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CRPL-F 253 PART A

OCT 15 1965

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PART A  
IONOSPHERIC DATA

ISSUED  
SEPTEMBER 1965

U. S. DEPARTMENT OF COMMERCE  
NATIONAL BUREAU OF STANDARDS  
CENTRAL RADIO PROPAGATION LABORATORY  
BOULDER, COLORADO



## NOTICE

Effective October 11, 1965, the Central Radio Propagation Laboratory was transferred from the National Bureau of Standards to the new Environmental Science Services Administration (ESSA). At the same time the name CRPL was changed to INSTITUTE FOR TELECOMMUNICATION SCIENCES AND AERONOMY (ITSA) to reflect the expanded scope of its responsibilities. The monthly bulletins "Ionospheric Data" (CRPL-F series, Part A) and "Solar-Geophysical Data" (CRPL-F series, Part B) will be continued under the new ITSA program. Communications concerning the "Ionospheric Data" series should be addressed to:

Prediction Services Section  
Ionospheric Telecommunication Laboratory  
Institute for Telecommunication Sciences and Aeronomy  
Environmental Science Services Administration  
Boulder, Colorado 80301

## IONOSPHERIC DATA

The CRPL-F series bulletins are issued as part of the responsibility of the Institute for Telecommunication Sciences and Aeronomy (formerly Central Radio Propagation Laboratory) of ESSA for the distribution of ionospheric and related geophysical data. They represent a variety of data collected by ITSA (CRPL) in the course of its research and service activities. Through the CRPL-F series, as part of the general exchange of scientific information, these data are made available for use by others in research on radio propagation and the ionosphere, and in other geophysical applications.

In "Ionospheric Data" (CRPL-F series, Part A) tables of monthly median values of vertical incidence ionospheric data are presented accompanied by graphs of critical frequencies and M(3000)F2. The tables include the number of values entering into the median determination (count). When available, the upper and lower quartile values (indicated by UQ and LQ) are listed for foF2, foF1, foEs, M(3000)F2, h'F2 and h'F. Space limitations do not permit inclusion of quartile values for the other characteristics. The tables are prepared by machine methods and the graphs are plotted automatically.

The tables and graphs present the ionospheric data as received from the originating laboratory. Responsibility for the accuracy and reliability of the data rests entirely with the originator. Medians of data for the U.S. stations are computed in accordance with the recommendations of the World-Wide Soundings Committee.

Data will appear in the "Ionospheric Data" only when the complete daily hourly tabulations have been received. In general, priority of publication is given to the most current data. Publication of data



**CRPL-F 253**  
**PART A**

NATIONAL BUREAU OF STANDARDS  
CENTRAL RADIO PROPAGATION LABORATORY  
BOULDER, COLORADO

Issued  
30 Sept. 1965

## IONOSPHERIC DATA

### CONTENTS

|   | <u>Page</u> |
|---|-------------|
| Ionospheric Data . . . . .  | ii          |
| Table of Smoothed Observed Zurich Sunspot Numbers                                 | iii         |
| Erratum . . . . .   | iii         |
| World-Wide Sources of Ionospheric Data . . . . .                                  | iv          |
| Tables and Graphs of Ionospheric Data . . . . .                                   | 1           |
| Index of Tables and Graphs of Ionospheric<br>Data in CRPL-F253 (Part A) . . . . . | 51          |

## IONOSPHERIC DATA

The CRPL-F series bulletins are issued as part of the responsibility of the Central Radio Propagation Laboratory for the exchange and distribution of ionospheric and related geophysical data. Part A, "Ionospheric Data," and Part B, "Solar-Geophysical Data," of the CRPL-F series present a variety of data collected by CRPL in the course of its research and service activities. Through the CRPL-F series, as part of the general exchange of scientific information, these data are made available for use by others in research on radio propagation and the ionosphere, and in other geophysical applications.

In the CRPL-F series, Part A, tables of monthly median values of vertical-incidence ionospheric data are presented accompanied by graphs of critical frequencies and M(3000)F2. The tables include the number of values entering into the median determination (count). When available, the upper and lower quartile values (indicated by UQ and LQ) are listed for foF2, foF1, foEs, M(3000)F2, h'F2 and h'F. Space limitations do not permit inclusion of quartile values for the other characteristics. The tables are prepared by machine methods and the graphs are plotted automatically.

The tables and graphs present the ionospheric data as received from the originating laboratory. Responsibility for the accuracy and reliability of the data rests entirely with the originator. Medians of data for the U.S. stations are computed by CRPL in accordance with the recommendations of the World-Wide Soundings Committee.

Data will appear in the F-series, Part A, only when the complete daily-hourly tabulations have been received by the CRPL or the World Data Center A for Airglow and Ionosphere. In general, priority of publication is given to the most current data. Data received too long after the month of observation may experience an indefinitely prolonged delay before finding space in the F series, Part A.

Information on symbols, terminology and conventions may be found in the "URSI Handbook of Ionogram Interpretation and Reduction of the World-Wide Soundings Committee," edited by W. R. Piggott and K. Rawer (Elsevier, 1961), which supersedes previous documents. A list of symbols is available from CRPL on request.

### Units and Abbreviations of Ionospheric Data Tables

|                |       |                           |     |                  |
|----------------|-------|---------------------------|-----|------------------|
| foF2, foEs     | - - - | Tenths of a megacycle     | MED | - Median         |
| foF1, foE      | - - - | Hundredths of a megacycle | CNT | - Count          |
| h'F2, h'F, h'E | - - - | Kilometers                | UQ  | - Upper Quartile |
| M(3000)F2      | - - - | Hundredths                | LQ  | - Lower Quartile |

## Key to Points of Ionospheric Data Graphs

f0F2: x

foE : ◎

M(3000)F2 : ◊

foF1: A

foEs: +

< Less-than value indicated.      > Greater-than value indicated.

> Greater-than value indicated.

- - - Interpolated value indicated.

The following table contains the latest available information on twelve-month smoothed average of observed Zurich relative sunspot numbers, beginning with the minimum of April 1954. Final numbers are listed through June 1964, the succeeding values being based on provisional data.

### Smoothed Observed Zurich Relative Sunspot Number

## ERRATUM

CRPL-F242, p. 21, Table for Dourbes, March 1964,  
h'E and h'F should read as follows:

## WORLD - WIDE SOURCES OF IONOSPHERIC DATA

THE IONOSPHERIC DATA PRESENTED IN THE 100 TABLES AND GRAPHS OF THIS ISSUE WERE ASSEMBLED BY THE CENTRAL RADIO PROPAGATION LABORATORY FOR ANALYSIS, CORRELATION, AND DISTRIBUTION. THE FOLLOWING ARE THE SOURCES OF DATA.

