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Temperature Classification of the Spectra of Dysprosium (Dy I , Dy II)

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The Temperature Classifications are listed for 4584 lines of Dy I and Dy II, as taken from an unpublished manuscript of the late A. S. King. In recording his observations, King used a wavelength list compiled mostly from the early literature. A homogeneous and extensive line list based on new observations has been prepared at the Lawrence Radiation Laboratory (LRL). King's data have been edited and adjusted by the present authors to fit the new wavelength list.

In the Table, King's estimated intensities of Dy lines in the spectra of the Arc, Spark, and Furnace are given along with the Temperature Classification. Some of his earlier published work has been used to fill the gaps in this manuscript, which was forwarded to the late W. F. Meggers in 1956.

Key words: Intensity estimates, Dy spectra; dysprosium spectra, temperature classification; temperature classification, Dy I and Dy II; spectra, Dy I and Dy II.

Upon completion of Volume III of "Atomic Energy Levels" in 1958 attention was focused more sharply on rare-earth spectra in preparation for Volume IV, the last of the series. Many of these spectra are complex and have overlapping configurations. The early observations are so fragmentary that it has been necessary to observe the spectra with modern sources and prepare new, homogeneous line lists having spectra of different stages of ionization clearly separated.

In addition, two types of observations are particularly helpful with the interpretation, namely Zeeman Effect and Temperature Classification. The latter subject is uniquely associated with the name of the late A. S. King, who initiated and carried out the extensive program at the Mount Wilson Observatory on estimated line intensities observed in Arc and Spark Spectra and in Furnace Spectra at various temperatures, for many elements. His numerous papers on this subject have helped to lay the foundation of our present knowledge of the structure of complex spectra. An excellent illustration may be found in his work on Gd spectra [1][1], which enabled H. N. Russell to extend the analyses without the aid of Zeeman data [2].

The present paper is concerned with the first and second spectra of the rare-earth element Dy ($Z=66$), for which new line lists are available and, also, an extensive list of Temperature Classifications by A. S. King which was unpublished at the time of his death. With the cordial support of R. B. King, the present authors have felt that the material should be published without further delay. They have assembled the data in Table A, which contains in the first two columns, respectively, the new wavelengths and the spectrum, from the list prepared at the Lawrence Radiation Laboratory (LRL). The following columns are from A. S. King's material; they contain, respectively, his estimated intensities in the Arc, Spark, and High, Medium and Low Temperature Furnace Spectra and the Temperature Classification. The last column contains special notes.

The LRL Line List. The two authors from LRL (J.G.C. and E.F.W.) have selected from their extensive line list the wavelengths and spectral assignments that correspond to the lines observed by King.

The spectra were photographed with the 9.15m Spectrograph at Argonne National Laboratory [3]. The sources were electrodeless lamps containing $^{162}DyI_3$ prepared and operated as described in references [4] and [5]. The plates were measured on a Grant comparator with photoelectric setting. A thorium comparison spectrum provided the standards. A description of the wavelength reductions may be found in the paper by F. S. Tomkins and M. Fred [6]. The wavelengths are standard air values. They have been rounded off to three decimal places and are listed in column 1 of Table A. The standard deviation ranges from about ± 0.001 Å at 3000 Å to ± 0.01 Å at 9375 Å.

Two methods were used to separate Dy I and Dy II lines: (1) the comparison of relative intensities of lines emitted by electrodeless lamps operated at low and high pressure [5]; (2) the comparison of lines emitted by a spark between Dy metal electrodes and by an electrodeless lamp operated at high Dy vapor pressure. The LRL assignment of the spectrum is entered in column 2 of Table A.

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

The King Line List. This list extends from 3000 Å to 9375 Å. It was forwarded by A. S. King to W. F. Meggers in hand-written manuscript form, in April 1956, evidently with the idea of assisting with the analyses of these complex Dy spectra. Some years later Meggers expressed his desire to one of the present authors (C.E.M.) to have the paper published, but he wished to fill a gap in the observations from λ3807 to λ3903 before publishing it. He did not live to accomplish this. The present authors have utilized two of King's earlier papers [7] and [8] to help cover this gap and another one from λ3407 to λ3463.

A few general remarks about the 1956 list are available from correspondence. In a letter to Meggers dated April 4, 1956, King states that "In the first section, λ3000–3800, I did not try to pick out Dy II lines, but I think the criterion will be that Dy I lines maintain their strength in the furnace better than Dy II lines. At higher wavelengths the difference is more pronounced, and I have made the distinction in the 'Class' column."

In a later letter he writes "The λ's are in general those of Eder throughout the spectrum, in order to have a basic list. Major λ lists are those of J. M. Blank . . . and Harrison, from M.I.T. λ's. . . . The section 3900–4700 was photographed in the second order and is improved in number of lines by later first-order spectrograms. However, the data from the second-order plates [7] can be used with little change except for improved wavelengths . . .".

A considerable amount of editing has been done in fitting the earlier King list to the later much more complete LRL line list. In many cases the disagreement in wavelength is large, amounting in some cases to tenths of an Ångstrom. In fact, within the King line list itself, for a given line several wavelengths are occasionally entered that differ appreciably. These appear to be taken from the earlier literature. Lines for which discrepancies in wavelength exist between the two line lists are indicated by note 3 in the last column of Table A. This note is used for differences exceeding ±0.05 Å in case King lists the wavelength to two decimals, and for differences exceeding ±0.1 Å when he lists the wavelength to only one decimal. In spite of large tolerances in Δλ, it is felt that the fitting of the lines from the LRL list to the King list is essentially reliable.

Most of the published papers on Temperature Classification of rare-earths contain only Arc and Furnace intensities. In earlier papers, however, such as one on Ti, King describes in detail the temperature stages and estimated intensities as observed in the High, Medium, and Low Temperature Furnace [9]. In the case of Dy, Arc intensities (column 3, Table A) are given for all lines, and High Temperature Furnace intensities (column 5) for most lines. Intensities from the Medium and Low Temperature Furnace (columns 6 and 7)-exposures are given for only a few of the strongest lines. The Spark intensities in column 4 are all from [7], as indicated by note 1. This reference has been used, also, for two gaps in the 1956 list: λλ3407 to 3463 and λλ3809 to 3831. Users are reminded that in these intervals the intensity scales may not fit smoothly with the rest of Table A.

For lines appearing in both the 1956 list and in reference [7], the arc intensities are the same in many cases; for these the published spark intensity [7] is quoted in Table A, Column 4. In case the 1956 arc intensity differs from that in the 1943 list, the spark intensity published in [7] has been adjusted approximately to the 1956 scale and entered in parentheses in Table A. Examples are as follows:

	λ	Arc	Spark	λ	Arc	Spark
Ref. 7	3849.388	25	25	4111.343	125	80
1956		15			150	
Table A		15	(15)		150	(100)

The gap from λ3836 to λ3902 has been covered in Table A as completely as possible by material from King's 1930 paper [8]. Again, the scale may not fit smoothly on to that of his 1956 ledger, but note 2 in the last column indicates to users that this break exists in the 1956 list. The High Temperature Furnace intensities given in the 1956 list supersede those of 1943 except for the gaps mentioned above.

All lines in the 1943 paper [7] are lines of Dy II according to King. With only one or two exceptions this agrees with the LRL listing. For these lines "E" has been entered in Table A in column 8, which contains the Temperature Classification assigned by A. S. King.

Braces are included in column 8 for lines indicated by King to be double or triple, but unresolved in his list. For example, the pair at λ6879.015 to λ6879.157 is clearly resolved in Table A, but the intensity estimates apply to one line in King's list.

A number of lines are blends of Dy I and Dy II. For example, the estimated intensities of the pair at λ5471.913 and λ5471.961 are entered as blends in Table A. An asterisk in column 5 or 6 indicates that the intensity in the High or Medium Temperature Furnace applies to the Dy I line.

General Comments. A number of King's lines have been omitted from Table A. They fall into three categories: (1) lines for which an Arc intensity is given but no Furnace intensity or Temperature Classification is entered; (2) lines not seen on the new spectrograms used for the LRL list; (3) lines rejected as impurities.

For those lines in King's list where there is a Furnace intensity but no Temperature Classification, a Classification has been added in column 8, on the basis of King's assignments for similar lines and in accordance with the known analysis. Parentheses indicate throughout the entries that have been furnished by the present authors, i.e. entries not taken from the 1956 or earlier lists by King.

The total number of lines in Table A is 4584. Had King lived to edit his list and compare it with the new line list from LRL, the present contribution could have been improved and greatly extended. An earnest effort has been made to interpret and present his data as reliably as possible.

This work could not have been done without the friendly encouragement of R. B. King, which is greatly appreciated. The authors are, also, most grateful to Isabel D. Murray for her painstaking care in preparing the press copy of the Table.

TABLE A. *Temperature classification of dysprosium lines*

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
3001.088	I	4					V	
3001.649	II	2					V	
3002.384	II	30	25				VE	1
3002.862	II	3					V	
3003.756	II	40	20				VE	1
3004.178	II	4					V	
3005.045	II	1					V	
3005.935	II	4					V	
3007.032	II	5					V	
3007.526	II	2					V	
3008.814	II	10					V	
3010.034	II	2					V	
3011.157	II	1					V	
3012.296	II	2					V	
3012.629	II	3					V	
3013.363	II	2					V	
3013.452	II	2					V	
3013.698	II	4					(V)	
3014.279	I	1		5			IV	
3015.068	II	30	25				VE	1
3015.684	II	60	50				VE	1
3016.598	II	1					V	
3016.951	II	40	60				VE	1
3017.720	II	3					V	
3018.272	II	1					V	
3018.956	II	1					V	
3020.340	II	3					V	
3021.780	II	8					V	
3022.087	II	3					V	
3022.627	II	3					V	
3023.053		1					V	3
3024.604	II	1					V	
3025.412	II	1					V	
3025.588	II	25		1			IV	
3025.746	II	5					V	
3026.157	II	150	60	15			IVE	1
3027.337	II	2					V	
3027.562	II	8					V	
3028.453	II	2					V	
3028.912	II	1					V	
3029.314	II	1					V	
3029.813	II	50	80				VE	1
3030.064	II	1					V	
3030.397	II	15					V	
3030.786	II	1					V	
3031.194	II	10					V	
3031.532	II	1					V	
3031.923	II	1					V	
3032.522	II	1					V	
3032.820	II	1					V	
3033.194	II	20					V	
3033.822	II	1					V	
3034.484	II	3					V	
3035.033	II	1					V	
3035.944	II	1					V	
3036.698	II	30	15	2			IVE	1
3037.387	II	2					V	
3038.285	II	300	300	5			IVE	1
3039.804	II	1					V	
3040.262	II	10					V	
3041.638	II	12					V	
3042.087	II	5					V	
3042.238	II	2					V	
3043.135	II	80	80	2			IVE	1
3043.426	II	30	20	1			IVE	1
3043.540	II	10					V	
3044.541	II	8					V	
3045.231	II	1					V	
3046.318	II	1	2				IV	
3046.379		5						
3046.736	II	3					V	
3047.560	II	60	50	2			IVE	1
3048.224	II	6					V	
3048.394	II	8					V	
3049.119	II	40	30	2			IVE	1
3049.638	II	1					V	
3050.499	II	3					V	
3051.239	II	1					V	
3051.454	II	60	20	5			IVE	1
3051.818	I			3			IV	3
3052.318	II	40	60				VE	1
3052.731	II	3					V	
3053.198	II	1					V	
3053.686	II	1					V	
3054.427		1					V	
3054.672	II	4					V	
3055.126	II	1					V	
3055.858	II	1					V	
3056.964	II	20					V	
3057.118	II	4					V	
3058.178	II	1					V	
3058.793	II	3					V	
3059.473	II	15					V	
3060.019	II	20					V	
3060.312	II	8					V	
3060.644	II	80	80	1			VE	1
3061.365	II	30	30				VE	1
3061.492	II	20	15				VE	1
3062.185	II	20					V	
3062.616	II	100	80	10			IVE	1
3063.248	II	1					V	
3063.547	II	1					V	
3063.880	II	2*d*					V	
3064.034	II	10					V	
3064.565	II	3					V	
3065.174	II	4					V	
3065.633	II	2					V	
3066.986	II	60	60	1			VE	1
3067.437	II	3					V	
3068.938	II	6					V	
3069.695	II	10					V	
3070.458	II	8					V	
3071.908	II	80	40	15			IVE	1
3072.380	II	2					V	
3072.735	II	4					V	
3072.916	II	8					V	
3073.539	II	80	80	2			IVE	1
3073.999	II	2					V	
3074.391	II	1					V	
3075.074	II	4					V	
3075.178	II	2					V	
3075.500	II	6					V	
3075.894	II	5					V	
3076.344	II	1					V	

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TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
3076.888	II	20		4			IV	
3078.207	I	15		5*			IV	3
3078.330	II							
3078.682	II	80	60	2			IVE	1
3079.329	II	50	40	1			VE	1
3080.006	II	2					V	
3080.282	II	4					V	
3080.918	II	15					V	
3081.911	II	1					V	
3082.510	II	50	15	6			IVE	1
3083.443	II	2					V	
3083.557	II	2					V	
3084.468	II	3					V	
3084.641	II	15*d*					V	
3084.684	II	3					V	
3085.783	II	3					V	
3086.627	II	12					V	
3087.511	II	10		1			IV	
3088.206	II	1					V	
3088.412	II	5					V	
3088.970	II	1					V	
3089.416	II	2					V	
3089.597	II	10					V	
3089.775	II	4					V	
3090.188	II	10					V	
3090.529	II	2					V	
3090.818	I	1		4			IV	
3090.872	I							
3091.930	I	2		2			IV	
3092.216	II	1					V	3
3093.101	II	60	20	2			IVE	1
3093.458	II	1					V	
3093.730	I	25		1*			IV	3
3093.822	II							
3094.543	II	3					V	
3095.024	II	10					V	
3095.615	II	4					V	
3095.745	II	40	30				VE	1
3096.290	II	2					V	
3096.898	II	2					V	
3096.995	I	3?		2*			IV	3
3097.278	II	1						
3097.579	II	3					V	
3097.655	II	1					(V)	
3098.037	II	10					V	
3098.523	II	3					V	
3098.566	II	1					(V)	
3099.908	I	1		2			IV	3
3100.915	II	6					V	
3101.381	II	2					V	
3101.878	II	20	80	20			IIIE	1
3101.932	II	50						1
3102.197	II	8					V	
3102.786	II	1					V	
3103.240	II	60	30	15			IIIE	1
3103.828	II	60	60	4			IVE	1
3104.109	II	10		1			IV	
3104.992	II	40	50				VE	1
3106.046	II	1					V	
3106.619	II	1					V	
3106.970	II	5		2*			V	3
3107.041	I							
3108.241	II	1					V	3
3109.295	II	4					V	
3109.760	II	150	100	10			IVE	1
3110.315	II	2					V	
3110.715	I	15		2*			IV	
3110.745	II							
3111.544	II	4					V	
3111.854	II	2					V	
3112.080	II	3					V	
3112.778	I	5		1*			IV	3
3112.870	II							
3113.104	II	10		3*			IV	3
3113.179	I							
3113.441	II	1					V	
3114.297	I	1					V	
3115.660	II	1					V	
3115.921	II	3					V	
3116.426	II	1					V	
3116.867	II	5					V	
3117.423	II	2					(V)	3
3117.504	II	20					V	
3117.960		1					(V)	
3117.986	II	8					V	
3118.648	II	1					V	
3118.963	II	2					V	
3119.450	II	1					V	
3120.180	II	80	80	1			VE	1
3120.509	II	3		1			IV	
3121.423	II	1					V	
3121.987	II	6					V	
3122.115	II	4					(V)	
3122.452	I	3*d*		15			IV	
3122.943	II	3					V	
3123.004	II	1					(V)	
3124.896	II	2					V	
3126.196	II	50	30	2			IVE	1
3126.714	I	6		1*			IV	3
3126.801	II							
3127.259	II	5					V	
3127.475	II	4					V	
3128.406	II	150	125	5			IVE	1
3128.757	II	5					V	3
3129.302	I	3		20			IV	
3129.764	II	1					V	
3130.154	II	8					V	
3130.561	II	2					V	
3131.204	II	2					V	
3131.467	II	1					V	
3132.121	II	6					V	
3132.600	II	3					V	
3132.663	II	2					(V)	
3133.026	II	6					V	
3133.499	II	1					V	
3133.815	I	2		25			III	
3134.474	II	2					V	
3135.385	II	500	500	30			IVE	1
3135.690	II	6					V	
3136.011	I	1		20			III	3
3136.394	II	2					V	
3136.692	II	10		1			IV	
3137.558	II	1					V	
3138.127	II	4*d*					V	

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes	Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace							Arc	Spark	Furnace				
				High	Medium	Low							High	Medium	Low		
3138.965	II	2					V		3168.637	II	5					V	
3139.497	II	5					V		3168.954	I	6		30			IV	
3139.887	II	2					V		3169.558	II	8					V	
3140.036	II	3					V		3169.994	II	300	100	100			IIIE	1
3140.413	II	4					V		3170.102	II	40?					V	
3140.642	II	150	150	5			IVE	1	3170.750	II	40	40	1			IVE	1
3141.140	II	200	60	40			IIIE	1	3170.971	II	20		2			IV	
3141.934	II	1					V		3171.471	II	20		2			IV	3
3142.295	II	40	40	1			IVE	1	3172.086	II	4					V	
3142.624	I			5			IV	3	3172.426	I	2		1			IV	
3143.176	II	15					V		3172.694	II	2					V	
3143.835	II	50	50	1			IVE	1	3173.017	II	2					V	3
3144.224		1					V	3	3173.366	II	1					V	3
3144.500	II	1					V		3174.017	II	3					V	
3145.218	II	25		6			III		3174.284	II	1					V	
3146.160	II	60	80	2			IVE	1	3174.883	II	30		1			IV	
3146.544	II	1					V		3175.538	II	1					V	3
3146.885	II	3		1			IV		3176.125	II	2					V	
3147.531	II	30	30				VE	1	3176.462	II	4					V	
3147.694	I	1		20			III		3176.709	II	3					V	
3148.164	II	1					V		3177.213	II	1					V	
3149.075	II	3					V		3177.522	II	10					V	
3149.277	II	3					V		3177.888	II	125	125	2			IVE	1
3149.872	II	8					V		3178.374	II	60	20	15			IIIE	1
3150.172	II	25					V		3179.030	II	8					V	
3150.470	II	6					V		3180.274	II	3					V	
3150.663	I	4		5			IV		3180.692	II	5					V	
3151.310	II	2					V		3181.089	II	3					V	
3151.527	I	2		1			IV		3181.636	II	3					V	3
3151.890	II	50	25	5			IVE	1	3181.939	II	15		3			IV	
3152.223	II	8					V		3182.482	II	2					V	
3152.374	II	30					V		3183.195	II	8					V	
3153.312	II	20					V		3183.946	II	2					V	3
3153.828	I	1		10			IV	3	3184.190	II	5					V	
3154.068	II	5					V		3184.271	II	10					V	3
3154.526	II	3					V		3184.552	II	} 4		1*			IV	3
3154.659	II	5					V		3184.600	I							
3155.380	II	1					V		3184.787	II	40	25	10			IVE	1
3156.522	II	500	500	20			IIIE	1	3185.405	I	} 2		1*			IV	3
3157.206	II	8					V		3185.464	II							
3157.551	II	15					V		3185.967	II	1					V	
3157.976	II	3					V		3186.377	II	80	60	4			IVE	1
3158.249	II	2					V		3187.246	II	5					V	
3159.289	I	5		3			IV		3187.680	II	60	60	2			IVE	1
3159.304	II	3					V		3188.372	II	2					V	
3159.750	II	1					V		3188.666	II	5					V	
3159.962	II	1					V		3189.067	II	5					V	
3160.503	II	40	15	5			IVE	1	3189.803	II	4		·			V	
3161.031	II	20		2			IV		3190.108	II	1					V	
3161.314	II	1					V		3190.180	II	3					V	
3162.833	II	250	250	10			IVE	1	3190.656	II	4					V	
3163.457	II	1					V		3191.561	II	1					V	
3164.041	II	10					V		3192.035	II	} 5		1*			IV	3
3164.134	II	15		1			IV		3192.139	I							
3164.917	II	6					V		3192.222	II	2					V	
3165.264		1					V	3	3192.695	II	2					V	
3165.616	I	1		5			(IV)		3193.304	II	80	25	25			IIIE	1
3166.304	II	2					V	3	3193.659	II	3					V	
3166.832	II	1					V	3	3193.868	II	3					V	
3167.471	II	25					V		3194.445	II	1					V	
3167.850	II	15		1			IV	3	3194.799	II	1					V	
3168.151	II	20		3			IV		3195.886	II	3					V	

