	+0.03	$34389^{\circ}_{2\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
3122.74		1	32013.88							
3122.48		3	32016.54							
3122.185	2	20	32019.57	+0.07	$45429^{\circ}_{3\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
3121.38		2	32027.83	+0.10	$61214_{4\frac{1}{2}} - 93242^{\circ}_{5\frac{1}{2}}$					
3119.73		1	32044.76	+0.12	$61822_{3\frac{1}{2}} - 93867^{\circ}_{4\frac{1}{2}}$?					
3119.37		2	32048.46	+0.02	$66571_{5\frac{1}{2}} - 98620^{\circ}_{6\frac{1}{2}}$					
3119.10		1	32051.24							
3117.806	1000*r*	3000	32064.54	−0.02	$26759^{\circ}_{2\frac{1}{2}} - 58823_{2\frac{1}{2}}$	6	1.568	1.260	0.770	1.414
3116.702	60	300	32075.90	−0.02	$31979^{\circ}_{3\frac{1}{2}} - 64055_{2\frac{1}{2}}$	5	1.333	1.111	0.110	1.888
3116.487	10	70	32078.11	+0.03	$44438^{\circ}_{3\frac{1}{2}} - 76516_{4\frac{1}{2}}$					
3116.342	10	40	32079.60	−0.05	$31568^{\circ}_{2\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
3116.070	15	70	32082.40	−0.03	$33494^{\circ}_{3\frac{1}{2}} - 65577_{3\frac{1}{2}}$	6	1.00	1.05	0.18	1.02
3115.340	100	400	32089.92	−0.06	$32371^{\circ}_{2\frac{1}{2}} - 64461_{1\frac{1}{2}}$	7	1.162	1.162	0	1.162
3115.25	1	8	32090.85	−0.10	$37516^{\circ}_{3\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
3114.905	3	20	32094.40							
3114.69		1	32096.62							
3114.505		4	32098.52							
3112.980	1	10	32114.25	−0.04	$45335^{\circ}_{4\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
3112.91		4	32114.97	−0.05	$51248^{\circ}_{2\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
3111.047	1	6	32134.20	−0.04	$31568^{\circ}_{2\frac{1}{2}} - 63702_{2\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3109.786	5	40	32147.23	−0.02	$33052^{\circ}_{4\frac{1}{2}} - 65199_{4\frac{1}{2}}$					
3109.52		2	32149.98	−0.03	$45737^{\circ}_{1\frac{1}{2}} - 77887_{0\frac{1}{2}}$					
3109.10	1	5	32154.32							
3107.902	1000r	3000	32166.72	−0.07	$30392^{\circ}_{1\frac{1}{2}} - 62559_{2\frac{1}{2}}$	4	(1.333)	1.25	w	1.14
3107.760	100	500	32168.18	−0.06	$34389^{\circ}_{2\frac{1}{2}} - 66558_{3\frac{1}{2}}$	5	(1.007)	1.08	w	1.26
3106.97		2	32176.36	+0.06	$45273^{\circ}_{3\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
3106.94	1	6	32176.67	−0.09	$45429^{\circ}_{3\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
3106.740	2	10	32178.75	−0.05 +0.03	$44497^{\circ}_{2\frac{1}{2}} - 76676_{2\frac{1}{2}}$ $57534^{\circ}_{3\frac{1}{2}} - 89713_{2\frac{1}{2}}$					
3106.133		3	32185.03	+0.09	$48272^{\circ}_{2\frac{1}{2}} - 80457_{3\frac{1}{2}}$					
3106.007		4	32186.34	−0.04	$61822_{3\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$					
3105.37		1	32192.94							
3103.81		4	32209.12							
3103.36		1	32213.79	−0.05	$43956^{\circ}_{2\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
3102.71		2	32220.54							
3102.074	30	150	32227.15	−0.03	$32371^{\circ}_{2\frac{1}{2}} - 64598_{3\frac{1}{2}}$	5	(1.170)	1.23	w	1.37
3101.688		5	32231.16	+0.08	$66571_{5\frac{1}{2}} - 98802^{\circ}_{5\frac{1}{2}}$					
3101.361	50	250	32234.55	−0.05	$33653^{\circ}_{0\frac{1}{2}} - 65888_{1\frac{1}{2}}$	4	1.32	1.22	(0.05)	1.17
3101.004	15	100	32238.26	−0.02	$44438^{\circ}_{3\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
3100.25		4	32246.11							
3100.03		2	32248.39	+0.04	$61214_{4\frac{1}{2}} - 93463^{\circ}_{3\frac{1}{2}}$					
3099.114	1	10	32257.93	+0.02	$66571_{5\frac{1}{2}} - 98829^{\circ}_{6\frac{1}{2}}$					
3098.850	4	10	32260.67	+0.01	$22960_{1\frac{1}{2}} - 55221^{\circ}_{1\frac{1}{2}}$					
3098.384		3	32265.52							
3097.331	1	8	32276.49	−0.02	$47329^{\circ}_{2\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
3096.278		4	32287.47							
3096.10		1	32289.33	+0.10	$61214_{4\frac{1}{2}} - 93503^{\circ}_{4\frac{1}{2}}$					
3095.415	30	60	32296.47	−0.04	$21418^{\circ}_{3\frac{1}{2}} - 53715_{3\frac{1}{2}}$					
3095.221	10	60	32298.50	+0.02	$30562^{\circ}_{5\frac{1}{2}} - 62861_{5\frac{1}{2}}$	6	(1.112)	1.15	w	1.13
3094.894	100	200	32301.91	−0.05	$21418^{\circ}_{3\frac{1}{2}} - 53720_{4\frac{1}{2}}$					
3093.870	200r	1000	32312.60	+0.01	$31631^{\circ}_{6\frac{1}{2}} - 63944_{5\frac{1}{2}}$	5	1.24	1.13	(0.056)	1.86
3093.423	3	30	32317.27	+0.07	$35831^{\circ}_{5\frac{1}{2}} - 68148_{5\frac{1}{2}}$	6	(1.214)	1.23	w	1.22
3093.40	1	10	32317.51	−0.10 −0.07	$37077^{\circ}_{2\frac{1}{2}} - 69395_{3\frac{1}{2}}$ $45429^{\circ}_{3\frac{1}{2}} - 77747_{4\frac{1}{2}}$					
3092.10	1	8	32331.10	−0.01	$26759^{\circ}_{2\frac{1}{2}} - 59090_{3\frac{1}{2}}$					
3091.10	1	6	32341.55	+0.06	$44497^{\circ}_{2\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
3090.924	6	15	32343.40	−0.01	$44940^{\circ}_{1\frac{1}{2}} - 77284_{1\frac{1}{2}}$					
3090.747	1	10	32345.25	+0.04	$56375_{2\frac{1}{2}} - 88721^{\circ}_{3\frac{1}{2}}$					
3089.61	3	20	32357.15	+0.12	$35059^{\circ}_{3\frac{1}{2}} - 67416_{4\frac{1}{2}}$					
3089.102	150r	500	32362.47	−0.04	$28757^{\circ}_{1\frac{1}{2}} - 61120_{0\frac{1}{2}}$	4	1.437	1.658	0.110	1.325

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3088.823	3	30	32365.39	−0.05	$40917^{\circ}_{4\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
3088.78	1	9	32365.84	−0.09	$37077^{\circ}_{2\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
3088.66		3	32367.10	+0.02	$43956^{\circ}_{2\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
3087.998	1	15	32374.04	0.00	$40917^{\circ}_{4\frac{1}{2}} - 73291_{5\frac{1}{2}}$					
3087.720		6	32376.96	−0.03	$47228^{\circ}_{0\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
3087.46		2	32379.68							
3086.971	10	100	32384.81	+0.03	$39378^{\circ}_{0\frac{1}{2}} - 71763_{1\frac{1}{2}}$	4	1.84	1.10	0.37	0.72
3086.508	8	40	32389.67	−0.05	$31568^{\circ}_{2\frac{1}{2}} - 63957_{3\frac{1}{2}}$					
3085.817	10	70	32396.92	+0.02	$35019^{\circ}_{4\frac{1}{2}} - 67416_{4\frac{1}{2}}$	6	1.16	1.26	0.44	1.21
3085.434	9	60	32400.94	−0.03	$44438^{\circ}_{3\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
3084.347	7	70	32412.36	−0.01	$45335^{\circ}_{4\frac{1}{2}} - 77747_{4\frac{1}{2}}$	6	1.00	1.07	0.30	1.04?
3083.809		3	32418.02							
3083.44		1	32421.89							
3082.34		1	32433.46	+0.05	$53715_{3\frac{1}{2}} - 86148^{\circ}_{2\frac{1}{2}}$					
3082.264		6	32434.26							
3082.05		1	32436.52	−0.01	$45012^{\circ}_{2\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
3081.625		8	32440.99	+0.09	$37516^{\circ}_{3\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
3081.18		1	32445.67							
3080.552	3	30	32452.29	+0.07	$45429^{\circ}_{3\frac{1}{2}} - 77882_{3\frac{1}{2}}$	6	1.15	1.13	(0.07)	1.14
3080.49		3	32452.94	+0.11	$61051_{3\frac{1}{2}} - 93503^{\circ}_{4\frac{1}{2}}$?					
3080.17	3	20	32456.31	+0.04	$33494^{\circ}_{3\frac{1}{2}} - 65950_{4\frac{1}{2}}$					
3079.593		7	32462.39	+0.09	$61873_{6\frac{1}{2}} - 94335^{\circ}_{5\frac{1}{2}}$					
3078.450	1	10	32474.45	+0.07	$45273^{\circ}_{3\frac{1}{2}} - 77747_{4\frac{1}{2}}$					
3078.31	1	10	32475.92	+0.07	$43075^{\circ}_{1\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
3077.82		2	32481.09	+0.09	$61822_{3\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
3077.34		7	32486.16							
3077.18		8	32487.85	+0.11	$31568^{\circ}_{2\frac{1}{2}} - 64055_{2\frac{1}{2}}$?					
3077.14		6	32488.27	+0.04	$64598_{3\frac{1}{2}} - 97086^{\circ}_{4\frac{1}{2}}$					
3076.50		1	32495.03	+0.09	$61051_{3\frac{1}{2}} - 93546^{\circ}_{2\frac{1}{2}}$					
3076.013	30	150	32500.17	−0.05	$26759^{\circ}_{2\frac{1}{2}} - 59259_{2\frac{1}{2}}$	6	1.572	1.104	1.170	1.338
3075.10		2	32509.82							
3074.92		2	32511.73							
3074.84		3	32512.57							
3074.50	1	10	32516.17	+0.01	$38342^{\circ}_{4\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
3073.89		3	32522.62							
3073.680	20	100	32524.84	+0.02	$33052^{\circ}_{4\frac{1}{2}} - 65577_{3\frac{1}{2}}$					
3073.19		3	32530.03	+0.08	$37077^{\circ}_{2\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
3072.486	6	60	32537.48	+0.06	$61822_{3\frac{1}{2}} - 94360^{\circ}_{4\frac{1}{2}}$					
3072.41		4	32538.29	+0.03	$63944_{5\frac{1}{2}} - 96482^{\circ}_{4\frac{1}{2}}$					
3071.583	5	50	32547.05	+0.04	$45335^{\circ}_{4\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
3071.26		1	32550.47							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3070.28	2	7	32560.86	+0.06	$43956^{\circ}_{2\frac{1}{2}} - 76517_{1\frac{1}{2}}$					
3069.34		2	32570.83	+0.05	$65950_{4\frac{1}{2}} - 98521^{\circ}_{4\frac{1}{2}}$					
3068.69	1	10	32577.73	+0.08	$47005^{\circ}_{1\frac{1}{2}} - 79583_{2\frac{1}{2}}$					
3068.284	7	60	32582.04	+0.01	$41688^{\circ}_{1\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
3067.986	2	10	32585.20	+0.07	$32981^{\circ}_{1\frac{1}{2}} - 65566_{0\frac{1}{2}}$					
3067.365	10	70	32591.80	+0.05	$41678^{\circ}_{2\frac{1}{2}} - 74270_{2\frac{1}{2}}$	6	(1.19)	0.93	0.65	?
3066.54		2	32600.57	+0.08	$47005^{\circ}_{1\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
3066.487	2	6	32601.13	+0.13	$30562^{\circ}_{5\frac{1}{2}} - 63163_{4\frac{1}{2}}$?					
3065.74		7	32609.07	+0.05	$45273^{\circ}_{3\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
3065.52		2	32611.41							
3065.48		1	32611.84							
3065.040	300	1000	32616.52	+0.01	$28757^{\circ}_{1\frac{1}{2}} - 61374_{2\frac{1}{2}}$	4	1.45	1.30	0.075	1.08
3064.868	30	150	32618.35	−0.03	$31979^{\circ}_{3\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
3064.75		2	32619.61	−0.01	$30392^{\circ}_{1\frac{1}{2}} - 63011_{1\frac{1}{2}}$					
3063.80		4	32629.72	+0.12	$34575^{\circ}_{1\frac{1}{2}} - 67204_{1\frac{1}{2}}$?					
3063.671	20	100	32631.10	+0.02	$34784^{\circ}_{5\frac{1}{2}} - 67416_{4\frac{1}{2}}$					
3063.350	2	10	32634.51	+0.04	$61374_{2\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$					
3063.125	40	200	32636.91	−0.03	$30224^{\circ}_{4\frac{1}{2}} - 62861_{5\frac{1}{2}}$	5	0.935	1.137	0.101	2.047
3062.524		4	32643.32							
3062.06		1	32648.26	+0.06	$49008^{\circ}_{3\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
3061.646		6	32652.68	+0.12	$61214_{4\frac{1}{2}} - 93867^{\circ}_{4\frac{1}{2}}$?					
3060.394		7	32666.03	+0.06	$44940^{\circ}_{1\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
3059.568		7	32674.85	+0.06	$66571_{5\frac{1}{2}} - 99246^{\circ}_{5\frac{1}{2}}$					
3059.362		4	32677.05							
3058.71		2	32684.02	+0.03	$49008^{\circ}_{3\frac{1}{2}} - 81692_{3\frac{1}{2}}$					
3058.66		5	32684.55							
3058.288		4	32688.53							
3058.20		1	32689.47							
3057.29		1	32699.20	+0.03	$47758^{\circ}_{3\frac{1}{2}} - 80457_{3\frac{1}{2}}$					
3056.01		2	32712.89	+0.07	$58823_{2\frac{1}{2}} - 91536^{\circ}_{3\frac{1}{2}}$					
3055.60		1	32717.28							
3055.46		2	32718.78							
3055.350	5	15	32719.96	+0.06	$43956^{\circ}_{2\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
3055.157	10	60	32722.03	−0.01	$32371^{\circ}_{2\frac{1}{2}} - 65093_{3\frac{1}{2}}$	4	1.168	0.978	0.095	0.503
3054.649	1	10	32727.47	0.00	$45737^{\circ}_{1\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
3053.928	2	20	32735.20	+0.04	$45335^{\circ}_{4\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
3053.452		8	32740.30							
3053.084	1	10	32744.24	+0.07 −0.01	$40035^{\circ}_{3\frac{1}{2}} - 72779_{3\frac{1}{2}}$ $65875_{6\frac{1}{2}} - 98620^{\circ}_{6\frac{1}{2}}$					
3052.20		2	32753.73							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3052.021	1	7	32755.65	+0.04	$63726_{4\frac{1}{2}} - 96482^{\circ}_{4\frac{1}{2}}$					
3051.98		2	32756.09	+0.01	$48556^{\circ}_{3\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
3051.11		2	32765.43							
3050.64		1	32770.48							
3050.50		6	32771.98							
3049.84		2	32779.07	+0.11	$58823_{2\frac{1}{2}} - 91602^{\circ}_{2\frac{1}{2}}$					
3049.14		7	32786.60	+0.09	$44497^{\circ}_{2\frac{1}{2}} - 77284_{1\frac{1}{2}}$					
3048.82		2	32790.04							
3048.41		6	32794.45	+0.15	$61214_{4\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$?					
3048.15		2	32797.24	+0.07	$45273^{\circ}_{3\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
3047.052	20	100	32809.06	+0.06	$33653^{\circ}_{0\frac{1}{2}} - 66462_{0\frac{1}{2}}$	6	1.315	1.107	0.104	1.211
3046.482	30	200	32815.20	−0.01	$34389^{\circ}_{2\frac{1}{2}} - 67204_{1\frac{1}{2}}$	4	(1.007)	1.03	w	0.97
3046.27		3	32817.48							
3045.91		2	32821.36	+0.01	$53404_{2\frac{1}{2}} - 86226^{\circ}_{1\frac{1}{2}}$					
3045.84		1	32822.12							
3045.46		4	32826.21							
3045.044	1	7	32830.70	+0.02	$43075^{\circ}_{1\frac{1}{2}} - 75905_{0\frac{1}{2}}$					
3044.83	10	60	32833.00	+0.01	$40917^{\circ}_{4\frac{1}{2}} - 73750_{4\frac{1}{2}}$	6	0.97	0.99	0.07?	0.98?
3044.004	20	100	32841.91	+0.03	$30392^{\circ}_{1\frac{1}{2}} - 63234_{2\frac{1}{2}}$	4	1.335	1.205	(0.065)	1.01
3043.93		4	32842.71	+0.05	$43956^{\circ}_{2\frac{1}{2}} - 76799_{1\frac{1}{2}}$					
3043.07		1	32851.99							
3042.78		3	32855.12							
3042.650	50	300	32856.53	0.00	$33494^{\circ}_{3\frac{1}{2}} - 66351_{2\frac{1}{2}}$	4	0.990	1.122	(0.066)	0.66
3042.34		2	32859.87	−0.01	$26759^{\circ}_{2\frac{1}{2}} - 59618_{3\frac{1}{2}}$					
3040.83		2	32876.19							
3040.504	5	30	32879.72	+0.04	$35059^{\circ}_{3\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
3040.444	2	15	32880.37	+0.03	$38342^{\circ}_{4\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
3040.235	5	15	32882.63	+0.04	$43956^{\circ}_{2\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
3039.665	40	300	32888.79	+0.03	$35831^{\circ}_{5\frac{1}{2}} - 68720_{6\frac{1}{2}}$	4	1.211	1.159	(0.026)	0.871
3039.276		6	32893.00	0.00 −0.03	$31568^{\circ}_{2\frac{1}{2}} - 64461_{1\frac{1}{2}}$ $62861_{5\frac{1}{2}} - 95754^{\circ}_{5\frac{1}{2}}$					
3038.81		2	32898.04	+0.06	$43007^{\circ}_{0\frac{1}{2}} - 75905_{0\frac{1}{2}}$					
3038.75	2	10	32898.69	+0.03	$33052^{\circ}_{4\frac{1}{2}} - 65950_{4\frac{1}{2}}$					
3038.531	5	30	32901.07	+0.03	$33494^{\circ}_{3\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
3037.992	15	90	32906.90	+0.03	$32981^{\circ}_{1\frac{1}{2}} - 65888_{1\frac{1}{2}}$	6	0.865	1.204	0.508	1.035
3036.820	10	60	32919.60	+0.05	$35019^{\circ}_{4\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
3036.13		1	32927.08							
3035.945	1	7	32929.09	0.00	$61374_{2\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
3034.99	1	5	32939.45	−0.01	$30224^{\circ}_{4\frac{1}{2}} - 63163_{4\frac{1}{2}}$					
3034.642	40	200	32943.23	+0.02	$31979^{\circ}_{3\frac{1}{2}} - 64923_{4\frac{1}{2}}$	4	1.336	1.113	0.111	0.330