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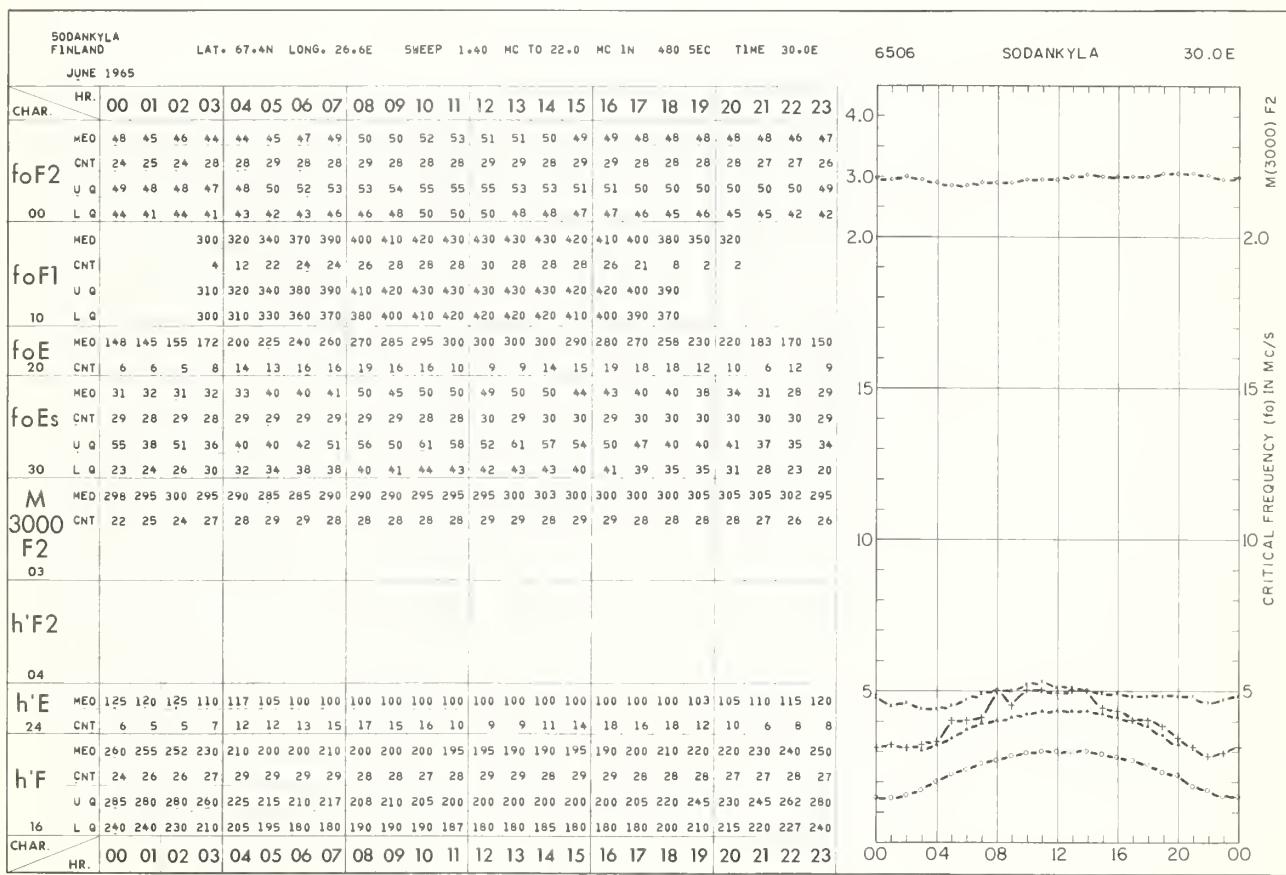
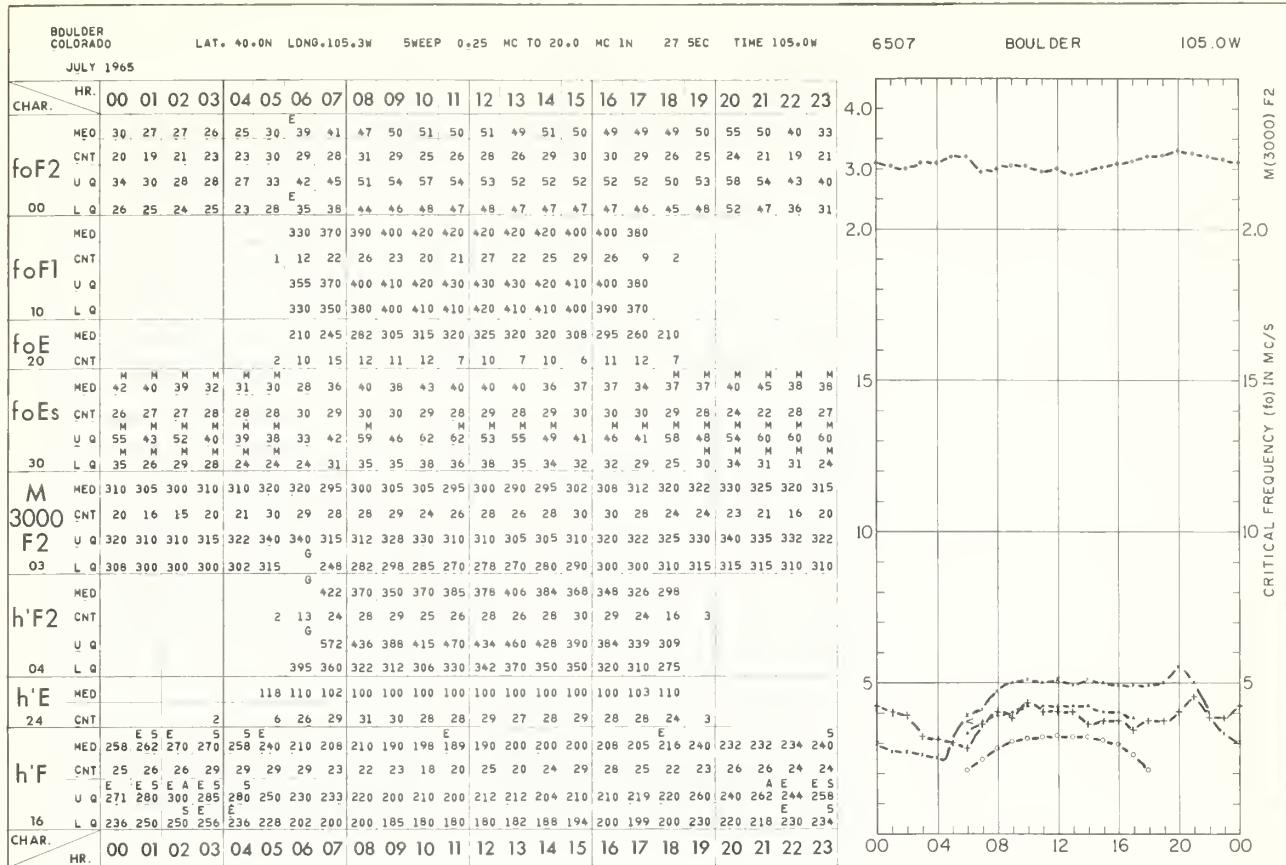
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