TABLE A. *Temperature classification of dysprosium lines* – Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes	Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace							Arc	Spark	Furnace				
				High	Medium	Low							High	Medium	Low		
3196.278	I	} 4		2*			IV	3	3223.840	II	1					V	3
3196.429	II								3224.075	II	3					V	
3197.067	II	1					V		3224.595	II	1					V	
3197.595	II	5					V		3225.079	II	25	} 15	10			{ IVE	1
3198.148	I	1*d*		4			IV		3225.153	II	10					{ IVE	
3198.787	II	2					V		3225.367	II	2					V	
3199.233	II	8		1			IV		3225.947	II	80	60	6			IVE	1
3199.587	I	3		8			IV		3226.380	II	15					V	
3200.321	I	} 1		3*			IV	3	3227.033	II	1					V	
3200.632	II								3227.419	II	2					V	
3200.926	II	} 1		3*			IV	3	3227.499	II	2					V	3
3201.196	I								3227.712	II	5					V	
3201.301	II	15		2			IV		3228.154	II	2					V	
3201.660	II	20		1			IV		3228.598	I	1					V	
3202.218	I	2		10			IV		3228.972	II	15					V	
3202.597	II	20					V		3229.363	II	15					V	
3202.848	II	8					V		3229.748	II	1					V	
3203.339		1					V		3229.939	II	20		8			IV	
3203.842	II	5					V		3230.320	II	6					V	
3204.299	I	6		2			IV		3230.663	I	1					V	
3204.357	II	3					V		3230.950	II	1					V	
3204.944	II	3					V		3231.076	II	1					V	
3205.459	II	30					V		3231.291	II	1					V	
3206.405	II	80	80	1			VE	1	3232.092	II	5					V	
3206.642	II	20					V		3232.154	II	3					V	
3207.123	II	60	60	3			IVE	1	3232.645	II	30		8			IV	
3207.340	II	2					V		3233.413	II	3					V	
3207.774	II	1					V		3234.093	II	5					V	
3208.312	II	5					V		3234.416	I	2					IV	
3208.813	II	} 80	60	5			IVE	1	3235.085	II	1					IV	
3208.847	II								3235.360	II	1					V	3
3209.284	II	8		1			IV		3235.816	II	120	} (100)	8			{ IVE	3
3210.066	II	2					V		3235.894	II	100					{ IVE	1
3210.333	I	3		2			IV		3236.078	II	4					V	
3210.724	II	1					V		3236.693	II	80	80	6			IVE	1
3212.045	II	20		1			IV		3237.089	II	5		1			IV	
3212.443	II	15					V		3237.857	II	1					V	
3212.683	II	20					V		3238.170	II	4					V	
3213.173	II	} 4					V		3238.290	II	4					IV	3
3213.205	II								3238.693	II	6					IV	
3213.587	II	1					V		3238.800	II	6					IV	3
3213.706	I	2		3			IV		3239.190	II	1					V	
3214.633	II	25		3			IV		3239.457	II	2					V }	3
3215.193	II	125	125	10			IVE	1	3239.585	II	6					V }	
3215.978	II	6		1			IV		3240.037	II	8					V	
3216.237	II	3					V		3240.385	II	2					V	
3216.627	II	150	200	12			IVE	1	3240.721	II	4					V	
3217.151	II	1					V		3240.861	II	30	30	1			IVE	1
3217.377	II	15					V		3241.309	II	3					V	
3218.012	II	1					V		3241.717	II	1					V	
3218.779	II	1					V		3242.088	II	2*d*					V	
3218.839	II	2					V		3242.292	II	2					V	
3219.542	II	8					V		3242.498	II	6					V	
3220.128	II	5					V		3243.119	II	2					V	
3220.464	II	25					V		3243.723	II	} 15*d*					V	
3221.069	I	1		4			IV		3243.784	II							
3221.494	II	50	50	1			IVE	1	3244.189	II	2					V	
3221.637	II	50*d*	25	3			IVE	1	3244.797	I	1		6			IV	
3221.884	II	6					V		3245.124	II	100	(100)	3			IVE	1
3222.550	II	1					V		3245.666	II	} 1		3*			IV	3
3222.875	II	2					V		3245.741	I							
3223.284	II	80	80	4			IVE	1	3245.877	II	4					V	

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
3246.178	II	2					V	
3246.685	II	4					V	
3246.802	I	1		5			IV	3
3247.272	II	1					V	
3248.359	II	50	40	1			IVE	1
3248.893	II	2					V	
3249.331	II	2					V	
3249.414	II	2					V	
3249.904	II	1					V	
3249.994	II	1					IV	
3250.548	II	2					V	
3250.987	II	6		1*			IV	
3251.084	I							3
3251.268	II	300	300	15			IVE	1
3251.376	I	20		10*			IV	
3251.407	II							
3251.898	II	50	25	2			IVE	1
3252.189	II	50	50	2			IVE	1
3252.638	II	1					V	
3253.223	II	1					V	
3253.366	II	1					V	
3253.573		1					V	
3253.910	II	12					V	
3254.483	II	15		1			IV	
3255.148	I	2		3*			IV	3
3255.241	II							
3255.666	I	1		6			IV	3
3256.259	II	80	60	1			IVE	1
3257.174	I	15		6*			IV	3
3257.226	II							
3257.366	II	20					IV	
3258.039	II	2					V	
3258.283	II	2					V	
3258.890	II	1					V	
3260.021	II	3		8?			IV?	
3260.701	II	50	25	10*			IVE	1
3260.718	I							
3261.008	II	2					V	
3261.215	II	30	40				VE	1
3261.607	II	1					V	
3261.954	II	2					V	
3262.042	II	4		1			IV	
3262.278	II	6		1			IV	
3263.076	II	3					V	
3263.186	I	1		10			IV	
3263.581	II	1					V	
3263.908	II	1					V	
3264.300	II	5		1			IV	
3264.744	II	4					V	
3265.159	II	4					V	
3265.523	II	10		2			IV	
3265.998	II	60	80	1			IVE	1
3266.024	II							
3266.210	II	80	125	1			IVE	1
3266.608	II	1					V	
3267.259	II	1					V	
3267.756	II	8		1			IV	
3267.787	II							
3268.075	II	3					V	
3268.278	II	6					V	
3268.644	I	2		2			IV	
3269.108	II	100	30	15			IVE	1
3269.540	II	3					V	
3269.947	II	1					V	
3270.444	II	1					V	
3270.939	II	3					V	
3271.307	II	2		2*			IV	3
3271.426	I							
3271.666	II	1					V	
3272.032	II	4					V	
3272.090	II	10					V	
3272.730	II	80	60	1			IVE	1
3272.961	I			15			IV	3
3273.624	II	1					V	
3274.208	II	1					V	
3274.570	II	1					V	3
3274.609	II	1					V	
3274.962	II	2					V	
3275.743	II	30					V	
3275.928	II	40		2			IV	
3276.176	II	1					V	
3276.839	II	1					V	3
3277.588	II	6					V	
3277.646	II	4					V	
3278.330	II	6					V	
3278.396	II	1					V	3
3278.587	II	1					V	
3279.453	II	30					V	
3279.511	II							
3279.696	II	80	60	4			IVE	1
3280.092	II	250	100	30			IIIE	1
3280.442	II	1					V	
3280.664	II	2					V	
3280.982	II	1					V	
3281.650	II	10		1			IV	
3282.059	II	1					V	
3282.504	II	3					V	
3282.775	II	100	150	1			VE	1
3283.083	I			30			?	3
3283.158	II	6		2			IV	
3283.556	II	2					V	
3283.714	II	4		2			IV	
3283.743	II							
3284.008	II	3					V	
3284.256	II	1					V	3
3284.365	II	8					V	
3284.862	I	3		3			IV	
3284.878	II	2					V	
3285.443	II	1					V	
3285.635	II	1					V	
3286.151	II	2					V	
3286.575	II	10		5			IV	
3287.096	I							
3287.154	II	2*d*		2*			IV	
3287.170	II							
3287.621	I	1		2*			IV	3
3287.807	II							
3287.944	II	50	30	1			VE	1
3288.624	I	30		10			IV	
3289.103	I	6		1*			IV	
3289.144	II							
3289.336	II	5					V	
3289.969	I	1		6			IV	
3290.213	II	1					V	

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
3290.647	II	1					V	
3291.121	II	15					V	
3292.168	I	1		3			IV	
3292.615	II	3					V	
3293.426	II	1					V	
3293.805	II	40	15	8			IVE	1
3293.876	II	2					V	
3294.203	II	2					V	
3294.670	II	1					V	
3294.916	II	6d					V	
3294.976	II							
3295.202	II	5					V	
3295.405	II	2					V	
3295.606	II	1					V	
3295.830	I	2		6			IV	
3295.875	II			4			V	
3296.302	II	40	30	1			VE	1
3296.868	II	1					V	
3297.175	II	2					V	
3297.603	II	30	40	4			IVE	1
3298.038	II	1					V	
3298.245	II	10		3*			IV	3
3298.362	I							
3299.149	II	4		1*			IV	
3299.208	I							
3299.856	II	1					V	
3300.310	II	1					V	
3300.923	II	15					V	
3301.490	II	2					V	
3301.723	II	3					V	
3302.016	II	2					V	
3302.062	I	1					V	
3302.401	II	5					V	3
3302.470	II	2					V	
3303.170	II	2					V	
3303.183	II							
3303.667	II	2					V	
3303.715	II	1					V	3
3304.012		1					V	
3304.069	II	1					V	
3304.294	II	6					V	
3304.706	II	1					V	
3305.400	II	40	30	1			IVE	1
3305.513	II	50	40	1			IVE	1
3306.188	II	50	50	1			IVE	1
3306.794	II	4					V	
3307.427	II	1					V	
3308.057	II	3					V	
3308.287	I	1		6			IV	
3308.794	II	150	100	3			IVE	1
3308.884	II	300	200	10			IVE	1
3309.392	II	1					V	
3309.863	II	1					V	
3310.732	II	1					V	
3310.967	II	10					V	
3311.263	II	1					V	
3311.513	II	5					V	
3312.328	II	3					V	
3312.719	II	100	50	15			IVE	1
3312.931	I	3		2*			IV	3
3313.023	II							
3313.150	II	4					V	
3313.312	II	15					V	
3313.854	II	1					V	
3313.990	II	1					V	
3314.212	I			4			IV	
3314.583	II	1d					V	
3314.949	II	15		1			V	
3315.480	II	3					V	
3315.742	II	4					V	
3316.316	II	150	60	20			IVE	1
3316.672	II	4					V	
3317.116	II	40	30	6			IVE	1
3317.565	II	6d					V	
3317.601	II							
3318.128	I	10		2			IV	
3318.174	II	2					IV	
3318.206	II							
3318.424	I	8		1*			IV	
3318.483	II							
3318.728	II	2					V	
3319.038	II	1					V	
3319.424	II	8					V	
3319.682	II	3					V	
3319.878	II	400	100	40			IVE	1
3320.060	I	1		6			IV	3
3320.878	II	1					V	
3321.033	II	4					V	
3321.435	II	1					V	
3321.878	II	2					V	
3322.309	II	1					V	
3322.925	II	1					V	
3323.275	I	10		3			IV	
3323.396	I	1		1			(IV)	3
3323.715	II	3					V	
3323.932	II	8					V	
3323.962	II							
3324.174	II	10					(V)	
3324.215	II	3					(V)	
3324.282	II	5					(V)	3
3324.872	II	2					V	
3325.277	II	4					V	
3325.505	II	2					V	
3325.590	II	4					V	
3325.867	II	1					V	
3326.192	II	50	25	8			IVE	1
3326.419	II	8?					V	
3326.521	II	6					V	3
3326.987	II	1					V	3
3327.084	II	20	(7)	5			IVE	1
3327.297	II	12					V	
3327.793	II	2d					V	
3327.932	II	4		1			IV	
3328.796	II	15		2			IV	
3329.308	II	1					V	
3329.798	II	1					V	3
3330.204	II	2					V	
3330.599	II	10					V	
3331.196	II	4					V	
3331.275	II	12		2			IV	
3332.046	II	3					V	
3332.778	II	3					V	
3333.037	II	2					V	
3333.547	II	5					V	

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
3333.980	I			4			IV	3
3334.137	II	30	25	1			IVE	1
3334.448	II	15					V	
3334.861	I	6		3			IV	
3335.460	II	2*d*					V	
3335.826	II	8					V	
3335.973	II	2*d*					V	
3336.029	II							
3336.515	II	1					V	
3336.654	I	3		3			IV	3
3336.833	II	1		1			IV	
3337.114	II	4					V	
3337.789	II	4					V	3
3338.026	II	2					V	
3338.224	II	3					V	
3338.613	I	4		1			V	
3339.066	II	1					V	
3339.509	II	50	30	8			IVE	1
3340.404	II	1					V	3
3340.614	II	20		2			IV	
3340.995	II	200	200	12			IVE	1
3341.429	I	40	10	10*			(IV)	
3341.445	II						IVE	1
3341.545	II	2					V	
3341.885	II	80	30	12			IVE	1
3342.616	I	6		2*			IV	
3342.644	II							
3343.166	II	1					V	
3343.367	II	2					V	
3343.510	II	4		4*			IV	
3343.524	I							
3343.769	I	2		6			IV	3
3344.483	I	4		5			IV	
3344.826	II	1					V	
3345.372	II	10					V	
3345.798	II	10					V	
3346.144	II	12					V	
3346.641	I	5		1*			IV	
3346.662	II							
3347.258	II	2					V	
3347.828	II	40	30	4			IVE	1
3348.027	II	10					V	
3348.876	II	4					V	
3349.589	II	1					V	
3350.298	II	3		1			IV	
3350.659	II	5					V	
3350.965	II	3					V	
3351.286	II	2					V	
3351.736	I	1		5			V	
3352.217	II	6					V	
3352.688	II	50	60	1			VE	1
3353.234	II	2					V	3
3353.586	II	125	50	25			IVE	1
3353.913	II	1					V	
3354.211	II	4					V	
3354.686	I	1		5			IV	
3355.015	II	6					V	
3355.063	II	10					V	
3355.340	II	3					V	
3355.593	II	5					V	
3356.212	II	40	40	1			IVE	1
3356.478	II	2					V	
3356.752	II	2*d*					V	
3357.311	I	1		2			IV	
3357.600	II	4		1			IV	
3357.922	II	3					V	
3358.224		15		2			IV	
3358.300		15		2			IV	
3358.602	II	50	15	10			IVE	1
3358.952	II	4					V	
3359.094	II	2					V	
3359.462	II	40	40	1			IVE	1
3360.124	I	1					V	
3360.218	II	1					V	
3360.560	II	1					V	
3360.654	II	5					V	
3360.936	I	1		5			IV	
3361.141	II	1					V?	3
3361.414	II	4					V	
3361.612	II	2					V	
3361.846	II	1		3			IV	
3362.170	II	4					V	
3362.568	II	2		3*			IV	
3362.600	I							
3362.911	II	1					V	
3363.382		8		1			IV	
3363.481	II	3					(V)	
3363.946	II	1					V	
3364.099	I	12		10*			IV	3
3364.337	II							
3364.624	II	2					V	
3365.020	II	2					V	
3365.155	II	1					V	
3365.806	II	30	30	1			IVE	1
3366.235	II	3					V	
3366.703	II	1					V	
3367.207	II	4					V	
3367.527	II	10		1			IV	
3368.106	II	150	50	40			IVE	1
3368.524	II	2					V	
3368.640	II	1					V	3
3369.283		10		1			IV	
3369.638		8		1			IV	
		2						
3369.935	I	2		1*			IV	
3370.030	II							
3370.098	II							
3370.373	II	4		1			IV	
3370.851	II	40	50	1			IVE	1
3370.222	II	1					V	
3371.512	II	2					V	
3371.692	II	40	40	1			IVE	1
3371.806	II	40	40	2			IVE	1
3372.116	I	1		8			IV	
3372.312	II	2					V	
3372.779	II	8					V	
3373.781	II	2					V	3
3374.291	II	8					V	
3374.958	II	1					V	
3375.254	II	1					V	
3375.739	II	20		1			IV	
3375.998	II	15		3			IV	
3376.183	II	2					V	
3376.296	II	10					V	

TABLE A. *Temperature classification of dysprosium lines* – Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes	Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace							Arc	Spark	Furnace				
				High	Medium	Low							High	Medium	Low		
3376.370	II	10					V		3397.726	I	1		2			IV	
3376.548	I			6			IV		3397.962	I	3		5*			IV	
3376.620	II	15					V		3397.979	II							
3376.927	II	1					V	3	3398.324		12		2			IV	
3377.101		10		3			IV		3398.789	II	5					V	
3377.236	II	1					V		3399.057	I	12*d*		8*			IV	3
3377.744	II	2		2*			IV		3399.175	II							
3377.788	I								3399.357	II	8					V	
3378.207	II	20		1			IV		3399.586	II	1					V	
3378.416	II	40	30	4			IVE	1	3399.954	I			6			IV	3
3378.879	II	25	40	8			IVE	1	3400.432	II	3					V	
3379.085	II	1					V	3	3400.913	II	4		1			IV	
3379.458	I			3			IV		3401.278	II	6					V	
3379.906	II	4					V		3401.687	I	2		10	1		III	
3380.164	II	3					V		3401.980	II	10		8*			IV	
3381.538	II	20		1			IV		3402.009	I							
3381.917	II	10					V		3402.264	II	1					V	
3382.345	II	1					V		3402.461	II	2					V	
3382.718	II	5					V		3402.732	II	6					V	3
3383.409	I	1		8			IV	3	3402.870	II	4					V	
3383.670	II	1					V		3403.176	I	20		4*			IV	3
3384.017		10		1			(IV)	3	3403.244	II							
3384.092	II	8					(V)		3403.428	II	15					V	
3384.126	II	4					(V)		3403.810	II	1					V	
3384.797	I	10		8			IV	3	3404.600	II	1					V	
		3							3404.944	I	5		15*			IV	
3385.015	II	600	400	100	5		IIIE	1	3404.987	II	20						
3385.674	II	1					V		3405.314	II	1		1			IV	
3386.348	I			5			IV		3405.496	II	6		1			IV	
3386.568	II	60	80	1			VE	1	3405.653	II	25		6			IV	
3386.967		3		1			IV		3406.758	II	8		1			IV	
3387.212	II	15		1			IV		3406.911	II	2					V	
3387.272	II								3407.159	II	40	30	10			IVE	1
3387.780	II	12		1			IV		3407.596	II	1					V	
3388.076	II	10		1			IV		3407.795	II	800	500	150			E	1
3388.366	II	1					V		3408.144	II	60	60	2			E	1
3388.850	II	100	60	15			IVE	1	3413.785	II	150	80	40			E	1
3389.444	II	20*d*					V		3414.821	II	40	30	5			E	1
3389.832	II	1					V		3417.129	II	20	20	1			E	1
3390.084	II	1					V		3418.103	II	20	20	1–			E	1
3390.513	II	2					V		3419.631	II	50	40	5			E	1
3390.786	II	5					V		3422.864	II	25	25	1			E	1
3391.056	II	30		3			(IV)		3425.056	II	50	20	6			E	1
3391.162	II	25		1			IV		3429.443	II	60	60	3			E	1
3391.280	II	4					V		3431.788	II	30	30	1–			E	1
3391.620	II	1					V		3432.575	II	25	15	4			E	1
3391.966	II	30		1			IV		3434.368	II	250	150	60			E	1
3392.517	I			4			IV		3438.944	II	40	40	1			E	1
3392.772	II	4					V		3440.928	II	60	80	2			E	1
3392.822									3441.447	II	150	60	25			E	1
3392.973	II	5					V		3445.574	II	300	150	80			E	1
3393.363		15		3			IV		3446.993	II	60	40	6			E	1
3393.568	II	400	250	80	4		IIIE	1	3449.892	II	30	20	5			E	1
3393.979	II	25		1			IV		3454.318	II	200	150	40			E	1
3394.443	II	1					V		3454.510	II	40	40	2			E	1
3394.841	II	4		1			IV		3456.559	II	125	80	10			E	1
3395.493	II	1					V		3460.968	II	300	150	60			E	1
3396.157	II	200	150	50			IVE	1	3463.873	II	20	10	3			E	1
3396.562	I	1		3			IV		3468.430	II	60	40	8			IVE	1
3396.800	II	2					IV		3468.562	II	6					V	
3396.863		4		1					3468.784	II	10		1			IV	
3397.445	I	1		3			IV										