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zeeman type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3034.52		2	32944.55	−0.07	$65577_{3\frac{1}{2}} - 98521^{\circ}_{4\frac{1}{2}}$					
3034.32		1	32946.72	+0.03	$44940^{\circ}_{1\frac{1}{2}} - 77887_{0\frac{1}{2}}$					
3033.860	30	100	32951.72	+0.09 −0.09	$26759^{\circ}_{2\frac{1}{2}} - 59710_{1\frac{1}{2}}$ $44497^{\circ}_{2\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
3033.664	2	10	32953.85	0.00	$63944_{5\frac{1}{2}} - 96898^{\circ}_{5\frac{1}{2}}$					
3033.40		2	32956.72							
3033.28		1	32958.02	+0.12	$61051_{3\frac{1}{2}} - 94008^{\circ}_{3\frac{1}{2}}$					
3033.14		1	32959.54	0.00	$60586_{1\frac{1}{2}} - 93546^{\circ}_{2\frac{1}{2}}$					
3031.110	5000*A*	3000	32981.61	+0.02	$0_{0\frac{1}{2}} - 32981^{\circ}_{1\frac{1}{2}}$	4	1.996	0.864	0.566	0.298
3028.38	2	20	33011.34	+0.05	$44438^{\circ}_{3\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
3026.669	100	700	33030.00	+0.04	$33052^{\circ}_{4\frac{1}{2}} - 66082_{5\frac{1}{2}}$	4	1.266	1.140	(0.063)	0.570
3025.76		2	33039.93	+0.05	$48272^{\circ}_{2\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
3025.38		6	33044.08	+0.08	$59259_{2\frac{1}{2}} - 92303^{\circ}_{3\frac{1}{2}}$					
3024.935	2	15	33048.94	+0.04	$40917^{\circ}_{4\frac{1}{2}} - 73966_{3\frac{1}{2}}$					
3023.614	5	30	33063.38	+0.06	$33494^{\circ}_{3\frac{1}{2}} - 66558_{3\frac{1}{2}}$	6	0.99	1.09	0.35	1.04
3022.58		1	33074.69							
3022.454	10	60	33076.07	+0.07	$35059^{\circ}_{3\frac{1}{2}} - 68135_{2\frac{1}{2}}$	7	1.11	(1.087)	*w*	1.17
3021.27		1	33089.03	+0.11	$61214_{4\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
3020.99		4	33092.09							
3020.703	20	100	33095.24	+0.08	$43075^{\circ}_{1\frac{1}{2}} - 76170_{2\frac{1}{2}}$	5				
3020.345	2	10	33099.16	+0.06	$63944_{5\frac{1}{2}} - 97043^{\circ}_{6\frac{1}{2}}$					
3020.211		5	33100.63	+0.07	$48556^{\circ}_{3\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
3019.440	2	15	33109.08	+0.01	$44497^{\circ}_{2\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
3019.17		2	33112.04	+0.07	$35831^{\circ}_{5\frac{1}{2}} - 68943_{4\frac{1}{2}}$					
3019.058	8	40	33113.27	+0.03	$31979^{\circ}_{3\frac{1}{2}} - 65093_{3\frac{1}{2}}$					
3017.560	100	800	33129.71	−0.04	$35019^{\circ}_{4\frac{1}{2}} - 68148_{5\frac{1}{2}}$	5	(1.158)	1.20	*w*	1.40
3016.95		6	33136.41	+0.06	$48556^{\circ}_{3\frac{1}{2}} - 81692_{3\frac{1}{2}}$					
3016.40		1	33142.45							
3014.97		2	33158.17							
3014.526	10	60	33163.05			7			0	1.12
3014.427	40	200	33164.14	+0.10 +0.02	$30562^{\circ}_{5\frac{1}{2}} - 63726_{4\frac{1}{2}}$ $(66082_{5\frac{1}{2}} - 99246^{\circ}_{5\frac{1}{2}})$	5	1.11	1.01	(0.05)	1.56
3014.02		8	33168.62	+0.07	$44438^{\circ}_{3\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
3013.08		2	33178.96							
3012.80		3	33182.05							
3012.28		1	33187.77							
3011.842		4	33192.60							
3011.00		1	33201.88	+0.12	$24332_{2\frac{1}{2}} - 57534^{\circ}_{3\frac{1}{2}}$					
3010.625	50	300	33206.02	+0.01	$32371^{\circ}_{2\frac{1}{2}} - 65577_{3\frac{1}{2}}$	4	1.17	1.05	0.06	0.75
3009.392	100	500	33219.62	−0.02	$31979^{\circ}_{3\frac{1}{2}} - 65199_{4\frac{1}{2}}$	4	1.328	1.076	0.126	0.195

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
3007.923	5	30	33235.85							
3007.56		3	33239.86	+0.01	$48272^{\circ}_{2\frac{1}{2}} - 81512_{1\frac{1}{2}}$					
3006.863	10	70	33247.56	+0.03	$40035^{\circ}_{3\frac{1}{2}} - 73283_{4\frac{1}{2}}$	5	0.720	1.020	0.150	2.070
3006.30		3	33253.79							
3006.14	5	40	33255.56	+0.06	$30392^{\circ}_{1\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
3005.766	800*r*	3000	33259.70	−0.01	$31631^{\circ}_{6\frac{1}{2}} - 64891_{7\frac{1}{2}}$	4	(1.230)	1.20	*w*	1.02
3004.642	1	15	33272.14							
3004.46	3	10*h*	33274.15	−0.01	$46354^{\circ}_{4\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
3004.097	1	5	33278.17	+0.06	$60586_{1\frac{1}{2}} - 93864^{\circ}_{2\frac{1}{2}}$					
3003.60		2	33283.68							
3002.608	30	200	33294.68	0.00	$41678^{\circ}_{2\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
3002.47		2	33296.21							
3002.035	5	30	33301.03	−0.01	$41688^{\circ}_{1\frac{1}{2}} - 74989_{0\frac{1}{2}}$	5	0.80	0.52	0.14	0.94
3001.864	2	10	33302.93	+0.02	$41688^{\circ}_{1\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
3001.283	4	40	33309.37	0.00	$44438^{\circ}_{3\frac{1}{2}} - 77747_{4\frac{1}{2}}$	4	(1.10)	1.10	*w*	1.09
3000.987	2	15	33312.66	+0.03	$41678^{\circ}_{2\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
3000.465	100	300	33318.45	−0.02	$42915^{\circ}_{5\frac{1}{2}} - 76233_{6\frac{1}{2}}$	4	(1.115)	1.10	*w*	1.05
3000.13		2	33322.17	−0.02	$65199_{4\frac{1}{2}} - 98521^{\circ}_{4\frac{1}{2}}$					
2999.642	5	10	33327.59	−0.02	$43956^{\circ}_{2\frac{1}{2}} - 77284_{1\frac{1}{2}}$					
2998.377	4	30	33341.66	+0.07	$37516^{\circ}_{3\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
2996.75		2	33359.76	+0.08	$63726_{4\frac{1}{2}} - 97086^{\circ}_{4\frac{1}{2}}$					
2996.373		5	33363.95	+0.02	$34784^{\circ}_{5\frac{1}{2}} - 68148_{5\frac{1}{2}}$					
2995.862	20	100	33369.64	+0.02 −0.02	$32981^{\circ}_{1\frac{1}{2}} - 66351_{2\frac{1}{2}}$ $(41688^{\circ}_{1\frac{1}{2}} - 75058_{2\frac{1}{2}})$	5	0.880	1.128	0.124	1.500
2995.03	6	30	33378.91	−0.05	$28757^{\circ}_{1\frac{1}{2}} - 62136_{0\frac{1}{2}}$					
2994.94	2	20	33379.92	+0.06	$34575^{\circ}_{1\frac{1}{2}} - 67955_{0\frac{1}{2}}$					
2994.805	150	600	33381.42	+0.03	$30562^{\circ}_{5\frac{1}{2}} - 63944_{5\frac{1}{2}}$	6	1.101	1.119	0.10	1.110
2994.53	2	20	33384.49	−0.04	$44497^{\circ}_{2\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
2994.48	1	10	33385.04	0.00	$45429^{\circ}_{3\frac{1}{2}} - 78814_{2\frac{1}{2}}$					
2993.939	10	70	33391.08	−0.03	$35059^{\circ}_{3\frac{1}{2}} - 68450_{3\frac{1}{2}}$	6	1.12	1.08	0.14	1.10
2992.28		5	33409.59							
2991.872	40	200	33414.14	+0.01	$32981^{\circ}_{1\frac{1}{2}} - 66395_{2\frac{1}{2}}$	5	0.867	1.248	0.189	1.813
2991.70	5	9	33416.07	−0.05	$28757^{\circ}_{1\frac{1}{2}} - 62174_{1\frac{1}{2}}$					
2991.33		1	33420.20	+0.05	$48272^{\circ}_{2\frac{1}{2}} - 81692_{3\frac{1}{2}}$					
2991.240	1	6	33421.20							
2990.366	30	200	33430.97	−0.01	$35019^{\circ}_{4\frac{1}{2}} - 68450_{3\frac{1}{2}}$	5	(1.158)	1.09	*w*	1.38
2989.768	2	15	33437.66	−0.02	$37516^{\circ}_{3\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
2989.376	6	10	33442.04	−0.08	$43075^{\circ}_{1\frac{1}{2}} - 76517_{1\frac{1}{2}}$					
2989.20	2	20	33444.01	0.00	$44438^{\circ}_{3\frac{1}{2}} - 77882_{3\frac{1}{2}}$	6	1.09	1.12	0.12	1.106
2988.95		5*h*	33446.81	+0.08	$47758^{\circ}_{3\frac{1}{2}} - 81205_{4\frac{1}{2}}$					
2988.56		1	33451.17							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2988.30		2	33454.08	+0.09	$66571_{5\frac{1}{2}} - 100025^{\circ}_{5\frac{1}{2}}$					
2987.862	1	10	33458.99	+0.06	$46169^{\circ}_{4\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
2987.25	1	6	33465.84	+0.02	$24332_{2\frac{1}{2}} - 57798^{\circ}_{2\frac{1}{2}}$					
2986.64		2	33472.68	+0.06	$57765_{4\frac{1}{2}} - 91237^{\circ}_{3\frac{1}{2}}$					
2986.47		1	33474.58							
2985.876	10	70	33481.24	−0.03	$32981^{\circ}_{1\frac{1}{2}} - 66462_{0\frac{1}{2}}$	4	0.864	1.100	0.118	0.746
2985.078	50	300	33490.19	−0.04	$35059^{\circ}_{3\frac{1}{2}} - 68549_{4\frac{1}{2}}$	5	(1.124)	1.15	w	1.24
2984.84	7	60	33492.86	−0.05	$43956^{\circ}_{2\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
2984.44		1	33497.35							
2983.990	200r	1000	33502.40	−0.10	$30224^{\circ}_{4\frac{1}{2}} - 63726_{4\frac{1}{2}}$	6	0.94	1.00	0.26	0.97
2983.702	15	100	33505.64	−0.07	$33052^{\circ}_{4\frac{1}{2}} - 66558_{3\frac{1}{2}}$					
2983.369	4	8	33509.37	−0.05	$43007^{\circ}_{0\frac{1}{2}} - 76517_{1\frac{1}{2}}$					
2982.659	10	70	33517.35	−0.01	$32371^{\circ}_{2\frac{1}{2}} - 65888_{1\frac{1}{2}}$	4	(1.170)	1.20	w	1.13
2982.494	20	150	33519.21	−0.08	$33052^{\circ}_{4\frac{1}{2}} - 66571_{5\frac{1}{2}}$	4	(1.264)	1.20	w	0.90
2982.055	2	8	33524.14	−0.01	$44940^{\circ}_{1\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
2982.01		5	33524.65	+0.01	$27061^{\circ}_{0\frac{1}{2}} - 60586_{1\frac{1}{2}}$					
2981.519	3	20	33530.17	+0.07	$35019^{\circ}_{4\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
2980.482		5	33541.83	−0.01 +0.08	$45273^{\circ}_{3\frac{1}{2}} - 78814_{2\frac{1}{2}}$ $47663^{\circ}_{4\frac{1}{2}} - 81205_{4\frac{1}{2}}$					
2979.859	10	60	33548.84	−0.08	$34389^{\circ}_{2\frac{1}{2}} - 67938_{3\frac{1}{2}}$	4	(1.007)	0.98	w	0.90
2979.658	3	20	33551.11	0.00	$33653^{\circ}_{0\frac{1}{2}} - 67204_{1\frac{1}{2}}$	4	1.32	1.04	0.14	0.90
2979.44		1	33553.56							
2978.906	6	40	33559.58	−0.05	$34575^{\circ}_{1\frac{1}{2}} - 68135_{2\frac{1}{2}}$	4	1.435	1.085	0.175	0.560
2977.76		1	33572.49							
2977.695		4	33573.22							
2977.525	10	60	33575.14	−0.06	$34575^{\circ}_{1\frac{1}{2}} - 68150_{1\frac{1}{2}}$	6	1.435	0.925	0.776	1.180
2977.270	1	9	33578.02							
2976.53		1	33586.36							
2975.567	3	20	33597.23	+0.02	$31979^{\circ}_{3\frac{1}{2}} - 65577_{3\frac{1}{2}}$					
2975.238		6	33600.95	−0.03	$42915^{\circ}_{5\frac{1}{2}} - 76516_{4\frac{1}{2}}$					
2973.36		1	33622.17							
2972.94		6	33626.92							
2972.47	3	30	33632.24	+0.08	$44438^{\circ}_{3\frac{1}{2}} - 78070_{4\frac{1}{2}}$	7	(1.10)	1.11	0	1.13
2970.84	20	200	33650.69	+0.02	$40917^{\circ}_{4\frac{1}{2}} - 74568_{4\frac{1}{2}}$	6	0.97	1.03	0.27	1.00
2970.564	4000A	3000	33653.82	−0.04	$0_{0\frac{1}{2}} - 33653^{\circ}_{0\frac{1}{2}}$	6	2.001	1.324	0.338	1.663
2969.70	1	7	33663.61	+0.02	$30392^{\circ}_{1\frac{1}{2}} - 64055_{2\frac{1}{2}}$					
2967.72		4	33686.06	+0.09	$58961_{5\frac{1}{2}} - 92647^{\circ}_{5\frac{1}{2}}$					
2966.763	20	100	33696.93	−0.11 −0.08	$35059^{\circ}_{3\frac{1}{2}} - 68756_{3\frac{1}{2}}$ $45429^{\circ}_{3\frac{1}{2}} - 79126_{4\frac{1}{2}}$	7			0	1.144
2965.168	8	60	33715.06	−0.02	$40035^{\circ}_{3\frac{1}{2}} - 73750_{4\frac{1}{2}}$	5				
2964.82		4	33719.01							