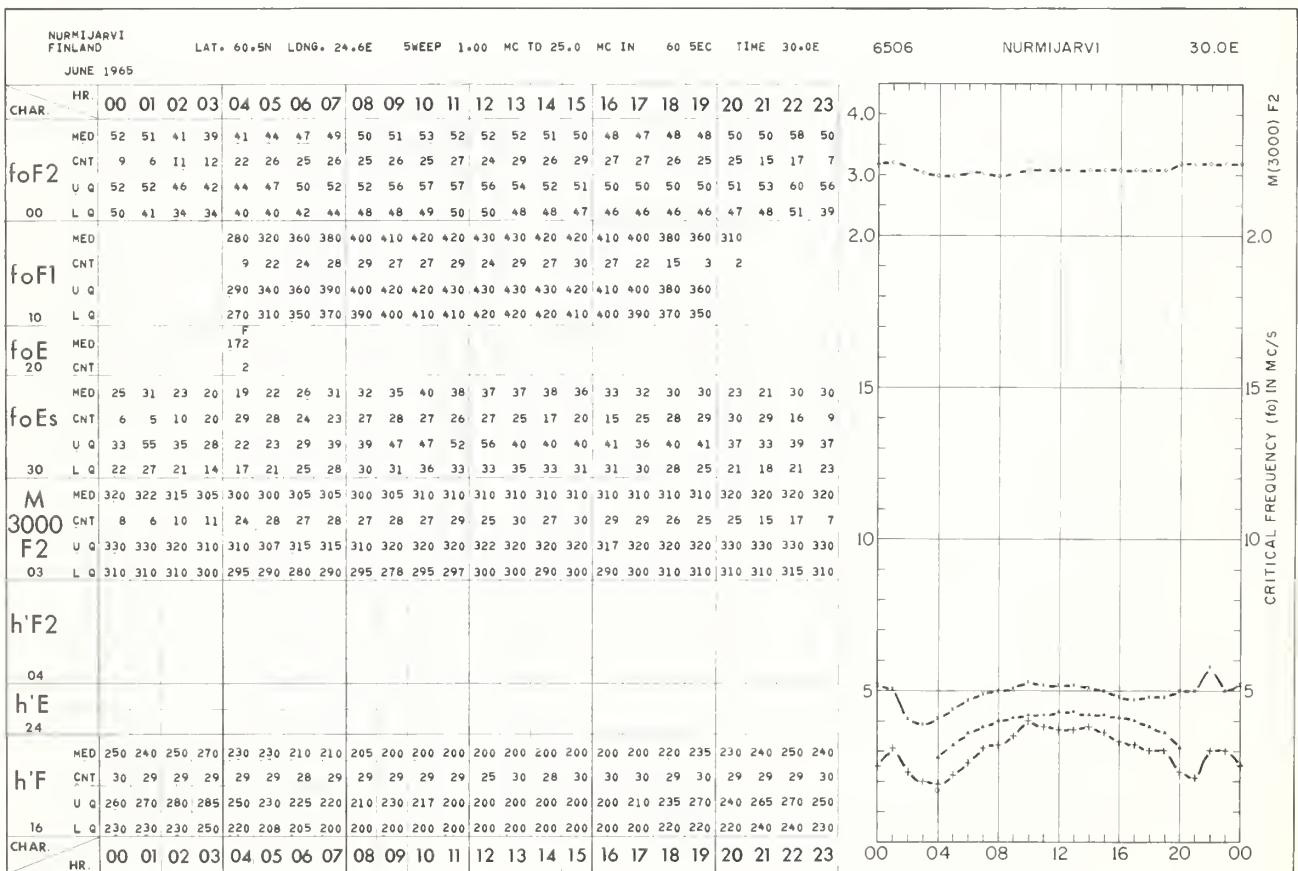
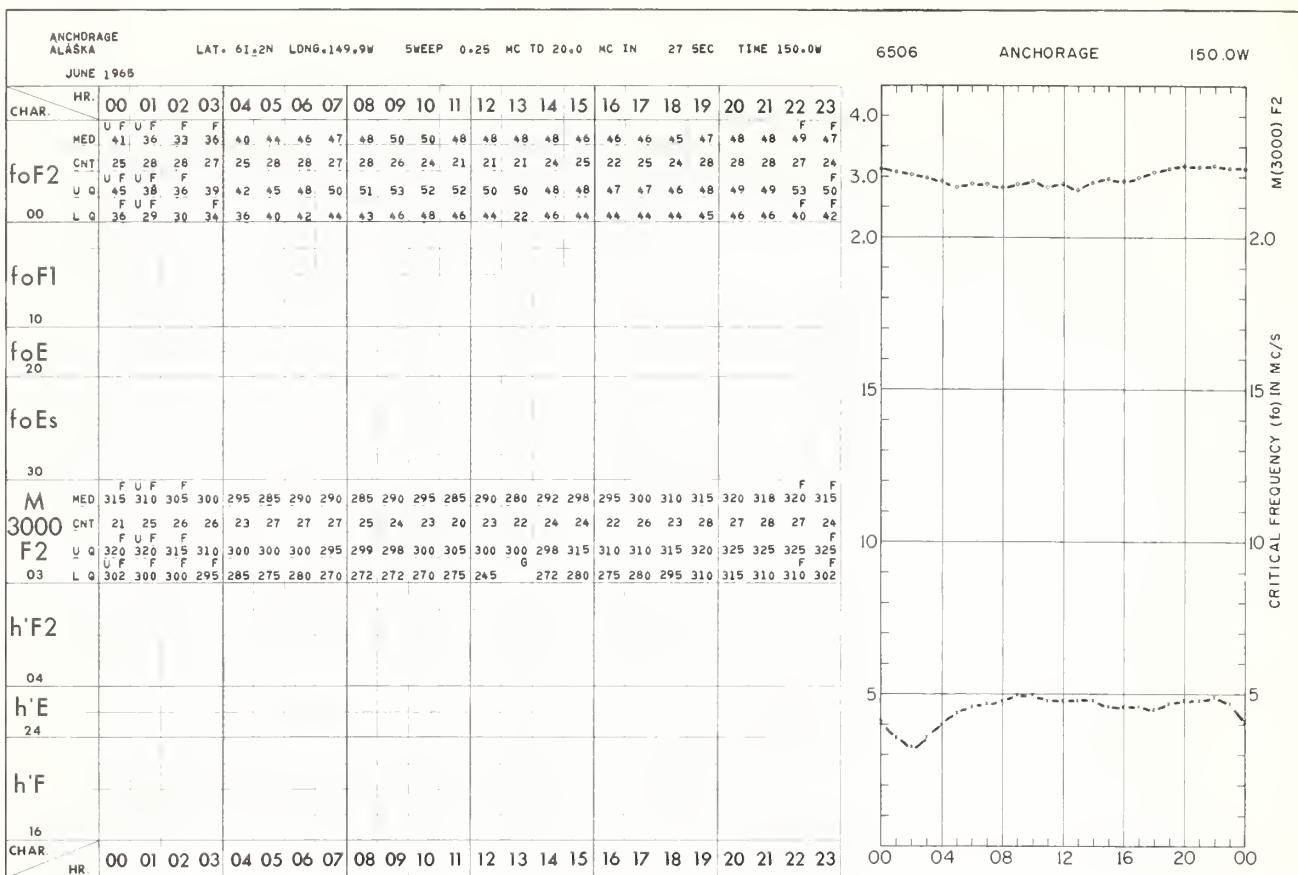
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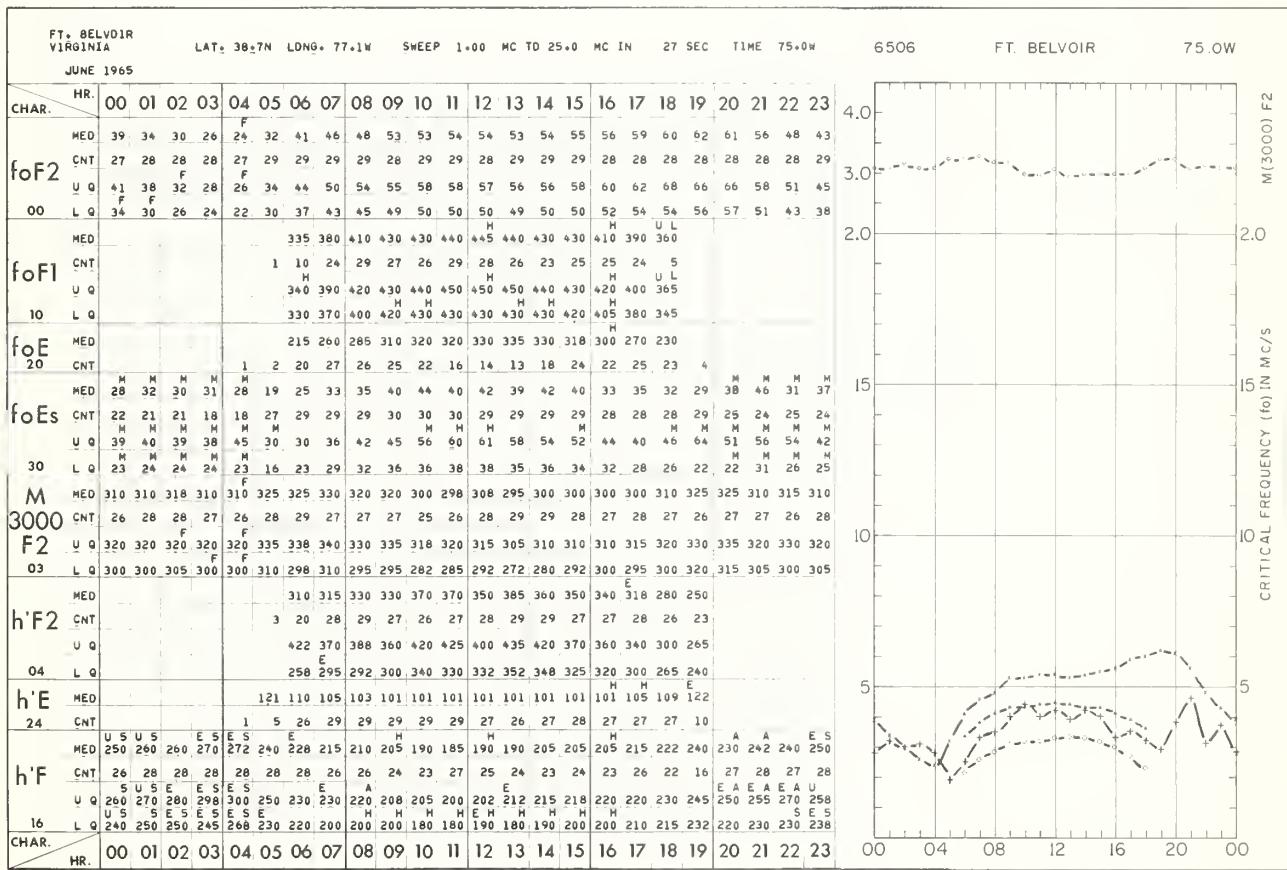
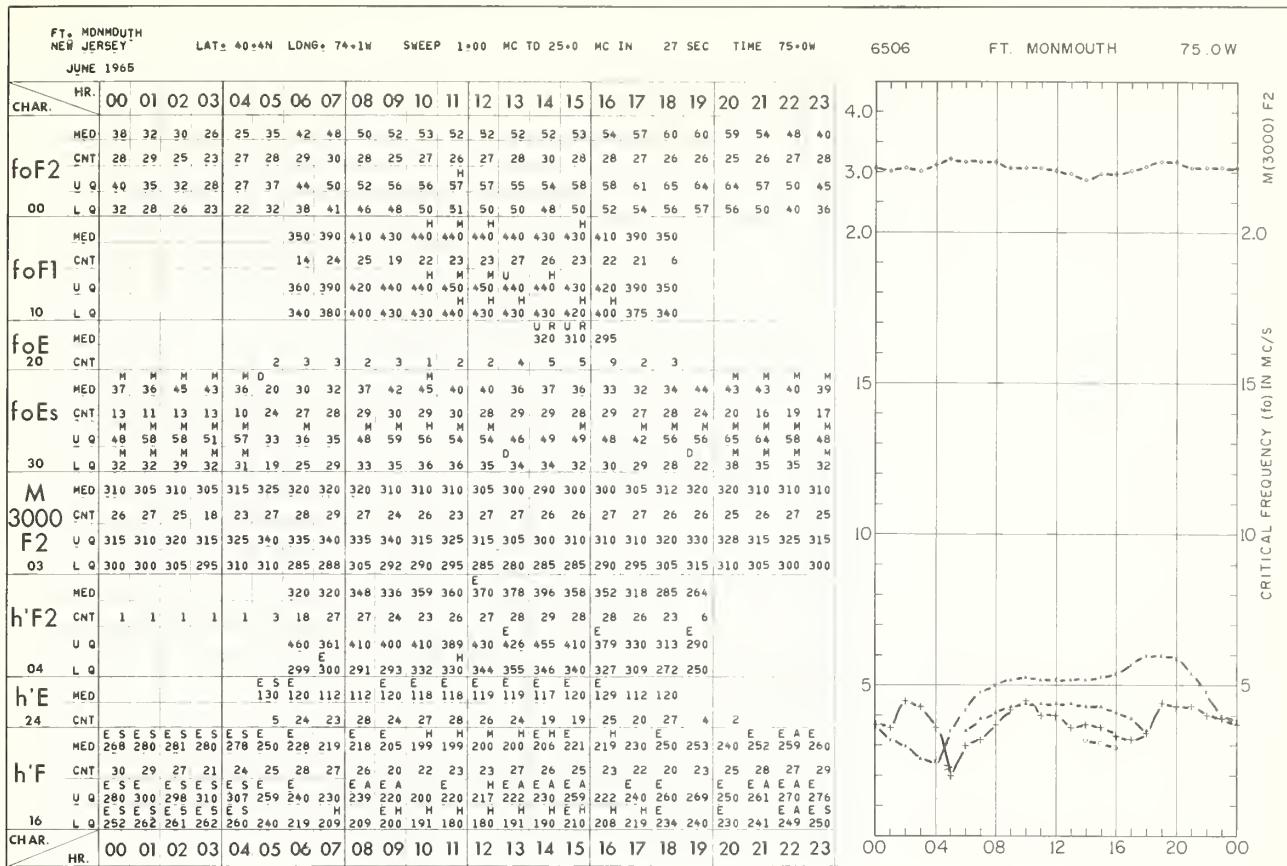