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
3469.132	II	2					V	
3469.148	II							
3469.882	II	5					V	
3470.176	II	15		1			IV	
3470.198	II							
3470.577	I	1		3			IV	3
3471.077	II	60*d*	40	6			IVE	1
3471.138	II							
3471.527	II	40	20	3			IVE	1
3471.606	II	50	30	5			IVE	1
3471.803	I	4		8	6		III	
3471.951	II	5					V	
3472.242	II	6					V	
3472.595	II	1					V	
3472.927	I	4		4*			IV	
3472.946	II							
3473.300	II	5		1*			IV	
3473.360	I							
3473.696	II	50	40	6			IVE	1
3474.269	II	30*d*	50	8			IVE	1
3474.296	II							
3474.703	II	3		1			IV	
3475.336	II	3					V	
3475.414	II	2					V	
3475.657	II	4					V	
3476.363	II	8					V	
3476.723	II	6					V	
3477.067	II	150	100	50			IVE	1
3477.400	II	2					V	
3477.528	II	4					V	
3477.927	II	10		1			IV	
3478.177	I	3		25	5		III	
3478.283	II	6					V	
3478.478	II	10		1			IV	
3478.761	II	3					V	
3478.877	I	1		6			IV	
3479.417	II	2					V	
3479.760	II	6		1			IV	
3480.050	II	1					IV	
3480.419	II	8		2			IV	
3480.811	II	20	20	3			IVE	1
3481.144	II	1					V	
3481.604	I	3		1*			IV	
3481.623	II							
3482.102	II	20*d*					V	
3482.400	II	1					V	
3482.433	I	1					V	
3482.772	II	10					V	
3483.073	II	1					V	
3483.315	I	3		8			IV	
3483.556	II	1					V	
3484.190	I	3*d*		15	2		III	
3484.522	II	8					V	
3484.676	II	40	30	3			IVE	1
3484.881	II	5					V	
3485.408	II	1					V	
3485.436	II	3					V	
3485.660	II	1					V	
3485.918	II	20		1			IV	
3486.146	II	3					V	
3486.945	II	3					V	
3487.197		15		3			IV	
3487.570	II	30*d*?	40	3			IVE	1
3487.605	II							
3487.921	II	1					V	
3488.192	I	3		8			IV	3
3488.308	II	2					(V)	
3488.859	II	4					V	
3488.994	II	10		1			IV	
3489.543	I	2		10			IV	
3489.897	II	2					V	
3490.649	II	10					V	
3490.880	II	3					(V)	
3490.945	II	2					V	
3491.286	II	4					V	
3492.299	I	2		2			IV	
3492.503	II	4					V	
3493.086	II	3					V	
3493.243	I	3		6			IV	
3493.637	II	1					V	
3493.946	II	3					V	
3494.127	II	15	(15)	1	2		IVE	1
3494.491	II	300	150	100			IVE	1
3494.742	I	3		15			IV	
3495.322	II	3					V	
3496.228	II	4					V	
3496.339	II	50	30	10			IVE	1
3496.712	II	3		1			IV	
3497.113	I	2		1*			IV	
3497.134	II							
3497.343	II	1		1*			IV	
3497.378	I							
3497.813	II	40	25	3			IVE	1
3498.172	I	1		1			IV	
3498.707	II	100	40	5			IVE	1
3498.934	II	30	15	8			IVE	1
3499.620	I	4		1			IV	
3499.862	II	10		1			IV	
3499.964	I	8		3			IV	
3500.512	II	5		5			IV	
3500.812	II	1					V	
3501.288	II	1					V	
3501.429	II	4	(4)				VE	1
3501.859	II	10		1			IV	
3502.091	I	4		4			IV	
3502.143	II	6					(V)	
3502.640	I	2		2			IV	
3502.847	I	3		1			IV	
3503.025	II	2					V	
3503.174	II	20*d*		3			IV	
3503.238	II							
3503.365	II	3					V	
3503.663	II	2					V	
3503.784	II	1						3
3504.116	II	1					V	3
3504.498	II	80*d*?	80	8			IVE	1
3504.529	II							
3504.936	II	4					V	
3505.171	II	3					V	
3505.420	II	50	40	8			?E	1
3505.453	II			5				
3505.561	II	3					V	
3505.844	II	20	10	5			IVE	1
3506.038	II	2					V	
3506.247	II	3		1			IV	

TABLE A. *Temperature classification of dysprosium lines* – Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
3506.638	II	1					V	
3506.813	II	150	50	30			IVE	1
3507.534	II	2		2*			IV	
3507.694	I							
3508.031	I	1		1*			IV	3
3508.095	II							
3509.012	II	3					V	
3509.231	II	20		3			IV	3
3509.434	II	4					V	
3510.053	II	3					V	
3510.155	II	3					V	
3510.872	II	2					V	
3511.014	I	5		25	15	5	II	
3511.368	II	2					V	
3511.685	II	20		1			IV	
3511.974		4		1			IV	
3512.078	II	4					V	
3512.556	II	20	20	1			IVE	1
3512.699	II	30	40	1			VE	1
3513.046	II	2					V	
3513.208	II	2					V	
3513.516	I			5			IV	
3513.734	II	2					V	
3513.891	I	3		4			IV	
3514.131	II	5					V	
3514.536	II	1		1*			IV	
3514.591	I							3
3514.732	I	1		1*			IV	3
3514.795	II							
3515.097	I	2		3			IV	
3515.614	II	4					(V)	
3515.769	I	1		25	3		III	
3516.112		1					V	
3516.511	II	1					V	
3517.050		1					V	3
3517.261	II	60	50	8			IVE	1
3517.625	I	2		8			IV	
3517.934	II	1					V	
3518.721	II	1					IV	
3519.104	II	1					V	
3519.665	II	6					(V)	
3519.765	II	6					(V)	
3519.903	II	8					(V)	
3520.349	II	1					V	
3521.157	I	15		25	6		III	
		20						
3521.491	I	4		3			IV	3
3521.879	II	6		1			IV	
3521.897	II							
3522.277	II	10*d*		2			IV	
3522.672	II	2					V	
3522.861	II	15		3			IV	
3523.208	II	2?		15	1*		IV	
3523.254	I	2						
3523.455	I	1		10	2		III	
3523.982	II	400	300	100	2		IVE	1
3524.574	II	2					IV	
3524.633	I	6		3			IV	
3524.930	II	8?*d*					V	
3525.746	II	15		3			IV	
3526.566	II	2					(V)	
3526.637	II	5					V	
3526.839	II	4					(V)	
3526.905	II	8					V	
3527.088	II	8		10	3*		III	
3527.178	I							3
3527.707	I	1		15	1		IV	3
3527.993	II	6		1			IV	
3528.472	II	2					V	
3528.861	I	3		1*			IV	
3528.896	II							
3529.030	II	6					V	
3529.148	II	15					V	
3529.563	II	1		2			IV	
3530.047		1					V	
3530.371	I	2		20	4		III	
3530.566	II	8					V	
3530.954	II	3					V	
3531.706	II	2000	1500	500	100	5	IIIE	1
3532.427	I	4		1			IV	
3532.536	I	3		1			IV	
3532.884	I	1		3			IV	
3533.262	I	1		3			IV	
3533.638	I	3		5*			IV	
3533.749	II							
3534.033	I	4		15	4		III	
3534.450	II	20		4*			IV	
3534.508	I							
3534.959	II	200	100	80	8		IIIE	1
3535.186	II	2					V	
3535.630	II	2					V	
3536.019	II	400	400	80	3		IVE	1
3536.512	II	15					(V)	
3536.585	I	2		3			(IV)	
3536.860	II	2					V	
3537.174	II	1					V	
3537.665	II	6					IV	
3537.763	I	2		3			IV	
3538.056	II	1					V	
3538.517	II	300	150	100	6		IIIE	1
3538.852	II	1					V	
3539.368	II	30	20	15*			IVE	1
3539.386	I							
3539.643	II	10		1			IV	
3539.896	I	4		4			IV	
3540.232	I	2		5			IV	3
3540.687	II	8		1			IV	
3541.301	II	3		1			IV	
3541.579	II	1					V	
3541.824	II	4		1			IV	
3542.327	II	150	100	30			IVE	1
3542.420	I			4			IV	3
3542.865	II	5		1			IV	
3543.132	II	2					V	
3543.826	II	3					V	
3544.038	II	4					V	
3544.204	II	25	20	4			IVE	1
3544.347	II	20	20	3			IVE	1
3544.992		30		4			IV	
3545.259	II	1					V	
3545.625	II	2					V	
3545.768	II	5					V	
3546.002	II	1					V	
3546.105	II	1					V	

TABLE A. *Temperature classification of dysprosium lines* – Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
3546.831	II	100	50	50	2		IVE	1
3547.008	II	3					V	
3547.538		10		1			IV	
3547.912	II	1					(V)	
3547.962	I	6		6	3		III	3
3548.192	II	15	(15)	2			IVE	1
3548.717	II	8		1			IV	
3549.248		8		2			IV	
3550.218	II	300	200	80	2		IVE	1
3550.986	II	2					V	
3551.148	I	5		6			IV	
3551.616	II	150	100	30			IVE	1
3552.021	II	2	3				IV	
3552.289	II	1					V	
3553.160	II	2	4	4			IV	
3553.208		2						
3554.855	II	2					V	
3555.328	I	2		3			IV	
3555.677	II	3					V	
3555.970	II	10		1			IV	
3556.420		1					V	
3556.550	I	1		1			IV	3
3556.842	I	2		8*			IV	3
3557.010	II							
3557.181	I	2		10			IV	
3557.622	II	10		1			IV	
3558.117	II	2					V	
3558.232	II	8		5			IV	
3558.511	I	3		3			IV	
3559.295	II	15		2			IV	
3559.564		1		1			IV	
3560.139	II	10		4*			IV	
3560.207	I							
3560.409	II	1		5			IV	
3561.263	II	2					V	3
3562.696		5		2			IV	
3563.148	II	200	100	40	1		IVE	1
3563.395	I	1		3			IV	
3563.692	II	40	50	3			IVE	1
3564.237	I	8		15			IV	
3564.561	II	2					V	
3564.768	II	1					V	
3565.116	II	1					V	
3565.269	II	1					V	3
3565.686		5		1			IV	
3566.055	II	4					V	
3566.099	II	1					V	
3566.561	II	2					V	
3566.785	I	2		3			IV	
3566.886	II	2					V	
3567.299	I	3		1			IV	
3567.620	I	1		4			IV	
3568.035	II	3					V	
3568.363	II	5					V	
3568.408	II	3					V	
3568.727	I	1		8			IV	
3568.739	I							
3569.010	II	4					V	
3569.332	I	2		6			IV	3
3569.660	II	20	10	8			IVE	1
3571.023	II	3		1*			IV	
3571.063	I							
3571.438	I	1		30	10	4	III	
		3						
3571.667	II	6		10	1*		IV	
3571.740	I							
3572.094	II	1					V	
3572.389	I	1		5			IV	
3572.654	II	2					V	
3573.026	I	6		1*			IV	
3573.063	II							
3573.318	I	1		8	2		III	3
3573.830	II	60	50	4			IVE	1
3574.006	I			2			IV	
3574.153	II	100	60	15			IVE	1
3574.620	II	1					V	
3574.903	II	1					V	
3575.379	II	2					V	
3575.600	I	2		3			IV	
3576.004	I	10		3			IV	
3576.244	II	300	200	50	1		IVE	1
3576.580	II	5					V	
3576.866	II	150	100	25	1		IVE	1
3577.460	II	1					V	
3577.649	II	4					V	
3577.982	II	60	30	25			IVE	1
3578.501	I	3		2			IV	
3578.832	I	3		3			IV	
3579.113	I	5		5			IV	
3579.437	I	2		1			IV	
3580.035	II	40	30	8			IVE	1
3581.847	II	1					V	
3582.021	II	10	(10)	2			IVE	1
3583.459	I			10	2		III	3
3584.417	II	40	40	3			IVE	1
3585.058	II	250	100	50	3		IVE	1
3585.778	II	150	80	20			IVE	1
3586.112	II	50	30	10			IVE	1
3589.457	I				5		(III)	3
3590.074	II	30	25	2			IVE	1
3590.658	II	25	20	2			IVE	1
3591.415	II	125	80	20			IVE	1
3591.811	II	40	40	5			IVE	1
3591.982	I	1		10			IV	
3592.107	II	30	30	10			IVE	1
3592.667	II	2					V	3
3593.047	II	1		1			IV	3
3593.160	I	4		1			IV	
3593.676	II	2		20	1*		IV	
3593.773	I							
3594.283	II	2					V	
3594.480	I	4		5			?	
3594.560	I	5		30	8		III	
3595.036	II	125	125	20			IVE	1
3595.283	II	6		1			V	
3595.648	II	1		1			IV	
3596.058	II	40	30	6			IVE	1
3596.481	II	6		1			IV	
3596.987	II	1					V	3
3597.284	I	3		25	3		III	
3597.537	I				1		(III?)	
3597.742	II	1					(V)	
3597.936	II	8		1			IV	
3598.256	II	10		6*			IV	
3598.319	I							

TABLE A. *Temperature classification of dysprosium lines* – Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
3598.726	I	1		2			IV	
3599.038	II	3		1			IV	
3599.471	II	4		1			IV	
3600.253	II	15		10			IV	
3600.297	II							
3600.376	II	50*d*?	40	30			IVE	1
3600.632		1					V	
3600.946	II	1					V	3
3601.372	I	2		6			IV	
		1						
3601.899	II	1					V	
3602.178	I	1		2			IV	
3602.823	II	20	(15)	3			IVE	1
3603.162	I	10		1			IV	
3603.329	I	1		20	6	2	II	
3603.655	II	2					V	
3603.755	I	1		5			III	
3604.342	I	4		3			IV	
3604.482	I	1		5			IV	3
3604.873	II	4					V	
3605.120	II	2					V	
3606.118	II	150	100	50			IVE	1
3606.385	II	2					V	
3606.944	I	4		5			IV	
3607.141	II	1		1			IV	
3607.688	II	2					V	
3608.038	I	4		4*			IV	
3608.089	II							
3609.247	I	8		1			IV	
3610.795	II	1					V	
3610.915	I			15	4		III	
3610.989	I			10	2		III	
3611.228	I	3		25	6		III	
3611.946	II	3					V	
3612.362	I	1*d*		10	1		IV	
3612.780	II	25	(35)	1			IVE	1
3613.079	II	15	20	1			IVE	1
3613.618	I	1		1			IV	
3614.074	II	30	(30)	1			VE	1
3614.702	II	5		30	1*		IV	
3614.774	I							
3614.947	II	6		30	1*		III?	
3615.052	I							3
3615.186	II	1					V	
3615.564	II	1					V	
3616.078	I	8		3			IV	
3616.366	I	5		1			IV	
3617.203	I	4		2			IV	
3617.633	I	5		1			IV	
3617.780	II	3					V	
3618.104	II	30	(30)	3			IVE	1
3618.509	II	30	(12)	30			IVE	1
3619.451	II	6	(4)	2			IVE	1
3619.975	II	10	(10)	1			IVE	1
3620.161	II	60	40	8			IVE	1
3620.544	I	6		4*			IV	
3620.575	II							
3621.090	I	3		12			IV	3
3621.566	II	1					V	3
3621.792	I	1		15			IV	
3622.045	I	1		3			(IV)	
3622.123	I			15			IV	
3622.350	I	4		2*			IV	3
3622.560	II							
3622.588	II							
3622.769	II	4					V	
3623.127	I	1		8			IV	
3623.385	I	2		15	2		III	
3624.267	II	30	30	1			IVE	1
3624.900	II	2					V	
3625.528	I	2		6			IV	
3625.739	II	4		3			IV	
3626.340	II	1		10			IV	
3626.711	I	3		8*			IV	
3626.783	II							
3626.872	I	3		15	3		III	
3627.127	I	1		2			IV	
3627.359	II	3		1			IV	
3627.897	I	2		6			IV	
3628.018	I	3		3			IV	
3628.565	I	1		15	1		IV	3
3629.418	II	100	80	8			IVE	1
3630.237	II	250	150	100	3		IVE	1
3630.476	II	10	(6)	4			IVE	1
3630.552	I	10		5			IV	3
3630.843	II	5		2			IV	
3632.776	II	25	20	–			IIIE	1
3632.803	I	5		10				
3633.018	II	15	25	1			IVE	1
3633.274	II	8		1			IV	
3633.758	II	10		1			IV	
3634.322	II	10					(V)	
3634.409	I	12		12			III	3
3634.777	I	2		1*			IV	
3634.838	II							
3635.267	II	30	25	5	1		IVE	1
3635.633	II	1		1*			IV	
3635.742	I							3
3636.254	II	15		3			IV	3
3637.275	II	20	(12)	6			IVE	1
3638.535	II	2					V	
3638.801	I	2		3*			IV	
3638.917	II							
3639.814	II	6		1			IV	
3639.902	II	4						
3640.248	II	100	60	40			IVE	1
3640.830	II	10					V	
3641.072	II	2		1			IV	
3641.633	II	3					V	
3641.830	I	4		25	6		III	
3641.984	I			3			IV	
3642.623	I	3		3			IV	
3643.524	I	3		30	6		III	
3643.923	II	40*d*	15	20			IVE	1
3644.181	II	1					V	
3644.498	I	2*d*		1			IV	
3644.899	II	1					V	
3645.398	II	1000	800	100	30		IIIE	1
3545.860	II	30	20	3			IVE	1
3646.294	I	1		3			IV	
3646.612	II	15	15				VE	1
3646.895	I	3		1			IV	
3647.258	II	1					V	
3647.600	I	2*d*		10	3		III	

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes	Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace							Arc	Spark	Furnace				
				High	Medium	Low							High	Medium	Low		
3647.977	I	3		8	1		IV		3672.300	II	125	80	15			IVE	1
3648.365	II	4		1			IV		3672.700	II	40	20	10			IVE	1
3648.459	II	5							3672.920	I	1		6			IV	
3648.785	II	60	50	3			IVE	1	3673.140	II	40	15	8			IVE	1
3650.052	II	6*d*		1			IV		3673.768	I	2		1*			IV	
3650.415	II			5			IV		3673.814	II							
3651.133	II	1					V		3674.085	II	250	60	80	1		IVE	1
3651.742	II								3674.452	I	8		4	12	2	III	
3651.866	I	2		5*			IV	3	3675.137	II	1					V	
3651.966	I							3	3675.383	II	1					V	
3652.292	I	2		15	1		IV		3675.569	I	2		3			IV	
3652.828	II	2					V		3676.023	II	4					V	
3653.278	I	1		1			IV		3676.430	II	10*d*		5			IV	
3653.727	II	2					V		3676.590	II	250	60	60			IVE	1
3653.874	II	4*d*					V		3677.042	I			4			IV	
3653.898	II								3677.266	I	4		3			IV	
3654.184	II	8		1			IV		3678.019	II	3					V	
3654.876	II	10		1			IV		3678.121	I	1		1			IV	
3655.618	I	6		10	2		III		3678.357	II	2?					V	3
3655.907	II	2					V		3678.507	I	10		10	15	3	II	
3656.358	I	3		1			IV						4				
3656.877	II	4		6*			IV		3679.119	II	1					V	
3656.956	I							3	3679.273	II	2					V	
3657.795	II	2.2					V		3680.613	II	2		2*			IV	3
3658.151	II	2		1			IV		3680.655	I							
3658.502	I	1		15	4		III		3680.804	II	1		1			IV	
3658.712	I	2		4			IV	3	3681.038	II	2					V	
3658.943	I			3			IV		3681.420	II	1					V	
3659.299	II	1					V		3681.710	II	1					V	3
3659.848	I	3		6	1		III		3681.951	II	2					V	
3660.251	II	1					V		3682.612	II	2		4			IV	
3660.674	I	1		4			IV		3683.089	I	2		8	1		IV	
3661.080	II	2					V		3683.402	II	10*d*					V	
3661.235	I	3		2*			IV		3684.400	II	2		1			IV	
3661.268	II								3684.853	I	8*d*		3	3		(IV)	
3661.780	II	15	15	1			IVE	1					12				
3662.261	I	2		3			IV		3685.782	I	30		30	30	8	II	
3662.851	II	1					V						50				
3663.347	I	1		8			IV		3686.441	II	1					V	3
3663.739	II	1					V		3686.890	II	1					V	
3664.248	II	1					V		3687.151	I	1		2			IV	
3664.615	II	60*d*	50	4			VE	1	3687.440	I	1		8			IV	
3664.680	II			3					3687.659	I	1		4			IV	
3664.985	I	1		25	6		III		3688.306	I	5		10	1		IV	
3665.008	I								3688.593	I			6	1		IV	
3665.233	II	30	30				VE	1	3689.031	II	3					V	
3665.401	I	5		5			IV		3689.300	I			8			IV	
3666.031	I	1		1*			IV		3689.465	I	3		5	1		IV	
3666.053	II								3689.888	I	1		5	1		IV	
3666.333	II	4		1*			IV		3690.297	II	2*d*					V	
3666.364	I								3690.361	II							
3666.839	I	6		30	15	3	III		3690.576	I	3		4			IV	
3666.998	II	3*d*					V		3691.236	I	4		2			IV	3
3668.093	I	1		4			IV		3691.584	II	1					V	3
3668.542	II	3					V		3692.076	II	3					V	
3668.726	II	2					V		3692.260	II	3					V	
3668.903	II	6	(4)	2			IVE	1	3692.289	I	3		8			IV	
3669.175	I	1		3			IV		3692.484	I			10	2		III	
3669.664	II	1					V		3692.986	I	2		1			IV	
3670.515	I	1		3			IV		3693.531	I	1		6			IV	3
3670.903	II	1					V		3693.874	I	4		20	3		III	
3671.689	II	20	15	3			IVE	1	3693.970	II	2					V	

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
3694.371	II	25*d*	20	1			IVE	1
3694.415	II							
3694.810	II	500	300	60	5		IIIE	1
3695.658	II	6		1			IV	
3696.083	I	2		1			IV	
3696.587	II	1					V	
3696.885	II	10*d*		8	1*		III	
3696.947	II							
3696.962	I							
3697.314	II	30	20	2			IVE	1
				5				
3697.637	I	1		5			IV	3
3697.958	II	3					V	
3698.207	II	60	50	5			VE	1
3698.304	I	?		1			IV	
3698.714	I	2		4*d*			IV	
3698.980	I	5		6			IV	
3699.723	I	1		3			IV	3
3700.577	II	10		8	1*		III	
3700.727	I							3
3701.627	II	40	30	3			IVE	1
3701.903	II	2					V	
3703.235	I	1		15	2		III	
3704.526	I	2		6*d*			IV	
3704.699	I							
3705.807	I	5		5	1		III	
3705.830	II	2					(V)	
3706.385	I	1		1			IV	
3706.798	I	2		20	1		IV	
3707.212	I	1		2			IV	
3707.404	II	30	20	5			IVE	1
3707.573	II	20	(15)	15			IVE	1
3708.220	II	40	30	10			IVE	1
3710.071	II	30	25	3			IVE	1
3710.744	II	10					V	
3711.662	II	30	20	2			IVE	1
3711.814	I	1		2			IV	
3713.843	II	15	10	15	3*		IIIE	1
3713.865	I							
3714.430	I	1		4			IV	
3715.313	II	15	10	1			VE	1
3716.941	II	20	20	1			VE	1
3717.284	I	2		30	8	2	III	
3718.135	II	8		1			IV	
3718.691	II	4					V	
3718.919	I	1		12			(III)	
3719.431	I	4		6	1		IV	
3720.834	I	2		25	10	5	III	
3721.712	I	2*d*		3			IV	
3721.809	I	1		3			IV	
3722.672	II	15					V	
3722.784	I	1		5			IV	
3724.446	II	150	80	50	1		IVE	1
3724.891	I	2		8	1		III	
3725.441	II	15		1			V	
3725.935	I	4		40	5	1	III	
3726.178	I	2		20	2		III	
3726.548	II	3					V	
3727.091	II	2					V	
3727.999	I	5		50	8	3	III	
		8						
3728.432	II	3					V	
3728.467	II	4					V	