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TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2964.755	100r	500	33719.75	−0.10	$30224^{\circ}_{4\frac{1}{2}} - 63944_{5\frac{1}{2}}$	5	0.944	1.110	0.083	1.852
2964.39	15	100	33723.90	−0.08	$43075^{\circ}_{1\frac{1}{2}} - 76799_{1\frac{1}{2}}$	6	0.97	0.85	0.17	0.91
2963.96		4	33728.80	+0.08	$64891_{7\frac{1}{2}} - 98620^{\circ}_{6\frac{1}{2}}$					
2963.46	40	300	33734.49			6			0.16	1.08
2963.255	10	70	33736.82	−0.09	$35019^{\circ}_{4\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
2963.17	8	50	33737.79	−0.03	$39378^{\circ}_{0\frac{1}{2}} - 73116_{1\frac{1}{2}}$					
2962.522	40	250	33745.17	−0.07	$34389^{\circ}_{2\frac{1}{2}} - 68135_{2\frac{1}{2}}$	6	1.00	1.08	0.19	1.04
2961.801	4	30	33753.38	−0.04	$37516^{\circ}_{3\frac{1}{2}} - 71270_{2\frac{1}{2}}$					
2961.150	1	6	33760.80	−0.01	$34389^{\circ}_{2\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
2960.850	10	60	33764.22	−0.06	$34784^{\circ}_{5\frac{1}{2}} - 68549_{4\frac{1}{2}}$	4	1.13	(1.157)	w	1.01
2958.425		3	33791.90	+0.10	$45335^{\circ}_{4\frac{1}{2}} - 79126_{4\frac{1}{2}}$					
2957.632	40	150	33800.96	−0.08	$28757^{\circ}_{1\frac{1}{2}} - 62559_{2\frac{1}{2}}$					
2957.05		3	33807.61							
2955.61		2	33824.08	+0.06	$59090_{3\frac{1}{2}} - 92914^{\circ}_{4\frac{1}{2}}$					
2955.318	40	200	33827.42	−0.02	$26759^{\circ}_{2\frac{1}{2}} - 60586_{1\frac{1}{2}}$	5	1.576	1.334	0.121	1.940
2955.09	1	4	33830.03	−0.03	$24332_{2\frac{1}{2}} - 58162^{\circ}_{1\frac{1}{2}}$					
2954.45		1	33837.36	+0.05	$65577_{3\frac{1}{2}} - 99414^{\circ}_{4\frac{1}{2}}$					
2953.016	5	40	33853.79	−0.02	$45273^{\circ}_{3\frac{1}{2}} - 79126_{4\frac{1}{2}}$	4	(1.18)	1.15	w	1.03
2952.475		4	33859.99	−0.02	$38342^{\circ}_{4\frac{1}{2}} - 72202_{3\frac{1}{2}}$					
2952.253	1	10	33862.54	+0.05	$41688^{\circ}_{1\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
2951.716	1	8	33868.70	+0.04 −0.04	$45737^{\circ}_{1\frac{1}{2}} - 79605_{1\frac{1}{2}}$ $61822_{3\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					
2951.406	5	40	33872.26	+0.05	$41678^{\circ}_{2\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
2951.022	8	50	33876.67	−0.01	$37077^{\circ}_{2\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
2950.80	2	8	33879.21	−0.03	$22960_{1\frac{1}{2}} - 56840^{\circ}_{1\frac{1}{2}}$					
2950.64		1	33881.05							
2950.52	2	20	33882.43							
2950.326	20	150	33884.66	+0.01	$35059^{a}_{3\frac{1}{2}} - 68943_{4\frac{1}{2}}$	4	1.143	0.889	0.127	0
2949.840		5	33890.24							
2948.65		2	33903.92							
2947.76		3	33914.15							
2947.131	4	30	33921.39	+0.04	$33494^{\circ}_{3\frac{1}{2}} - 67416_{4\frac{1}{2}}$					
2946.95		5	33923.47	+0.02	$64598_{3\frac{1}{2}} - 98521^{\circ}_{4\frac{1}{2}}$					
2946.852	2	20	33924.60	+0.08	$35019^{\circ}_{4\frac{1}{2}} - 68943_{4\frac{1}{2}}$					
2946.765	10	70	33925.60	−0.03	$43956^{\circ}_{2\frac{1}{2}} - 77882_{3\frac{1}{2}}$	5	(0.99)	1.15	w	1.55
2946.305	30	200	33930.90	−0.09	$40035^{\circ}_{3\frac{1}{2}} - 73966_{3\frac{1}{2}}$	6	0.71	0.76	0.17	0.733
2945.907	100r	600	33935.48	−0.01	$34784^{\circ}_{5\frac{1}{2}} - 68720_{6\frac{1}{2}}$	5	(1.119)	1.14	w	1.28
2945.22		3	33943.40	+0.08	$66082_{5\frac{1}{2}} - 100025^{\circ}_{5\frac{1}{2}}$					
2944.465	5	30	33952.10	−0.01	$37516^{\circ}_{3\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
2944.19		2	33955.27							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2943.20		2	33966.69							
2943.15		1	33967.27	+0.02	$44497^{\circ}_{2\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
2942.823	10	50	33971.04	−0.01	$31979^{\circ}_{3\frac{1}{2}} - 65950_{4\frac{1}{2}}$	4	1.33	1.08	0.12	0.20
2942.60		2	33973.62							
2942.038	15	80	33980.11	0.00	$32371^{\circ}_{2\frac{1}{2}} - 66351_{2\frac{1}{2}}$	6	1.169	1.125	0.11	1.145
2941.77	1	4	33983.20	−0.01	$47329^{\circ}_{2\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
2941.11		1	33990.83							
2940.517	25	150	33997.68			5			w	1.44
2940.25		2	34000.77							
2939.534	20	100	34009.05	+0.02	$31568^{\circ}_{2\frac{1}{2}} - 65577_{3\frac{1}{2}}$	5	0.863	1.049	0.093	1.514
2938.85	1	4	34016.97	+0.06	$22960_{1\frac{1}{2}} - 56977^{\circ}_{0\frac{1}{2}}$					
2938.51	3	20	34020.90	+0.02	$35059^{\circ}_{3\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
2938.188	7	50	34024.63	+0.01	$32371^{\circ}_{2\frac{1}{2}} - 66395_{2\frac{1}{2}}$	6	1.165	1.235	0.176	1.200
2937.186	15	100	34036.24	−0.01	$37077^{\circ}_{2\frac{1}{2}} - 71113_{1\frac{1}{2}}$	5	1.097	0.965	0.066	1.300
2935.52		4	34055.56	+0.06	$40917^{\circ}_{4\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
2935.245	1	7	34058.74	+0.07	$27061^{\circ}_{0\frac{1}{2}} - 61120_{0\frac{1}{2}}$					
2935.108	30	200	34060.33	−0.02	$34389^{\circ}_{2\frac{1}{2}} - 68450_{3\frac{1}{2}}$	5	(1.007)	1.07	w	1.23
2932.90		1	34085.98							
2932.21		1	34094.00							
2932.08		2	34095.51	−0.01	$58823_{2\frac{1}{2}} - 92919^{\circ}_{3\frac{1}{2}}$					
2931.27		1	34104.93	+0.03	$59090_{3\frac{1}{2}} - 93195^{\circ}_{3\frac{1}{2}}$					
2929.70		5	34123.20							
2929.48		3	34125.77	−0.04	$35831^{\circ}_{5\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
2929.44		1	34126.23	+0.02	$48272^{\circ}_{2\frac{1}{2}} - 82398_{1\frac{1}{2}}$					
2927.850	10	70	34144.76	−0.01	$37077^{\circ}_{2\frac{1}{2}} - 71222_{3\frac{1}{2}}$	5	(1.113)	1.14	w	1.206
2927.42		1	34149.78	−0.02	$65875_{6\frac{1}{2}} - 100025^{\circ}_{5\frac{1}{2}}$					
2927.116	1	10	34153.33	+0.04	$45429^{\circ}_{3\frac{1}{2}} - 79583_{2\frac{1}{2}}$					
2926.65	2	15	34158.76	+0.06	$34784^{\circ}_{5\frac{1}{2}} - 68943_{4\frac{1}{2}}$					
2926.28		1	34163.08							
2924.65	2	9	34182.12	+0.11	$62861_{5\frac{1}{2}} - 97043^{\circ}_{6\frac{1}{2}}$					
2924.560		4	34183.17	−0.01	$47329^{\circ}_{2\frac{1}{2}} - 81512_{1\frac{1}{2}}$					
2924.235	20	100	34186.97	+0.07	$32371^{\circ}_{2\frac{1}{2}} - 66558_{3\frac{1}{2}}$	4	(1.17)	1.11	w	0.96
2922.35	2	7	34209.02	+0.09	$43075^{\circ}_{1\frac{1}{2}} - 77284_{1\frac{1}{2}}$					
2921.85		1	34214.88	0.00	$65199_{4\frac{1}{2}} - 99414^{\circ}_{4\frac{1}{2}}$					
2921.64		2	34217.34	+0.02	$41688^{\circ}_{1\frac{1}{2}} - 75905_{0\frac{1}{2}}$					
2921.119	40	200	34223.44	+0.06	$32981^{\circ}_{1\frac{1}{2}} - 67204_{1\frac{1}{2}}$	6	0.861	1.033	0.258	0.946
2920.16	1	10	34234.68	+0.02	$40035^{\circ}_{3\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
2919.346	400r	1000	34244.22	+0.04	$31631^{\circ}_{6\frac{1}{2}} - 65875_{6\frac{1}{2}}$	6	1.227	1.201	0.165	1.214
2918.89		2	34249.57							
2918.53		1	34253.80	−0.07	$28757^{\circ}_{1\frac{1}{2}} - 63011_{1\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2916.83	2	10	34273.76	+0.04	$38342^{\circ}_{4\frac{1}{2}} - 72615_{5\frac{1}{2}}$					
2916.61	7	30	34276.35	+0.12	$43007^{\circ}_{0\frac{1}{2}} - 77284_{1\frac{1}{2}}$					
2916.431	10	70	34278.45	+0.05	$39378^{\circ}_{0\frac{1}{2}} - 73657_{1\frac{1}{2}}$	4	1.86	1.05	0.40	0.64
2915.99		4	34283.63	−0.03	$47228^{\circ}_{0\frac{1}{2}} - 81512_{1\frac{1}{2}}$					
2915.275	100*r*	300	34292.04	0.00	$26759^{\circ}_{2\frac{1}{2}} - 61051_{3\frac{1}{2}}$	4	1.56	1.18	0.19	0.22
2915.14		4	34293.63	−0.05	$45335^{\circ}_{4\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
2914.84	1	8	34297.16							
2914.48	7	40	34301.39	+0.02	$33653^{\circ}_{0\frac{1}{2}} - 67955_{0\frac{1}{2}}$	6	1.310	0.900	0.205	1.105
2914.210	100*r*	600	34304.57	+0.01	$35831^{\circ}_{5\frac{1}{2}} - 70136_{6\frac{1}{2}}$	4	1.22	1.15	(0.034)	0.78
2913.75		3	34309.99	−0.10	$45273^{\circ}_{3\frac{1}{2}} - 79583_{2\frac{1}{2}}$					
2913.12	1	10	34317.41	+0.06	$44497^{\circ}_{2\frac{1}{2}} - 78814_{2\frac{1}{2}}$					
2912.865	10	50	34320.41	+0.03	$31568^{\circ}_{2\frac{1}{2}} - 65888_{1\frac{1}{2}}$	4	0.86	1.20	0.17	0.36
2912.51		5	34324.59	−0.04	$46354^{\circ}_{4\frac{1}{2}} - 80679_{5\frac{1}{2}}$					
2912.25		2	34327.66	−0.03	$47329^{\circ}_{2\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
2911.61		3	34335.20	−0.03	$48556^{\circ}_{3\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
2911.523	40	200	34336.23	+0.03	$35059^{\circ}_{3\frac{1}{2}} - 69395_{3\frac{1}{2}}$	6	1.12	0.94	0.63	1.05
2910.43		2	34349.12							
2909.88		4	34355.62	−0.07	$45273^{\circ}_{3\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
2909.48	30	150	34360.34	+0.02	$30562^{\circ}_{5\frac{1}{2}} - 64923_{4\frac{1}{2}}$	5	(1.112)	1.10	0	1.153
2909.19	20	100	34363.76	+0.02	$33052^{\circ}_{4\frac{1}{2}} - 67416_{4\frac{1}{2}}$	7	1.26	1.26	0	1.266
2908.55	1	9	34371.33	+0.02	$31979^{\circ}_{3\frac{1}{2}} - 66351_{2\frac{1}{2}}$					
2908.33	10	50	34373.93	−0.02	$30224^{\circ}_{4\frac{1}{2}} - 64598_{3\frac{1}{2}}$	4	0.93	1.23	0.150	−0.12
2908.15		4	34376.05	−0.02	$35019^{\circ}_{4\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
2908.09	5	40	34376.76	−0.07	$44438^{\circ}_{3\frac{1}{2}} - 78814_{2\frac{1}{2}}$					
2906.88	7	60	34391.07	−0.04	$37077^{\circ}_{2\frac{1}{2}} - 71468_{2\frac{1}{2}}$	6	1.110	1.018	0.23	1.064
2905.61		3	34406.10							
2904.97		3	34413.68	−0.08	$59090_{3\frac{1}{2}} - 93503^{\circ}_{4\frac{1}{2}}$					
2904.79	1	7	34415.81	−0.01	$31979^{\circ}_{3\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
2904.20		1	34422.81							
2902.924	8	80	34437.94	−0.03	$38342^{\circ}_{4\frac{1}{2}} - 72779_{3\frac{1}{2}}$	5	(1.093)	1.064	*w*	1.065
2902.41	6	40	34444.03	+0.03	$33494^{\circ}_{3\frac{1}{2}} - 67938_{3\frac{1}{2}}$	6	0.99	0.97	0.06	0.98
2901.86		1	34450.56	−0.10	$31631^{\circ}_{6\frac{1}{2}} - 66082_{5\frac{1}{2}}$					
2901.60		1	34453.65							
2900.39		2	34468.02							
2899.705	40	200	34476.16	+0.03	$28757^{\circ}_{1\frac{1}{2}} - 63234_{2\frac{1}{2}}$	4	1.44	1.21	0.115	0.86
2899.236	5	40	34481.74	−0.06	$41688^{\circ}_{1\frac{1}{2}} - 76170_{2\frac{1}{2}}$	5	0.77	1.12	0.175*us*	1.646*us*
2897.98		2	34496.68	−0.03	$33653^{\circ}_{0\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
2897.32		4	34504.54	+0.03	$34575^{\circ}_{1\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
2896.902	10	100	34509.52	+0.12	$46169^{\circ}_{4\frac{1}{2}} - 80679_{5\frac{1}{2}}$	4	1.06	1.00	(0.03?)	0.73
2895.06	2	15	34531.48	−0.01	$43075^{\circ}_{1\frac{1}{2}} - 77606_{2\frac{1}{2}}$					

TABLE 6. Yb II — *Observed and classified lines* — Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2894.95	3	30	34532.79	+0.03	$40035^{\circ}_{3\frac{1}{2}} - 74568_{4\frac{1}{2}}$	5				
2893.620	10	100	34548.66	+0.12	$35059^{\circ}_{3\frac{1}{2}} - 69607_{2\frac{1}{2}}$	4	1.12	1.21	(0.044)	0.90
2891.384	5000*A*	2000	34575.38	+0.01	$0_{0\frac{1}{2}} - 34575^{\circ}_{1\frac{1}{2}}$	4	1.999	1.430	0.285	1.145
2891.16	4	40	34578.06	−0.04	$31979^{\circ}_{3\frac{1}{2}} - 66558_{3\frac{1}{2}}$					
2890.28	1	8	34588.58							
2888.04	100*r*	300	34615.41	−0.06	$26759^{\circ}_{2\frac{1}{2}} - 61374_{2\frac{1}{2}}$	6	1.567	1.292	0.692	1.430
2887.74	2	7	34619.00	−0.03	$48272^{\circ}_{2\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
2886.263	30	200	34636.72	−0.03	$30562_{3\frac{1}{2}} - 65199_{4\frac{1}{2}}$	5	1.10	1.06	(0.02)	1.28
2885.97	10	70	34640.24	−0.08 −0.02	$33494^{\circ}_{3\frac{1}{2}} - 68135_{2\frac{1}{2}}$ $(61051_{3\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}})$	4	1.00	1.09	(0.044)	0.78
2885.594		7	34644.75	−0.01	$41678^{\circ}_{2\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
2885.02	1	8	34651.64	−0.03	$47005^{\circ}_{1\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
2884.51		2	34657.77							
2883.87	1	10	34665.46	+0.12	$44940^{\circ}_{1\frac{1}{2}} - 79605_{1\frac{1}{2}}$	6	1.236	1.152	0.125	1.194
2883.01		6	34675.80	−0.04	$63944_{5\frac{1}{2}} - 98620^{\circ}_{6\frac{1}{2}}$					
2882.155	7	50	34686.09	+0.01	$37077^{\circ}_{2\frac{1}{2}} - 71763_{1\frac{1}{2}}$	7	1.12	1.12	0	1.122
2882.01		1	34687.83							
2881.93	7	60	34688.79			5			*w*	1.24
2881.10		6	34698.79	+0.01	$30224^{\circ}_{4\frac{1}{2}} - 64923_{4\frac{1}{2}}$					
2879.83		1	34714.09							
2879.159	10	70	34722.18	+0.03	$40917^{\circ}_{4\frac{1}{2}} - 75640_{3\frac{1}{2}}$	5	0.976	0.820	0.078	1.522
2876.45		1	34754.88							
2874.83		1	34774.46	+0.02	$59090_{3\frac{1}{2}} - 93864^{\circ}_{2\frac{1}{2}}$					
2874.11		6	34783.17	+0.04	$31568^{\circ}_{2\frac{1}{2}} - 66351_{2\frac{1}{2}}$					
2873.14		3	34794.91	+0.01	$63726_{4\frac{1}{2}} - 98521^{\circ}_{4\frac{1}{2}}$					
2872.82		1	34798.79							
2872.11	2	10	34807.39	+0.08	$48556^{\circ}_{3\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
2871.712	2	10	34812.22	+0.01	$43075^{\circ}_{1\frac{1}{2}} - 77887_{0\frac{1}{2}}$					
2870.57		3	34826.06	+0.03	$65199_{4\frac{1}{2}} - 100025^{\circ}_{5\frac{1}{2}}$					
2870.51		3	34826.79							
2870.061	20	100	34832.24	−0.03	$42915^{\circ}_{5\frac{1}{2}} - 77747_{4\frac{1}{2}}$	5	1.10	1.07	(0.017)	1.25
2869.61		1	34837.71	0.00	$22960_{1\frac{1}{2}} - 57798^{\circ}_{2\frac{1}{2}}$					
2869.546	1	15	34838.49	+0.01	$41678^{\circ}_{2\frac{1}{2}} - 76517_{1\frac{1}{2}}$					
2868.536		5	34850.76	+0.04	$46354^{\circ}_{4\frac{1}{2}} - 81205_{4\frac{1}{2}}$					
2867.90		7	34858.49	+0.01 +0.04	$63944_{5\frac{1}{2}} - 98802^{\circ}_{5\frac{1}{2}}$ $43956^{\circ}_{2\frac{1}{2}} - 78814_{2\frac{1}{2}}$					
2867.58	5	15	34862.38	+0.02	$47228^{\circ}_{0\frac{1}{2}} - 82091_{0\frac{1}{2}}$					
2867.20	1	7	34867.00	−0.10	$48024^{\circ}_{1\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
2867.06	100*r*	500	34868.70	−0.11	$30224^{\circ}_{4\frac{1}{2}} - 65093_{3\frac{1}{2}}$	4	0.94	1.00	(0.03)	0.72
2866.179	4	30	34879.42	−0.09	$43007^{\circ}_{0\frac{1}{2}} - 77887_{0\frac{1}{2}}$	6	0.14	2.18	1.02	1.16