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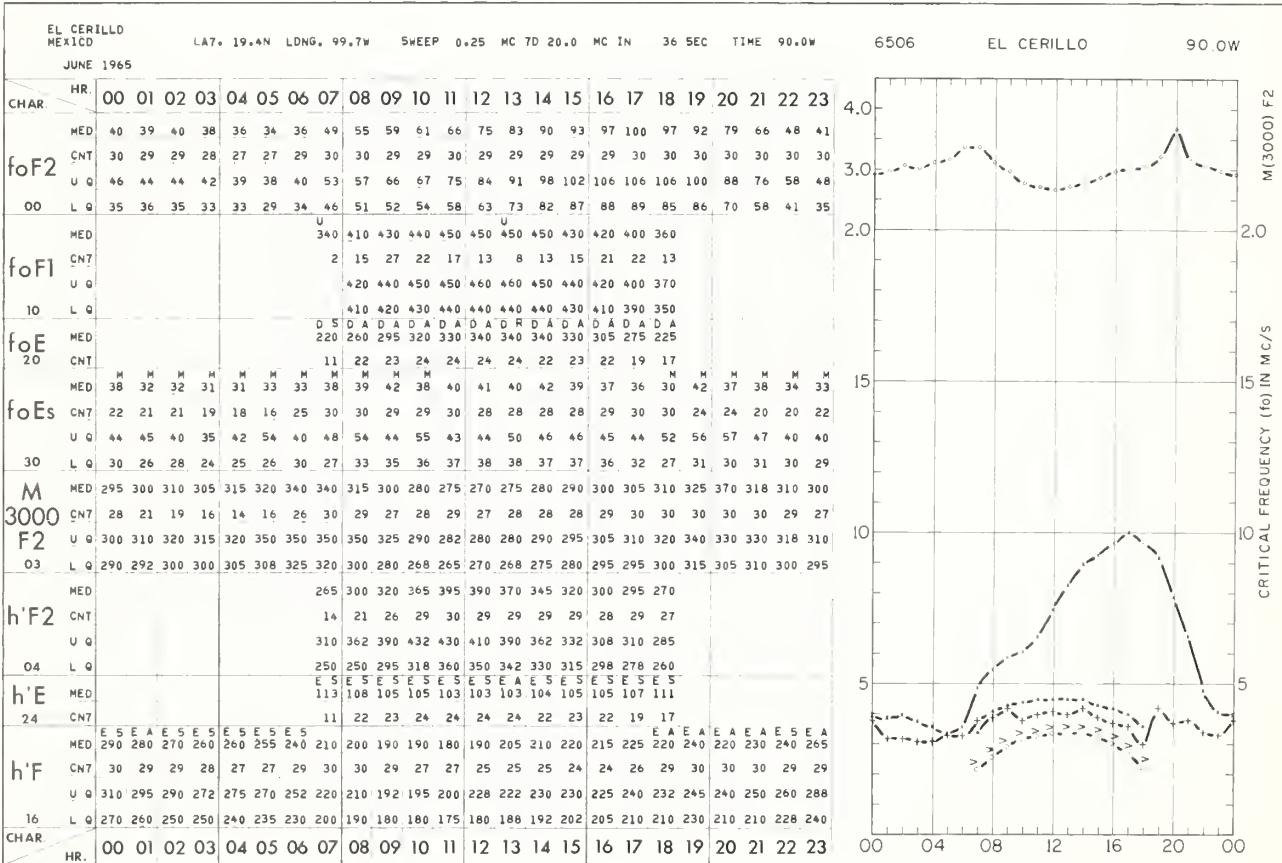
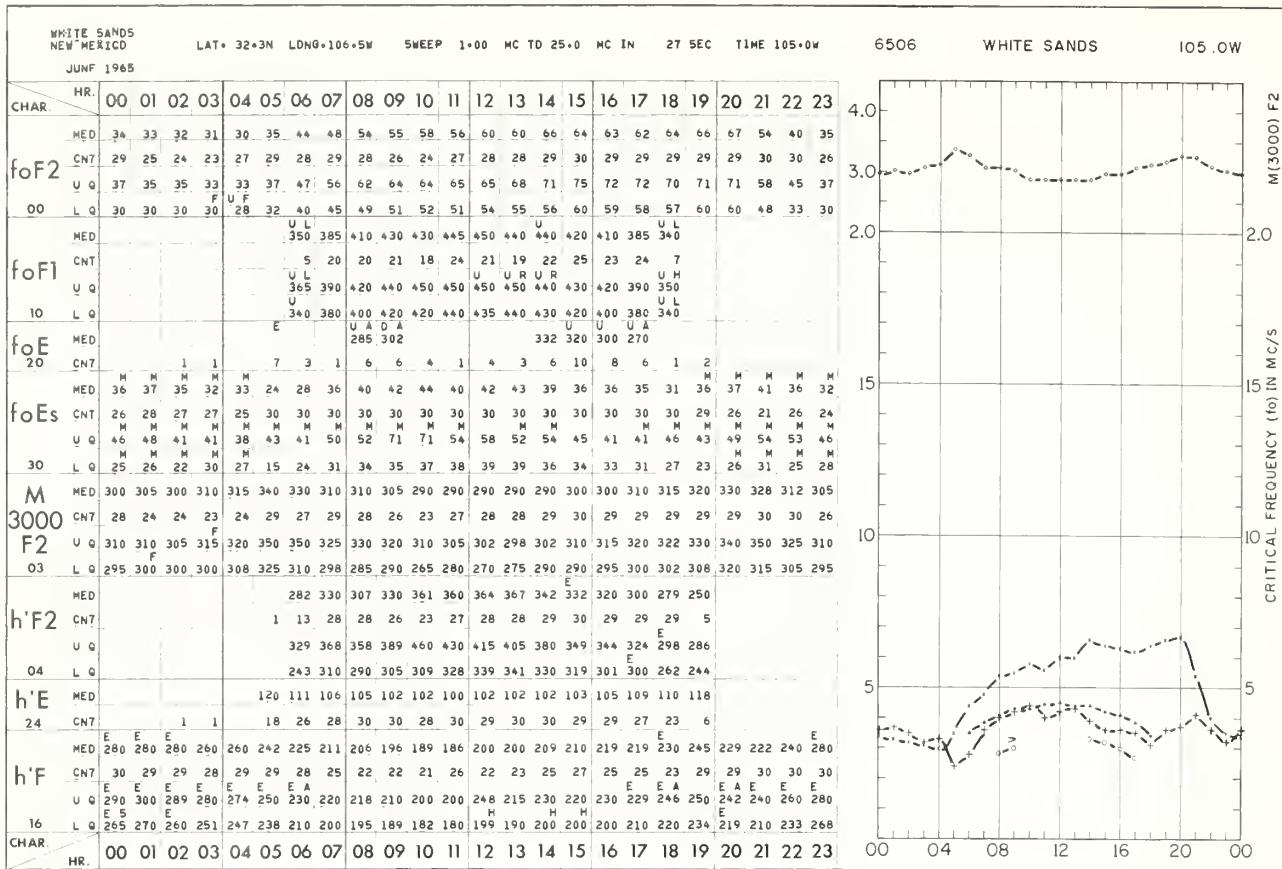
## TABLES AND GRAPHS OF IONOSPHERIC DATA