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
3729.270	II	2					V	
3730.606	II	12		10	1*		IV	
3730.673	I							
3731.139	II	4		1			IV	
3731.292	I	4		5			IV	
3732.075	I	1		3			IV	
3733.336	I	2		8	1		IV	
		3						
3734.269	I	5*d*		15	2		III	3
3734.378	II	4					V	
3735.993	I	2		6			IV	
3738.292	II	3					V	
3738.594	II	3					V	
3739.344	I	20		60	20	10	III	
3739.858	II	5					V	
3740.064	I	12		40	15	8	II	
3740.379	II	1		2*			IV	
3740.529	I	1						
3741.201	I	8		15	5	1	III	
3741.894	I	15*d*					V	
3742.350	I	1		10	1		IV	
3743.053	II	2		2	2*		II	
3743.115	I							
3743.868	I	1					V	
3744.930	I	3		4			IV	
3745.497	I	5		15*			IV	
3745.540	II							
3745.819	II	8					V	
3747.817	II	100	40	20			IVE	1
3748.056	II	20	20				VE	1
3748.550	I	1		6			IV	
3748.779	I	1					V	
3750.316	II	15	15				VE	1
3750.346	II							
3751.802	II	20		1			IV	
3752.382	I	2		5			IV	
3752.808	I	2		40			IV	
3753.506	II	150	60	15			IVE	1
3753.749	II	200	100	4			IVE	1
3754.809	I	8*d*		10	1		IV	
3755.137	II	3					V	
3755.381	I	4		10			IV	
3756.094		2		3	1		III	
				2				
3757.054	I	8		20	30	20	II	
3757.372	II	500	300	60	2		IVE	1
3758.988	II	5		1			IV	
3760.086	II	2		1			IV	
3760.362	I	2					V	
3760.850	II	1					V	
3761.407	I	2		5	2		(III)	3
3761.517	I	1		6	1		III	
3762.234	II	8*d*		1*			IV	
3762.274	I							
3762.691	II	10*d*					V	
3762.766	II							
3764.316		8		1			IV	
3764.835	I	6		8			IV	
3765.969	I	1		5	1		IV	
3766.214	I	3		8	2		III	
3767.628	I	15		30	20	8	II	
3768.507	I	1		1			IV	

TABLE A. *Temperature classification of dysprosium lines* – Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
3769.095	I	1		10			IV	
3769.370	I	1		8	–1		IV	
3770.701	I			3			IV	
3771.107	I	4		15	6	2	II	
3771.164	I	2		8?	2		III	
3772.105	I	2		2			IV	
3772.642	I	2		12	3	1	II	
3773.052	I	115		40	20	8	II	
3773.303	II	25	20	6	1		IVE	1
3773.766	I	1		4	1		III	
3774.843	II	10		1			IV	
3775.937	I	} 2		1*			IV	
3776.030	II	}						
3776.921	II	4					V	
3777.434	I	5*d*?		25?	2		III	
3779.032	II	3					V	3
3779.232	II	10	(8)	1			IVE	1
3779.671	I	1		6			IV	
3780.308	I	3		20	4		III	
3780.944	I	2		15	4		III	
3781.468	I	10		12	6		III	
3782.154	II	1					V	
3782.871	II	10	(5)	4			IVE	1
3783.595	II	12					V	
3783.941	I	} 8		6	1*		IV	
3783.972	II	}						
3784.559	I	2		4	1		III	3
3785.214	I	2		2			IV	
3785.411	II	15	(8)	4	1		IIIE	1
3786.176	II	300	150	100	5	1	IIIE	1
3786.826	I	2		8	2		III	
3787.256	II	5		1			IV	
3788.436	II	150	80	80	?		IIIE	1
3789.850	I	} 2		2*			IV	
3789.894	II	}						
3791.871	II	50	25	8			IVE	1
3793.513	II	2					V	
3794.222	II	3					V	
3795.428	II	3					V	
3795.989	I	} 1		2?*			IV	
3796.048	II	}						
3796.817	I	2		15	4	1	III	
3797.750	I	3		12	6	1	III	
3798.312	II	2					V	
3798.567	I	2		6	2		III	
3799.014	II	2					V	
3799.564	II	3					V	
3799.903	I	1		4	2		III	
3800.404	I	2					V	
3801.571		2					V	
3801.926	II	5					V	
3802.693	II	1		1			IV	
3803.549	I	1		8	2		III	
3804.142	II	40	20	10	2		IIIE	1
3804.352	I	4			1		IV	
3805.832	I	1		3	1		IV	
3806.271	II	50	100	1?			IVE	1
3807.474	I	2		?			?	
3809.020	II	25	20				E	1
3813.672	II	40	30	3			E	1
3816.762	II	200	150	10			E	1
3822.580	II	20	15	5			E	1

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
3825.680	II	30*d*	15	?			E	1
3825.951	II	20?	30				E	1
3831.641	II	20	15	5			E	1
3836.504	II	60	(35)	5?			IIIE	1,2
3838.658	II	5					VE	2
3840.894	I	10		5?			II	2
3841.310	II	40	(25)	3			IVE	1,2
3842.004	I	20		2?			III	2
3844.363	I	6		3			II	2,3
3846.342	II	15	(10)				VE	1,2
3847.022	I	8		6			II	2
3848.398	I	2		3			III	2
3849.388	II	15	(15)				VE	1,2
3850.036	II	5					VE	2
3850.420	II	4					VE	2
3850.515	II	5					VE	2
3853.027	II	50	(35)	3			IVE	1,2
3854.935	II	4					VE	2
3855.636	II	5					VE	2
3858.104	II	5					VE	2
3858.404	I	15		8?			II	2
3862.700	I	5		3			III	2
3863.245	II	4					VE	2
3865.482	II	8					VE	2
3866.580	II	20	(15)				VE	1,2
3867.855	II	5					VE	2
3868.450	II	25	(15)	2?			IVE	1,2
3868.808	I	50		12?			II	2
3869.137	II	3					VE	2
3869.424	II	10	(6)				VE	1,2
3869.864	II	25	(12)	?			VE	1,2
3871.628	II	10	(7)				VE	1,2
3872.107	II	300	(250)	?			IVE	1,2
3873.986	II	40	(25)	?			IVE	1,2
3875.179	II	4					VE	2
3877.943	II	2					VE	2
3879.058	II	20*d*	(20)				VE	1,2
3881.993	II	12	(10)				VE	1,2
3883.066	II	4					VE	2
3887.540	I	8		1			IV	2
3888.426	II	6	(8)				VE	1,2
3888.951	I	12		2			IV	} 2
3889.013	II	20	10	6			(IV)E	} 1
3891.865	II	3					VE	2
3891.969	I	6		5			III	2
3892.901	I	12		8?			II?	2
3893.382	I	1		6			IIIA	2
3894.530	I	2		6			IIIA	2
3895.373	II	15	(18)				VE	1,2
3896.218	I	1		6			IIIA	2
3896.651	I	2		6			IIIA	2
3898.529	II	300	(240)	20			IVE	1,2
3899.120	I	} 6		{ 4			III	} 2
3899.169	I	}		{ 6			III	}
3902.400	II	2					VE	2
3903.072	II	1					(?)	
3903.330	I	8		15			III	
3904.084	I	2		8			III	
3904.210	II	20	15	1			VE	1
3905.172	I	1		2			(IV)	
3905.598	II	?		1?			VE	
3905.941	I	3		10			III	

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
3907.573	I	1		4			(III)	
3909.135	II	2		1			(IV)	
3910.106	I	4*d*		12			III	
3910.547	II	2					VE	
3911.672	I	2		5			III	
		3		5				
3912.298	I	2		5			(III)	
3912.545	I	10		10			III	
3912.866	II	5					VE	
3913.062	I			2			(III)	
3913.625	I	10		20			III	
3913.974	II	5	(7)				VE	1
3914.866	II	40	(20)	3			IVE	1
3915.594	II	40	(20)	4			IVE	1
3917.292	I	30		30			III	
3917.376	I	20		15			III	
3917.985	I	1		1			(IV)	
3918.555	II	6					VE	
3919.125	I	5*d*		5			(III)	
3919.156	I			15			III	
3920.114	I	2		5			III	
3920.860	I	4		6			III	
3921.313	I	1		2			(III)	
3922.049	I	2		5			(III)	
3922.617	II	2					(V)	
3923.291	II	3					VE	
3923.380	II	10	(10)				VE	1
3924.409	I	4		(6?)			IIIA	2
3924.466	II	3					VE	
3925.261	I	1		3			(III)	
3925.563	II	3*d*					(V)	3
3926.771	I	2		3			(III)	
3927.300	II	1					(V)	
3927.861	I	10		8			III	
3928.005	II	3					V	
3929.333	II	5	(7)				VE	1
3929.716	II	2					(V)	
3930.146	I	15		8			III	
3931.281	II	8	(6)	2			IVE	1
3931.524	II	150	125	5			IVE	1
3932.078	II	3					(V)	
3932.216	II	10	(10)				VE	1
3932.995	II	6					VE	
3934.207	II	8	8				VE	1
3934.373	I	3		5			(III)	
3936.054	II	5	(5)				VE	1
3936.295	II	4					VE	
3936.700	I	10		8			III	
3937.164	I	4		5			III	
3937.984	I	3		5			III	
3938.046	II	4					VE	
3938.203	I	6		4			III	
3938.842	I	1		1			IV	
3939.260	I	1		3			IV	
3939.794	I	2		6			IV	
3942.045	II	3					VE	
3942.527	II	25	(20)	2			VE	1
3944.683	II	600	(450)	50			IIIE	1
3945.634	II	1					(V)	
3945.913	I	3		4			IV	
3946.343	I	2		5			(III)	
3946.929	II	15	(20)				VE	1
3949.248	I	1		2			(III)	
3949.700	I	1		2			(III)	
3950.389	II	20	(20)	1			VE	1
3951.342	I	1		1			(IV)	
3951.837	I	1		2			(III)	
3952.135	I	1		3			(III)	
3952.481	II	1					(V)	
3953.128	II	3					(V	
3953.191	I			3			(III)	
3953.500	I	4		6			III	
3953.970	I	1		1			(IV)	
3954.552	II	20	(15)				VE	1
3955.100	I	2		2			(IV)	
3955.353	I	1		1			(IV)	
3955.484	II	1					(V)	
3956.252	I	2		4			(III)	
3956.809	II	3					(V)	
3957.240	II	3					(V)	
3957.790	II	30	(30)	1			VE	1
3957.996	I	2		4			III	
3958.832	II	1					(V)	
3959.380	II	4					VE	
3959.700	II	2					(V)	
3960.827	II	1					(V)	
3961.802	I	5		5			III	
3962.152	I	1		1*			(IV)	3
3962.454	II							
3962.590	I	10		8			III	
3962.791	I	2		2			(IV)	
3963.165	I	3		4			(III)	
3963.807	II	4					VE	
3964.712	II	3					VE	
3965.155	I	1		2			(III)	
3966.356	I	5		6			III	
3967.512	I	10		10			III	
3968.391	II	1000	800	20			IIIE	1,
3969.227	I	10		5			III	
3971.214	I	8		10			III	
3971.613	I	2		3			(III)	
3972.415	I	4		6			III	
3973.313	I	1		1			(IV)	
3973.877	I	12		10			III	
3975.075	I	2		5			(III)	
3976.962	I	2		4			III	
3978.566	II	250	200	5			IVE	1
3979.471	II	10	(6)	2			VE	1
3979.945	I	2		4			(III)	
3980.369	I	1		1			(IV)	
3980.695	I	1		1			(IV)	
3981.366	I	3		20			III	
3981.924	II	100	80	2			IVE	1
3982.512	I	2		?			(?)	
3982.843	I	1		1			(IV)	
3983.652	II	100	(70)	4			IVE	1
3984.210	II	60	(40)	1			IVE	1
3984.691	II	3		1			VE	
3985.356	I	2		4			III	
3986.059	I	4		6			III	
3987.070	II	3					VE	
3987.541	I	1		2			(III)	
3988.207	I	2		4			(III)	

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
3988.880	I	6*d*		5?			III	
3988.931	I							
3989.683	I	2		5			(III)	
3990.336	II	3					VE	
3990.734	I	1		1			(IV)	
3991.316	II	30	25				VE	1
3991.849	II	3					VE	
3992.457	I	1		1			IV	
3993.274	II	1					VE	
3993.571	I	8		6			III	
3993.680	I			2			(III)	
3993.854	I	1		3			III	
3994.531	I	4		6			III	
3995.333	I	1		1			(IV)	
3995.757	II	3					(V)	
3995.990	I	5		8			III	
3996.688	II	150	100	4			IVE	1
3996.920	I	2		5			III	
3998.060	II	3					VE	
3998.204	I	2		4			(III)	
3998.938	I	1		5			III	
3999.847	II	2					(V)	
4000.450	II	800	600	10			IIIE	1
4000.589	I	1		4			III	
4001.188	I	1		1			(IV)	
4001.521	I	2		4			III	
4002.179	I	1		3			(III)	
4004.297	I	3		5			(III)	
4004.452	I	1		2			III	
4005.838	I	12		8			III	
4006.071	I	10		8			III	
4006.444	I	2		6			(III)	3
4006.738	II	4					(V)	
4007.136	I	4		6			III	
4007.759	II	6					VE	
4008.478	I	2		5			(III)	
4009.330	I	1		3			(III)	
4009.855	I	3		5			(III)	
4010.067	II	5					VE	
4011.161	I			1			(III)	
4011.288	II	20	(15)				VE	1
4011.816	I	1		2			III	
4012.524	I	2		5			III	
4012.816	II	2*d*					(V)	
4013.826	I	15		40*r*			II	
4014.097	I	1		6			III	
4014.704	II	20	(12)	1			VE	1
4015.172	II	4					VE	
4016.748	I	2		1*			(IV)	3
4016.895	II							
4017.054	I	3		5			III	
4017.752	II	1					(V)	
4018.476	I	1		1			(IV)	
4019.396	II	2					VE	
4019.548	II	2					VE	
4020.032	I	1		1			(IV)	
4020.868	II	5					VE	
4020.897	I	1		5			III	
4022.554	I	1		2			(III)	
4023.587	I	2		5			(III)	
4023.713	I	10		15			III	
4024.428	II	10					VE	
4024.899	I	8		6			III	
4025.391	I	2		4			III	3
4025.603	I	4		4			III	
4026.054	I	1		2			(III)	3
4026.754	I	1		2			(III)	3
4027.779	II	15	(12)				VE	1
4028.316	II	8					VE	
4028.412	I	12		10			II	
4031.075	I	3		8			III	
4032.471	II	30	(30)	1			VE	1
4032.840	I	4		2			III	
4033.551	I	1		2			III	
4033.655	II	10					VE	
4036.325	II	15					VE	
4037.624	I	3		2			III	
4038.512	II	8					VE	
4038.708	I	1		5			III	
4038.828	I	4		3			III	
4040.771	I	2		3			(III)	
4041.975	II	10					VE	
4043.035	I	1		3			IIIA	2
4043.388	II	2*d*					(V)	
4045.271	I	2		4			III	
4045.971	I	400		200			II	
4047.391	II	2					(V)	
4047.731	II	3		2			III	
4048.377	II	3*d*?					(V)	
4048.931	I	5		5			III	
4049.362	I	5		8			II	
4050.564	II	150	(90)	3			IVE	1
4052.448	I	1		3			III	
4054.988	I	8		5			III	
4055.144	II	30	(20)				VE	1
4057.373	II	3					VE	
4057.441	II							
4058.159	I	2		1			(IV)	
4060.566	II	5					VE	
4061.045	I	2		3			III	
4065.158	I	2		2			III	
4065.391	I	4		5			III	
4066.745	I	2		4			III	
4067.960	I	2		4			III	
4071.021	I	3		4			III	
4072.609	II	3					VE	
4073.116	II	150	80	10			IVE	1
4073.985	II	3					VE	
4077.340	I	2		3			IV	
4077.964	II	800	500	20			IIIE	1
4079.258	I	3		5			III	
4079.586	I	3		5			III	
4081.730	I	2		2*			(IV)	
4081.835	II							
4083.100	I	4		6			III	
4083.802	I	2		4			III	
4085.130	I	15		15			III	
4085.336	I	20		20			III	
4087.199	II	15	(12)				VE	1
4087.381	I	5		6			III	
4089.502	I	3		5			III	
4090.389	I	1		3			III	
4091.520	II	10	(8)				VE	1
4091.759	II	6					VE	

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TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
4093.638	I	3		5			III	
4095.244	I	1		3			III	
4096.099	I	20		15			III	
4096.624	I	{ 2	}	5			III	
		{ 2	}					
4099.880	I	4		10			II	
4101.393	I	2		4			III	
4101.840	I	1		3			III	
4101.933	II	2					VE	
4103.304	II	600	400	150			IVE	1
4103.874	I	60		6?			III	
4105.017	I	?		5			III	
4105.035	II	8	(6)				VE	1
4105.256	I	3					(V)	
4105.804	I	2		3			III	
4105.988	I	2		2			(III)	
4106.378	II	5					VE	
4106.679	II	3					VE	
4107.170	II	2					(V)	
4107.359	II	3					VE	3
4109.134	I	1		1			(III)	
4111.343	II	150	(100)	40			VE	1
4113.054	I	5		8			III	
4114.052	II	} 4*d*					VE	
4114.117	II	}						
4114.642	I	3		6			IV	
4119.310	II	10	(8?)				VE	1
4120.652	I	1		4			III	
4124.626	II	20	(10)	2			IVE	1
4126.086	I	8		15*r*			II	
4128.238	II	20	(10)	1			IVE	1
4129.117	I	10		15*r*			II	
4129.422	II	100	50	3			IVE	1
4130.351	I	10		12*r*			IIA	2,3
4131.021	II	6					VE	
4132.835	II	3					VE	
4133.353	II	6					VE	
4133.849	I	15		8			III	
4134.146	I	10		4			III	
4134.708	I	4		4			III	
4136.901		1					IV	
4137.349	II	4					(V)	
4138.539	I	4		6			III	
4139.558	I	4		6			III	
4141.385	I	3		6			III	
4141.505	II	20	(8)	2			IVE	1
4143.099	II	300	(160)	5			IVE	1
4145.621	II	2					VE	2
4146.060	I	100		30*r*			II	
4147.968	I	3		4			III	
4148.957	I	2		4			(III)	
4149.776	I	2		4			III	3
4152.424	II	8					VE	
4153.122	I	5		4			III	
4153.375	I	4		5			III	
4154.202	II	5					VE	
4154.242	I	3		4			III	
4154.515	I	3		4			III	
4156.361	I	4		3			III	
4156.952	I	5		6			III	
4157.862	II	4					VE	
4158.055	I	6		5			III	
4159.313	I	8		8			III	
4160.247	I	3		3			III	
4162.246	I	4		4			III	
4164.732	I	3		4			III	
4166.234	I	4		3			III	
4167.225	II	2	}				(VE)	3
4167.552	II	2	}					
4167.974	I	400		100*R*			II	
4169.043	I	3		5			III	
4169.247	II	5					VE	
4170.317	I	2		5			III	
4170.562	I	3		4			IV	
4171.930	I	6		8			III	
4172.002	I	8		8			III	
4176.601	I	4		3			III	
4176.784	I	3		3			III	
4177.766	I	3		3			III	
4178.086	I	6		4			III	
4181.269	I	3		5			III	
4182.404	II	3					VE	
4183.599	I	8		10?			III	
4183.723	I	30		30*r*			II	
4186.818	I	600		300*R*			II	
4189.396	I	3		4			III	
4190.939	I	10		8			III	
4191.642	I	100		50*R*			II	
4194.845	I	500		200*R*			II	
4195.254	I	8		?			III	
4198.019	I	25		15			II	3
4201.027	I	3		5			III	
4201.304	I	15		15			III	
4201.372	II	10					VE	
4202.241	I	20		20*r*			II	
4204.001	I	2		4			III	
4205.062	I	15		10			III	
4206.542	II	30	(15)	6			IVE	1
4207.696	I	6		6			III	
4211.239	I	15		30*r*			II	
4211.715	I	1200		600*R*			II	
4213.179	I	60		50*R*			II	
4214.410	I	5		12			III	
4215.159	I	80		100*R*			II	
4216.985	I	2		4			III	
4218.091	I	200		150*R*			II	
4218.574	II	4					VE	
4221.108	I	250		200*r*			II	
4222.210	I	20		15			III	
4224.672	I	3		4			III	
4225.155	I	150		100*r*			II	
4232.024	I	30		15			II	
4234.132	I	3		4			III	
4234.831	I	5		4			III	
4236.264	I	2		4			III	
4236.579	I	1		4			III	
4237.523	II	3					VE	
4237.945	I	2		3			III	
4238.070	II	2					VE	
4238.455	II	3					VE	
4239.852	I	40		30*r*			II	
4240.685	I	1		2			III	
4240.850		1		5			III	