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2865.96	1	6	34882.08	+0.06	$57765_{4\frac{1}{2}} - 92647^{\circ}_{5\frac{1}{2}}$					
2865.74		1	34884.76							
2865.60	1	7	34886.46	+0.07	$33052^{\circ}_{4\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
2865.328	5	30	34889.77	+0.02	$28757^{\circ}_{1\frac{1}{2}} - 63647_{1\frac{1}{2}}$	6	1.454	1.146	0.44	1.300
2864.725	4	40	34897.12			4			w	0.94
2864.62	1	10	34898.40	−0.09	$35059^{\circ}_{3\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
2864.19		1	34903.64							
2863.13	5	30	34916.56	−0.13	$49301_{4\frac{1}{2}} - 84217^{\circ}_{4\frac{1}{2}}$					
2862.97	2	5	34918.51							
2862.85	1	8	34919.97							
2861.34	20	200	34938.40	+0.04	$35019^{\circ}_{4\frac{1}{2}} - 69957_{4\frac{1}{2}}$	6	1.15	1.11	0.18	1.12
2861.212	40	300	34939.96	−0.03	$31631^{\circ}_{6\frac{1}{2}} - 66571_{5\frac{1}{2}}$	5	1.22	1.18	(0.018)	1.41
2861.11	5	30	34941.21	−0.12	$38342^{\circ}_{4\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
2860.71	3	15	34946.10	+0.07	$49498_{2\frac{1}{2}} - 84444^{\circ}_{3\frac{1}{2}}$					
2860.393	20	100	34949.97	+0.04	$38342^{\circ}_{4\frac{1}{2}} - 73291_{5\frac{1}{2}}$	7	(1.093)	1.09	0	1.07
2859.94	4	20	34955.50	+0.07	$33494^{\circ}_{3\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
2859.805	1000R	1000	34957.15	−0.01	$21418^{\circ}_{3\frac{1}{2}} - 56375_{2\frac{1}{2}}$	4	(1.145)	1.24	?	0.91
2859.392	30	200	34962.20	−0.08	$35831^{\circ}_{5\frac{1}{2}} - 70793_{5\frac{1}{2}}$	6	1.21	1.19	w	1.20
2858.460	8	40	34973.60	−0.04	$32981^{\circ}_{1\frac{1}{2}} - 67955_{0\frac{1}{2}}$	4	0.87	0.89	(0.01)	0.880
2858.332	15	60	34975.17	−0.04	$30224^{\circ}_{4\frac{1}{2}} - 65199_{4\frac{1}{2}}$	6	0.971	1.118	(0.666)	1.044
2857.75		2	34982.29	+0.03	$53720_{4\frac{1}{2}} - 88702^{\circ}_{5\frac{1}{2}}$					
2857.29	4	20	34987.92	+0.06	$41688^{\circ}_{1\frac{1}{2}} - 76676_{2\frac{1}{2}}$	5	0.770	1.110	0.170	1.620
2857.13		3	34989.88	−0.04	$31568^{\circ}_{2\frac{1}{2}} - 66558_{3\frac{1}{2}}$					
2855.85	1	7	35005.56	+0.12	$34389^{\circ}_{2\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
2854.490	10	50	35022.24	−0.05	$40035^{\circ}_{3\frac{1}{2}} - 75058_{2\frac{1}{2}}$	4	(0.72)	0.76	w	0.63
2854.144	10	60	35026.48	−0.02	$35831^{\circ}_{5\frac{1}{2}} - 70858_{4\frac{1}{2}}$	4	1.21	1.27?	(0.03)	0.94
2854.04	4	40	35027.76	−0.13	$45429^{\circ}_{3\frac{1}{2}} - 80457_{3\frac{1}{2}}$					
2853.68	3	30	35032.18	+0.01	$34575^{\circ}_{1\frac{1}{2}} - 69607_{2\frac{1}{2}}$	4	1.44	1.21	0.12	0.86
2853.409	5	60	35035.51	+0.02	$46169^{\circ}_{4\frac{1}{2}} - 81205_{4\frac{1}{2}}$	6	1.123	1.087	0.16	1.10
2852.63		1	35045.07							
2851.92		4	35053.80	+0.04	$34389^{\circ}_{2\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
2851.86	10	70	35054.53	−0.02	$33494^{\circ}_{3\frac{1}{2}} - 68549_{4\frac{1}{2}}$	5	1.000	1.167	0.083	1.755
2851.126	500R	1000	35063.56	0.00	$26759^{\circ}_{2\frac{1}{2}} - 61822_{3\frac{1}{2}}$	4	1.560	1.310	0.125	0.686
2850.64		3	35069.54	0.00	$47329^{\circ}_{2\frac{1}{2}} - 82398_{1\frac{1}{2}}$					
2850.13		1	35075.81	−0.02	$63726_{4\frac{1}{2}} - 98802^{\circ}_{5\frac{1}{2}}$					
2849.90		3	35078.64							
2849.84		1	35079.38							
2849.336	6	40	35085.58	−0.02	$44497^{\circ}_{2\frac{1}{2}} - 79583_{2\frac{1}{2}}$	6	0.746	0.674	0.18	0.71
2848.88	1	7	35091.20	+0.09	$48272^{\circ}_{2\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
2848.445	20	100	35096.56	−0.03	$33052^{\circ}_{4\frac{1}{2}} - 68148_{5\frac{1}{2}}$	4	1.29	1.24	(0.027)	1.00

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2847.97		3	35102.41	−0.05	$64923_{4\frac{1}{2}} - \mathit{100025}^{\circ}_{5\frac{1}{2}}$					
2847.75		2	35105.12							
2847.64		2	35106.48	+0.09	$24332_{2\frac{1}{2}} - \mathit{59439}^{\circ}_{2\frac{1}{2}}$					
2847.28		4	35110.92							
2847.175	400r	1000	35112.21	−0.07	$\mathit{27061}^{\circ}_{0\frac{1}{2}} - 62174_{1\frac{1}{2}}$	5	(0.667)	0.79	w	0.85
2847.03		1	35114.00							
2846.324		5	35122.71	+0.03	$\mathit{45335}^{\circ}_{4\frac{1}{2}} - 80457_{3\frac{1}{2}}$					
2846.183	1	5	35124.45	+0.01	$\mathit{37077}^{\circ}_{2\frac{1}{2}} - 72202_{3\frac{1}{2}}$					
2845.355		4	35134.67	0.00	$49498_{2\frac{1}{2}} - \mathit{84632}^{\circ}_{2\frac{1}{2}}$					
2844.685	4	20	35142.95	+0.04	$49301_{4\frac{1}{2}} - \mathit{84444}^{\circ}_{3\frac{1}{2}}$					
2844.067	4	10	35150.58	+0.03	$\mathit{41688}^{\circ}_{1\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
2843.83	3	15	35153.51	+0.10	$\mathit{32981}^{\circ}_{1\frac{1}{2}} - 68135_{2\frac{1}{2}}$					
2843.702	1	7	35155.09	+0.03	$\mathit{42915}^{\circ}_{5\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
2842.586	6	30	35168.90	−0.08	$\mathit{32981}^{\circ}_{1\frac{1}{2}} - 68150_{1\frac{1}{2}}$	6	0.88	0.92	0.05	0.90
2842.51	2	8	35169.84	−0.04	$61873_{6\frac{1}{2}} - \mathit{97043}^{\circ}_{6\frac{1}{2}}$					
2842.291	1	7	35172.55	+0.01	$\mathit{34784}^{\circ}_{5\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
2842.140	3	15	35174.42	−0.07	$\mathit{30392}^{\circ}_{1\frac{1}{2}} - 65566_{0\frac{1}{2}}$	7	(1.333)	1.38	0	1.31
2841.308	2	20	35184.71	+0.02	$\mathit{45273}^{\circ}_{3\frac{1}{2}} - 80457_{3\frac{1}{2}}$	6	(1.18)	0.97	0.709	?
2841.26		1	35185.31	−0.07	$58823_{2\frac{1}{2}} - \mathit{94008}^{\circ}_{3\frac{1}{2}}$					
2841.02		2	35188.28							
2839.91		2	35202.03	+0.08	$22960_{1\frac{1}{2}} - \mathit{58162}^{\circ}_{1\frac{1}{2}}$					
2839.85		1	35202.78							
2839.17		1	35211.21	+0.03	$57765_{4\frac{1}{2}} - \mathit{92976}^{\circ}_{3\frac{1}{2}}$					
2838.64	3	15	35217.78	0.00	$\mathit{34389}^{\circ}_{2\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
2837.92		2	35226.72	+0.09	$56375_{2\frac{1}{2}} - \mathit{91602}^{\circ}_{2\frac{1}{2}}$					
2837.09		1	35237.02							
2835.95		1	35251.19							
2835.48		2	35257.03							
2835.13		1	35261.38	+0.02	$\mathit{33494}^{\circ}_{3\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
2834.972	10	70	35263.35	−0.05	$\mathit{37516}^{\circ}_{3\frac{1}{2}} - 72779_{3\frac{1}{2}}$	6	1.13	1.11	0.07	1.12
2834.63		4	35267.60							
2833.68		1	35279.42							
2832.201	4	20	35297.85	+0.01	$\mathit{28757}^{\circ}_{1\frac{1}{2}} - 64055_{2\frac{1}{2}}$	4	1.44	1.11	0.16	0.62
2830.989	30	200	35312.96	−0.02	$\mathit{30562}^{\circ}_{5\frac{1}{2}} - 65875_{6\frac{1}{2}}$	5	1.13	1.20	(0.035)	1.60
2830.88	4	30	35314.32			7			0	0.99
2830.639	1	8	35317.32	−0.12	$48900_{3\frac{1}{2}} - \mathit{84217}^{\circ}_{4\frac{1}{2}}$					
2828.49	1	10	35344.16	+0.01	$\mathit{45335}^{\circ}_{4\frac{1}{2}} - 80679_{5\frac{1}{2}}$					
2827.921	3	20	35351.26	−0.03	$\mathit{34784}^{\circ}_{5\frac{1}{2}} - 70136_{6\frac{1}{2}}$	7	(1.12)	1.14	w	1.23
2827.80	1	5	35352.78	0.00	$\mathit{30224}^{\circ}_{4\frac{1}{2}} - 65577_{3\frac{1}{2}}$					
2826.735		3	35366.10							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2826.522		2	35368.76							
2824.974	20	100	35388.14	−0.02	$30562^{\circ}_{5\frac{1}{2}} - 65950_{4\frac{1}{2}}$	5	(1.112)	1.10	w	1.19
2824.86	1	4	35389.57	−0.10	$43075^{\circ}_{1\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
2824.54	2	9	35393.58	+0.06	$47005^{\circ}_{1\frac{1}{2}} - 82398_{1\frac{1}{2}}$					
2824.20	2	10	35397.84	+0.02	$33052^{\circ}_{4\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
2823.585	7	50	35405.55	−0.03	$40917^{\circ}_{4\frac{1}{2}} - 76323_{3\frac{1}{2}}$	7	0.97	0.97	0	0.97
2823.320		4	35408.87	−0.01	$38342^{\circ}_{4\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
2821.52		3	35431.46	+0.08	$61051_{3\frac{1}{2}} - 96482^{\circ}_{4\frac{1}{2}}$					
2821.152	30r	200	35436.08	−0.05	$31979^{\circ}_{3\frac{1}{2}} - 67416_{4\frac{1}{2}}$	4	1.34	1.27	(0.037)	1.01
2820.12		3	35449.05	+0.08	$33494^{\circ}_{3\frac{1}{2}} - 68943_{4\frac{1}{2}}$					
2819.75		2	35453.70	+0.03	$34575^{\circ}_{1\frac{1}{2}} - 70029_{0\frac{1}{2}}$					
2819.49	2	10	35456.97	0.00	$43007^{\circ}_{0\frac{1}{2}} - 78464_{1\frac{1}{2}}$	?	0.09	1.15	0.53	1.68
2817.66		2	35480.00	0.00	$58823_{2\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
2816.368	2	8	35496.27	+0.04 0.00	$30392^{\circ}_{1\frac{1}{2}} - 65888_{1\frac{1}{2}}$ $46902^{\circ}_{0\frac{1}{2}} - 82398_{1\frac{1}{2}}$					
2816.317	4	20	35496.91	−0.03	$33052^{\circ}_{4\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
2815.20		1	35511.00							
2814.87	2	10	35515.16	+0.04	$40035^{\circ}_{3\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
2814.528	20	100	35519.48	+0.02 −0.06	$30562^{\circ}_{5\frac{1}{2}} - 66082_{5\frac{1}{2}}$ $(63726_{4\frac{1}{2}} - 99246^{\circ}_{5\frac{1}{2}})$	6	1.12	1.14	0.09	1.13
2814.241	2	10	35523.10	−0.04	$46169^{\circ}_{4\frac{1}{2}} - 81692_{3\frac{1}{2}}$					
2813.00		1	35538.77							
2812.612	2	6	35543.67	+0.01	$48900_{3\frac{1}{2}} - 84444^{\circ}_{3\frac{1}{2}}$					
2811.133	3	8	35562.37	+0.01	$47329^{\circ}_{2\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
2810.723	5	20	35567.56	−0.02	$32371^{\circ}_{2\frac{1}{2}} - 67938_{3\frac{1}{2}}$	4	1.164	0.966	0.099	0.471
2810.109	4	15	35575.33	−0.03	$45737^{\circ}_{1\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
2809.326	2	9	35585.24	+0.04	$33494^{\circ}_{3\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
2808.75		2	35592.54							
2808.305	4	20	35598.18	−0.02	$40917^{\circ}_{4\frac{1}{2}} - 76516_{4\frac{1}{2}}$	6	0.99	1.01	0.09	1.00
2807.83	2	10	35604.20	−0.04	$40035^{\circ}_{3\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
2807.744	2	6	35605.29	0.00 −0.05	$41678^{\circ}_{2\frac{1}{2}} - 77284_{1\frac{1}{2}}$ $47758^{\circ}_{3\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
2807.32	1	4	35610.67	+0.07	$39378^{\circ}_{0\frac{1}{2}} - 74989_{0\frac{1}{2}}$					
2807.180	2	8	35612.45	−0.02	$39378^{\circ}_{0\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
2806.43		1	35621.96							
2806.057	1	4	35626.70	0.00	$43956^{\circ}_{2\frac{1}{2}} - 79583_{2\frac{1}{2}}$					
2804.807	1	3	35642.58							
2804.260	5	30	35649.53	−0.01	$43956^{\circ}_{2\frac{1}{2}} - 79605_{1\frac{1}{2}}$	4	1.00	1.17	0.083	0.74
2801.598	1	5	35683.40	+0.03	$61214_{4\frac{1}{2}} - 96898^{\circ}_{5\frac{1}{2}}$					
2801.272		1	35687.55	−0.04	$63726_{4\frac{1}{2}} - 99414^{\circ}_{4\frac{1}{2}}$					
2800.109	2	10	35702.37	−0.03	$37077^{\circ}_{2\frac{1}{2}} - 72779_{3\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2800.060	6	30	35703.00	−0.10	$28757^{\circ}_{1\frac{1}{2}} - 64461_{1\frac{1}{2}}$					
2800.006	8	50	35703.69	−0.06	$33052^{\circ}_{4\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
2799.376	30	40	35711.72	−0.01	$22960_{1\frac{1}{2}} - 58672^{\circ}_{0\frac{1}{2}}$	5	0.807	0.541	0.133	0.940
2798.211	20	100	35726.59	−0.03	$30224^{\circ}_{4\frac{1}{2}} - 65950_{4\frac{1}{2}}$	6	0.931	1.091	0.720	1.10
2797.796	10	80	35731.89	0.00	$40917^{\circ}_{4\frac{1}{2}} - 76649_{5\frac{1}{2}}$ [d]	5			0.43w	1.58
2797.28		2	35738.48	−0.09	$57765_{4\frac{1}{2}} - 93503^{\circ}_{4\frac{1}{2}}$					
2796.764		2	35745.07							
2795.292	6	20	35763.89	−0.01	$32371^{\circ}_{2\frac{1}{2}} - 68135_{2\frac{1}{2}}$	6	1.17	1.09	0.20	1.13
2795.074	8	40	35766.68	−0.08	$37516^{\circ}_{3\frac{1}{2}} - 73283_{4\frac{1}{2}}$ [d]	4			(0.04)	0.63
2794.774	7	40	35770.52	−0.07	$41678^{\circ}_{2\frac{1}{2}} - 77449_{3\frac{1}{2}}$	7	(1.193)	1.18	0	1.14
2794.441	10	70	35774.79	−0.04	$35019^{\circ}_{4\frac{1}{2}} - 70793_{5\frac{1}{2}}$	5	1.15	1.20	(0.025)	1.43
2794.08	2	10	35779.41	−0.06	$32371^{\circ}_{2\frac{1}{2}} - 68150_{1\frac{1}{2}}$					
2793.280	10	60	35789.65	−0.01	$33653^{\circ}_{0\frac{1}{2}} - 69443_{1\frac{1}{2}}$	4	1.32	1.15	0.09	1.06
2792.54		3	35799.14	−0.04	$35059^{\circ}_{3\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
2789.431	3	15	35839.04	−0.01	$35019^{\circ}_{4\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
2787.965	7	30	35857.88	−0.04	$30224^{\circ}_{4\frac{1}{2}} - 66082_{5\frac{1}{2}}$	5	(0.935)	1.15	0.107	?
2787.010	1	7	35870.17	−0.07	$45335^{\circ}_{4\frac{1}{2}} - 81205_{4\frac{1}{2}}$					
2786.025	1	5	35882.85	+0.02	$45429^{\circ}_{3\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
2785.750	8	30	35886.39	+0.05	$47005^{\circ}_{1\frac{1}{2}} - 82891_{2\frac{1}{2}}$	5	(0.99)	1.03	w	1.09
2785.066		2	35895.20	−0.07	$35059^{\circ}_{3\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
2784.656	30	150	35900.49	−0.03 +0.02	$33494^{\circ}_{3\frac{1}{2}} - 69395_{3\frac{1}{2}}$ $(55702_{1\frac{1}{2}} - 91602^{\circ}_{2\frac{1}{2}})$	6	0.99	0.95	0.15	0.97
2783.16		2	35919.78	−0.06	$45737^{\circ}_{1\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
2782.58		3	35927.27	−0.06	$56375_{2\frac{1}{2}} - 92303^{\circ}_{3\frac{1}{2}}$					
2782.54	1	5	35927.79	−0.06	$41678^{\circ}_{2\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
2782.203	1	5	35932.14	−0.11	$45273^{\circ}_{3\frac{1}{2}} - 81205_{4\frac{1}{2}}$					
2782.102	1	2	35933.44							
2781.493		2	35941.31	−0.08	$62861_{5\frac{1}{2}} - 98802^{\circ}_{5\frac{1}{2}}$					
2780.820	1	3	35950.01	−0.02	$27061^{\circ}_{0\frac{1}{2}} - 63011_{1\frac{1}{2}}$					
2780.125		3	35958.99	+0.01	$30392^{\circ}_{1\frac{1}{2}} - 66351_{2\frac{1}{2}}$					
2780.032	2	15	35960.20	0.00	$44497^{\circ}_{2\frac{1}{2}} - 80457_{3\frac{1}{2}}$					
2776.688	1	5	36003.50	+0.01	$30392^{\circ}_{1\frac{1}{2}} - 66395_{2\frac{1}{2}}$					
2776.280	60r	200	36008.79	0.00	$30562^{\circ}_{5\frac{1}{2}} - 66571_{5\frac{1}{2}}$	6	1.12	1.19	0.36	1.16
2775.440	2	10	36019.69	+0.01 +0.02	$44438^{\circ}_{3\frac{1}{2}} - 80457_{3\frac{1}{2}}$ $(58283_{2\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}})$	6	(1.10)	0.99?	0.38	
2774.304	5	20	36034.44	0.00	$47329^{\circ}_{2\frac{1}{2}} - 83363_{3\frac{1}{2}}$	7	(0.990)	0.97	0	0.911
2773.91		2	36039.56	−0.07	$45273^{\circ}_{3\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
2771.86		2	36066.21							
2771.324	20	100	36073.18	−0.05	$34784^{\circ}_{5\frac{1}{2}} - 70858_{4\frac{1}{2}}$	4	1.12	1.28	0.080	0.40
2770.405		2	36085.15							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2769.402		2	36098.22	−0.07	$32981^{\circ}_{1\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
2768.281	2	20	36112.84	−0.02	$33494^{\circ}_{3\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
2766.624	2	7	36134.46	+0.03	$40035^{\circ}_{3\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
2766.167	1	3	36140.43							
2765.046	2	8	36155.08	−0.02	$31979^{\circ}_{3\frac{1}{2}} - 68135_{2\frac{1}{2}}$					
2764.414	10	50	36163.35	−0.01	$35059^{\circ}_{3\frac{1}{2}} - 71222_{3\frac{1}{2}}$	6	1.13	1.15	0.07	1.14
2762.716	1	3	36185.58	−0.04	$52517_{5\frac{1}{2}} - 88702^{\circ}_{5\frac{1}{2}}$					
2761.70		4	36198.89	+0.04	$41688^{\circ}_{1\frac{1}{2}} - 77887_{0\frac{1}{2}}$					
2761.373	10	70	36203.17	−0.06	$35019^{\circ}_{1\frac{1}{2}} - 71222_{3\frac{1}{2}}$	7	(1.158)	1.15	w	1.175
2760.780	10	70	36210.95	−0.06	$35059^{\circ}_{3\frac{1}{2}} - 71270_{2\frac{1}{2}}$	5	1.12	0.90	0.11	1.67
2759.532	3	20	36227.32	+0.01	$45429^{\circ}_{3\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
2759.257		3	36230.93							
2759.003	7	40	36234.27	−0.04	$37516^{\circ}_{3\frac{1}{2}} - 73750_{4\frac{1}{2}}$	4	1.15	1.03	(0.063)	0.58
2758.263		1	36243.99							
2758.065		1	36246.59							
2757.542		3	36253.47							
2754.943	3	20	36287.67	0.00	$40035^{\circ}_{3\frac{1}{2}} - 76323_{3\frac{1}{2}}$	6	(0.72)	0.99	0.936	?
2754.105		2	36298.71	−0.03	$63726_{4\frac{1}{2}} - 100025^{\circ}_{5\frac{1}{2}}$					
2753.584	5	20	36305.57	+0.03	$47912_{3\frac{1}{2}} - 84217^{\circ}_{4\frac{1}{2}}$					
2751.452	20	80	36333.71	+0.04	$30224^{\circ}_{4\frac{1}{2}} - 66558_{3\frac{1}{2}}$	4	0.94	1.11	0.085	0.345
2750.477	600R	500	36346.58	+0.01	$21418^{\circ}_{3\frac{1}{2}} - 57765_{4\frac{1}{2}}$	4	(1.145)	1.12	0	1.05
2749.624	3	20	36357.86	−0.03	$45335^{\circ}_{4\frac{1}{2}} - 81692_{3\frac{1}{2}}$					
2748.664	50r	150	36370.56	−0.04	$31568^{\circ}_{2\frac{1}{2}} - 67938_{3\frac{1}{2}}$	5	0.85	0.96	(0.06)	1.24
2748.56	3	10	36371.93	−0.11	$44940^{\circ}_{1\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
2748.036	5	30	36378.87	−0.03	$34575^{\circ}_{1\frac{1}{2}} - 70954_{2\frac{1}{2}}$	4	1.450	1.016	0.213	0.363
2747.641	3	10	36384.10	−0.01	$45273^{\circ}_{3\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
2747.580	20	80	36384.90	−0.04	$32371^{\circ}_{2\frac{1}{2}} - 68756_{3\frac{1}{2}}$	5	1.165	1.330	0.082	1.743
2746.83		1	36394.84							
2745.712	5	30	36409.66	−0.04	$35059^{\circ}_{3\frac{1}{2}} - 71468_{2\frac{1}{2}}$	5	1.12	1.02	(0.05)	1.38
2745.115	2	8	36417.58						(0.14)	
2744.782	1	3	36421.99	−0.04	$53720_{4\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
2744.372		1	36427.43	−0.05	$53715_{3\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
2742.741		2	36449.10							
2742.651	1	5	36450.29	+0.07	$37516^{\circ}_{3\frac{1}{2}} - 73966_{3\frac{1}{2}}$					
2741.779	4	15	36461.88	−0.05	$32981^{\circ}_{1\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
2741.714	8	40	36462.75	−0.06	$33494^{\circ}_{3\frac{1}{2}} - 69957_{4\frac{1}{2}}$	5	1.00	1.11	0.05	1.49
2741.150	2	8	36470.25	+0.04	$31979^{\circ}_{3\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
2740.79	3	9	36475.04	−0.05	$26759^{\circ}_{2\frac{1}{2}} - 63234_{2\frac{1}{2}}$					
2740.551	3	6	36478.22	−0.06	$22960_{1\frac{1}{2}} - 59439^{\circ}_{2\frac{1}{2}}$					
2740.397	1	4	36480.27	−0.02	$40035^{\circ}_{3\frac{1}{2}} - 76516_{4\frac{1}{2}}$					