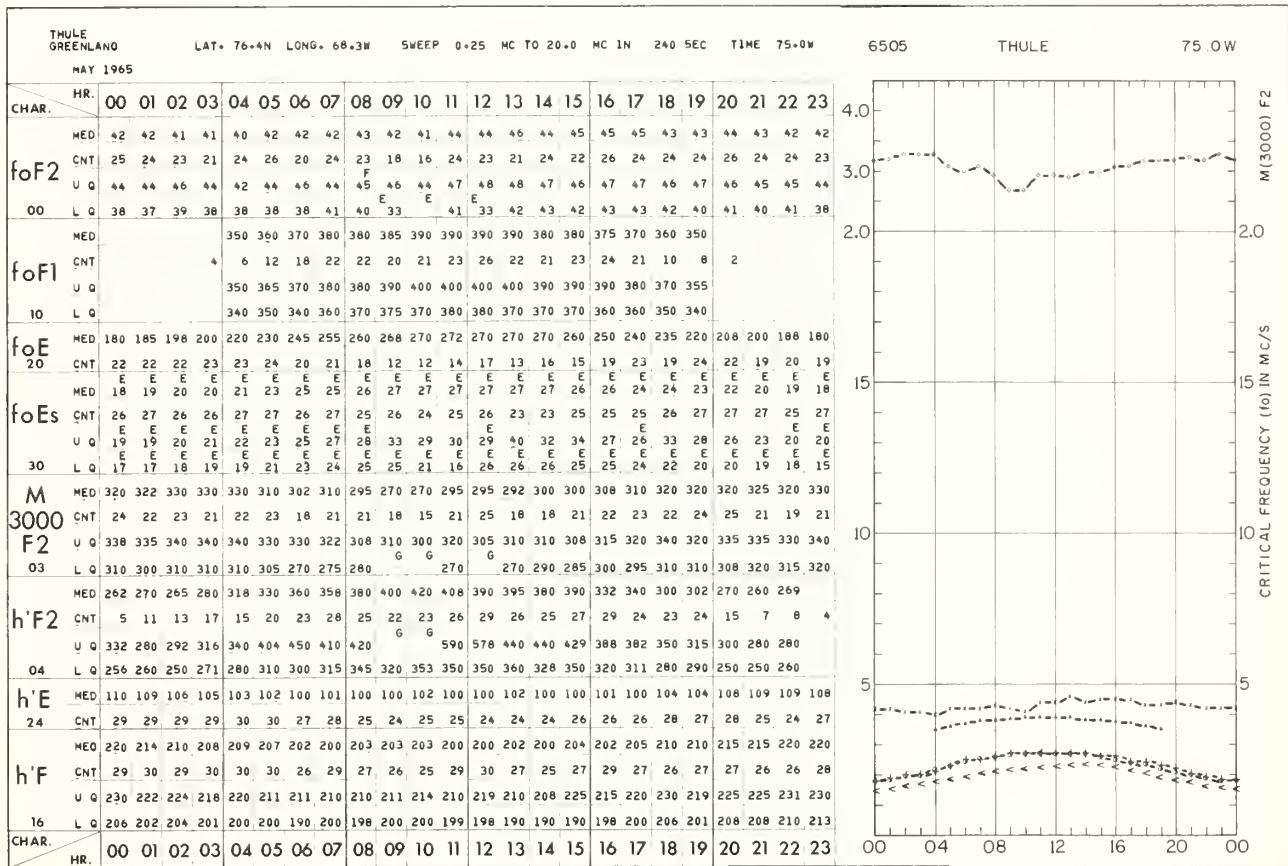
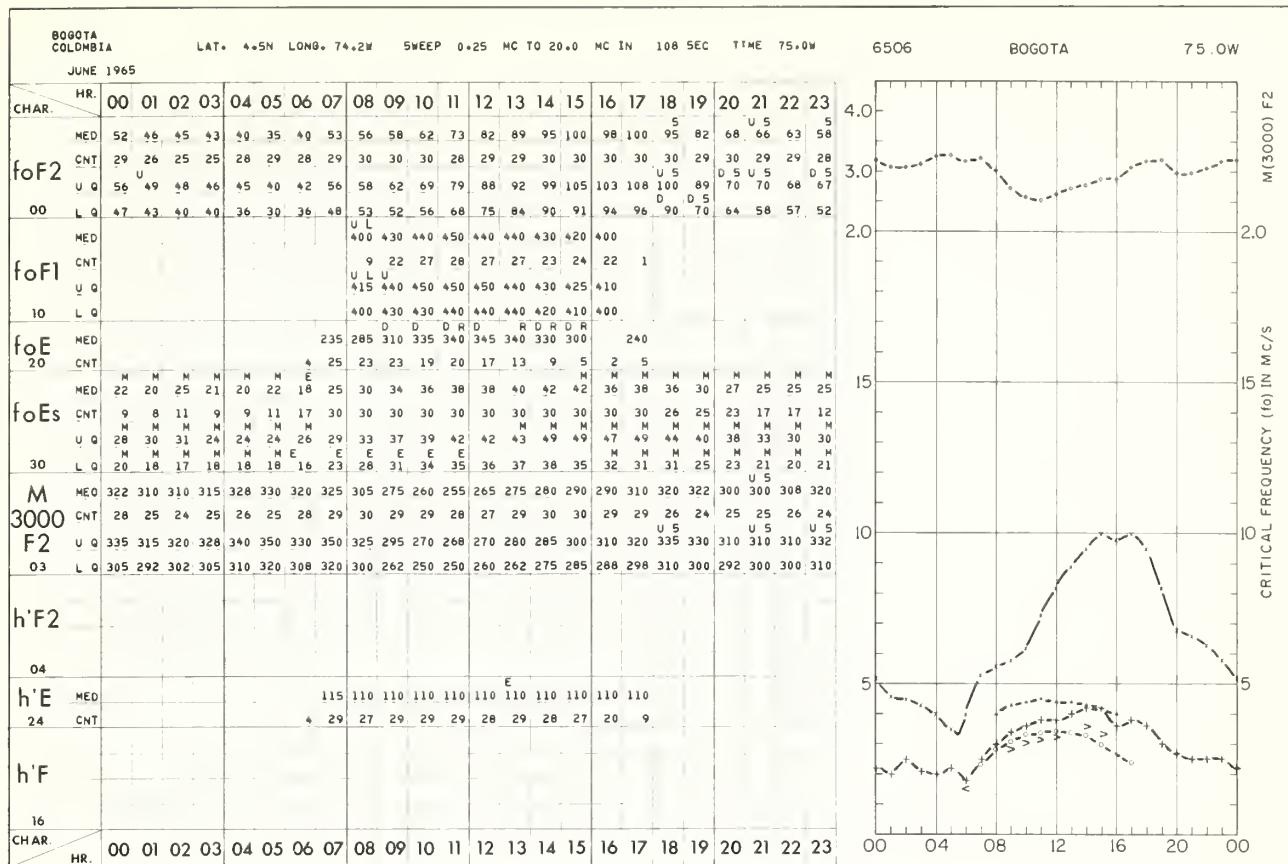
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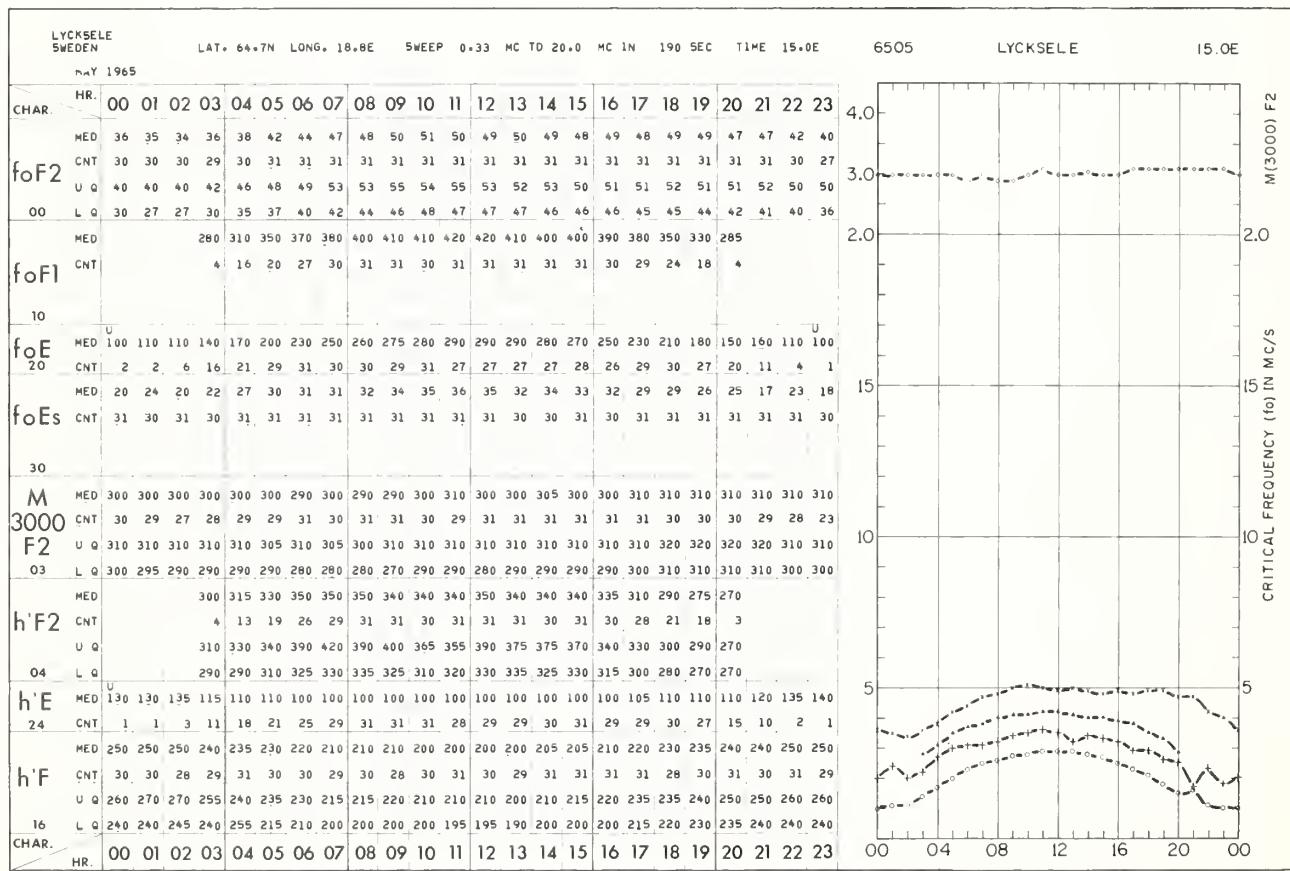
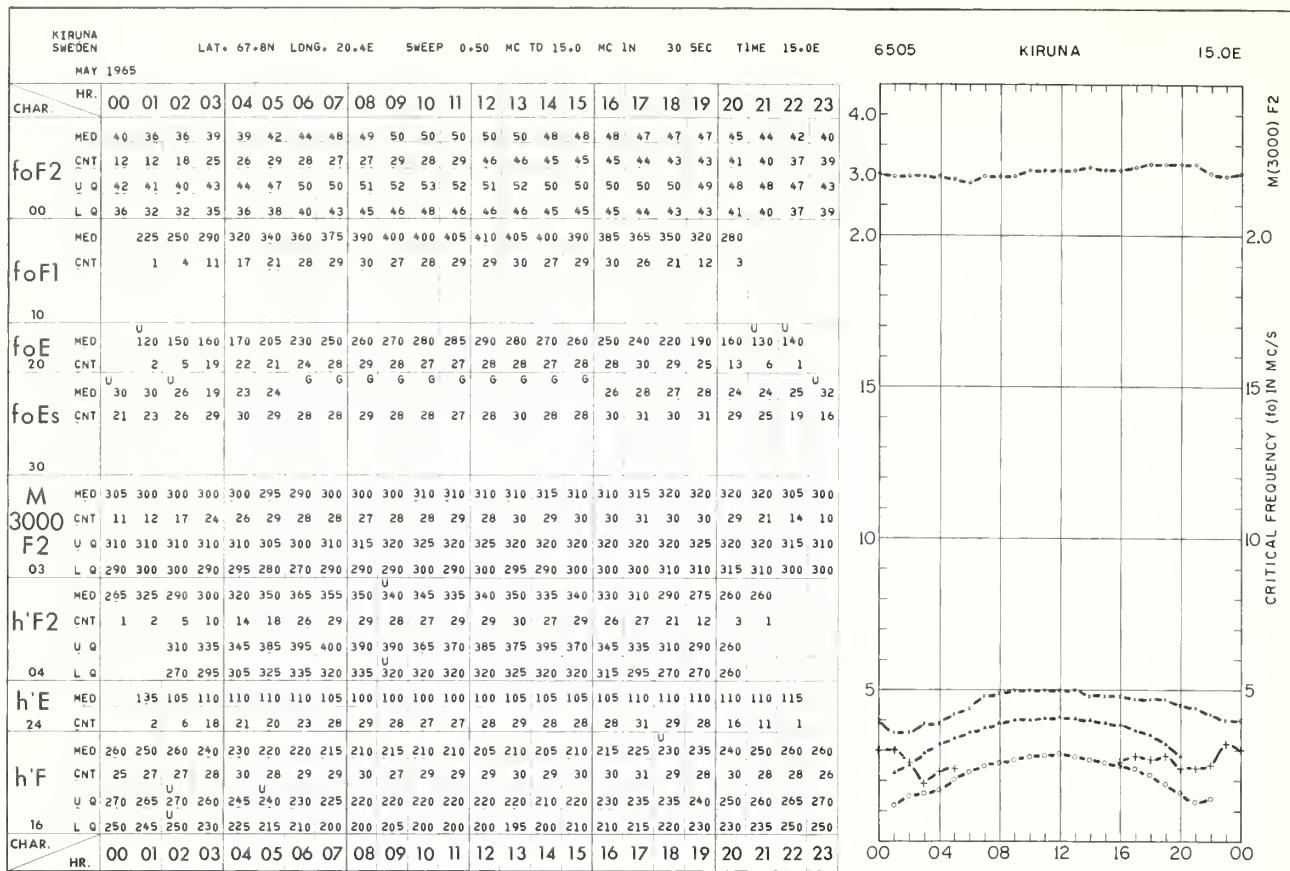