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
4241.818	I	1		5			III	
4242.716	I	3		4			III	
4242.990	I	3		4			III	
4243.435	I	5		10			III	
4244.792	II	2					VE	
4245.912	I	30		20			III	
4247.345	II	10	(8)				VE	1
4248.451	II	3					VE	
4248.893	I	1		2			III	
4250.337	I	3		3			III	
4250.459	I	2		5			III	
4251.319	I	3		8			III	
4251.733	I	5		6			III	
4252.122		1		3			III	
4254.923	I	1		3			III	
4255.955	II	2					VE	
4256.205	II	5					VE	
4256.330	II	15	(5)	3			IVE	1
4257.698	II	1					VE	
4257.785	I	1		10			III	
4258.149	I	5		10			III	
4258.514	I	1		5			III	
4258.577	I	10		10			III	
4259.768	I	1		3			III	
4259.831	I	1		3			III	
4260.715		1		2			III	
4264.834	I	1		2			III	
4265.789	II	2					VE	
4266.007	I	1		4			III	
4267.870	I	4		3			IV	
4268.264	I	5		10			III	
4269.545	I	6		8			III	
4272.976	I	3		4			III	
4273.133	II	5					VE	
4274.954	I	4		6			III	
4275.405	I	3		3			III	
4275.918	I	1		3			III	
4276.688	I	15		15			III	
4277.715	I	1		3			III	
4279.730	I	6		8			III	
4282.057	I	1		3			III	
4283.259	I	1		5			III	
4283.575	I	2		5			III	
4284.232	I	1		3			III	
4288.019	I	1		3			III	
4288.185	I	1		2			III	
4288.719	I	2		3			III	
4290.442	I	5		8			III	
4290.952	II	1		3			III	
4291.955	I	8		15			III	
4294.456	I	1		2			III	
4294.928	II	10	(10)				VE	1
4295.036	I	25		8			III	
4296.353	I	1		3			III	
4297.775	I	1		3			III	
4298.518	I	5		3			III	
4298.910	I	2		5			III	
4300.380	II	3					VE	
4300.634	II	1		4			III	
4300.736	II	3					VE	
4301.340	I	1		2			III	
4302.581	II	12					VE	
4302.714	II	8					VE	
4306.766	I	1		3			III	
4308.349	I	2		5			IIIA	2
4308.626	II	200	100	8			IVE	1
4311.946	I	2		4			III	
4312.431	I	1		4			III	
4313.880	II	2					VE	
4313.931	I	6		6			III	
4315.603	I	1		4			III	
4318.356	I	1		4			III	
4318.991	I	6		4			III	
4322.184	II	5					VE	
4322.367	I	1		4			III	
4322.533	II	8					VE	
4323.795	I	4		5			III	
4324.661	II	1					VE	
4325.108	II	20	(15)				VE	1
4326.375	I	15		4			III	
4328.668	I	1		2			III	
4328.902	II	15	(8)				VE	1
4329.886	II	2 3					VE	
4334.052	I	1		3			III	
4334.358	I	1		6			III	
4335.995	I	1		6			III	
4338.459	I	2		1			(IV)	
4339.622	II	20	(25)				VE	1
4339.654	II							
4340.407	II	2					VE	
4346.371	II	10					(VE)	2
4347.708	I	15		6			III	
4356.109	I	2		6			III	
4356.747	I	3		3			III	
4358.443	II	40	(15)	2			IVE	1
4360.186	II	6					(V)	
4361.343	II	8					VE	
4364.046	II	5					VE	
4364.204	II	15	(20)				VE	1
4365.612	I	2		11			III	
4366.722	I	8		12			III	
4368.256	I	1		2			III	
4369.541	I	2		6			III	
4374.235	II	40	(12)	3			IVE	1
4374.764	II	30	(20)	2			IVE	1
4375.308	II	10	(12)				VE	1
4379.338	I	2		2			(III)	3
4380.221	II	6					VE	
4380.469	I	2		5			III	
4384.295	II	8					VE	
4385.272	II	5					VE	
4389.774	I	5		3			IV	
4390.306	I	1		2			III	
4390.926	I	2		5			III	
4393.265	I	1		3			III	
4394.978	II	15	(6)	5			VE	1
4397.490	I	1		4			III	
4399.713	I	2*d*?		4			III	
4400.077	II	6					VE	
4403.957	I	1		4			III	
4408.034	II	10					III?	
4409.378	II	100	(50)	5			IVE	1

TABLE A. *Temperature classification of dysprosium lines* – Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes	Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace							Arc	Spark	Furnace				
				High	Medium	Low							High	Medium	Low		
4409.909	I	1		2			III		4556.439	II	4					VE	
4411.353	I	3		3			IV		4557.324	I	2		4			III	
4411.669	I	1		3			III		4559.582	I	3		3			III	
4414.172	I	1		3			III		4565.091	I	50		20*r*			II	
4418.095	II	5					(V)		4565.937	I	1		5			III	
4421.683	II	4					VE		4566.216	I	6		3			IV	
4426.866	I	5		3			III		4567.044	I	5		8			III	
4430.991	II	15					VE		4568.415	I	3		3			III	
4435.774	II	3					VE		4573.850	II	20					VE	
4436.627	II	3					VE		4576.584	II	25					VE	
4444.576	I	25		12			III		4577.776	I	200		40*R*			II	
4448.185	II	20					VE		4585.703	I	3		5			III	
4449.130	II	10					VE		4585.959	I	3		4			III	
4449.702	II	200	(100)	8			IVE	1	4586.184	II	3		3			III	
4454.332	I	2		4			III		4586.620		10		1			IV	
4455.598	II	20					VE		4587.906	II	40	30				VE	1
4467.870	II	6	(5)				VE	1	4589.088	I			12			III	
4468.137	II	30	(10)	3			IVE	1	4589.355	I	400*d*		150*R*			II	
4479.464	I	5					(V)		4590.553	I	5		3			III	
4480.680	I	8		10			III		4591.658	I	2		3			III	
4481.956	II	5					(V)		4591.776	II	12					VE	
4482.290	I	5		2*			IV		4595.127	II	5					VE	
4482.316	II								4599.845	I	8*d*		6			IV	
4484.357	I	10		10			III		4601.550	I	1		4			IV	
4486.222	II	5					(V)		4602.513	I	3		4			IV	
4487.857	I	1		2			III		4604.298	II	4		1			IV	
4492.144	I	1		5			III		4606.037	I	10		10			IV	
4493.091	I	5					(V)		4611.692	II	1					VE	
4496.361	I	2		2			IV		4612.258	I	300		100			II	
4499.259	I	3		2			III		4613.827	I	6		6			IV	
4502.602	II	10					(V)		4614.822	I	10		10			IV	
4503.232	II	50	(30)				VE	1	4615.564	II	5					VE	
4503.372	I	1		4			III		4616.929	I	1		2			IV	
4505.622	II	5					(V)		4617.264	II	30	20				VE	1
4506.063	II	4					(V)		4618.719	II	1					VE	
4506.939	II	8		2			IV		4620.034	II	60	40	1			VE	1
4508.086	I	?		3			IV		4620.378	II	1					VE?	
4513.586	I	4		12			III		4620.969	I	2		2			IV	
4516.838	I	20		5*			III		4621.411	II	3					VE	
4516.952	II								4622.370	II	5					VE	
4518.506	II	3	(6)				VE	1	4622.732	I	1		5			III	
4519.815	II	10					VE		4624.118	I	6		6			IV	
4522.704	I	1		4			III		4624.439	II	4					VE	
4523.075	I	2		3			(III)		4625.661	I	1–		3			IV	
4525.110	I	4		3			IV		4626.021	I	2		1			IV	
4526.083	I	4		3			IV		4627.394	I	1		10			IV	3
4527.761	II	10?	40?	3			VE	1	4628.066	II	5					VE	
		50?							4631.489	I	10		12			III	
4531.552	I	5		15			II		4634.762	I	2		2			IV	
4538.730	II	20	15	3			VE	1	4635.292	I	5		5			III	
4539.134	II	3		6			IV		4637.126	I	6		3			IV	
4541.663	II	30	40				VE	1	4637.579	II	4					VE	
4545.322	II	6					VE		4638.800	II	5					VE	
4546.424	I	2		2			IV		4641.072	I	2		6			III	
4546.760	I	1		3			III	3	4642.205	I	1		3			IV	
4550.866	II	2	(3)	1			VE	1	4642.237	I							
4553.130	I	4		8			III		4642.767	II	2					VE	
4555.007	I	3		4			III		4643.438	I	6		3			IV	
4555.219	I	8		8			III		4644.105	II	1					VE	
									4646.714	I	3		2			IV	
									4647.281	II	4		4*			IV	3
									4647.397	I							

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes	Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace							Arc	Spark	Furnace				
				High	Medium	Low							High	Medium	Low		
4649.466	II	2					VE		4723.916	I	5		12			III	
4650.148	I	6		15			III		4724.224	I	3		3			IV	
4651.523	II	15					VE		4726.194	II	2					VE	3
4653.406	II	2		1?			IV		4726.352	I	4		6			IV	
4654.761	II	6					VE		4726.765	I	1		3			IV	
4655.880	II	2					VE		4727.127	II	50	150				VE	1
4657.445	II	5					VE		4728.344	II	2					VE	
4659.500	I	4		2			IV		4728.869	I	6		5			III	
4660.823	I	5		2			IV		4729.087	I	2		2			IV	
4661.916	II	4					VE		4731.846	II	150	80	10?			VE	1
4662.146	I	4		4			IV		4732.097	I	5?		4?			IV	
4662.725	I	8		10			III		4734.379	I	2		?			IV?	
4663.074	II	2					VE		4734.617	I	1		?			IV?	
4664.659	II	80	40	2			IVE	1	4738.466	I	2		3			IV	
4665.893	I	1		3			IV		4740.926	I	6		6			IV	
4666.532	II	5					VE		4741.538	I	5		5			IV	
4667.778	II	2					VE		4742.397	I	1		1			IV	
4668.089	I	2		1*			IV		4743.018	II	15					VE	
4668.162	II								4744.910	I	1		8			III	
4669.108	I	1		1			IV		4745.784	II	30	25				VE	1
4669.388	II	2		2			IV		4747.870	I	1		1			IV	
4671.125	II	2*d*					VE		4749.529	I	1		2*d*?			IV	
4671.528	II	2					VE		4754.990	II	20	20				VE	1
4672.471	I	3		2			IV		4756.672	II	15	10				VE	1
4673.596	II	15					VE		4757.408	I	2		1			IV	
4674.598	I	2		1			IV		4758.375	I	1		1			IV	3
4675.789	I	8		2			IV		4760.046	II	50	30	1			VE	1
4679.061	II	1					VE	3	4761.307	I	2		1			IV	
4680.175	I	2		2			IV		4762.400	I	1		1			IV	
4680.739	I	1		5			III		4763.835	II	3					VE	
4680.961	I	2		4			IV		4764.365	II	2					VE	
4681.863	I	4		4			IV		4764.652	I	2		3			IV	3
4682.028	II	8					VE		4765.585	II	1		1			IV	
4683.775	II	6					VE		4767.151	II	2					VE	
4685.986	I	1		2			IV		4769.622	II	6					VE	
4689.751	II	40	50				VE	1	4770.798	II	1					VE	
4690.243	I	2		2			IV		4771.937	I	20		15			III	
4691.596	I	1		1			IV		4772.444	I	1		1			IV	
4692.728	I	2		2			IV		4773.151	II	1					VE	
4693.659	II	2					VE		4774.286	II	2*d*					VE	
4693.956	I	1		1			IV		4774.804	I	6		3			IV	
4694.336	II	4		6*			IV		4775.789	I	30		20			III	
4694.389	I								4776.841	II	1					VE	
4695.240	II	8					VE		4778.813	I	1		1			IV	
4697.169	II	1					VE	3	4780.145	I	1		1			IV	
4698.684	II	60	60?				VE	1	4781.023	II	2					VE	
4699.297	I	1		3			IV		4781.814	I	5		4			IV	
4703.471	I	10		6			IV		4784.576	I	1		1			IV	
4705.729	I	1		1			IV		4784.900	II	12					VE	
4706.773	I	5		8			IV		4785.295	I	4		2			IV	
4707.791	II	5*d*					VE	3	4786.241	II	2					VE	
4709.223	II	6					IVE		4786.919	II	50	25	?			VE	1
4711.065	I	2		2?			IV		4788.393	I	1		15?			IV?	
4711.595	II	2		2?			IV		4789.911	I	1		1			IV	
4712.505	II	2		1			IV		4790.455	I	1		1			IV	
4714.789	II	2		?			IV?		4791.289	I	30		50			III	
4716.876	II	1		1			IV		4791.920	I	2		1			IV	
4718.500	I	1		1			IV		4792.563	I	1		1			IV	
4718.818	I	3		?			IV		4792.843	I	4		3			IV	
4721.225	I	30		8			IV		4794.845	I	2		3			IV	
4723.154	II	2					VE		4797.572	II	2					VE	
									4798.420	I	2		1			IV	

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
4800.639	I	6		6			IV	
4802.142	II	1					VE	
4804.512	I	5		5			IV	
4806.950	I	1		8			?	
4807.942	I	12		15			III	
4808.739	I	2		2			IV	
4810.276	I	3		3			IV	
4810.802	II	1		1			IV	
4812.801	I	8		30			III	
4814.150	I	1		12			III	3
4816.517	I	1		2			IV	
4817.069	I	1		1			IV	
4817.464	I	1		1			IV	
4818.203	I	·2		8			IV	
4819.041	I	10		10			III	
4820.275	I	1		2			IV	
4821.293	I	5		4			IV	
4821.907	I	1		1			IV	
4823.723	I	2		8			IV	
4824.964	I	12		6			IV	
4826.555	II	5					VE	
4828.880	I	8		6			IV	
4829.130	II	2					VE	
4829.682	II	20	20				VE	1
4830.879	II	1					VE	
4832.377	I	15		15			IV	
4833.754	II	15	15				VE	1
4836.947	I	1		2			IV	
4837.683	I	2*d*		1			IV	
4839.677	I	1		1			IV	
4840.169	I	1					VE	
4840.461	II	10		8			IV VE	
4841.082	I	1		3			IV	
4841.752	I	8		3			IV	
4842.192	I	1		1			IV	
4843.422	II	2					VE	
4843.767	I	1					VE	
4844.824	II	1					VE	
4845.778	I	2*d*		4			IV	3
4850.952	I	1		3			IV	
4851.435	I	2		2			IV	
4852.517	I	2		2			IV	
4854.978	I	1		3*d*			IV	
4855.136	I							3
4855.578	I	2		2			IV	
4856.239	II	20	20				VE	1
4857.373	I	1		1			IV	3
4858.971	I	1		15			III	
4859.150	I	1					VE	
4860.051	I	1		1			IV	
4861.701	I	1		1			IV	
4861.798	I							
4865.682	I	2		1			IV	
4867.756	I	1		1			IV	
4868.050	II	15	15				VE	1
4868.650	I	1		2			IV	3
4868.832	I							
4869.660	I	1		1			IV	
4872.476	I	1		1			IV	
4873.159	I	3		3			IV	
4875.460	II	(?)					VE	
4875.927	I	3		1			IV	
4877.115	I	1		1			IV	3
4879.170	I	1		1			IV	
4880.161	I	30		30			II	
4881.981	II	3*d*					VE	
4884.152	I	3		10			III	
4884.551	I	6		3			IV	
4886.144	I	2		2			IV	
4888.081	I	40		60			III	
4889.327	II	50	60				VE	1
4889.783	II	1					VE	
4890.102	II	60	15	1			VE	1
4892.592	II	2					VE	
4893.676	I	8		6			IV	
4895.850	I	5		6			IV	
4897.121	II	2					VE	
4899.245	I	5		3			IV	
4901.941	I	6*d*?		25			III	
4903.682	I	1		5			IV	
4906.252	I	5		30			III	
4907.479	I	2		2			IV	
4909.003	II	1					VE	
4909.799	I	2					VE	
4911.167	I	1		5			IV	
4911.480	II	1					VE	
4912.547	II	2					VE	
4914.729	I	5		40			III	
4916.409	I	15		6			IV	
4917.175	I	3		20			III	
4918.242	I	5		5			IV	
4919.554	I	1		1			IV	
4921.492	I	2		2			IV	
4922.221	II	25	50				VE	1
4923.160	II	60	25				VE	1
4927.332	II	2					VE	
4929.322	II	2					VE	
4931.031	I	3		3			IV	
4932.474	I	1		1			IV	
4933.028	I	1		2			IV	3
4933.845	II	8					VE	
4936.108	I	2		2			IV	
4936.832	I	1		1			IV	
4940.425	I	1		10			IV	
4941.159	I	2		1			IV	
4942.849	I	2		3			IV	
4945.502	II	1					VE	
4946.262	II	4					VE	
4948.217	I	3		4			IV	
4949.319	I	1		2			IV	3
4951.016	I	2		1			IV	
4951.431	I	2		3			IV	
4953.366	I	1		3			IV	
4954.349	II	2					VE	
4957.338	II	1500	500	50			IVE	1
4959.587	I	6		5			IV	
4961.742	I	1		8			IV	3
4963.081	II	2					VE	
4964.659	I	1					VE	
4969.859	I	2*d*?		10			IV	
4971.768	I	4		3			IV	
4973.568	I	6		6			IV	
4974.990	II	6	(8)				VE	1

TABLE A. *Temperature classification of dysprosium lines* – Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes	Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace							Arc	Spark	Furnace				
				High	Medium	Low							High	Medium	Low		
4976.444	I	1		1			IV		5065.760	I	3		1			IV	
4980.126	I	2		?			IV		5067.157		1					VE	
4981.964	I	1		1			IV		5070.678	I	60		80			III	
4983.818	I	1		1			IV	3	5071.761	I	1		2			IV	
4984.622	I	1					VE	3	5072.954	II	1					VE	3
4985.068	I	2		2			IV	3	5073.809	I	1		1			IV	
4985.523	I	10		6			IV		5074.274	I	2					VE	
4988.112	I	1*d*?		3			IV		5077.669	I	60		80			II	
4991.819	I	1		1			IV		5080.172	II	4					VE	
4993.518	I	2		8			IV		5084.947	I	2		?			IV	
4994.808	I	3		2			IV		5086.864	I	2					VE	
4995.359	II	8					VE		5088.419	II	5					VE	
4996.771	I	1*d*?		4			IV		5090.386	II	50	25	1			VE	1
4997.630	I	1		3			IV	3	5092.203	II	8	(8)				VE	1
4998.462	I	3		10			IV		5099.844	II	2					VE	
4998.976	II	} 4*d*?	{				VE		5102.350	I	4		10?			IV	
4999.048				1			IV		5105.331	I	2		5			IV	
5000.108		1					VE		5106.347	I	8					VE	
5000.925	I	1*d*		5			IV		5106.882	I	5		8			IV	
5003.867	I	20		25			IV		5107.983	II	20	20				VE	1
5004.285	II	50					VE		5108.454	I	2		4			IV	
5005.888	I	1		1			IV		5110.321	I	15		8			IV	
5007.418	II	8					VE		5112.713	I	1		15			III	
5009.415	I	1		4			IV		5113.415	II	3					VE	
5010.606	I	4		3			IV		5120.036	I	100		80			III	
5011.529	I	1		1			IV		5122.408	I	4		?			IV	
5012.156	I	2*d*		2			IV		5123.119	I	3		2			IV	
5012.579	I	1		6			IV		5125.534	I	2*d*?		?			IV	3
5017.986	II	10	(8)				VE	1	5127.487	I	3					VE	
5019.319	I	1					VE		5128.292	I	5		?			IV	
5021.835	I	1		30			III		5129.846	II	15	15				VE	1
5022.118	I	50		80			III		5130.336	I	2		?			IV	
5024.032	I	5		6			IV		5131.068	II	} 4*d*	{				VE	3
5024.536	I	6		25			III		5131.121	I			1			IV	3
5027.874	I	6		6			IV		5131.928	I	2		3			IV	
5029.233	II	3					VE		5132.221	I	2					VE	
5032.660	I	5		6			IV		5133.603	I	1					V	3
5032.996	I	6		6			IV		5135.023	I	15		30			III	
5034.353	I	1*d*		2			IV		5136.292	II	8					VE	
5036.901	I	1		1			IV		5139.598	II	200	80	6			IVE	1
5037.702	I	1*d*		6			IV		5141.524	I	} 2*d*		8			IV	3
5039.046	I	3		15			III		5141.652	I							
5040.529	II	2					VE		5145.212	II	15	20				VE	1
5042.038	I	2		1			IV		5146.978	I	2		8			IV	
5042.634	I	100		100			III		5147.192	I	3		3?			IV	
5043.624	I	2		3			IV		5148.976	I	2		?			IV	
5045.498		1		1			IV		5149.642	I	1		2			IV	
5046.300	II	4					VE		5150.137	I	6*d*?					VE	
5047.249	I	8		20			III		5151.299	I	1					VE	
5049.521	I	2*d*		4?			IV		5151.607	I	2		4			IV	
5050.215	I	10		6			IV		5154.582	I	1		2			IV	
5051.241	I	1		1			IV		5155.305	I	60		30			IV	
5052.010	I	4		10			IV		5156.031	I	1		4			IV	3
5053.189	I	2					V		5156.805	I	3		4?			IV	3
5053.352	I	5		5			IV	3	5157.805	I	1		?			IV	
5055.462	I	4		3			IV		5158.917	II	4					VE	
5055.859	I	1		2			IV		5159.162	I	6		25			III	
5056.180	II	2*d*					VE		5161.027	II	25	25				VE	1
5060.732	I	1		1			IV		5162.338	I	2*d*?		?			IV	
5061.594	II	5					VE		5164.116	II	25	30				VE	1
5063.435	I	3		6			III		5165.073	I	1		1			IV	3
5065.537	I	2		1			IV		5165.338	I	} 15		15?			IV	
									5165.390	I							