TABLE 6. Yb II — *Observed and classified lines* — Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2740.215	2	6	36482.69							
2739.475	1	2	36492.55	−0.04	$53404_{2\frac{1}{2}} - 89897^{\circ}_{1\frac{1}{2}}$					
2738.818	2	8	36501.30	0.00	$43956^{\circ}_{2\frac{1}{2}} - 80457_{3\frac{1}{2}}$	7	(0.99)	0.99	0	0.99
2738.31		1	36508.07	+0.05	$43075^{\circ}_{1\frac{1}{2}} - 79583_{2\frac{1}{2}}$					
2737.61	3	15	36517.41	+0.12	$31631^{\circ}_{6\frac{1}{2}} - 68148_{5\frac{1}{2}}$	5	(1.230)	1.22	0	1.28
2736.553	4	20	36531.51	+0.10	$40917^{\circ}_{4\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
2736.050		2	36538.23	−0.03	$57765_{4\frac{1}{2}} - 94303^{\circ}_{3\frac{1}{2}}$					
2735.673	2	6	36543.26	+0.07	$56375_{2\frac{1}{2}} - 92919^{\circ}_{3\frac{1}{2}}$					
2734.928		2	36553.22	+0.07	$62861_{5\frac{1}{2}} - 99414^{\circ}_{4\frac{1}{2}}$					
2734.413		1	36560.10							
2734.087	5	30	36564.46	−0.05	$34389^{\circ}_{2\frac{1}{2}} - 70954_{2\frac{1}{2}}$	7	1.00	1.00	0	1.00
2733.724		4	36569.31	−0.02	$31979^{\circ}_{3\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
2733.65		2	36570.30	−0.08	$57765_{4\frac{1}{2}} - 94335^{\circ}_{5\frac{1}{2}}$					
2733.112	5	10	36577.50	+0.05	$24332_{2\frac{1}{2}} - 60910^{\circ}_{1\frac{1}{2}}$	5	(1.202)	1.12	w	1.32
2732.942	1	4	36579.78	+0.08	$37077^{\circ}_{2\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
2732.742	30r	150	36582.45	−0.04	$31568^{\circ}_{2\frac{1}{2}} - 68150_{1\frac{1}{2}}$	4	(0.862)	0.90	d	0.81
2732.50		1	36585.69							
2732.033		1	36591.95							
2731.83		1	36594.67	−0.01	$57765_{4\frac{1}{2}} - 94360^{\circ}_{4\frac{1}{2}}$					
2731.573		3	36598.11	−0.05	$43007^{\circ}_{0\frac{1}{2}} - 79605_{1\frac{1}{2}}$					
2731.517		3	36598.86							
2730.62		1	36610.88							
2729.50	2	8	36625.90	−0.05	$32981^{\circ}_{1\frac{1}{2}} - 69607_{2\frac{1}{2}}$	5	(0.866)	1.21	0.17	
2729.093	1	5	36631.36	−0.03	$38342^{\circ}_{4\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
2728.47		1	36639.73							
2728.420	6	20	36640.40	−0.09	$40035^{\circ}_{3\frac{1}{2}} - 76676_{2\frac{1}{2}}$	4	0.726	1.112	0.193	0.240
2727.66		1	36650.61	−0.02	$49498_{2\frac{1}{2}} - 86148^{\circ}_{2\frac{1}{2}}$					
2727.22		1	36656.52							
2724.65	1	3	36691.09							
2724.41		2	36694.33							
2723.338		3	36708.77	−0.01	$32371^{\circ}_{2\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
2722.759		2	36716.58	+0.06	$44940^{\circ}_{1\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
2722.475	1	5	36720.41	+0.01	$47912_{3\frac{1}{2}} - 84632^{\circ}_{2\frac{1}{2}}$					
2722.205	8	40	36724.05	−0.03	$34389^{\circ}_{2\frac{1}{2}} - 71113_{1\frac{1}{2}}$	7	0.99	(0.967)	0	1.03
2721.895		3	36728.23	−0.04	$49498_{2\frac{1}{2}} - 86226^{\circ}_{1\frac{1}{2}}$					
2721.183		3	36737.84	+0.06	$53404_{2\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
2720.522	1	5	36746.77							
2719.996		2	36753.87	−0.02	$37516^{\circ}_{3\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
2719.005	3	15	36767.27	+0.03	$44438^{\circ}_{3\frac{1}{2}} - 81205_{4\frac{1}{2}}$	7	(1.10)	1.11	0	1.157
2718.349	40r	200	36776.14	0.00	$31979^{\circ}_{3\frac{1}{2}} - 68756_{3\frac{1}{2}}$	7	1.328	1.328	0	1.328

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2717.76		2	36784.11	+0.05	$35831^{\circ}_{5\frac{1}{2}} - 72615_{5\frac{1}{2}}$					
2717.661	3	10	36785.45							
2717.617	1	4	36786.04	+0.01	$41678^{\circ}_{2\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
2717.106	4	20	36792.96	+0.03	$58961_{5\frac{1}{2}} - 95754^{\circ}_{5\frac{1}{2}}$	7	0.89	0.89	0	0.89
2716.354	3	5	36803.15	−0.03	$40035^{\circ}_{3\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
2716.177		3	36805.55							
2715.94	3	15	36808.76	+0.02	$28757^{\circ}_{1\frac{1}{2}} - 65566_{0\frac{1}{2}}$	7	1.45	1.45	0	1.45
2715.640	1	4	36812.82	+0.08	$30392^{\circ}_{1\frac{1}{2}} - 67204_{1\frac{1}{2}}$					
2715.383	4	7	36816.31	+0.04	$22960_{1\frac{1}{2}} - 59777^{\circ}_{1\frac{1}{2}}$					
2715.17		1	36819.19	+0.07	$56375_{2\frac{1}{2}} - 93195^{\circ}_{3\frac{1}{2}}$					
2714.408	4	30	36829.53	+0.04	$40917^{\circ}_{4\frac{1}{2}} - 77747_{4\frac{1}{2}}$	6	0.965	1.073	0.49	1.02
2714.18		2	36832.62	+0.02	$34389^{\circ}_{2\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
2713.718		2	36838.89							
2712.658	15	80	36853.29	+0.05	$30562^{\circ}_{5\frac{1}{2}} - 67416_{4\frac{1}{2}}$	4	(1.112)	1.23	?	0.52
2711.785	20	30	36865.15	−0.01	$21418^{\circ}_{3\frac{1}{2}} - 58283_{2\frac{1}{2}}$	5	1.141	0.770	0.190	2.071
2711.09		1	36874.60	−0.02	$44438^{\circ}_{3\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
2710.674	6	30	36880.26	+0.01	$34389^{\circ}_{2\frac{1}{2}} - 71270_{2\frac{1}{2}}$	6	1.02	0.92	0.26	0.97
2710.544	20	80	36882.03	0.00	$31568^{\circ}_{2\frac{1}{2}} - 68450_{3\frac{1}{2}}$	5	0.87	1.09	0.111	1.651
2710.046	2	5	36888.81	+0.10	$26759^{\circ}_{2\frac{1}{2}} - 63647_{1\frac{1}{2}}$					
2709.715	4	20	36893.31	−0.02	$34575^{\circ}_{1\frac{1}{2}} - 71468_{2\frac{1}{2}}$	4	1.46	1.02	0.22	0.36
2708.842	5	30	36905.20	0.00	$33052^{\circ}_{4\frac{1}{2}} - 69957_{4\frac{1}{2}}$	6	1.27	1.13	0.65	1.20
2708.46		2	36910.41							
2705.108		3	36956.14	+0.05	$61873_{6\frac{1}{2}} - 98829^{\circ}_{6\frac{1}{2}}$					
2704.75		2	36961.03							
2704.53	3	15	36964.04	−0.09	$40917^{\circ}_{4\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
2702.133	1	4	36996.83	0.00	$53720_{4\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
2701.733	1	4	37002.30	+0.02	$53715_{3\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
2701.130	3	5	37010.56							
2700.797	6	40	37015.13	+0.02	$44497^{\circ}_{2\frac{1}{2}} - 81512_{1\frac{1}{2}}$	5	0.74	0.48	0.130	1.14
2698.617	2	8	37045.03							
2698.447		1	37047.36	−0.09	$32981^{\circ}_{1\frac{1}{2}} - 70029_{0\frac{1}{2}}$					
2696.625	4	20	37072.39	−0.03	$32371^{\circ}_{2\frac{1}{2}} - 69443_{1\frac{1}{2}}$	7	(1.170)	1.16	0	1.19
2696.150		2	37078.92	−0.02	$34389^{\circ}_{2\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
2695.556		2	37087.09	−0.01	$56375_{2\frac{1}{2}} - 93463^{\circ}_{3\frac{1}{2}}$					
2695.427	8	60	37088.87	+0.02	$31631^{\circ}_{6\frac{1}{2}} - 68720_{6\frac{1}{2}}$	6	(1.230)	1.16	0.44	?
2694.622	1	4	37099.95	−0.03	$31979^{\circ}_{3\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
2692.703	2	10	37126.38	−0.03	$41688^{\circ}_{1\frac{1}{2}} - 78814_{2\frac{1}{2}}$					
2692.408	3	15	37130.45	−0.03	$28757^{\circ}_{1\frac{1}{2}} - 65888_{1\frac{1}{2}}$					
2691.996	5	30	37136.14	+0.01	$41678^{\circ}_{2\frac{1}{2}} - 78814_{2\frac{1}{2}}$	6	(1.193)	1.26	d	1.225
2691.49		3	37143.12	+0.09	$35059^{\circ}_{3\frac{1}{2}} - 72202_{3\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2691.44		2	37143.81	0.00	$53715_{3\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$					
2690.669	2	2	37154.45	−0.06	$45737^{\circ}_{1\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
2690.298	1	3	37159.57	−0.05	$44497^{\circ}_{2\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
2688.22		1	37188.29	−0.01	$34575^{\circ}_{1\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
2687.980	4	30	37191.62	−0.08	$30224^{\circ}_{4\frac{1}{2}} - 67416_{4\frac{1}{2}}$	6	(0.935)	1.261	1.467	?
2687.900	1	5	37192.72							
2687.08		1	37204.07							
2685.990	2	10	37219.17	+0.07	$44438^{\circ}_{3\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
2685.30		2	37228.73							
2684.747	10	70	37236.40	−0.04	$32371^{\circ}_{2\frac{1}{2}} - 69607_{2\frac{1}{2}}$	6	1.172	1.208	0.09	1.190
2683.895		2	37248.22	−0.04	$48900_{3\frac{1}{2}} - 86148^{\circ}_{2\frac{1}{2}}$					
2683.416	4	30	37254.87	−0.02	$44438^{\circ}_{3\frac{1}{2}} - 81692_{3\frac{1}{2}}$	6	1.11	1.16	0.18	1.14
2681.180		2	37285.94							
2680.404	6	40	37296.73	−0.07	$26759^{\circ}_{2\frac{1}{2}} - 64055_{2\frac{1}{2}}$	6	1.576	1.100	1.164	1.338
2678.847	1	3	37318.41							
2676.131	3	6	37356.28	+0.04	$43956^{\circ}_{2\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
2674.866	3	10	37373.94	+0.03	$34389^{\circ}_{2\frac{1}{2}} - 71763_{1\frac{1}{2}}$	4	(1.007)	1.06	d	0.924
2672.656	200R	200	37404.85	+0.02	$21418^{\circ}_{3\frac{1}{2}} - 58823_{2\frac{1}{2}}$	4	1.15	1.28	(0.064)	0.83
2672.035		2	37413.54	+0.04	$40035^{\circ}_{3\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
2671.554		2	37420.27	+0.09	$39378^{\circ}_{0\frac{1}{2}} - 76799_{1\frac{1}{2}}$					
2670.605		1	37433.57							
2669.305		1	37451.80	+0.13	$35831^{\circ}_{5\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
2669.131	1	3	37454.24	+0.13	$53404_{2\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$					
2668.94		2	37456.92	+0.10	$37516^{\circ}_{3\frac{1}{2}} - 74973_{3\frac{1}{2}}$					
2668.752	8	40	37459.56	−0.03	$33494^{\circ}_{3\frac{1}{2}} - 70954_{2\frac{1}{2}}$	7	(0.991)	1.00	0	0.98
2668.707	4	20	37460.19	−0.08	$35831^{\circ}_{5\frac{1}{2}} - 73291_{5\frac{1}{2}}$					
2668.587	1	3	37461.88	−0.10	$45429^{\circ}_{3\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
2667.965		2	37470.61	−0.06	$61051_{3\frac{1}{2}} - 98521^{\circ}_{4\frac{1}{2}}$					
2665.038	60	100	37511.76	−0.04	$31568^{\circ}_{2\frac{1}{2}} - 69079_{2\frac{1}{2}}$	6	0.859	0.893	0.085	0.876
2664.39		2	37520.88							
2663.900	2	5	37527.79							
2661.888		3	37556.15	−0.06	$43956^{\circ}_{2\frac{1}{2}} - 81512_{1\frac{1}{2}}$					
2660.861	1	4	37570.64	−0.12	$40035^{\circ}_{3\frac{1}{2}} - 77606_{2\frac{1}{2}}$					
2660.73		2	37572.49							
2659.635		2	37587.96	−0.04	$61214_{4\frac{1}{2}} - 98802^{\circ}_{5\frac{1}{2}}$					
2659.267	4	20	37593.16	−0.07	$28757^{\circ}_{1\frac{1}{2}} - 66351_{2\frac{1}{2}}$	4	1.443	1.129	0.157	0.658
2657.46		1	37618.72	−0.06	$45273^{\circ}_{3\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
2657.20		2	37622.40							
2656.838	2	15	37627.53	−0.11	$31979^{\circ}_{3\frac{1}{2}} - 69607_{2\frac{1}{2}}$ [d]	7	(1.33)	1.45	0	1.03
2656.125	10	40	37637.63	−0.11	$28757^{\circ}_{1\frac{1}{2}} - 66395_{2\frac{1}{2}}$	4	1.44	1.24	0.10	0.94