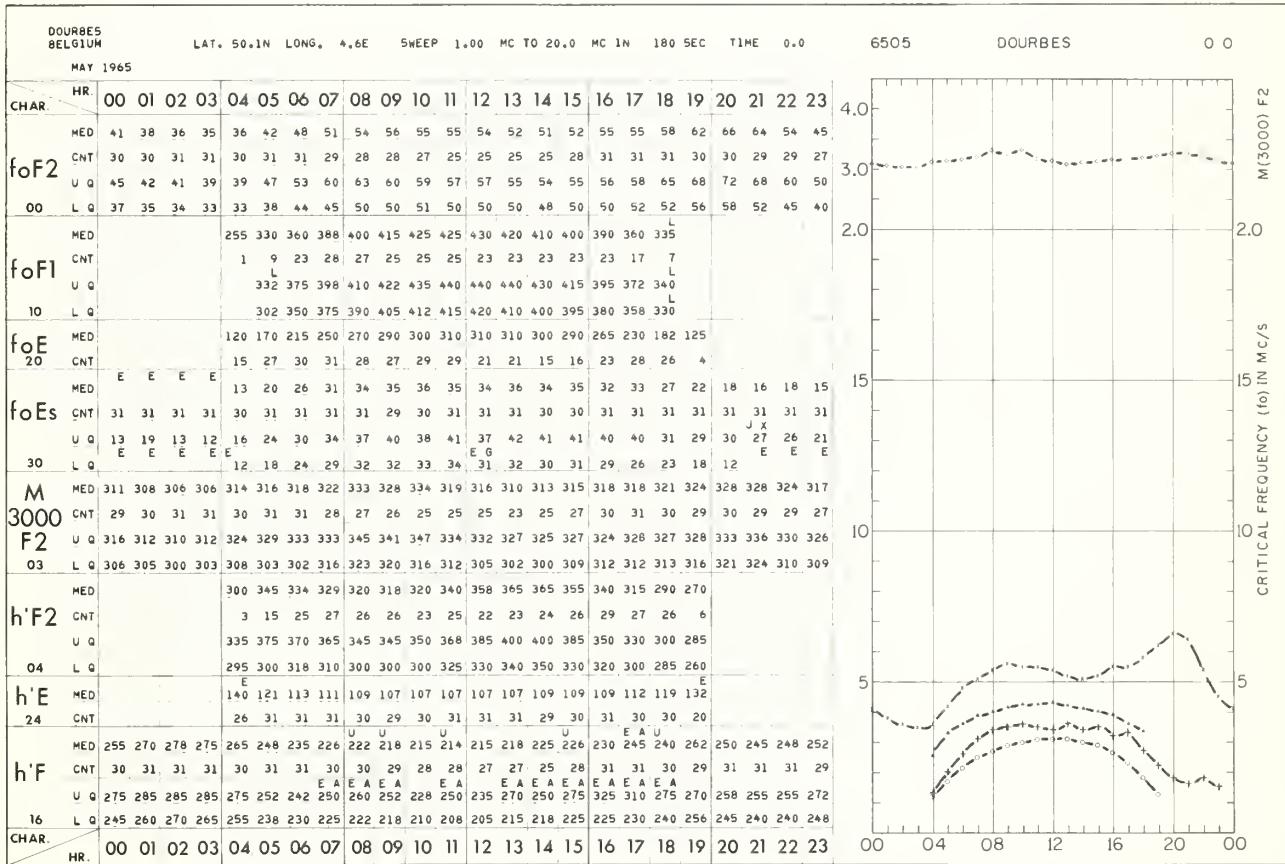
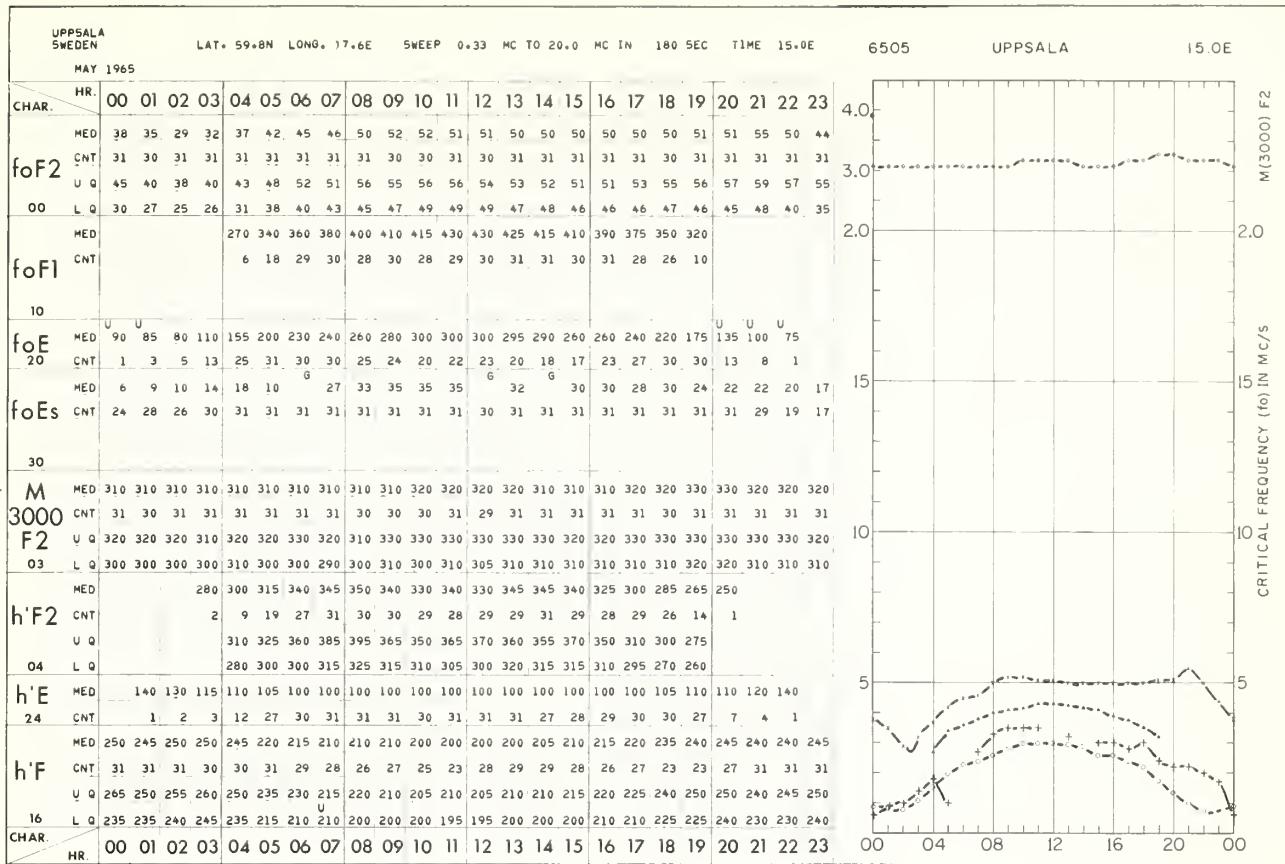