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wave-length (Air)	Spectrum	Intensity					Temp. Class	Notes	Wave-length (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace							Arc	Spark	Furnace				
				High	Medium	Low							High	Medium	Low		
5166.845	II	30					VE		5247.742	I	10*d*?					VE	
5168.110	I	2		2			IV		5248.141	II	20					VE	
5169.584	I	?		10			IV		5248.454	I	5					VE	
5169.688	II	150	60				VE	1	5250.804	I	2		2			IV	3
5170.193	II	5					VE		5254.158	II	1		1			IV	
5171.919	I	4		60			III	3	5255.047	II	15	20				VE	1
5172.895	II	5					VE	3	5255.326	I	1		1			IV	
5173.833	I	5		5			IV		5258.372	II	25	15				VE	1
5175.079	I	8*d*		6			IV		5259.880	I	30		20			III	
5177.575	I	1		1			IV		5260.558	I	100		80			III	
5180.105	I	3*d*		3			IV		5262.519	I	1		1			IV	
5182.231	I	1		1			IV	3	5263.546	I	?		2			IV	
5184.506	I	3		25			III	3	5264.354	I	6		5			IV	
5185.158	I	30		25			III		5265.746	I	2?		1			IV	
5185.615	I	1		1			IV		5267.111	I	80		100			II	
5186.984	II	2					VE		5268.949	I	3		5			IV	
5188.452	II	15	10	3			VE	1	5270.765	I	4		4			IV	
5190.529	I	1–		4			IV	3	5272.248	II	80	30				VE	1
5192.496	I	?		2			IV		5274.068	I	20		60			II	
5192.865	II	1000	400	30			IVE	1	5275.291	II	100	100				VE	1
5194.053	I	1		3			IV	3	5275.916	I	2					VE	
5196.814	I	6		8			IV		5276.846	I	1		4			IV	
5196.969	I			2			IV	3	5277.377	II	15					VE	
5197.664	II	150	80	2			IVE	1	5277.684	I	4		6			IV	
5199.511	I	1*d*		4			IV		5277.883	I	8		6			IV	
5200.826	I	2*d*		2			IV		5278.327	I	3		3			IV	
5202.334	II	2					VE		5279.698	II	125	100				VE	1
5203.449	II	1					VE		5280.391	I	2		2			IV	
5205.663	I	10*d*?		10			IV		5281.594	I	1		1			IV	
5206.857	II	2					VE		5282.072	I	60		100			II	
5212.033	I	3*d*		40			IV		5282.360	I	3		4			IV	
				?			?		5283.296	II	2					VE	
5212.402	I	3		2			IV		5283.753	I	2		2			IV	
5214.428	II	6*d*					VE	3	5284.987	II	50	30				VE	1
5215.412	II	4					VE		5287.967	I	3		3			IV	
5216.212	I	1		6			IV	3	5290.034	I	5		20			III	
5216.427	I	1		4			IV	3	5292.713	I	2		2			IV	
5217.270	I	1		2			IV		5295.610	I	2		3			IV	3
5220.322	II	(1?)					VE		5297.817	II	60	50	50			IIIE	1
5220.704	II	3					VE		5299.039	I	1		1			IV	
5221.980	I	10		60			IV		5300.298	II	20	8				VE	1
5224.228	I	1		5			IV		5300.884	I	5		50			III	
5225.028	I	1		1			IV		5301.576	I	300		200			I	
5225.867	I	1		1			IV		5303.170	I	3		1			IV	
5226.919	I	15		20			IV		5305.727	I	1		1			IV	3
5227.411	I	1		2			IV		5306.600	I	4		2			IV	
5227.827	I	3		3			IV		5308.830	I	4		4			IV	
5229.530	I	2		1			IV	3	5309.015	II	150	150				VE	1
5231.948	I	2*d*?		1			IV		5309.377	I	1		1			IV	3
5232.973	II	5					VE		5310.086	I	4		4			IV	
5234.275	I	1		1			IV	3	5311.849	I	3		15			IV	
5235.488	I	1		1			IV	3	5312.162	II	3					VE	
5236.253	I	25		150			I		5312.627	I	12		8			IV	
5238.372	I	5		50			III		5313.750	I	1		4			IV	
5240.894	I	2		1			IV		5315.991		4*d*?		0			VE	3
5241.463	I	2		1			IV		5316.150	I			1			IV	
5242.071	I			4			IV		5316.981	I	3		15			IV	
5242.485		3					VE		5318.108	I	4		3			IV	
5245.158	II	2					VE		5319.202	I	4		6?			IV	3
5246.387	I	2		3			IV		5319.945	II	1					VE	3
5246.944	II	20	20				VE	1	5320.619	I	1		1?			IV	
									5321.689	I	8		6			IV	

TABLE A. *Temperature classification of dysprosium lines* – Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
5322.233	I	6		50			III	
5324.695	II	125	125	2			VE	1
5325.780	I	1		4			IV	
5326.688		3					VE	
5328.938	I	5		25			IV	
5330.734	I	4	(10)				VE	1
5333.083	I	5		5			IV	
5334.085	I	1		1			IV	
5335.053	I	6		6			IV	
5336.513	I	2		2			IV	
5336.786	I	4		12			IV	
5337.432	II	30	20				VE	1
5340.300	I	100		80			III	
5343.154	I	4		20			IV	
5343.557	I	5		25			IV	
5345.562	I	2		1			IV	
5347.561		1					VE	
5348.353	II	4					VE	
5350.295		1					VE	
5352.114	I	40		150			II	
5353.245	I	3		3			IV	
5354.993	I	3		?			IV	
5356.142	I	6		3			IV	
5360.665	II	2					VE	
5361.349	I	3		3			IV	3
5364.852	I	2		1			IV	
5368.085	I	3?		2			IV	
5368.197	II	30					VE	
5369.245	II	5	(12)				VE	1
5370.588	I	8		30			III	
5372.980	I	4					VE	
5376.099	I	10		6?			IV	
5380.660	I	4		8			III	
5381.358	I	2		25			III	
5381.878		2					VE	
5384.844	II	4					VE	3
5385.629	II	40	(14)				VE	1
5386.673		1		1			IV	3
5389.580	II	300	(60)	3			VE	1
5389.744	I	?		15			IV	
5390.092	II	4					VE	
5391.199	I	3		4			IV	
5392.044	I	15		50			II	
5395.126	II	1		1			IV	3
5395.572	I	60		150			I	
5399.934	II	20	10				VE	1
5401.354	I	6*d*?		4			IV	
5404.192	I	40		200			I	
5407.749	I	10		8			IV	
5409.681	I	3		3			IV	
5410.766	II	4*d*					VE	3
5412.474		2		?			VE?	
5416.559	I	1		1			IV	3
5416.938	I	3		2			IV	
5418.722	I	4		3			IV	
5419.133	I	80		60			III	
5419.298	I	?		10			IV	
5420.770	I	8		60			III	
5421.989		2		3			IV	
5423.319	I	150		200			I	
5424.273	I	20		20			III	
5424.699	I	2		1			IV	
5425.304	I	2		1			IV	3
5426.336	II	2					VE	
5426.700	II	80	100	2			VE	1
5428.823	I	1		1			IV	3
5431.489	I	3		3			IV	3
5434.961	I	1		4			IV	
5436.678	II	4		1			IV	
5442.226	I	1		1			IV	3
5443.344	II	30	30				VE	1
5449.416	I	1		1			IV	3
5449.965	I	2		4			IV	
5451.109	I	300		200			I	
5453.597	II	2					VE	
5454.249	I	2		3			IV	
5455.466	II	40	40				VE	1
5455.711	I	3		10			IV	
5458.114	I	2		1			IV	
5459.340	I	2		1			IV	
5460.605	I	6		4			IV	
5465.642	I	2		8			IV	
5468.641	I	1		1			IV	3
5469.106	II	40	20				VE	1
5471.913	II	15	(8)	20*			IVE	1
5471.961	I						(IV)	
5472.632	I	2		2			IV	
5474.888	I	2		2			IV	
5477.253	I	4					VE	
5478.577	I	2		2			IV	
5479.925	I	3		2			IV	
5481.112	I	1		2			IV	3
5481.637	I	2		?			IV?	
5483.853	I	3		2			IV	
5486.382	I	3		2			IV	3
5486.834	I	2		8			IV	3
5488.700	I	3		3			IV	3
5489.184		1					VE	3
5490.336	I	3		2			IV	
5491.809	I	3		15			IV	
5496.181	I	1		1			IV	
5496.830	I	20		20			IV	
5497.288	I	2		5			IV	3
5499.552	I	2		2			IV	
5501.858	I	1		1			IV	
5502.794	I	20		40			III	
5503.927		2					VE	
5506.515	I	20		10			IV	
5508.301		5*d*?		2			IV	
5511.313	I	4		3			IV	
5511.895	I	3		4			IV	
5515.407	II	30	15	2			VE	1
5519.925	I	5*d*?		2			IV	
5521.762	I	2					VE?	3
5522.336	I	2		2			IV	3
5527.259	I	1					V	3
5527.443		3					VE	
5528.012	I	30		80			III	
5530.548	II	3		1			IV	
5532.078	I	5*d*?		5			IV	
5534.367	I	4		4			IV	
5535.216	I	8		5			IV	
5538.231	I	3		6			IV	
5539.100	I	1		2			IV	

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes	Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace							Arc	Spark	Furnace				
				High	Medium	Low							High	Medium	Low		
5542.195	I	8		4			IV		5656.327	I	1		4			IV	3
5544.047	I	1		1?			IV		5658.785	I	2		4			IV	
5544.679	I	2		1			IV		5660.308	II	3	(5)				VE	1
5546.383	I	2		2			IV	3	5661.380	I	1		1			IV	
5547.268	I	300		300			I		5663.873	II	8d	(4)	5*			VE	1
5552.861	I	2		2			IV	3	5663.954	I						IV	
5554.691		4		10			IV	3	5664.412	I	3		60			II	
5555.627	I	2		1			IV		5665.560	II	3					V	
5557.453	I	2		2			IV	3	5666.428	I	6		4			IV	
5559.119	II	8					VE		5669.268	I	1		1			IV	
5562.481	I	10		10			IV		5670.308	I	2		2			IV	
5563.169	II	8					VE		5671.250	I	20		20			IV	
5564.061	I	2		3			IV	3	5673.026	I	2		4			IV	
5564.783	I	2					VE		5677.683	I	30		40			IV	
5566.302	I	5					VE		5678.344	II	6					VE	
5567.222		3		5			IV		5683.032	I	4		10			IV	
5568.150	I	5		4			IV		5685.583	I	40		300			II	
5573.943	I	1		1			IV	3	5687.625	I	2					IV	
5574.337	I	1		1			IV		5690.436	I	4		4			IV	
5575.951	I	2					V		5690.959	I	2		4			IV	3
5576.611	I	2		40			III		5692.352	I	4		2			IV	
5577.817	I	1					V		5695.889	II	12	(8)	4			IVE	1
5579.432	I	1					V		5698.718	II	15	(15)				VE	1
5579.901	I	2		12			III		5699.332	I	20		200			II	
5582.799	II	1					V	3	5702.908	I	30		150			II	
5583.195	I	8	(8)	30			III	1	5704.458	I	1		2			IV	
5584.347	I	2		2			IV		5707.031	I	3		3			IV	3
5585.562	I	1		6			IV		5707.808	I	20		25			IV	
5591.642	I	3		3			IV		5711.025	I	4		15			IV	
5592.314	II	5	(8)				VE	1	5713.848	I	2		5			IV	
5594.338	I	6		4			IV		5717.686	I	3		4			IV	
5596.055	I	2					V	3	5714.925	I	2		2			IV	3
5597.350	II	5	(5)				VE	1	5718.461	I	100		50			III	
5598.338	I	2?					V		5719.978	II	3					VE	
5598.799	I	1		3			IV		5727.451	I	8		50			III	
5600.652	II	200	(80)				VE	1	5732.912	I	15		12			IV	
5600.800	I	?		4			IV		5733.360	I	3		3			IV	
5602.426	II	2					V		5737.704	I	3		3			IV	
5605.629	I	20		20			III		5740.204	I	50		50			III	
5609.866	I	2		4			IV		5745.529	I	80		300			II	
5613.229	I	60		30			IV		5748.010	I	2		3			IV	
5618.453	II	1					V	3	5750.219	I	1?		6			IV	
5620.618	I	1		8			IV		5750.484	I	10		6			IV	
5622.498	I	3		4			IV		5753.648	I	5		2			IV	
5624.996	I	2		2			IV		5754.261	I	5		40			III	
5626.135	I	3		10			IV		5758.226	I	8		10			IV	
5627.490	I	20		200			II		5758.793	I	25		300			II	
5629.714	II	3					V		5759.780	I	4		2			IV	
5634.714	II	6					VE		5760.223	I	1		1			IV	
5635.976	II	2					V		5761.853	I	4		4			IV	
5637.160	I	1		4			IV		5763.524	II	5					VE	
5637.578	I	1					V	3	5766.350	I	4		2			IV	3
5639.498	I	500		400			I		5766.973	II	5					VE	
5641.504	II	25	(10)	2			IVE	1	5771.276	I	2		2			IV	3
5645.520	I	4					V		5784.026	I	4		6			IV	
5645.990	I	100		80			III		5787.197	I	5		5			IV	
5649.766	II	3					V		5789.280	II	5					VE	
5651.469	I	1		2			IV		5800.689		1					IV	3
5652.009	I	300		250			I		5802.617	I	8		80			III	
5653.488	I	2		2			IV	3	5805.554	I	30		100			III	
5654.543	I	1		1			IV	3	5807.658	I	15		60			III	
5654.749	II	2		0			VE	3	5813.101	I	8		?			VE?	

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
5824.920	I	1		2			IV	
5827.426	I	2		3			IV	
5829.292	I	2		8			III	
5831.378	I	1		1			IV	3
5838.869	I	2		1			IV	
5840.125	I	5		8			IV	
5840.339	I	5		1			IV	
5845.360	II	8					VE	
5846.157	I	4					VE	
5850.131	I	4		8			IV	
5852.460	I	4		6			IV	3
5856.082	II	6	(6)				VE	1
5856.976	I	2		10			III	3
5858.054	I	2		3			IV	
5859.566	II	4					VE	
5864.025	I	15		20			IV	
5868.106	II	150	25	4			VE	1
5874.086	I	4		3			IV	3
5876.312	I	1		4			IV	
5883.216	I	2		8			IV	
5884.189	I	4		50			III	
5887.497	II	4					VE	
5893.098	I	4		30			III	3
5893.308	I	6		20				
5897.670	II	5					VE	
5902.448	II	10	(10)				VE	1
5903.295	I	5		6			IV	
5905.185	II	3					VE	
5907.262	I	2		3			IV	
5909.167	II	12	(7)				VE	1
5915.163	II	100	(65)				VE	1
5916.619	I	5		5			IV	
5922.360	I	6		6			IV	
5923.970	I	3					IV	
5924.562	II	30	10	2			VE	1
5927.812	I	5		3			IV	3
5929.111	I	1		2			IV	
5929.521	I	5		6			IV	
5929.591	I							
5933.177	I	6		40			III	
5935.269	I	1		1			IV	
5935.567	I	1		1			IV	
5936.597	I	3		3			IV	
5938.816	II	2					VE	
5941.464	I	3		25			III	
5943.674	I	8		150			II	
5945.803	I	200		300			II	
5948.633	I	1		1			IV	3
5949.481	I	2		2			IV	
5951.614	I	2		2			IV	3
5954.358	I	1		1			IV	3
5955.514	II	5	(8)				VE	1
5958.803	I	1		1			IV	
5961.272	I	5		5			IV	
5964.464	I	100		400			II	
5964.713	I	20?	15	40			III	1
5965.052	I	1		12			IV	
5965.426	I	1		2			IV	
5966.486	II	10					VE	
5970.032	I	15		20			IV	
5970.719	II	4					VE	
5974.487	I	300		300			I	
5978.248	II	2	(2)				VE	1
5979.996	I	5		200			I	
5982.501	I	3		5			III	
5984.102	I	1		3			IV	
5984.862	I	30		30			IV	
5985.990	I	15		100			II	
5988.562	I	800		500			I	
5989.671	II	2					VE	
5990.505	I	1		3			IV	
5991.674	I	8		50			III	
5992.638	II	2					VE	
5994.952	I	1		8			IV	
5996.581	I	1		1			IV	
6000.838	I	10		10			IV	
6001.214	II	1					VE	3
6003.262	I	15		30			III	
6006.842	I	3		2			IV	3
6007.753	I	1					VE	
6008.351	I	1		3			IV	
6008.938	I	40		250			II	
6009.331	I	2		20			III	
6010.815	I	200		400			I	
6013.638	II	3					VE	
6017.263	I	20		150			II	
6018.542	I	4		15			III	
6021.564	I	3					VE	
6023.593	I	1		4			IV	
6025.074	I	2		3			IV	
6030.980	I	25		300			II	
6036.180	I	1		2			IV	
6038.700	II	8					VE	
6040.443	I	1		5				3
6040.556	I			15			III	3
6042.966	I	1		1			IV	3
6044.480	II	4	(3)				VE	1
6047.051	I	1		2			IV	
6050.061	II	6	(4)				VE	1
6052.040	I	2		2			IV	
6052.914	II	4					VE	
6053.201	I	1		5			IV	
6058.176	I	60		400			II	
6058.790	I	1		1			IV	
6063.561	II	8	(8)				VE	1
6067.895	I	10		150			II	
6073.775	II	6	(6)				VE	1
6074.605	II	6	(4)				VE	1
6075.020	I	5		20			IV	
6076.942	I	2		2			IV	3
6079.843	I	1		1			IV	3
6083.362	I	2		4			IV	
6084.043	I	6		4			IV	
6084.372	I	1		2			IV	3
6085.056	I	100		500			II	
6088.261	I	500		400			I	
6089.300	I	6		40			II	
6090.432	I	1		1			IV	
6090.889	I	10		200			II	
6091.270	I	2					VE	
6093.464	I	1		4			IV	3
6097.357	I	3		25			III	
6099.646	I	6		80			II	

TABLE A. *Temperature classification of dysprosium lines* – Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
6103.375	I	10		125			II	
6103.648		8					VE	
6106.201	I	1		3			IV	
6107.621	I	10		15			IV	
6107.886	I	1		12			IV	
6111.337	I	1		15			III	3
6113.927	I	15		50?			II	
6114.074	I	10		200?				3
6115.276	I	15		150			II	
6115.676	I	10		80			III	
6117.025	I	1		2			IV	
6119.630	I	20		200			III	
6121.612	I	1		3			IV	
6124.830	I	2		8			IV	
6125.931	I	1		4			IV	
6126.487	I	30		40			IV	
6127.155	I	40		150			III	
6132.238	I	1		1			IV	
6133.645	I	60		300			III	
6138.362	I	8		40			III	3
6142.211	I	1		10			III	
6143.016	I	1		2			IV	
6144.879	I	2		1			IV	
6145.537		2		2			IV	3
6146.441	I	1		2			IV	
6150.604	I	10		40			III	3
6150.772	I	8		80			III	
6151.488	I	3		2			IV	
6152.770	I	1		2			IV	
6158.282	I	50*d*		400			II	
6158.838	I	1		5			IV	
6163.984	I	1		8			IV	
6165.555	I	80		400			II	
6167.981	I	1		2			IV	
6168.431	I	600		1000			I	
6169.639	I	2		2			IV	3
6170.317	I	3		3			IV	3
6170.525	I	3		3			IV	
6172.701	I	1		8			III	
6173.454	I	2		6			IV	
6175.173	I	2		2			IV	
6177.039	I	2		2			IV	
6184.704	II	4	(3)				VE	1
6189.706	I	10		100			III	
6191.718	I	1		?			VE?	3
6196.231	II	50	(25)				VE	1
6199.212	II	15					VE	
6203.382	I	2		1			IV	
6204.016	I	4		3			III	
6205.120	I	1					V	
6206.322	I	2		1			IV	
6207.977	I	3		3			III	
6210.767		2		3			IV	
6212.665	I	10		2			IV	
6213.426	I	5		3			III	
6215.209	I	2					VE	
6216.562	II	6	(4)				VE	1
6220.371	I	1		1			IV	3
6221.640	II	2					VE	
6225.371	I	3					VE	
6229.740	II	40					VE	
6230.590	I	10*d*		2			III	
6230.779	II						VE	3

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
6232.328	I	2					VE	3
6236.572	I	1					VE	
6237.391	II	2					VE	3
6238.268	I	3		6			II	3
6239.248	II	8					VE	
6240.171	II	3					VE	
6244.126	I	1					VE	
6246.847	I	40		8			III	
6250.003	II	5	(5)				VE	1
6250.654	I	10*d*		5			II	
6251.265	I	5		10			III	
6254.309	I	6					VE	
6255.446	I	15		4			III	
6255.921	I	3					VE	
6259.088	I	1000		1200			I	
6260.364	I	100		80			II	
6260.444	I							
6261.091	II	2*d*		1			IV	
6263.440	I	1		1			IV	
6265.552	I	4		1?			IV?	
6266.734	I	2		2			IV	3
6270.759	I	40					VE	
6271.102	I	20		3			III	
6272.897	I	5		2			IV	3
6273.800	I	15		4			IV	3
6274.618	I	1		1			IV	
6281.273	I	4		8			III	3
6283.738	II	1					VE	
6288.730	I	2		1			IV	3
6290.485	II	5					VE	
6291.651	I	50		40			II	
6298.902	I	3					VE	
6299.281	I	4		5			II	
6300.230	II	6*d*					VE	3
6301.013	I	4		2			IV	
6302.652	I	5					VE	
6303.038	II	3					VE	3
6304.202		2		2			IV	
6305.150	I	2					VE	
6305.626	I	1		20			III	
6310.524	I	2		1?			IV?	
6311.829	I	4					VE	
6316.632	II	5	(5)				VE	1
6317.228	II	40	(20)				VE	1
6318.705	I	3					VE	
6320.180	II	6					VE	3
6320.456	I	2					VE	
6321.464	I	5					VE	
6322.793	I	3		1?			IV?	3
6323.210	I	30		2?			IV?	
6326.912	I	6		5			III	3
6329.216	I	8		6			III	
6329.591	I	3					VE	
6331.086	I	30					VE	
6331.234	I	?		3			III	
6331.988	I	4		2			IV	
6333.354	I	2*d*?					VE	
6333.814	I	4		4			IV	
6334.232	I	3		1			IV	
6336.121	I	1					V	
6338.083	I	50		60			I	