TABLE 6. Yb II — *Observed and classified lines* — Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2653.75	1000R	1000	37671.31	−0.07	$21418^{\circ}_{3\frac{1}{2}} - 59090_{3\frac{1}{2}}$	7	(1.145)	1.13	0	1.136
2650.795	2	10	37713.30	−0.08	$24332_{2\frac{1}{2}} - 62046^{\circ}_{3\frac{1}{2}}$					
2650.728	9	30	37714.26	−0.09	$30224^{\circ}_{4\frac{1}{2}} - 67938_{3\frac{1}{2}}$	4	(0.935)	0.96		0.863
2649.787	10	40	37727.65	−0.03	$33494^{\circ}_{3\frac{1}{2}} - 71222_{3\frac{1}{2}}$	6	0.98	1.14	0.54	1.06
2649.165		3	37736.51	0.00	$43956^{\circ}_{2\frac{1}{2}} - 81692_{3\frac{1}{2}}$					
2648.803	6	30	37741.66	−0.01	$33052^{\circ}_{4\frac{1}{2}} - 70793_{5\frac{1}{2}}$	4	1.24	1.20	(0.017)	1.05
2647.455	8	40	37760.88	+0.02	$35019^{\circ}_{4\frac{1}{2}} - 72779_{3\frac{1}{2}}$	5	1.16	1.12	(0.02)	1.30
2647.233	2	10	37764.05	0.00	$42915^{\circ}_{5\frac{1}{2}} - 80679_{5\frac{1}{2}}$					
2646.442	6	30	37775.33	0.00	$33494^{\circ}_{3\frac{1}{2}} - 71270_{2\frac{1}{2}}$	5	0.98	0.90	(0.04)	1.18
2645.691		2	37786.06							
2644.306	20r	80	37805.85	−0.04	$33052^{\circ}_{4\frac{1}{2}} - 70858_{4\frac{1}{2}}$	6	1.265	1.279	(0.06)	1.272
2643.237		3	37821.13	−0.01	$53715_{3\frac{1}{2}} - 91536^{\circ}_{3\frac{1}{2}}$					
2642.815		5	37827.17	+0.05	$31568^{\circ}_{2\frac{1}{2}} - 69395_{3\frac{1}{2}}$					
2642.558	10	1000	37830.85	+0.06	$34784^{\circ}_{5\frac{1}{2}} - 72615_{5\frac{1}{2}}$	6	1.20	1.07	0.73	1.132
2641.97	2	10	37839.27	+0.01	$26759^{\circ}_{2\frac{1}{2}} - 64598_{3\frac{1}{2}}$					
2641.886	50	50	37840.47	−0.02	$21418^{\circ}_{3\frac{1}{2}} - 59259_{2\frac{1}{2}}$	5	(1.145)	1.12	w	1.20
2641.485		2	37846.22	0.00	$40035^{\circ}_{3\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
2639.448	10	40	37875.42	−0.02	$31568^{\circ}_{2\frac{1}{2}} - 69443_{1\frac{1}{2}}$	4	0.86	1.14	0.14	0.42
2638.596	4	5	37887.65	−0.05	$49498_{2\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}}$					
2637.637		2	37901.43	−0.04	$44497^{\circ}_{2\frac{1}{2}} - 82398_{1\frac{1}{2}}$					
2637.378	2	2	37905.15	+0.02	$39378^{\circ}_{0\frac{1}{2}} - 77284_{1\frac{1}{2}}$					
2636.519	1	6	37917.50	0.00	$41688^{\circ}_{1\frac{1}{2}} - 79605_{1\frac{1}{2}}$	6	(0.784)	1.16	0.58	
2636.399		3	37919.22	0.00	$35831^{\circ}_{5\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
2636.275	2	8	37921.01	−0.05	$52938_{1\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$					
2635.197	1	4	37936.52	−0.14	$58961_{5\frac{1}{2}} - 96898^{\circ}_{5\frac{1}{2}}$					
2634.306	30	40	37949.35	+0.01	$22960_{1\frac{1}{2}} - 60910^{\circ}_{1\frac{1}{2}}$	6	0.806	1.000	0.29	0.903
2634.183		3	37951.12	−0.07	$44940^{\circ}_{1\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
2632.69	2	8	37972.64	−0.04	$32981^{\circ}_{1\frac{1}{2}} - 70954_{2\frac{1}{2}}$					
2631.73	3	15	37986.49	+0.05	$30562^{\circ}_{5\frac{1}{2}} - 68549_{4\frac{1}{2}}$	4	(1.112)	1.14	w	1.00
2628.80	2	7	38028.83	−0.02	$45335^{\circ}_{4\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
2628.605	1	4	38031.65	−0.06	$61214_{4\frac{1}{2}} - 99246^{\circ}_{5\frac{1}{2}}$					
2628.424		2	38034.27	−0.08 −0.10	$37516^{\circ}_{3\frac{1}{2}} - 75550_{2\frac{1}{2}}$ $40035^{\circ}_{3\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
2628.07	3	20	38039.39	−0.07	$31568^{\circ}_{2\frac{1}{2}} - 69607_{2\frac{1}{2}}$	6	(0.862)	1.22	0.88	
2624.949	3	5	38084.62	+0.04	$49301_{4\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}}$					
2624.52		2	38090.84	−0.02	$45273^{\circ}_{3\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
2623.22	2	9	38109.72	−0.09	$33653^{\circ}_{0\frac{1}{2}} - 71763_{1\frac{1}{2}}$	4	1.32	1.10	0.11	0.99
2621.67	4	20	38132.25	0.00	$32981^{\circ}_{1\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
2619.93	3	15	38157.57	−0.08	$30562^{\circ}_{5\frac{1}{2}} - 68720_{6\frac{1}{2}}$	5	(1.112)	1.13	d	1.25
2619.074	4	20	38170.04	−0.03	$33052^{\circ}_{4\frac{1}{2}} - 71222_{3\frac{1}{2}}$					

TABLE 6. Yb II — *Observed and classified lines* — Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2618.948		2	38171.88							
2617.01	100r	100	38200.15	0.00 −0.04	$21418^{\circ}_{3\frac{1}{2}} - 59618_{3\frac{1}{2}}$ $(52517_{5\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}})$	6	1.16	1.02	0.46	1.09
2615.35	1	5	38224.39	+0.04	$35059^{\circ}_{3\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
2615.262	6	30	38225.68	−0.10	$30224^{\circ}_{4\frac{1}{2}} - 68450_{3\frac{1}{2}}$	4	(0.935)	1.06	(0.06)	
2614.55	1	3	38236.08							
2614.45	2	3	38237.55	−0.01	$43075^{\circ}_{1\frac{1}{2}} - 81312_{2\frac{1}{2}}$					
2612.63	2	10	38264.18	−0.04	$35019^{\circ}_{4\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
2612.041	4	20	38272.81	−0.01	$35019^{\circ}_{4\frac{1}{2}} - 73291_{5\frac{1}{2}}$					
2611.645	2	2	38278.61							
2610.860	5	30	38290.12	−0.02	$42915^{\circ}_{5\frac{1}{2}} - 81205_{4\frac{1}{2}}$	7	(1.115)	1.11	0	1.14
2610.531	1	4	38294.95	−0.10	$53720_{4\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$					
2608.498	1	4	38324.79	−0.11	$30224^{\circ}_{4\frac{1}{2}} - 68549_{4\frac{1}{2}}$					
2607.864	5	30	38334.11	−0.01	$26759^{\circ}_{2\frac{1}{2}} - 65093_{3\frac{1}{2}}$	4				
2605.43	2	3	38369.92							
2604.69		2	38380.82	−0.04	$30562^{\circ}_{5\frac{1}{2}} - 68943_{4\frac{1}{2}}$					
2604.053	5	30	38390.21	−0.02	$34389^{\circ}_{2\frac{1}{2}} - 72779_{3\frac{1}{2}}$	5	(1.007)	1.08	w	1.25
2602.40		2	38414.59							
2600.850	2	9	38437.48	−0.05	$43075^{\circ}_{1\frac{1}{2}} - 81512_{1\frac{1}{2}}$					
2600.508	1	2	38442.54	−0.03	$43956^{\circ}_{2\frac{1}{2}} - 82398_{1\frac{1}{2}}$					
2600.21	3	15	38446.94	−0.05	$28757^{\circ}_{1\frac{1}{2}} - 67204_{1\frac{1}{2}}$					
2599.75	1	2	38453.74	−0.03	$44438^{\circ}_{3\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
2598.43	2	6	38473.28	−0.07	$37077^{\circ}_{2\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
2598.11		2	38478.02							
2597.69	1	3	38484.24							
2597.619	2	2	38485.29	−0.04	$48900_{3\frac{1}{2}} - 87385^{\circ}_{3\frac{1}{2}}$					
2597.495	1	5	38487.13	+0.02	$32981^{\circ}_{1\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
2596.735	3	30	38498.39	−0.01	$34784^{\circ}_{5\frac{1}{2}} - 73283_{4\frac{1}{2}}$					
2596.320	6	80	38504.54	−0.11	$31631^{\circ}_{6\frac{1}{2}} - 70136_{6\frac{1}{2}}$	6	(1.23)	1.15?	0.51	
2596.16	6	80	38506.92	−0.08	$34784^{\circ}_{5\frac{1}{2}} - 73291_{5\frac{1}{2}}$	6	1.12	1.09	0.17	1.10w
2594.493	3	20	38531.65	−0.06	$30224^{\circ}_{4\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
2594.20	3	15	38536.01			6			0.22	
2591.026	3	10	38583.21	+0.04	$32371^{\circ}_{2\frac{1}{2}} - 70954_{2\frac{1}{2}}$	6	(1.17)	1.00	0.43	
2590.711	2	5	38587.90	−0.08	$53715_{3\frac{1}{2}} - 92303^{\circ}_{3\frac{1}{2}}$					
2586.30	3	10	38653.71	+0.05	$37516^{\circ}_{3\frac{1}{2}} - 76170_{2\frac{1}{2}}$	7	(1.12)	1.10	0	1.17
2583.748	1	4	38691.89	−0.01	$35059^{\circ}_{3\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
2582.489		2	38710.75	−0.05	$40917^{\circ}_{4\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
2582.068		3	38717.06	−0.06	$57765_{4\frac{1}{2}} - 96482^{\circ}_{4\frac{1}{2}}$					
2581.41	1	4	38726.93	−0.02	$34389^{\circ}_{2\frac{1}{2}} - 73116_{1\frac{1}{2}}$					
2581.092		3	38731.70	−0.07	$35019^{\circ}_{4\frac{1}{2}} - 73750_{4\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2577.74	3	10	38782.06	−0.02	$32981^{\circ}_{1\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
2577.605	5	20	38784.09	−0.13	$52517_{5\frac{1}{2}} - 91301^{\circ}_{6\frac{1}{2}}$					
2576.09		2	38806.90	0.00	$37516^{\circ}_{3\frac{1}{2}} - 76323_{3\frac{1}{2}}$					
2574.78	2	10	38826.64	0.00	$27061^{\circ}_{0\frac{1}{2}} - 65888_{1\frac{1}{2}}$					
2573.147	6	30	38851.28	+0.02	$32371^{\circ}_{2\frac{1}{2}} - 71222_{3\frac{1}{2}}$	7	(1.17)	1.16	0	1.12
2572.15	1	4	38866.34	−0.03	$44497^{\circ}_{2\frac{1}{2}} - 83363_{3\frac{1}{2}}$					
2571.69	1	2	38873.29	−0.02	$53404_{2\frac{1}{2}} - 92278^{\circ}_{1\frac{1}{2}}$					
2571.36	7	50	38878.28	0.00	$31979^{\circ}_{3\frac{1}{2}} - 70858_{4\frac{1}{2}}$	4	(1.331)	1.30	w	1.18
2569.61	1	2	38904.76							
2568.60		2	38920.05							
2568.17	3	10	38926.57	−0.06	$53720_{4\frac{1}{2}} - 92647^{\circ}_{5\frac{1}{2}}$					
2565.573	10	40	38965.97	+0.02	$34784^{\circ}_{5\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
2563.92	2	2	38991.09							
2559.972	2	5	39051.22	−0.07	$30392^{\circ}_{1\frac{1}{2}} - 69443_{1\frac{1}{2}}$					
2558.40	3	2	39075.21							
2557.804	4	5	39084.32	−0.02	$24332_{2\frac{1}{2}} - 63417^{\circ}_{2\frac{1}{2}}$					
2557.703	1	5	39085.86	−0.01	$39378^{\circ}_{0\frac{1}{2}} - 78464_{1\frac{1}{2}}$					
2557.259	4	20	39092.64	−0.02	$37077^{\circ}_{2\frac{1}{2}} - 76170_{2\frac{1}{2}}$	7	(1.113)	1.13	0	1.12
2556.30		3	39107.31	+0.01	$38342^{\circ}_{4\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
2554.641		2	39132.70	−0.01	$57765_{4\frac{1}{2}} - 96898^{\circ}_{5\frac{1}{2}}$					
2552.88	2	2	39159.70	−0.02	$37516^{\circ}_{3\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
2552.70	10	60	39162.46	+0.09	$31631^{\circ}_{6\frac{1}{2}} - 70793_{5\frac{1}{2}}$	7	(1.230)	1.224	0	1.264
2552.147	15	80	39170.94	+0.07	$30224^{\circ}_{4\frac{1}{2}} - 69395_{3\frac{1}{2}}$	7	(0.935)	0.942	0	0.912
2550.786		1	39191.84							
2550.68	3	10	39193.47	+0.03	$53720_{4\frac{1}{2}} - 92914^{\circ}_{4\frac{1}{2}}$					
2550.060	10	20	39203.00	−0.12	$22960_{1\frac{1}{2}} - 62163^{\circ}_{2\frac{1}{2}}$					
2550.023		3	39203.57							
2548.756	3	15	39223.05	−0.03	$49498_{2\frac{1}{2}} - 88721^{\circ}_{3\frac{1}{2}}$	7	(1.145)	1.156	0	1.182
2548.00		3	39234.69							
2547.498	2	8	39242.42	−0.04	$31979^{\circ}_{3\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
2547.23	2	5	39246.55							
2547.20		2	39247.01							
2546.886	1	2	39251.85							
2546.28	2	5	39261.19	−0.05	$53715_{3\frac{1}{2}} - 92976^{\circ}_{3\frac{1}{2}}$					
2545.871	2	4	39267.50	−0.03	$34389^{\circ}_{2\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
2545.545		3	39272.53							
2544.72		2	39285.26	−0.05	$33494^{\circ}_{3\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
2542.76	3	10	39315.54	−0.05 +0.13	$53720_{4\frac{1}{2}} - 93036^{\circ}_{5\frac{1}{2}}$ $56375_{2\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					
2542.318	4	10	39322.37	−0.04	$37516^{\circ}_{3\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
2541.82		1	39330.08							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2541.16	2	6	39340.29	+0.03	$52938_{1\frac{1}{2}} - 92278^{\circ}_{1\frac{1}{2}}$					
2540.60		1	39348.96							
2539.64		4	39363.84							
2538.79	2	20	39377.02	0.00	$28757^{\circ}_{1\frac{1}{2}} - 68135_{2\frac{1}{2}}$					
2538.67	300*A*	200	39378.88	−0.01	$0_{0\frac{1}{2}} - 39378^{\circ}_{0\frac{1}{2}}$	6	2.00	1.86	0.07	1.93
2538.203	4	30	39386.12	−0.07	$31568^{\circ}_{2\frac{1}{2}} - 70954_{2\frac{1}{2}}$	6				
2537.65	10	70	39394.70	0.00	$30562^{\circ}_{5\frac{1}{2}} - 69957_{4\frac{1}{2}}$	7	(1.11)	1.11	0	1.135
2537.240	1	5	39401.07	+0.03	$27061^{\circ}_{0\frac{1}{2}} - 66462_{0\frac{1}{2}}$					
2537.08		1	39403.55							
2536.962	2	10	39405.39	+0.01	$38342^{\circ}_{4\frac{1}{2}} - 77747_{4\frac{1}{2}}$	6	(1.09)	1.07	0	1.08
2536.027	4	20	39419.91	−0.05	$49301_{4\frac{1}{2}} - 88721^{\circ}_{3\frac{1}{2}}$	5	(1.19)	1.18	*w*	1.23
2534.05		2	39450.67							
2532.55	2	6	39474.03							
2532.19	2	3	39479.64	−0.13	$53715_{3\frac{1}{2}} - 93195^{\circ}_{3\frac{1}{2}}$					
2531.00		1	39498.20	−0.21	$52517_{5\frac{1}{2}} - 92015^{\circ}_{4\frac{1}{2}}$?					
2529.98	1	3	39514.13	−0.01	$53404_{2\frac{1}{2}} - 92919^{\circ}_{3\frac{1}{2}}$					
2529.50	3	9	39521.62	−0.06	$53720_{4\frac{1}{2}} - 93242^{\circ}_{5\frac{1}{2}}$					
2528.836	1	1	39532.00							
2528.339	3	25	39539.77	−0.03	$40917^{\circ}_{4\frac{1}{2}} - 80457_{3\frac{1}{2}}$	7	(0.967)	0.98	0	0.938
2527.954		3	39545.79	+0.03	$31568^{\circ}_{2\frac{1}{2}} - 71113_{1\frac{1}{2}}$					
2727.864	4	30	39547.20	−0.09	$40035^{\circ}_{3\frac{1}{2}} - 79583_{2\frac{1}{2}}$	5	(0.72)	0.70	*w*	0.77
2527.49		2	39553.05							
2526.31	2	5	39571.52	−0.02	$53404_{2\frac{1}{2}} - 92976^{\circ}_{3\frac{1}{2}}$					
2526.189		3	39573.42	−0.03	$30562^{\circ}_{5\frac{1}{2}} - 70136_{6\frac{1}{2}}$					
2524.990	2	10	39592.21	+0.02	$26759^{\circ}_{2\frac{1}{2}} - 66351_{2\frac{1}{2}}$					
2524.573	4	8	39598.75	+0.03	$37077^{\circ}_{2\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
2522.438	15	50	39632.26	−0.05	$21418^{\circ}_{3\frac{1}{2}} - 61051_{3\frac{1}{2}}$	6	1.14	1.18	0.14	1.16*w*
2521.04	3	15	39654.24	−0.04	$31568^{\circ}_{2\frac{1}{2}} - 71222_{3\frac{1}{2}}$					
2519.39		2	39680.21							
2518.59		2	39692.81							
2518.47		1	39694.70							
2518.01	3	10	39701.95	+0.02	$31568^{\circ}_{2\frac{1}{2}} - 71270_{2\frac{1}{2}}$	6	0.86	0.90	0.09	0.88
2516.82	50	300	39720.72			7			0	1.348
2516.35	6	30	39728.14	−0.03	$38342^{\circ}_{4\frac{1}{2}} - 78070_{4\frac{1}{2}}$	6	1.09	1.10	0.06	1.094
2516.031	3	15	39733.18	+0.02	$30224^{\circ}_{4\frac{1}{2}} - 69957_{4\frac{1}{2}}$					
2515.600	2	7	39739.99			7			0	0.91
2515.460	2	3	39742.20	−0.10	$53720_{4\frac{1}{2}} - 93463^{\circ}_{3\frac{1}{2}}$					
2515.165		2	39746.86							
2514.69		1	39754.37							
2514.248	7	20	39761.35	−0.06 +0.08	$37077^{\circ}_{2\frac{1}{2}} - 76839_{2\frac{1}{2}}$ $(40917^{\circ}_{4\frac{1}{2}} - 80679_{5\frac{1}{2}})$	7	1.116	1.116	0	1.116