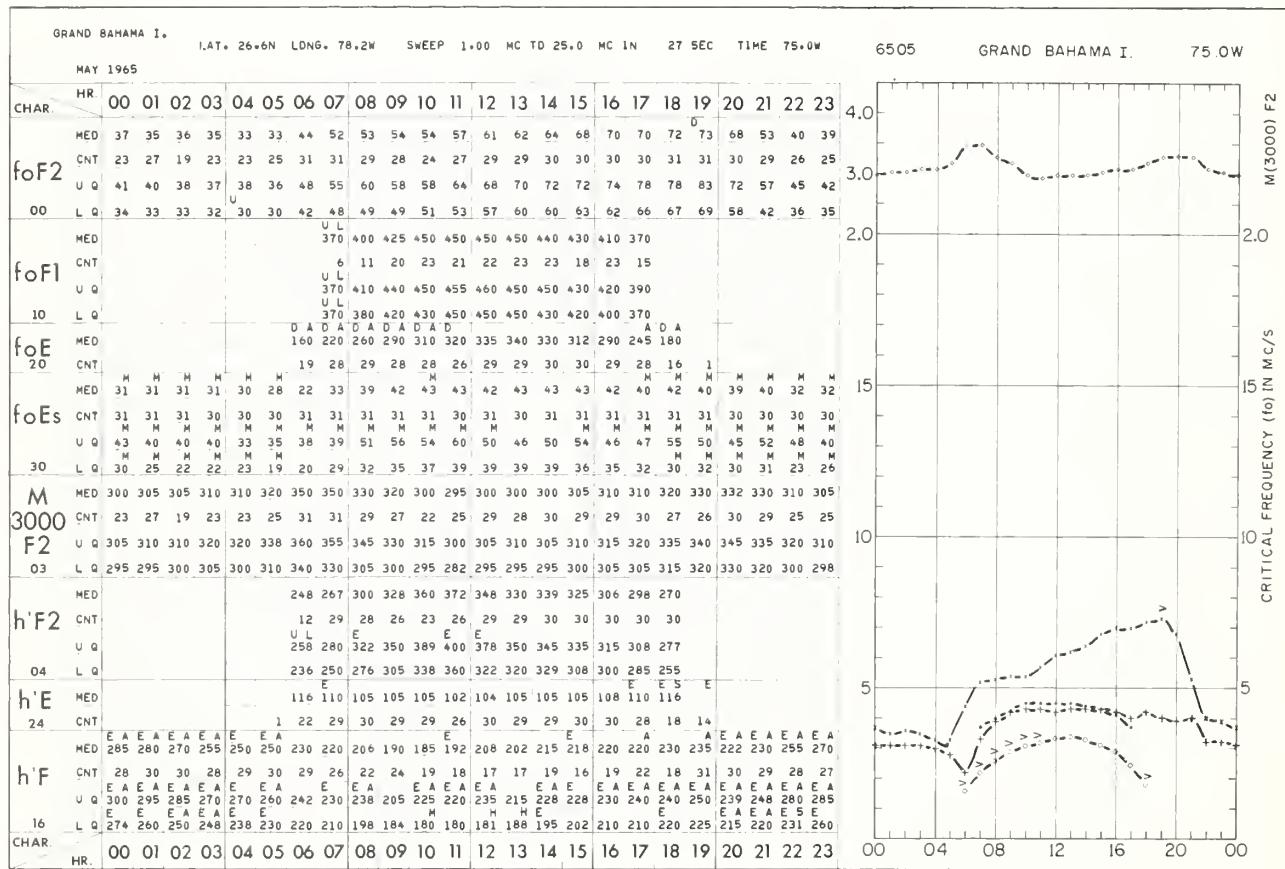
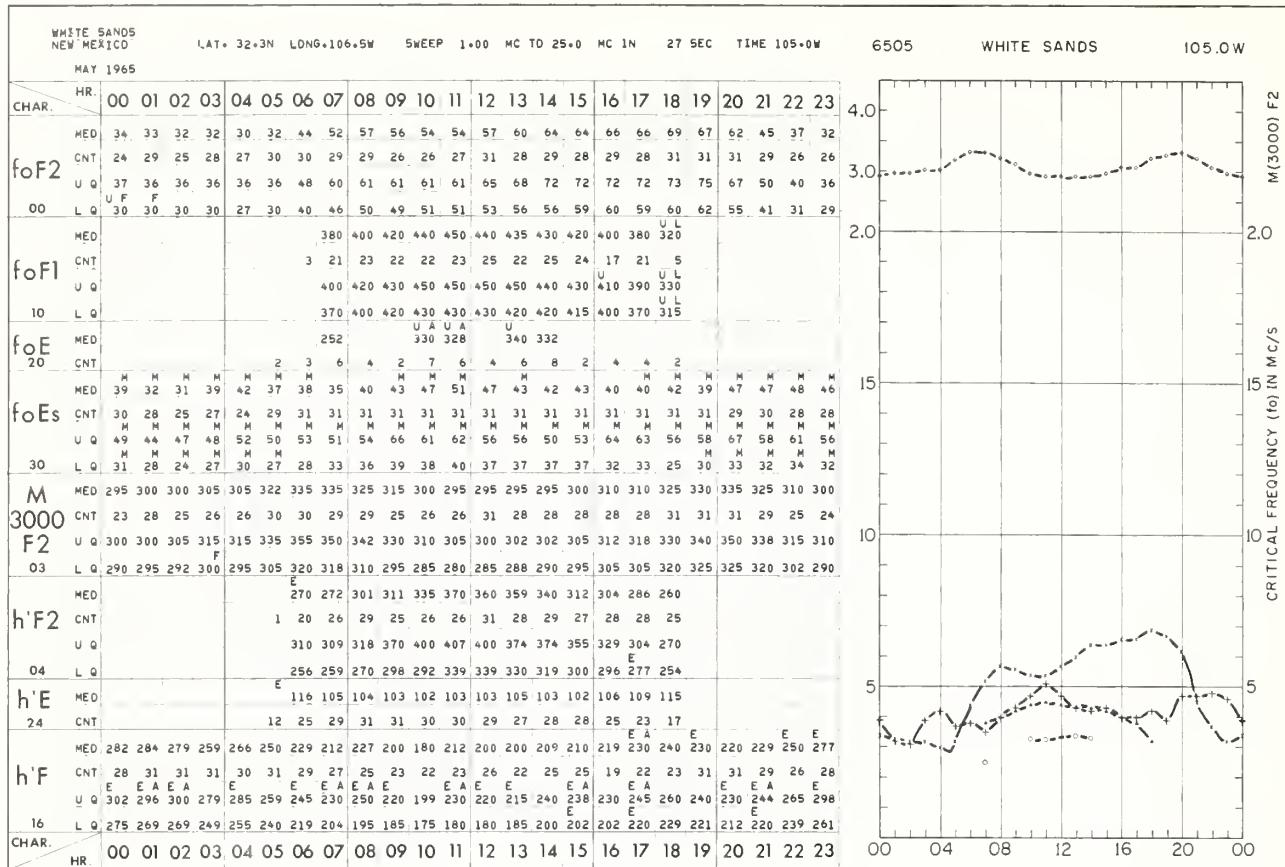