TABLE A. *Temperature classification of dysprosium lines* – Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
6339.318	II	5					VE	
6341.362	I	15		3			III	
6341.877	I	3					V	
6342.518	II	6					VE	
6343.325	I	150		4			III	
6344.689	I	3					V	
6348.356	I	3		?			V	
6349.002	I	2		1?			IV?	
6351.251		3					VE	
6352.630	I	15		10			III	
6353.090	I	15		2			IV	
6353.631	II	20	15				VE	1
6358.495	I	10		15			III	
6359.702	I	12		2			IV	
6359.897	I	3					V	
6361.496	II	5					VE	
6366.885	I	1					V	
6368.009		3					V	3
6369.590	I	80					VE	
6371.997	I	1		1			IV	
6373.157	I	2					V	3
6374.439	I	3					V	
6375.010	I	12		12			II	
6376.905		2					VE	3
6377.712	I	60					VE	
6379.323	I	5		2			IV	
6379.750	I	3		4			III	
6381.368	I	5					V	3
6382.163		1					V	
6386.796	I	400		300			I	
6387.532	I	15		4			III	
6388.388	I	10		2			IV	
6390.641	II	10	(10)				VE	1
6396.411	I	?		?			II	
6396.604	II	200	200				VE	1
6402.009	I	10					V	3
6402.300	I	50					V	
6407.531	II	5					V	
6408.274	I	3					V	
6410.397	I	2					V	
6413.500	I	6		1?			IV?	
6414.806	I	2					V	
6415.630	I	4		5			II	
6418.239	I	3?		1			IV }	3
6418.426	II	30					VE }	
6421.917	I	600		500			I	
6423.070		2					V	
6427.282	I	60		100			II	3
6427.768	II	6	(4)				VE	1
6431.180	I	3		2			IV	
6432.399	I	1					V	
6432.965	I	20		10			III	
6434.354	II	4					VE	
6435.013	I	4					V?	
6435.626	II	8	(8)				VE	1
6436.547	I	60					VE	
6436.736	I	2?		2			IV	
6441.815	II	6	(12)				VE	1
6442.639	I	2					V	
6443.085		1					V	
6443.696	II	40	40				VE	1
6444.149	I	10		2?			IV?	
6445.489	I	1					V	
6449.509	I	1					V	3
6449.974	I	10					V	3
6450.501	I	20					V	
6453.476	II	3					V	
6454.587	I	1					V	
6454.886	II	1					V	
6456.019	I	3		2?			IV	3
6459.260	I	3					V	
6460.048	I	1		1			IV	
6460.829	I	300		200			II	
6467.943	I	2					V	3
6468.497	I	?		4			III	
6468.576	II	150	(150)				VE	1
6471.976	II	50	(35)				VE	1
6474.005	I	1					V	
6474.915	I	125		1			VE	
6478.218	II	15					V	
6480.961	II	4					V	
6482.546	I	3		1?			IV?	
6483.586	II	300	(120)				VE	1
6486.595	I	800		50			III	
6487.165	I	2					V	
6489.477	I	4		2?			IV?	
6496.265	I	1					V	3
6498.528	I	2					V	
6499.119	I	1					V	
6503.472	I	1					V	
6504.274	I	3		1			IV	3
6505.318	I	5					V	3
6509.334	II	3					V	3
6511.474	I	1					V	
6512.135	I	2					V	3
6513.126	I	15					V	
6513.599	I	1					V	3
6515.898	I	3					V	
6516.527	II	3					VE	3
6517.909	I	1					V	3
6519.130	II	50	(35)				VE	1
6522.301	II	4					V	
6526.026	I	4					V	
6527.963	I	3					V	3
6529.453	II	4					VE	
6532.339	II	10	25				VE	1,3
6534.454	I	2					V	3
6536.646	I	5					V	3
6539.452	II	8					VE	
6542.608	I	10		15			II	
6548.258	II	200	(100)				VE	1
6550.750	I	5		4			IV	3
6553.194	II	8					V	
6554.824	I	1					V	
6556.969	I	2					V	
6558.023	I	500		400			I	
6563.166	I	1					V	
6563.994	II	5					V	
6565.114	I	150		10			IV	
6570.196	I	3		2			IV	
6574.299	II	20					V	
6575.486	I	3					V	3
6579.367	I	2000		500			I	

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes	Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace							Arc	Spark	Furnace				
				High	Medium	Low							High	Medium	Low		
6582.048	I	2					V		6709.519	I	1					V	
6582.979	I	3					V		6711.567	I	4		1			IV	
6583.523	I	1					V		6713.046	I	} 30		15			III	3
6585.079	II	2					V	3	6713.157	I							
6587.503	I	5		5			IV		6716.200	I	2					V	
6591.678	I	15		2			IV		6718.266	I	3		2			IV	
6594.145	II	80	(65)				VE	1	6719.411	I	1					VE	3
6595.299	I	4		1?			IV?		6720.216	I	1		1			IV	
6595.581		1					V		6721.704	I	3		2			IV	3
6600.546	I	1					V		6722.238	I	1					V	3
6604.502	I	10					V		6723.210	I	1		2			IV	
6607.051	I	1		2			IV	3	6723.442	I	2		2			IV	
6611.729	II	15					V		6724.706	I	20		5			III	
6614.707	I	3					V		6726.884		1					V	
6614.911	I	20					V		6727.619	I	1					V	
6616.200	II	2					V		6730.337		1					V	
6617.683		3					V		6733.823	I	3*d*?		2			III	3
6622.567	I	1					V	3	6736.069	I	15		20			III	
6623.742	I	1					V	3	6736.963	I	2		2			III	3
6625.490	I	15*d*?		6			IV		6738.569	I	3					VE	3
6626.972	I	2					V		6739.860	I	3		4			III	
6628.288	I	3		2			IV		6740.470	I	2		1			IV	
6632.961	I	1		5			III		6741.219	I	4					V	
6639.213	I	30		5			III		6742.274	I	5		5			III	
6641.450	I	2		2			III		6742.782	I	2		2			IV	
6643.373	I	200		250			I		6743.680	I	10					VE	3
6645.475	I	2		2			III		6744.439	I	8		2			IV	3
6649.522		2		2			IV		6747.930	I	300		100			II	
6650.290	I	3		2			III		6748.686	I	1					V	
6654.232	II	8	(8)				VE	1	6750.212	I	30		40			II	
6654.542	I	1					V		6751.581	I	2		3			IV	
6658.039	I	10		40			III	3	6752.778	I	1					V	
6658.360	I	300		40			III		6753.052	I	1		1			IV	3
6660.090	I	1		3			III	3	6757.623	I	60		20			III	
6661.639	I	300		150			III		6758.489	I	1		1			IV	
6662.806	II	2					VE		6759.113	I	8		10			III	
6666.937	I	6		4			III		6764.778	I	15		30			II	
6667.858	I	1200		800			II		6765.894	I	600		300			II	
6670.161	I	30		40			II		6767.499	I	1		1			IV	
6672.061	I	1		1			IV		6768.037	I	2		2			IV	
6676.707	I	2		1			IV		6768.436	I	1		2			IV	
6682.094	I	3		2			IV		6769.790	I	2		1			IV	
6683.247	II	3					VE		6770.877	I	1		1			IV	
6683.498	I	2		20			II		6772.188	I	5		6			III	
6684.776	II	2					VE		6772.630	I	1		2			III	
6686.381	I	6		5			III		6774.088	I	1		3			III	3
6687.837	I	2					VE		6774.590	I	4		5			III	
6688.068	I	10		15			III		6775.078	I	1		1			IV	
6691.133	I	3		1			IV		6776.407	I	2		1			IV	
6692.351	I	2					V		6777.044	I	15		30			II	
6692.729	I	4*d*?		2			IV	3	6777.646		6					V	
6694.072	I	2					V		6778.435	I	1					V	3
6694.568	I	3		2			IV	3	6780.997	I	1		1			IV	3
6697.028	II	1					V		6782.471	I	2		1			IV	
6698.122	I	1					IV		6783.082	I	3		1			IV	
6698.401	I	4		2			IV	3	6783.942	I	1		1			IV	3
6700.044	I	(1)					V		6785.000	I	3					V	3
6700.636	II	20	(15)				VE	1	6785.701	I	4		15			III	
6701.582	II	1					VE	3	6787.370	I	25		20			III	
6704.333	I	2					V		6790.298	I	30		200			I	
6704.724		1					V		6794.229	I	30		50			II	

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
6795.167	I	1					V	
6795.538	I	2		1			IV	
6797.294	I	2					V	
6797.552	I	5					VE?	
6798.937		2					V	3
6799.579		2					V	
6800.010	II	6					V	
6800.419	I	2		1			V	
6803.066	II	8	(8)				VE	1
6803.324	I	6		1			IV	3
6805.545	I	40		30			III	3
6807.312		6	(5)				VE	1
6808.409	I	2		1			IV	
6811.782	I	1		1			IV	3
6814.839		4					VE	
6815.330	I	8		10			III	
6816.769	I	2					V	3
6817.299	II	1					VE	3
6818.205	I	80		80			II	
6818.680	II	2					VE	
6820.820	I	4		1			IV	
6821.780	I	200		40			III	
6822.546	}						V	
6822.687	}	2						3
6824.703	I	1					V	
6826.438		1		1			III	
6827.072	I	30		6			III	
6828.347	II	6	(6)				VE	1
6829.130	I	2		1			IV	3
6832.914		1					V	
6833.652	I	8		8			III	
6835.418	I	2000		500			I	
6835.862	I	8?		8			IV	
6838.902	I	1					V	
6839.563	I	3					VE	
6841.191	I	1		1			IV	
6841.802	I	3					V	
6842.751		1					V	
6843.747	I	8		2			III	
6844.970		2					VE	
6845.761	I	40		20			III	
6848.321		1					VE	
6849.593		2					V	
6850.565	I	3					VE	
6850.803	I	1		1			IV	
6851.992	I	20		4			III	
6852.964	I	1500		400			II	
6855.768	I	4		4			III	3
6856.458	I	300		80			III	
6857.356	I	1					V	
6857.902	I	3		10			II	
6860.386		2		1			IV	3
6861.470	I	2					V	
6861.872	I	1					V	3
6863.394	I	1					VE	
6865.558	I	1					V	
6868.109	I	(?)					IV	
6870.893	I	8		3			IV	
6871.446	I	4		1			V	
6871.819		2		1			V	3
6873.020		1					VE	
6873.636	I	2		3			IV	

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
6874.944	I	3		3			III	3
6875.122	I	10		2			III	
6875.823	I	2		2			IV	3
6876.798		1					VE	
6879.015	I	2		3			III	3
6879.157	I	2		1			IV	
6882.313	I	3		1			IV	
6884.315		1					V	
6885.939	I	1		1			IV	
6886.399	I	15		4			III	
6888.565	I	6?		6?			IV?	3
6888.833	I	200		300			I	3
6889.859	I	1		1			IV	
6890.679	I	3		3			III	
6891.205		1					VE	
6894.516	I	25		10			III	
6895.228	I	1					V	3
6895.509	I	30		40			III	
6895.953	I	2					V	
6896.905		1		1			IV	
6897.968	II	40	(25)	1			VE	1
6898.923	I	20		8			III	3
6899.321	II	1500	1000	10			IVE	1
6900.040	I	1		6			III	
6900.235	I	1					V	3
6900.700	I	8		8			III	
6902.046	II	4	(4)				VE	1
6904.076		1					V	
6905.949	I	3		15			III	
6906.443	I	} 200	(110)	200*			{ II	} 1
6906.534	II	}					{ VE	}
6908.419		1					V	3
6908.886		1		1			IV	
6910.386	I	3		2			IV	
6912.198	II	10	(8)				VE	1
6912.677	II	2					V	
6914.002	II	2					VE	
6915.340	I	2		1			IV	
6915.784	II	1					IV	
6917.213	II	1					V	
6917.801	II	2					V	
6918.014	I	2		2			IV	
6919.669	II	4					VE	
6921.980	I	1		1			IV	
6922.845	I	1					IV	
6923.204	II	1					VE	
6925.261	I	5		1			IV	3
6925.494	I	10		3			III	3
6927.664	I	1		1			IV	3
6929.550	I	200		500			I	
6931.517	I	1		1			IV	
6932.452	II	20	(16)	1			VE	1,3
6933.865		1		1			IV	
6935.778	I	5		2			III	
6936.963		1		1			IV	
6939.650	I	6		3			III	
6940.242	I	2		4			III	3
6940.428	I	2					V	
6942.114	I	15		25			III	
6945.263	I	20		150			II	
6946.432	I	3		1			IV	

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes	Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace							Arc	Spark	Furnace				
				High	Medium	Low							High	Medium	Low		
6948.622	I	6		1			IV		7040.673	I	8		10			III	
6950.280	II	100	(80)	2			IVE	1	7043.622	I	10		15			III	
6951.417	I	50		8			III		7046.522		1					V	
6952.203	I	3		1			IV		7047.485	II	3					VE	
6952.933	II	10	(7)				VE	1, 3	7048.061	I	3		2			III	
6956.414	I	2		2			IV		7049.446	I	3		1			IV	
6957.483	I	10		6			III		7050.448	I	1					V	
6958.084	I	1000		1000			I		7053.577	I	6		1			IV	
6959.687	I	1					V		7053.738	I	6		8			III	
6961.674	I	3		2			IV		7054.338	I	4		5			III	
6963.947	II	1					V		7054.644	I	3					V	
6966.138	II	1					VE		7055.398		1		1			IV	
6966.984	I	8		1			IV	3	7055.952	II	250	200	4			IVE	1
6968.778	I	4		4			III		7057.061	II	1					VE	
6970.427	I	80		100			II		7059.680	I	1					V	3
6971.062	I	1		6			III	3	7061.160	II	1					V	3
6972.871		1					V	3	7061.814	I	2		2			III	
6973.594	I	10		2			IV		7062.297	I	80		40			III	
6974.677		1					V	3	7063.307	I	4		2			IV	
6974.918	I	2		2			IV		7063.887	I	1		1?			IV?	
6975.436	I	4		2			III		7066.863	I	2		1			IV	
6977.340	II	3					VE		7067.840	II	2					VE	
6977.932	II	6					VE	3	7073.036	I	4		4			III	
6978.740	I	1					V	3	7073.683	II	1		1?			IV?	
6982.435	I	150		60			III		7074.683		1		1			IV	3
6984.364	I	2					VE		7075.139	II	150	100	5			IVE	1
6985.506	I	2		2			IV		7075.761	II	2					VE	
6986.191	I	3		3			III		7078.951	I	1		1			IV	
6990.077		2		1			IV		7079.661	I	2		2			III	
6991.304	I	250		500			I		7080.043	I	1					V	
6992.168	II	1					VE		7081.414	II	1					VE	
6993.160	I	6		2			III		7082.090	II	1					V	
6994.914	I	3		1			IV		7084.228		1					VE	
6996.450	II	1					VE		7084.998	I	10		1			IV	3
6998.095	I	1500		800			II		7086.245	I	2		1			IV	3
6999.035	I	4		4			III		7087.590		1					V	3
7002.732	II	1					VE		7090.250		2					VE	
7004.894	I	5		6			III		7091.733	I	5		2			IV	
7006.069	II	2					VE		7093.695	I	1					V	
7009.437	I	3		2			IV	3	7095.649	I	2		5			III	
7012.303	II	3					VE		7095.858	I	4		2			III	
7014.640	II	8	(8)				VE	1	7097.791	I	3		3			III	
7015.608	I	2		1			IV		7098.060	II	1?					VE	
7017.416	I	400		200			II		7098.800	II	1					V	3
7019.196	I	3		2			III		7099.180	I	3					VE	
7020.164	I	2		1			IV		7099.725	I	1					V	
7020.907	I	2		2			IV		7100.542	II	10	(10)				VE	1
7021.783	I	5		10			III		7101.663	II	30	15				VE	1
7022.098	II	1					VE?		7103.516	I	3					VE?	
7023.284	II	2					V		7105.628	I	2					V	
7026.032		2					V		7107.005	II	1					V	
7026.786	II	1					VE		7107.357	I	2		1			IV	
7027.283	I	6		6			III		7107.650	II	1					V	3
7029.145	I	1					V		7109.258	II	100	60	15			IVE	1
7031.088		2*d*					V		7110.079		1					VE	
7033.186	I	8		3			III		7110.987	I	2					V	3
7033.962	I	1		6			III		7111.611	I	2		1			IV	
7034.675	I	3		1?			IV		7113.054	I	3					V	
7035.649	I	1					V		7114.710	II	1					V	3
7036.375	I	20		30			III		7116.289	II	5					VE	
7037.535	I	150		300			II		7117.531	I	1					V	
7039.194	I	1		2			III										
7040.118	I	1					V		7120.810	II	30					VE	

TABLE A. *Temperature classification of dysprosium lines* – Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
7121.232	I	150		500			I	
7121.895	II	1					VE	
7123.281		1					V	3
7125.363	I	2		1			III	
7126.251	I	1					V	3
7127.509	II	1					V	3
7128.388	I	3		2			III	
7129.694	I	10		6			III	
7131.368		1					V	
7132.577	I	2		3			III	
7133.381	I	6		4			III	
7135.430		2					VE	3
7135.896	I	3		1			IV	3
7137.521	I	4		4			III	
7137.788	I	3		1			IV	
7139.809	II	4*d*?					VE	
7140.371		3					V	3
7141.216	I	2		1			IV	
7141.515	II	4	(3)				VE	1
7143.504	I	3		2			III	
7145.066	II	4	(4)				VE	1
7147.251	I	1					VE	
7149.302	II	6	(4)				VE	1
7153.308		1					V	
7155.838	I	2					V	
7156.478	I	40		15			III	
7157.300	I	1		1			IV	
7158.742	I	3		3			III	
7162.046	I	6		10			III	
7163.100	I	1		2			III	
7166.502	I	15		20			III	
7167.253	I	2					V	
7170.008	II	1					VE?	
7170.478	I	3					V	
7172.298	I	3		3			III	
7172.690	II	2					VE	3
7175.107	II	60	(50)	1			VE	1
7177.791	I	2		1			IV	
7181.372	I	2		3			(III)	
7184.102	I	1		3			III	3
7185.064	I	3		2			III	3
7187.312	I	1		1			IV	
7190.080	I	2		1			IV	
7190.423	I	1		2			III	
7192.657	I	20		5			III	
7194.830	I	40		80			II?	
7196.709	II	1					(V)	
7198.653	I	10		150			III	
7200.266		1					V	
7204.248	I	1					V	
7206.279		1					VE	3
7206.767	I	40		60			III	
7207.328	I	40		100			II	
7208.147	I	1		1			IV	3
7213.274	I	150		200			II	
7213.899		1		1			IV	
7215.056	I	1					V	
7215.513	I	15		5			III	
7215.940	I	10*d*		5			III	3
7216.064	I			–			VE	
7217.744	I	4		15			III	
7220.788	I	4*d*?		1			IV	
7222.010	I	2		4			IV	
7222.520	I	10		1			IV	
7222.901	I	15		100			II	
7224.178		1					V	3
7226.366	I	2		2			III	
7229.388	I	1		1			IV	3
7230.044	I	600		400			II	
7231.591	I	1					V	3
7232.563	I	1					V	
7233.270	I	1					V	
7234.450	I	1		1			IV	
7234.679	II	8	?				VE	1
7237.664	II	1					V	3
7238.139	II	1					V	
7238.565	II	1					V	3
7241.049	I	1					V	
7243.051	II	2					VE	
7244.830	I	2					IV	
7245.870		1					IV	
7246.190	I	1					V	3
7247.001	I	1		1			IV	3
7250.010	I	300		400			I	
7253.398	II	1					VE	
7254.601	I	3		2			III	
7257.183	II	1					V	
7258.210	I	2		2			IV	
7258.562	I	4		2			IV	
7260.180	I	1		3			III	
7261.738	I	50		200			I	
7263.599		3					VE	
7264.538	II	1					VE	3
7265.576	I	1		1			IV	
7265.889	II	2					VE	
7271.848	II	2					VE	
7273.573	II	20	(12)				VE	1
7273.948	II	2					VE	
7274.249	I	2		5			III	
7275.508	I	1					V	
7276.579	II	1					V	
7277.309	II	1					VE	
7278.597	I	1		1			IV	
7278.918	II	2					VE	
7279.710	I	2					VE	
7279.905	I	8		20			III	
7283.196	I	1		6			III	
7285.224	I	3		4			III	
7288.238	II	20	(12)				VE	1
7288.921	I	12		60			II	
7289.518	I	2		3			III	
7289.774	I	2		1			IV	
7291.048	I	3		2			III	
7291.140								
7291.613	I	5		20			II	
7293.324	I	1					VE	
7295.496	II	1					VE	
7297.897	II	2					VE	
7298.662	I	2					V	3
7299.253	II	2					VE	3
7300.276	I	30		40			III	
7302.224	I	3					V	3
7303.114	II	1					V	
7303.348	I	1					VE	