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TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2513.64		1	39770.97							
2512.87		2	39783.16	−0.02	$53720_{4\frac{1}{2}} - \mathit{93503}^{\circ}_{4\frac{1}{2}}$					
2512.524	5	20	39788.64	−0.03 +0.01	$\mathit{33494}^{\circ}_{3\frac{1}{2}} - 73283_{4\frac{1}{2}}$ $(53715_{3\frac{1}{2}} - \mathit{93503}^{\circ}_{4\frac{1}{2}})$	5	(0.99)	1.02	w	1.11
2512.061	50r	100	39795.97	+0.06	$21418^{\circ}_{3\frac{1}{2}} - 61214_{4\frac{1}{2}}$	4	1.12	1.05	(0.036)	0.80
2511.868	4	20	39799.03	+0.05	$\mathit{26759}^{\circ}_{2\frac{1}{2}} - 66558_{3\frac{1}{2}}$					
2510.50	2	7	39820.71	0.00	$48900_{3\frac{1}{2}} - \mathit{88721}^{\circ}_{3\frac{1}{2}}$					
2510.29	1	2	39824.04	−0.13	$\mathit{41688}^{\circ}_{1\frac{1}{2}} - 81512_{1\frac{1}{2}}$					
2510.03	1	1	39828.17							
2509.86	2	5	39830.86	−0.07	$\mathit{32371}^{\circ}_{2\frac{1}{2}} - 72202_{3\frac{1}{2}}$					
2508.073	10	20	39859.24	−0.04	$24332_{2\frac{1}{2}} - \mathit{64191}^{\circ}_{1\frac{1}{2}}$					
2505.477	6	30	39900.54	−0.08	$\mathit{31568}^{\circ}_{2\frac{1}{2}} - 71468_{2\frac{1}{2}}$	6	0.86	1.00	0.36?	0.93
2503.46		1	39932.68	−0.05	$\mathit{37516}^{\circ}_{3\frac{1}{2}} - 77449_{3\frac{1}{2}}$					
2502.02	30	70	39955.66	−0.08	$\mathit{21418}^{\circ}_{3\frac{1}{2}} - 61374_{2\frac{1}{2}}$	4	1.14	1.29	(0.07)	0.77
2501.21	1	3	39968.60	−0.08	$\mathit{41688}^{\circ}_{1\frac{1}{2}} - 81657_{2\frac{1}{2}}$					
2500.568	2	6	39978.86							
2498.73		2	40008.27							
2498.36	2	5	40014.19	0.00	$\mathit{41678}^{\circ}_{2\frac{1}{2}} - 81692_{3\frac{1}{2}}$				0	
2496.85		2	40038.39							
2495.63	5	20	40057.96	−0.06 −0.09	$\mathit{32981}^{\circ}_{1\frac{1}{2}} - 73039_{0\frac{1}{2}}$ $53404_{2\frac{1}{2}} - \mathit{93463}^{\circ}_{3\frac{1}{2}}$					
2495.05	4	3	40067.27							
2493.64	3	10	40089.93	−0.06	$\mathit{37516}^{\circ}_{3\frac{1}{2}} - 77606_{2\frac{1}{2}}$				0	
2491.15	3	5	40130.00	+0.01	$52517_{5\frac{1}{2}} - \mathit{92647}^{\circ}_{5\frac{1}{2}}$					
2488.92		3	40165.95							
2487.08	1	3	40195.66	+0.07	$\mathit{31568}^{\circ}_{2\frac{1}{2}} - 71763_{1\frac{1}{2}}$					
2484.89	5	20	40231.09	−0.08 +0.03	$\mathit{30562}^{\circ}_{5\frac{1}{2}} - 70793_{5\frac{1}{2}}$ $(\mathit{33052}^{\circ}_{4\frac{1}{2}} - 73283_{4\frac{1}{2}})$	6	(1.112)	1.20	0.49	
2481.42	1	3	40287.34	−0.02	$\mathit{40917}^{\circ}_{4\frac{1}{2}} - 81205_{4\frac{1}{2}}$					
2481.36		2	40288.32	+0.07	$53720_{4\frac{1}{2}} - \mathit{94008}^{\circ}_{3\frac{1}{2}}$					
2481.03	1	2	40293.67	−0.03	$53715_{3\frac{1}{2}} - \mathit{94008}^{\circ}_{3\frac{1}{2}}$					
2479.29		2	40321.95	+0.05	$\mathit{28757}^{\circ}_{1\frac{1}{2}} - 69079_{2\frac{1}{2}}$					
2479.15	1	5	40324.23	−0.06	$59090_{3\frac{1}{2}} - \mathit{99414}^{\circ}_{4\frac{1}{2}}$					
2477.76		1	40346.85							
2476.62		2	40365.42	−0.03	$\mathit{37516}^{\circ}_{3\frac{1}{2}} - 77882_{3\frac{1}{2}}$					
2475.92		2	40376.83							
2474.52	2	1	40399.67	+0.16	$49498_{2\frac{1}{2}} - \mathit{89897}^{\circ}_{1\frac{1}{2}}$					
2474.27	1	3	40403.75	−0.08	$\mathit{21418}^{\circ}_{3\frac{1}{2}} - 61822_{3\frac{1}{2}}$					
2473.95		1	40408.98	+0.09	$\mathit{32371}^{\circ}_{2\frac{1}{2}} - 72779_{3\frac{1}{2}}$					
2473.16		2	40421.89	0.00	$\mathit{40035}^{\circ}_{3\frac{1}{2}} - 80457_{3\frac{1}{2}}$					
2471.06	2	3	40456.24	+0.01	$22960_{1\frac{1}{2}} - \mathit{63417}^{\circ}_{2\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2470.85		2	40459.67	+0.06	$53404_{2\frac{1}{2}} - \mathit{93864}^{\circ}_{2\frac{1}{2}}$					
2469.89	1	2	40475.40							
2469.52		1	40481.46							
2467.24		2	40518.87	−0.08 −0.01	$52517_{5\frac{1}{2}} - \mathit{93036}^{\circ}_{5\frac{1}{2}}$ $54304_{0\frac{1}{2}} - \mathit{94823}^{\circ}_{1\frac{1}{2}}$					
2466.63	5	20	40528.89	−0.10	$\mathit{37077}^{\circ}_{2\frac{1}{2}} - 77606_{2\frac{1}{2}}$	6				
2465.13		2	40553.55	−0.05	$\mathit{37516}^{\circ}_{3\frac{1}{2}} - 78070_{4\frac{1}{2}}$					
2464.59	1	10	40562.43							
2463.79		1	40575.60							
2463.35	2	4	40582.85	−0.02	$53720_{4\frac{1}{2}} - \mathit{94303}^{\circ}_{3\frac{1}{2}}$					
2463.04		1	40587.96							
2462.71		1	40593.40	−0.16	$53404_{2\frac{1}{2}} - \mathit{93998}^{\circ}_{1\frac{1}{2}}$					
2461.98		2	40605.43							
2461.83		1	40607.90	−0.09	$52938_{1\frac{1}{2}} - \mathit{93546}^{\circ}_{2\frac{1}{2}}$					
2461.40	3	10	40615.00	+0.01	$53720_{4\frac{1}{2}} - \mathit{94335}^{\circ}_{5\frac{1}{2}}$					
2460.25	10	40	40633.98	+0.03	$\mathit{31568}^{\circ}_{2\frac{1}{2}} - 72202_{3\frac{1}{2}}$	7	(0.86)	0.86	0	0.86
2460.00	1	1	40638.11	+0.06	$24332_{2\frac{1}{2}} - \mathit{64970}^{\circ}_{3\frac{1}{2}}$					
2459.93	1	4	40639.27	−0.02	$53720_{4\frac{1}{2}} - \mathit{94360}^{\circ}_{4\frac{1}{2}}$					
2458.22		2	40667.54							
2457.73		2	40675.64	−0.06	$\mathit{32981}^{\circ}_{1\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
2456.74		1	40692.03							
2456.35		1	40698.49	−0.12	$\mathit{33052}^{\circ}_{4\frac{1}{2}} - 73750_{4\frac{1}{2}}$					
2456.08		6	40702.97							
2455.97		3	40704.79							
2454.75	1	10	40725.02	−0.02	$52517_{5\frac{1}{2}} - \mathit{93242}^{\circ}_{5\frac{1}{2}}$					
2454.52	3	20	40728.83	−0.01	$52517_{5\frac{1}{2}} - \mathit{93246}^{\circ}_{6\frac{1}{2}}$					
2453.51		2	40745.60	−0.01	$\mathit{32371}^{\circ}_{2\frac{1}{2}} - 73116_{1\frac{1}{2}}$					
2451.94	2	3	40771.69							
2451.15		1	40784.83	+0.02	$\mathit{38342}^{\circ}_{4\frac{1}{2}} - 79126_{4\frac{1}{2}}$					
2450.26	3	5	40799.64							
2449.71	1	3	40808.80	−0.01	$47912_{3\frac{1}{2}} - \mathit{88721}^{\circ}_{3\frac{1}{2}}$					
2449.45		2	40813.13							
2447.26	3	10	40849.65	+0.09	$\mathit{28757}^{\circ}_{1\frac{1}{2}} - 69607_{2\frac{1}{2}}$					
2446.41		1	40863.84							
2445.92	1	2	40872.03							
2444.64		2	40893.43	+0.02	$\mathit{27061}^{\circ}_{0\frac{1}{2}} - 67955_{0\frac{1}{2}}$					
2443.74		2	40908.49	−0.02	$49301_{4\frac{1}{2}} - \mathit{90209}^{\circ}_{4\frac{1}{2}}$					
2442.64	1	3	40926.91							
2440.01		1	40971.02							
2439.72		2	40975.89							

TABLE 6. Yb II — *Observed and classified lines* — Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2439.59	3	5	40978.07	+0.15	$49301_{4\frac{1}{2}} - 90279^{\circ}_{5\frac{1}{2}}$					
2437.24	4	7	41017.58							
2436.87	1	2	41023.81	−0.03	$53404_{2\frac{1}{2}} - 94428^{\circ}_{1\frac{1}{2}}$					
2436.06		5	41037.45	+0.11	$57765_{4\frac{1}{2}} - 98802^{\circ}_{5\frac{1}{2}}$					
2434.02		2	41071.84							
2433.74		1	41076.56	+0.09	$30392^{\circ}_{1\frac{1}{2}} - 71468_{2\frac{1}{2}}$					
2433.62	1	3	41078.59							
2433.16	1	2	41086.35							
2433.05		1	41088.21							
2432.62	2	3	41095.47							
2432.01		2	41105.78							
2431.69		1	41111.19	−0.06	$35059^{\circ}_{3\frac{1}{2}} - 76170_{2\frac{1}{2}}$					
2429.01	1	10	41156.55	−0.05	$48556^{\circ}_{3\frac{1}{2}} - 89713_{2\frac{1}{2}}$					
2428.74		1	41161.12	−0.06	$34389^{\circ}_{2\frac{1}{2}} - 75550_{2\frac{1}{2}}$					
2428.30		1	41168.58							
2428.12		6	41171.63							
2427.66		1	41179.43							
2427.20		1	41187.23							
2426.19		1	41204.38							
2425.68		1	41213.04	−0.03	$41678^{\circ}_{2\frac{1}{2}} - 82891_{2\frac{1}{2}}$					
2424.61	4	6	41231.23	+0.06	$22960_{1\frac{1}{2}} - 64191^{\circ}_{1\frac{1}{2}}$					
2423.96		1	41242.28	−0.05	$48900_{3\frac{1}{2}} - 90142^{\circ}_{3\frac{1}{2}}$					
2422.84	10	20	41261.35	−0.02	$24332_{2\frac{1}{2}} - 65594^{\circ}_{2\frac{1}{2}}$					
2421.35	10	50	41286.74	+0.05	$38342^{\circ}_{4\frac{1}{2}} - 79628_{3\frac{1}{2}}$	4	(1.09)	1.12	w	1.00
2420.03	1	4	41309.25	−0.01	$48900_{3\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
2419.41		1	41319.84							
2419.20		2	41323.42							
2418.38		2	41337.44	−0.06	$33653^{\circ}_{0\frac{1}{2}} - 74991_{1\frac{1}{2}}$					
2417.01		3	41360.86	−0.17	$49498_{2\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$					
2415.39		2	41388.60							
2414.33	2	6	41406.77	−0.01	$24332_{2\frac{1}{2}} - 65739^{\circ}_{2\frac{1}{2}}$					
2413.77		2	41416.38	0.00	$49301_{4\frac{1}{2}} - 90717^{\circ}_{4\frac{1}{2}}$					
2413.66	1	5	41418.27	+0.05	$53404_{2\frac{1}{2}} - 94823^{\circ}_{1\frac{1}{2}}$					
2409.44		1	41490.80	+0.01	$52938_{1\frac{1}{2}} - 94428^{\circ}_{1\frac{1}{2}}$					
2409.06		5	41497.35							
2407.98		1	41515.96							
2407.76		1	41519.75							
2406.79		1	41536.48							
2406.09	1	10	41548.57	−0.06	$31568^{\circ}_{2\frac{1}{2}} - 73116_{1\frac{1}{2}}$					
2403.41		4	41594.89	+0.01	$34575^{\circ}_{1\frac{1}{2}} - 76170_{2\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2402.71		2	41607.01							
2399.93		1	41655.20							
2398.02	40	20	41688.38	−0.07	$0_{0\frac{1}{2}} - 41688^{\circ}_{1\frac{1}{2}}$					
2397.87		3	41690.98	−0.11	$26759^{\circ}_{2\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
2397.73		3	41693.42	−0.07	$47912_{3\frac{1}{2}} - 89605^{\circ}_{4\frac{1}{2}}$					
2397.34		1	41700.20							
2390.74	20*R*	70	41815.31	−0.05	$21418^{\circ}_{3\frac{1}{2}} - 63234_{2\frac{1}{2}}$	4	(1.143)	1.20	*w*	1.01
2390.57	2	8	41818.29	−0.06	$52517_{5\frac{1}{2}} - 94335^{\circ}_{5\frac{1}{2}}$					
2389.18		3	41842.61	−0.04	$52517_{5\frac{1}{2}} - 94360^{\circ}_{4\frac{1}{2}}$					
2388.40	2	7	41856.28	−0.03	$24332_{2\frac{1}{2}} - 66189^{\circ}_{1\frac{1}{2}}$					
2386.75		2	41885.21	+0.04	$52938_{1\frac{1}{2}} - 94823^{\circ}_{1\frac{1}{2}}$					
2385.94		1	41899.43	+0.05	$32371^{\circ}_{2\frac{1}{2}} - 74270_{2\frac{1}{2}}$					
2385.01	1	5	41915.77	+0.05	$35831^{\circ}_{5\frac{1}{2}} - 77747_{4\frac{1}{2}}$					
2383.44		1	41943.37							
2382.98		2	41951.47							
2382.57	1	10	41958.69	+0.03	$48900_{3\frac{1}{2}} - 90859^{\circ}_{2\frac{1}{2}}$					
2380.39	2	15	41997.11	+0.09	$26759^{\circ}_{2\frac{1}{2}} - 68756_{3\frac{1}{2}}$					
2375.18		3	42089.23	+0.02	$31568^{\circ}_{2\frac{1}{2}} - 73657_{1\frac{1}{2}}$					
2374.74		1	42097.02							
2374.52	1	5	42100.92	−0.02	$34575^{\circ}_{1\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
2374.32		3	42104.47	−0.03	$49498_{2\frac{1}{2}} - 91602^{\circ}_{2\frac{1}{2}}$					
2373.89	2	20	42112.10	−0.02	$37516^{\circ}_{3\frac{1}{2}} - 79628_{3\frac{1}{2}}$	7	(1.119)	1.10	0	1.11
2373.06		7	42126.82							
2371.64		1	42152.04							
2369.59		2	42188.51	0.00	$22960_{1\frac{1}{2}} - 65149^{\circ}_{0\frac{1}{2}}$					
2369.42		50	42191.53							
2366.97		2	42235.20	−0.04	$49301_{4\frac{1}{2}} - 91536^{\circ}_{3\frac{1}{2}}$					
2364.10		2	42286.47	−0.08 +0.11	$34389^{\circ}_{2\frac{1}{2}} - 76676_{2\frac{1}{2}}$ $53404_{2\frac{1}{2}} - 95691^{\circ}_{3\frac{1}{2}}$					
2363.49	1	9	42297.38	+0.02	$47912_{3\frac{1}{2}} - 90209^{\circ}_{4\frac{1}{2}}$					
2362.89	10	60	42308.12	+0.04	$21418^{\circ}_{3\frac{1}{2}} - 63726_{4\frac{1}{2}}$					
2362.30		1	42318.69							
2358.67		2	42383.81	+0.08	$47329^{\circ}_{2\frac{1}{2}} - 89713_{2\frac{1}{2}}$					
2357.84	1	7	42398.73	0.00	$31568^{\circ}_{2\frac{1}{2}} - 73966_{3\frac{1}{2}}$					
2355.03		1	42449.32	+0.08	$34389^{\circ}_{2\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
2350.06		2	42539.08	+0.03	$21418^{\circ}_{3\frac{1}{2}} - 63957_{3\frac{1}{2}}$					
2349.39		7	42551.21	+0.09	$37077^{\circ}_{2\frac{1}{2}} - 79628_{3\frac{1}{2}}$					
2347.41		1	42587.10							
2344.66	4	20	42637.05	−0.02	$21418^{\circ}_{3\frac{1}{2}} - 64055_{2\frac{1}{2}}$					
2344.09	4	7	42647.41	+0.03	$30392^{\circ}_{1\frac{1}{2}} - 73039_{0\frac{1}{2}}$					

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2340.78		1	42707.72	+0.01	$47005^{\circ}_{1\frac{1}{2}}-89713_{2\frac{1}{2}}$					
2340.40	1	6	42714.65	+0.05	$49301_{4\frac{1}{2}}-92015^{\circ}_{4\frac{1}{2}}$					
2339.61		1	42729.07	−0.09	$30562^{\circ}_{5\frac{1}{2}}-73291_{5\frac{1}{2}}$					
2336.83		1	42779.90							
2335.44	2	10	42805.36	+0.13 +0.16	$47912_{3\frac{1}{2}}-90717^{\circ}_{4\frac{1}{2}}$ $49498_{2\frac{1}{2}}-92303^{\circ}_{3\frac{1}{2}}$					
2335.11		1	42811.41							
2332.28		1	42863.35	0.00 +0.10	$33653^{\circ}_{0\frac{1}{2}}-76517_{1\frac{1}{2}}$ $38342^{\circ}_{4\frac{1}{2}}-81205_{4\frac{1}{2}}$					
2331.56		1	42876.59							
2330.39		1	42898.11							
2328.06		1	42941.04	−0.08	$37516^{\circ}_{3\frac{1}{2}}-80457_{3\frac{1}{2}}$					
2327.74		3	42946.94	+0.18	$47912_{3\frac{1}{2}}-90859^{\circ}_{2\frac{1}{2}}$					
2327.38		1	42953.59							
2326.92	1	10	42962.08							
2323.18		4	43031.23	+0.02	$34575^{\circ}_{1\frac{1}{2}}-77606_{2\frac{1}{2}}$					
2323.02		1	43034.20							
2322.63		1	43041.42							
2321.38		1	43064.60							
2320.81	200*A*	150	43075.17	+0.08	$0_{0\frac{1}{2}}-43075^{\circ}_{1\frac{1}{2}}$	4	2.01	0.95	0.53	0.41
2318.65		2	43115.30	−0.05	$48900_{3\frac{1}{2}}-92015^{\circ}_{4\frac{1}{2}}$					
2315.20	3	10	43179.54	+0.01	$21418^{\circ}_{3\frac{1}{2}}-64598_{3\frac{1}{2}}$					
2312.59	1	3	43228.27	+0.07	$22960_{1\frac{1}{2}}-66189^{\circ}_{1\frac{1}{2}}$					
2311.18		1	43254.64							
2309.54	2	5	43285.35	+0.11	$34784^{\circ}_{5\frac{1}{2}}-78070_{4\frac{1}{2}}$					
2307.39	1	6	43325.68	+0.05	$47912_{3\frac{1}{2}}-91237^{\circ}_{3\frac{1}{2}}$					
2306.30		2	43346.16	−0.02	$49301_{4\frac{1}{2}}-92647^{\circ}_{5\frac{1}{2}}$					
2303.28		2	43402.98	+0.15	$48900_{3\frac{1}{2}}-92303^{\circ}_{3\frac{1}{2}}$					
2303.16		1	43405.25	−0.08	$31568^{\circ}_{2\frac{1}{2}}-74973_{3\frac{1}{2}}$					
2298.67		2	43490.02	−0.01	$31568^{\circ}_{2\frac{1}{2}}-75058_{2\frac{1}{2}}$					
2297.91		4	43504.40	+0.04	$21418^{\circ}_{3\frac{1}{2}}-64923_{4\frac{1}{2}}$					
2296.63		2	43528.65							
2292.83		4	43600.78	−0.04	$24332_{2\frac{1}{2}}-67933^{\circ}_{2\frac{1}{2}}$					
2292.19		3	43612.96	−0.03	$49301_{4\frac{1}{2}}-92914^{\circ}_{4\frac{1}{2}}$					
2291.61		1	43623.99	−0.10	$47912_{3\frac{1}{2}}-91536^{\circ}_{3\frac{1}{2}}$					
2288.96	2	10	43674.49	+0.10	$21418^{\circ}_{3\frac{1}{2}}-65093_{3\frac{1}{2}}$					
2288.14		1	43690.15	−0.08	$47912_{3\frac{1}{2}}-91602^{\circ}_{2\frac{1}{2}}$					
2285.79		4	43735.06	−0.08	$49301_{4\frac{1}{2}}-93036^{\circ}_{5\frac{1}{2}}$					
2284.99		30	43750.37							
2283.40	3	9	43780.83	+0.04	$21418^{\circ}_{3\frac{1}{2}}-65199_{4\frac{1}{2}}$					
2279.44		1	43856.88							

TABLE 6. Yb II—*Observed and classified lines*—Continued

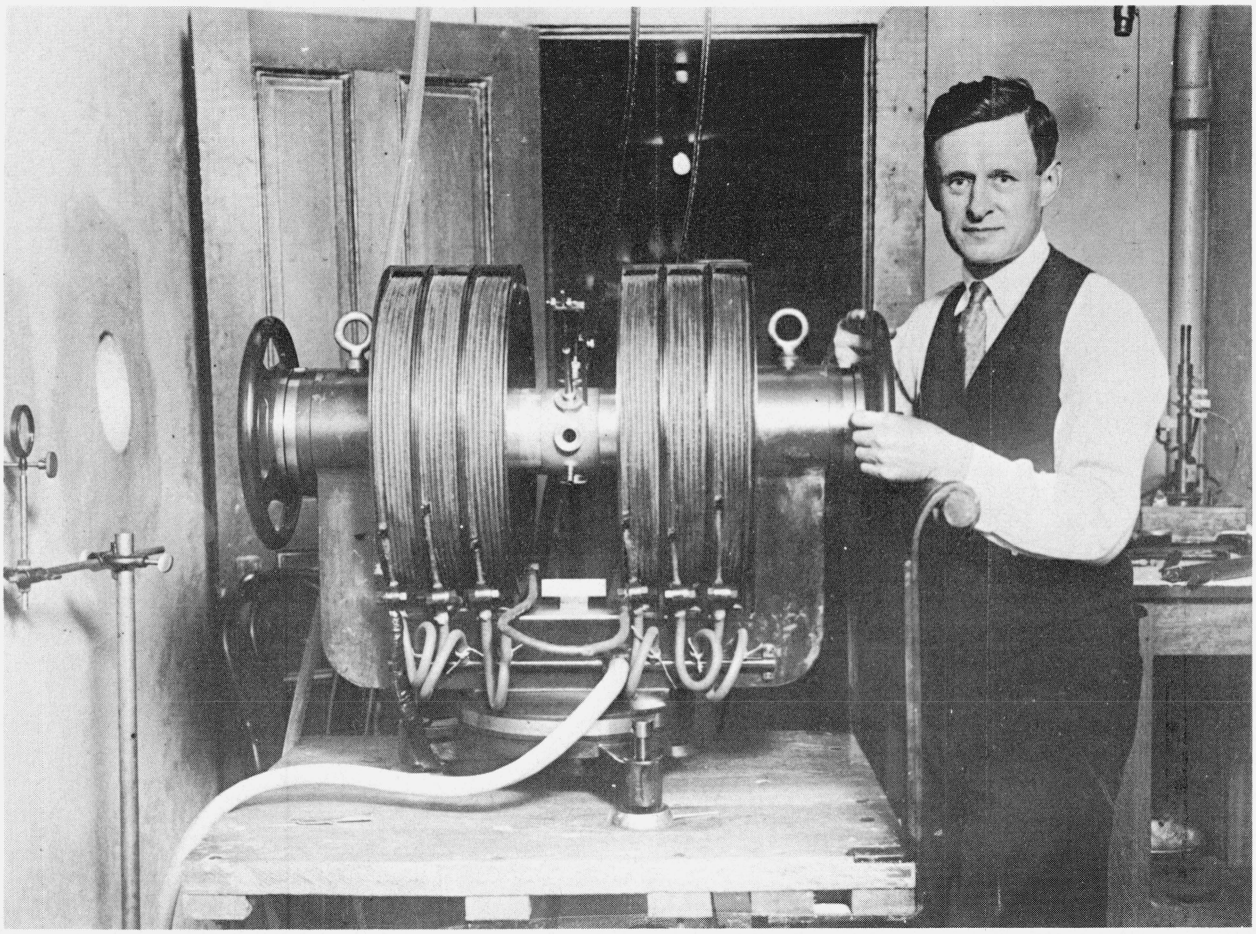
1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2276.11		1	43921.04							
2275.07		3	43941.12	−0.11	$49301_{4\frac{1}{2}} - 93242^{\circ}_{5\frac{1}{2}}$					
2271.31		1	44013.85	+0.11	$48900_{3\frac{1}{2}} - 92914^{\circ}_{4\frac{1}{2}}$					
2269.57		1	44047.59							
2268.57		4	44067.01							
2268.31		3	44072.06	+0.08	$31568^{\circ}_{2\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
2267.16		3	44094.41							
2263.89		1	44158.10							
2263.12		3	44173.12							
2255.48		3	44322.73							
2253.97		1	44352.42							
2253.27		2	44366.20							
2251.93		1	44392.60							
2243.18		1	44565.74							
2237.51		2	44678.67							
2224.89		1	44932.07							
2224.46	100	80	44940.75	+0.14	$0_{0\frac{1}{2}} - 44940^{\circ}_{1\frac{1}{2}}$	4	(2.00)	1.24	0.38	?
2222.25		1	44985.44							
2216.20		1	45108.23	0.00	$31568^{\circ}_{2\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
2214.68		3	45139.19	−0.06	$21418^{\circ}_{3\frac{1}{2}} - 66558_{3\frac{1}{2}}$					
2213.06		1	45172.23							
2211.91		1	45195.71							
2203.11		2	45376.22							
2201.20		3	45415.59	−0.14	$30224^{\circ}_{4\frac{1}{2}} - 75640_{3\frac{1}{2}}$					
2189.45		6	45659.29							
2185.71	100	80	45737.41	+0.12	$0_{0\frac{1}{2}} - 45737^{\circ}_{1\frac{1}{2}}$	?	(2.00)	1.32	0.34	?
2178.70		4	45884.56							
2174.28	1	3	45977.83	+0.04	$27061^{\circ}_{0\frac{1}{2}} - 73039_{0\frac{1}{2}}$					
2169.79		2	46072.96							
2165.21		3	46170.40							
2161.60	10	40	46247.50							
2160.20		6	46277.47							
2159.89		1	46284.12	+0.04	$30392^{\circ}_{1\frac{1}{2}} - 76676_{2\frac{1}{2}}$					
2155.50		30	46378.37							
2155.20		3	46384.82							
2152.32		3	46446.88	+0.11	$30392^{\circ}_{1\frac{1}{2}} - 76839_{2\frac{1}{2}}$					
2148.94		2	46519.93	0.00	$21418^{\circ}_{3\frac{1}{2}} - 67938_{3\frac{1}{2}}$					
2142.21		2	46666.06							
2137.71		4	46764.28							
2135.27		3	46817.72							

TABLE 6. Yb II—*Observed and classified lines*—Continued

1	2	3	4	5	6	7	8	9	10	11
Wave-length air	Intensity		Wave number	o–c	Classification	Zee-man type	1st g	2nd g	Zeeman components	
	Meggers lamp	Thomson lamp							Strong p	Strong n
Å			K	K						
2131.40	6	5	46902.72	+0.01	$0_{0\frac{1}{2}} - 46902^{\circ}_{0\frac{1}{2}}$					
2126.74	100	80	47005.47	+0.01	$0_{0\frac{1}{2}} - 47005^{\circ}_{1\frac{1}{2}}$					
2125.57		4	47031.34	−0.02	$21418^{\circ}_{3\frac{1}{2}} - 68450_{3\frac{1}{2}}$					
2120.36		3	47146.89	−0.04	$31979^{\circ}_{3\frac{1}{2}} - 79126_{4\frac{1}{2}}$					
2117.62		6	47207.89	+0.10	$26759^{\circ}_{2\frac{1}{2}} - 73966_{3\frac{1}{2}}$					
2116.67	100	80	47229.07	+0.11	$0_{0\frac{1}{2}} - 47228^{\circ}_{0\frac{1}{2}}$					
2102.73	5	20	47542.14							
2022.03		2	49439.31	−0.12	$21418^{\circ}_{3\frac{1}{2}} - 70858_{4\frac{1}{2}}$					
2021.36		2	49455.70							
2018.08		2	49536.06							

[a] Line is a blend of Yb I and Yb II.
[b] Parentheses in column 6 denote masked lines.
[c] $J = 0\frac{1}{2}$ assumed in deriving g-values for λ 8093.030.
[d] Observed Zeeman Effect and classification are discordant.
[e] For λ 7362.920 $J = 1\frac{1}{2}$, 1st g; $0\frac{1}{2}$ 2nd g.
For λ 3736.901 $J = 0\frac{1}{2}$, 1st g; $1\frac{1}{2}$ 2nd g.

(Paper 71A6–470)



W. F. Meggers shown in 1925 with the electromagnet used by him in his pioneering application of the Zeeman effect to the interpretation of atomic spectra.