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TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes	Wavelength (Air)	Spectrum	Intensity					Temp. Class	Note
		Arc	Spark	Furnace							Arc	Spark	Furnace				
				High	Medium	Low							High	Medium	Low		
7303.988	II	1					V	3	7401.853	I	3		5			III	
7308.976	II	1					V	3	7403.103	I	} 100	(70)	150*			{ II	} 1
7311.425	I	1					VE	3	7403.194	II						{(VE)	
7311.655	II	1					VE	3	7404.016	I	50		125			III	
7312.807	I	1					VE?	3	7407.595	I	150		500			I	
7313.079	I	1					V		7409.381	I	2		2			IV	
7313.405	I	2		1			IV	3	7409.708	I	2*d*					V	
7314.706	II	2					VE		7412.369	I	400		300			II	
7318.170	II	1					V	3	7413.778	II	1					VE	
7318.704	II	2					V		7415.453	II	2					VE	
7321.735	I	1		2			IV		7418.945	I	2		2			IV	3
7322.269		2					VE	3	7422.561	I	2		1			IV	3
7324.195	I	3		1			IV		7425.219	I	3		1			IV	
7326.843	II	1					VE		7426.194	I	3		2			IV	
7328.785	II	2					VE		7426.863	II	300	(120)	15			IIIE	1
7332.758	I	4		4			III		7427.553	II	1					VE	
7334.559	I	1					V	3	7427.889	I	20		40			III	
7336.886	I	2		2			IV		7428.538	I	30		8			III	
7337.454	I	1					V		7429.370	I	3		2			IV	
7338.080	I	3		1			IV		7431.238	I	1					VE?	
7339.750	II	2					V		7433.140	I	6*d*		2			IV	3
7340.081	I	4		4			III		7434.963	I	4*d*		3			IV	3
7341.077	I	15		4			III		7436.568	II	3					V	
7342.301	I	6		4			III		7437.493	I	4		4			III	
7345.132	II	150	(30)	20			IIIE	1	7440.169	I	2					VE?	
7347.153	I	2		1			IV		7440.565	I	3					V	
7349.147	I	1		1			IV		7449.502	I	4					V	
7349.643	II	3					V		7450.489	I	6*d*		1			IV	
7350.475	I	2					VE		7451.115	II	30	(15)				VE	1
7351.031		1					VE	3	7451.802	I	3		2			III	
7353.582	I	20	80				II		7454.058	I	2					V	
7354.394	II	6					VE		7454.760	I	4					V	
7355.574	II	1					V		7455.558	I	3		5			III	
7357.065	I	5*d*		4			III		7457.047	II	100	60	3			IVE	1
7360.221	I	4		1			(IV)		7457.864	I	5		2			IV	
7361.578	II	8	(6)				VE	1	7459 988	I	60		50			III	
7362.779	II	6					VE		7461.759	I	3		25			III	
7363.590	I	1		1			IV		7462.158		1					V	
7365.868	II	1					VE		7464.028	I	4					V	
7367.564	I	2		2			IV		7464.904	I	3					V	
7368.566	I	2					V	3	7467.320	I	4		4			IV	
7369.045	I	15		60			II		7469.261		2					V	
7370.234	II	50	(35)	1			VE	\1	7474.145	I	1		1			IV	
7370.447	I	3		8			III	∫3	7476.976		1					V	
7372.754	I	5		1			IV		7483.027	I	100		30			III	
7376.038	I	600		1000			I		7485.348	I	1		1			IV	
7377.530	II	1					VE		7487.479	II	} 6		{ –			VE	
7378.831	I	2		1			IV		7487.551	I			{ 6			III	
7380.167		1					VE?		7490.790	I	10		2			IV	
7380.865	II	2					VE	3	7493.771	I	12		10			III	
7381.566	I	150		300			II		7495.045	I	4		5			III	
7381.959	I	1					V		7496.184	I	3					V	
7386.184	II	3		1			IV		7497.378	I	10		10			III	
7387.837	II	1					VE		7502.865	II	3					VE	
7388.166	I	2		1			IV		7503.296	I	3					V	
7389.815	II	2					V		7503.872	I	20		6			III	
7391.172	I	2*d*					V	3	7504.716	I	5					V	
7391.547	I	2		1			IV		7506.475	II	8					{ VE	
7394.964	I	2					V									{(?)	
7398.276	I	(?)					III	3	7507.900		1					V	
7400.660	I	3		30			III		7509.596	I	25		100			II	
7401.069	I	1		1			IV		7510.154	I	3		1			IV	

TABLE A. *Temperature classification of dysprosium lines* – Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace				
				High	Medium	Low		
7512.580	I	1		3			III	
7516.613	II	15	(90)	3			IVE	1
7519.469	I	4		5			III	
7521.460	I	30		25			III	
7521.964	II	1					VE	
7522.684	I	6		30			III	
7523.863	II	4					VE	
7528.506	II	3					VE	3
7529.595	I	3*d*					V	
7531.352	I	4		5			III	
7532.666	I	6		30			II	
7533.160	I	100*d*		40			III	
7533.698	I	3		4			III	
7536.714	I	2					VE?	
7538.921	I	4		1			IV	
7539.847	I	1		4			III	3
7540.340	I	2					VE	
7541.987	I	5		10			III	
7543.729	I	2000		1000			II	
7544.483	I	2		1			IV	
7544.992	I	2		2			III	
7545.916	I	3					V	
7548.693	I	3		3			III	
7553.000	I	300		100			III	
7557.852	I	80		150			II	
7559.036	I	1		2			III	3
7559.782	I	250		600			I	
7562.965	II	200	(160)	4			IVE	1
7564.258	I	10		2			III	
7565.055	I	12*d*?		3			III	
7566.979	I	8		8			III	
7571.370	II	2					VE	
7572.194	II	1		1			IV	
7577.462	II	200	(120)	3			VE	1
7578.454	I	5		1			IV	
7580.548	I	2		1			IV	
7583.334	I	4		1?			IV	
7584.748	II	1					V	
7585.364	II	3					VE	
7587.764	I	25		15			III	
7591.305	I	300		200			II	
7593.849	I	4					VE?	
7594.859	I	60		15			III	
7595.408	I	4		1			IV	
7596.280	I	5		5			III	
7596.714	II	1					VE	
7598.350	II	2					VE	
7598.686	II	1					VE	
7603.724	I	2*d*		1			IV	
7606.506	I	5		1			IV	
7609.175	I	30		6			III	
7609.702	I	6		2			III	
7611.555	I	150		60			III	
7612.725	I	15		4			III	
7613.433	II	1					V	
7614.322	I	4		1			IV	
7615.683	II	1					VE	
7616.215	I	50		15			III	
7617.702	I	100		15			III	
7620.869	I	2					V	
7624.290	II	4					VE	
7625.030	I	2		1			IV	
7626.587	I	4		1			IV	
7627.513	I	1		2			IV	3
7629.575	I	15		2			III	
7631.270	I	25		4			III	
7633.618	II	2					VE	
7635.320	I	40		4			III	
7638.171	I	2		5			III	
7639.298	I	30		15			III	
7640.004	I	4		1			IV	
7641.093	I	}800		600			II	
7641.226	I							3
7644.273	I	3		4			III	
7645.162	I	15		3			III	
7645.866	I	150		150			II	
7646.637	I	80		40			III	
7647.153	I	1					V	
7648.113	II	8	(7)				VE	1
7650.435	II	1					VE	
7652.249	I	5					V	
7655.467	II	?					VE	
7661.478	I	?		200			I	
7662.358	I	?		400			I	
7666.310	I	?		2			IV	
7666.784	II	(15)?	(10)?				VE	1
7672.748	I	?		5			III	
7675.994	I	?		2			III	
7676.687	I	40		40			III	
7677.481	I	2?		2			IV	
7680.039	I	?		2			IV	
7681.904	I	8		2			IV	
7682.715	I	8		8			III	
7688.665	I	?		2			IV	
7690.738	I	?		3			IV	
7692.015	I	5?		5			III	
7693.865	I	8?		8			III	
7696.540	I	?		15			III	
7699.838	I	?		3			III	
7701.779	I	?		2			III	
7706.666	I	?		3			III	
7707.286	II	(2)?	(2)?				VE	1
7710.137	I	?		4			III	
7711.912	II	8	(5)				VE	1
7715.327	I	500		300			II	
7717.430	II	1					V	3
7721.122	I	30*d*?		20			III	
7722.085	I	25		25			III	
7724.378	I	2*d*					IV	
7725.582	I	3		3			III	
7728.020	I	5					V	
7728.758	I	4		2			III	
7729.764	II	200	(150)	8			IVE	1
7732.516	I	} 20*d*		15			III	
7732.674	I							
7737.538	I			2			IV	
7739.381	II	8	(5)				VE	}1
7739.586	I	3		2			IV	}
7740.531	I	6		10			III	
7741.916	I	2					V	
7742.456	I	1		1			IV	
7745.818	I	4		4			III	
7746.671	I	} 2		2			IV	
7746.836	I							

TABLE A. *Temperature classification of dysprosium lines* —Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes	Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace							Arc	Spark	Furnace				
				High	Medium	Low							High	Medium	Low		
7750.148	I	50		150			II		7877.142	II	3					VE	3
7751.616	II	250	(125)	50			IIIE	1	7881.946	II	2		1			IV	
7753.115	I	1					V		7889.419	I	4		2			IV	
7753.548	I	3		3			III		7893.992	I	2					V	3
7754.844	I	6		2			III		7899.750	I	5		40			II	
7757.324	I	40		150			II		7900.783	II	*–d*?					VE	
7760.083	I	12		6			III		7902.526	I	20		15			III	
7764.412	II	2					V	3	7904.520	II	3		–			VE	3
7767.119	II	2					VE		7904.629	I			2			IV	
7772.805		2					V	3	7908.860	I	?		4			III	3
7773.424		10		5			III		7909.386	I	300		150			II	
7775.783		5		40			II		7911.548	I	2		2			III	
7777.808	I	8		15			III		7916.739	I	30		200			I	
7780.890	I	100		40			III		7922.884	I	8*d*?					VE	
7785.811	II	2					V		7934.335	I	1		4			III	
7786.981	I	2		2			IV		7934.976	I	40		250			I	
7790.020	I	500		300			II		7940.672	II	6	(5)				VE	1
7792.853	II	3					VE		7948.742	II	5					VE	
7793.590	I	4		4			III		7952.244	II	3					VE?	
7798.012	I	30		40			III		7954.178	I	8		8			III	
7799.247	I	2					V		7954.728	I	2		3			IV	
7801.618	I	4		4			III		7955.914	I	1		2			IV	
7806.967		1		8 (?)			III		7962.772	I	40		200			II	
7807.256	I	8					VE		7965.413	II	5					VE	
7808.114	I	3		4			III		7968.627	I	125		80			III	
7812.055	I	1000		300			II		7973.134	I	80		50			III	
7814.598	I	30		40			III		7982.854	II	50	(40)				VE	1
7815.115	I	4		2			III		7983.415	I	3					V	
7815.641	I	3		3			III		7990.087	II	4					VE	
7817.765	II	1					V		7997.764	II	2					V	
7819.675	II	1					V		8004.474	II	3					VE	
7821.103	I	4		1?			IV?		8008.706	II	30	(20)				VE	1
7823.154	I	1					V		8010.194	I	40		50			III	3
7824.357	I	1					V		8016.845		4					VE	
7827.569	II	3					VE		8025.312	I	80		400			I	
7828.052	I	2		1			IV		8027.216	I	50		20			III	
7829.060	II	2*d*?					VE		8034.837	II	25	15	1			(V)E	1,3
7829.111	II								8035.767	II	2					VE	
7830.893	I	1					V	3	8036.043	I	1		4			III	
7831.679	I	1		2			IV		8040.090	I	50		50			III	
7832.767	I	60		200			II		8042.664	I	2		30			II	
7833.877	I	20		40			III		8047.277	I	30		60			II	
7835.522	II	20	(15)				VE	1	8050.070	II	10	(6)				VE	1
7836.012	I	1		1			IV		8050.853	I	30		40			II	
7836.817	I	20		40			II		8057.988	I	4		1			IV	
7838.607	II	3					VE		8059.959	II	2					VE	
7842.679	II	5					VE		8065.130	I	2		4			III	
7843.290	I	1		1			IV		8070.903	II	40	(20)				VE	1
7844.658	II	4					VE		8075.833	I	2		2			IV	3
7850.748	I	1		1			IV		8077.919	II	8	(8)				VE	1
7851.765	I	5		5			III		8098.335	II	8	(20)				VE	1
7858.624	I	2		2			IV		8106.308	I	15		25			III	
7860.768	I	8		6			III		8106.697	I	1		1			IV	
7864.309	II	30	(40)				VE	1	8108.430	II	50	(30)				VE	1
7864.965	I	100		80			III		8110.378	I	2		10			III	
7866.099	I	1		1			IV	3	8112.624	I	2		3			III	
7866.577	I	1		1			IV		8116.901	II	30	(20)				VE	1
7867.617	II	3					VE	3	8121.354	I	3		6			III	3
7870.638	I	10		2			IV		8123.707	I	6		3			III	
7870.744	I	8					VE(?)		8128.971	I	3		2			IV	
7871.146	I	4		6			III		8139.706	I	5		4			III	
7874.934	I	3		2			IV		8140.724	II	4					VE	

TABLE A. *Temperature classification of dysprosium lines* – Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes	Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace							Arc	Spark	Furnace				
				High	Medium	Low							High	Medium	Low		
8142.100	II	3					VE		8416.641	II	150					VE	
8144.295	II	6	(5)				VE	1	8424.557	II	3					V	
8147.288	I	200		300			I		8435.476	II	1					V	
8149.341	I	1		2			III	3	8438.583	II	150					VE	
8150.809	I	1		2			IV	3	8441.444	II	6					V	3
8153.797	I	3					V		8444.461	II	60					VE	
8158.684	I	3		6			III		8448.860	I	5		5			III	3
8160.317	I	5		8			III	3	8455.503	II	5					V	
8169.055	II	6*d*?					VE		8461.670	I	2		4			IV	
8171.486	I	1		3			III		8462.225	II	1					V	3
8175.156	I	4?		3			III		8464.362	II	8*d*?					V	
8186.400	I			2			III		8472.580	II	40					VE	3
8190.482	II	2?					VE?		8473.566	II	2					V	
8197.290	I	2		2			III		8477.784	I	4		15			III	
8198.770	II	80	(25)	2			IVE	1	8480.662	II	20					VE	3
8201.573	II	300	(120)	30			IIIE	1	8490.149	I	12		40			III	
8204.928	II	1					(V)		8492.370	II	10					VE	3
8208.339	II	8	(5)				VE	1	8506.608	II	1					V	3
8210.189	II	2					(V)		8507.817	II	1					V	
8210.470	II	2					(V)		8510.792	II	150					VE	
8217.042	II	40					VE	1	8513.273	II	30					VE?	3
8218.623	II	125					VE	1	8517.683	II	30					VE?	
8224.531	II	3					VE		8521.105	I	3?		5			III	
8225.130	I	5		150			I		8523.386	I	1		20			III	
8233.557	II	40					VE	1	8525.732	II	100					VE	
8235.379	II	2					V		8527.295	I	1					V	
8238.398	II	5*d*?					V		8528.326	II	40					VE	
8240.376	I	1		10			III		8537.398	I	1		10			III	3
8240.948	I	20		40			III		8540.832 8540.958	II	3					V	3
8242.239		1					V		8548.931	II	50					VE	
8243.906	II	40*d*?					VE	1	8554.052	I	1		5			III	
8244.535	I	40		100			II		8557.786	II	50					(VE)	
8245.334	II	1		3			IV		8559.262	I	2		10			III	3
8246.867	I	10*d*		5			III		8563.430	I	2		20			III	3
8249.360	I	6*d*?		2			IV		8567.968	II	30					VE	
8255.076	I	1					V		8573.013	I	1?		2			III	3
8255.392	I	1					V		8575.577	II	40					VE	
8257.377	II	8					V		8578.664	I	5		6			III	
8264.004	I	4		4			III		8582.638	I	5		40			III	
8265.528	I	200		600			I		8586.803	II	8?					V	
8271.628	I	1					V		8593.202	II	12					VE	
8272.407	I	3		2			III		8605.201	II	1					V	
8284.146	I	3*d*		2			III		8610.794	I	2		3			III	
8295.323	I	3		1			IV	3	8618.521	I	4		4			IV	
8302.283	I	2		5			IV	3	8622.556	II	6					V	3
8307.823	I	2?		2			IV	3	8625.315	I	2		3			IV	
8314.524				2			III		8630.118	I	25		80			III	3
8322.186	I			15			III	3	8632.429	II	4					V	
8323.849	I			60			III		8635.778	II	60					VE	3
8323.973		10					(V)	3	8637.215	II	3					V	
8324.522	II	10					(V)		8655.935	II	400					(V)	
8326.103	I	150		1000			I	3	8657.678	II	200					(V)	
8335.313	II	3					V	3	8667.375	II	50					(V)	
8341.519	II	2					V	3	8672.617	I	15		30			(III)	3
8343.669	I	5		30			III	3	8678.490	II	200					(V)	3
8344.351	II	4					V	3	8685.256	I	4		50			(III)	3
8346.571	I	3		1			IV	3	8696.829	II	50					(V)	3
8388.526	I	12		60			III		8715.949	II	25					(V)	3
8392.008	II	200					VE		8728.538	I	1		5			(III)	3
8395.776	II	6					V		8744.098	I	2*d*?		10			(III)	3
8405.854	II	50					VE		8750.400	II	50					(V)	3

TABLE A. *Temperature classification of dysprosium lines* — Continued

Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes	Wavelength (Air)	Spectrum	Intensity					Temp. Class	Notes
		Arc	Spark	Furnace							Arc	Spark	Furnace				
				High	Medium	Low							High	Medium	Low		
8753.513	II	3		2			(IV)	3	8912.567		8					(V)	
8759.043	II	6					(V)	3	8919.219		5					(V)	3
8762.120	I	2		3			III		8923.817		12					(V)	3
8773.444	I	3		2			IV		8924.814		10					(V)	3
8780.831	I	25		60			(II)	3	8942.854	II	15					(V)	3
8782.496	I	1		4			(III)		8970.763	I	8		3			(IV)	3
8783.524	I	3		4			(IV)	3	8972.248	II	10					(V)	3
8790.978	I	?		20			(III)	3	8985.667		5					(V)	3
8791.389	II	100					(V)		8988.507	I	6		10			(III)	3
8798.378	I	2		3			(IV)		8994.150		2					(V)	
8805.409	I	10		15			(III)	3	9005.619		4					(V)	3
8809.869	I	1		3			(IV)	3	9014.103	II	25					(V)	3
8813.492	I	3		4			(IV)		9020.789	II	200					(V)	3
8817.786	I	5		15			(III)	3	9038.596	I	25		50			(III)	3
8822.240	I	1		2			(IV)		9079.314	II	8					(V)	
8826.543		3					(V)	3	9100.495	I	3*d*					(V)	
8832.811	II	5					(V)	3	9111.168	II	200					(V)	
8833.083	II	20					(V)	3	9136.428	II	4					(V)	
8836.202	I	5		1?			(IV)	3	9169.436	II	20					(V)	3
8836.863	I			2			(IV)		9171.587	II	600					(V)	
8842.633		4					(V)	3	9180.740	II	1					(V)	
8850.374	II	100					(V)	3	9182.318	I	15		10			(IV)	
8866.698	II	10					(V)	3	9200.275	II	15					(V)	3
8868.050	I	2		2			(IV)	3	9251.157	II	8					(V)	3
8873.610		4					(V)	3	9257.664	I	6					(V)	3
8897.212	I	10					(V)	3	9373.326	II	5					(V)	3
8905.748	II	80					(V)	3	9375.806	II	15					(V)	3

Notes to Table A

Column 8

The Temperature Classification scheme used by King is as follows. (See Astrophys. J. **68,** 200 (1928).

I The more decided low-temperature lines.

II Lines that strengthen rapidly at medium temperature.

III, IV, V } Lines requiring successively higher temperatures.

A Denotes a neutral line that is relatively much stronger in the furnace than in the arc.

E Denotes lines of ionized atoms (Dy II).

Column 9

1. See, also, A. S. King and C. E. Moore, Astrophys. J. **98,** 33 to 42 (1943); "E" entered by present authors in Column 8 for lines from this reference, λ3002 to λ8243. This reference used for gap in 1956 list from λ3407 to λ3463 and λ3809 to λ3831.

2. See A. S. King, Astrophys. J. **72,** 244 to 249 (1930); this reference used for gap in 1956 line list: λ3836 to λ3902.

3. Discordance in wavelength, LRL versus A.S.K. listing, exceeds ±0.05 Å for wavelengths given to 2 decimal places by A. S. K.; ±0.1 for those given to one decimal place.

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(Paper 74A3–606)

Symposium on Electronic Density of States

Electronic Density of States was the subject of the 3d Materials Research Symposium, sponsored by, and held at the National Bureau of Standards, Gaithersburg, Md. on November 3–6, 1969. Attention was focussed on the correlation of various experimental and theoretical techniques such as optical methods; photoelectron, soft x-ray, and ion neutralization spectroscopy; specific heat; Knight shift; and magnetic susceptibility. Band theory and many-body effects, as they relate to the electronic density of states, were included.

Approximately 100 papers were presented at these sessions, including 16 invited presentations. Six of these invited papers were published in the March–April 1970 issue of the Journal, five are being published in this issue, and five will appear in the July–August issue. All of the papers presented at the symposium will be published by the National Bureau of Standards as Special Publication 323 which will appear later this year.