9

TAIPEI  
CHINA

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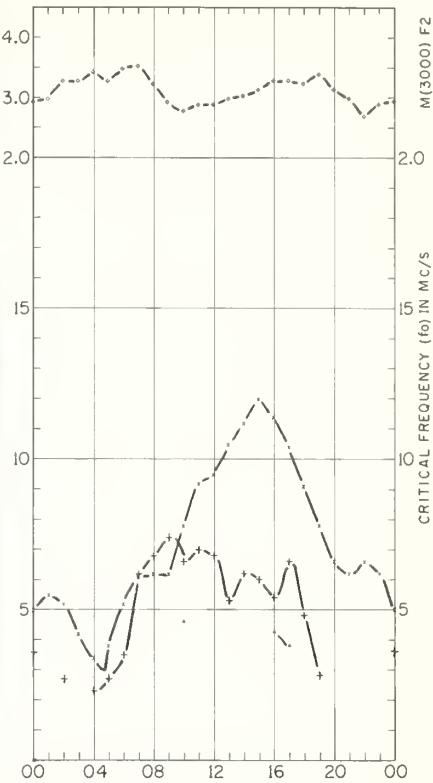
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TAIPEI

120.0E

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|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| foF2  | MED | U   | 50  | 55  | 52  | 42  | 34  | 38  | 52  | 61  | 62  | 62  | 78  | 92  | 95  | 105 | 112 | 120 | 114 | 104 | 91  | 78  | 66  | 62  | 66  | 62 |
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|       | U Q | U   | U   | U   | U   | U   | 40  | 44  | 56  | 64  | 70  | 74  | 86  | 100 | 112 | 122 | 128 | 131 | 131 | 128 | 118 | 89  | 80  | 68  | 72  | 68 |
|       | OO  | L Q | 40  | 44  | 37  | 38  | 31  | 32  | 49  | 57  | 59  | 68  | 75  | 83  | 90  | 96  | 98  | 103 | 104 | 94  | 79  | 67  | 60  | 58  | 61  | 40 |
| foF1  | MED |     |     |     |     |     |     |     |     | U   |     | 460 |     |     |     |     |     |     | 425 | 380 |     |     |     |     |     |    |
|       | CNT |     |     |     |     |     |     |     |     | 1   |     |     |     |     |     |     |     |     | 2   | 1   |     |     |     |     |     |    |
| 10    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| foE   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| 20    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| foEs  | MED | 36  | 27  | 23  | 27  | 35  | 62  | 68  | 74  | 66  | 70  | 68  | 53  | 62  | 60  | 54  | 66  | 48  | 28  |     |     |     |     |     |     |    |
|       | CNT | 31  | 31  | 31  | 30  | 30  | 26  | 23  | 28  | 29  | 29  | 27  | 27  | 22  | 22  | 20  | 27  | 23  | 22  | 25  | 29  | 30  | 29  | 29  | 30  |    |
| 30    |     |     |     |     |     |     |     |     |     |     |     |     | U   |     |     |     |     |     |     |     |     |     |     |     |     |    |
| M     | MED | 295 | 300 | 330 | 330 | 345 | 330 | 350 | 355 | 325 | 295 | 280 | 290 | 290 | 300 | 305 | 315 | 330 | 330 | 325 | 340 | 315 | 300 | 270 | 290 |    |
| 3000  | CNT | 6   | 8   | 18  | 14  | 9   | 11  | 25  | 20  | 16  | 14  | 19  | 19  | 22  | 17  | 17  | 20  | 17  | 12  | 16  | 14  | 4   | 5   | 1   | 4   |    |
| F2    | U Q | 300 | 330 | 350 | 350 | 355 | 350 | 370 | 365 | 330 | 320 | 290 | 300 | 300 | 310 | 320 | 330 | 330 | 340 | 340 | 345 | 320 | 310 |     | 300 |    |
| 03    | L Q | 290 | 300 | 310 | 310 | 315 | 315 | 340 | 340 | 310 | 285 | 265 | 280 | 285 | 290 | 300 | 310 | 315 | 320 | 320 | 320 | 305 | 295 |     | 285 |    |
| h'F2  | MED |     |     |     |     | 250 | 255 | 295 | 320 | 370 | 350 | 330 | 320 | 310 | 295 | 280 | 260 | 235 |     |     |     |     |     |     |     |    |
|       | CNT |     |     |     |     | 8   | 17  | 15  | 15  | 19  | 24  | 28  | 27  | 28  | 29  | 27  | 25  | 1   |     |     |     |     |     |     |     |    |
| 04    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| h'E   | MED |     |     |     |     |     |     |     |     | 111 |     | 111 |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| 24    | CNT |     |     |     |     |     |     |     |     | 1   |     | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| h'F   | MED | 300 | U   | 270 | 250 | 250 | 250 | 230 | 220 | 210 | 200 | 220 | U   | E   | 270 | 230 | 230 | 250 | 230 | 235 | 290 | 320 | 320 | 320 | 320 |    |
|       | CNT | 15  | 22  | 27  | 22  | 20  | 11  | 21  | 6   | 3   | 1   | 1   |     |     | 1   | 6   | 9   | 26  | 24  | 9   | 6   | 3   | 12  |     |     |    |
| 16    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
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EL CERILLO  
MEXICO

AT. 19°4N LONG. 99°7W SWEEP 0.25 MC TD 20.0 MC LN 36 SEC TIME 90.0W

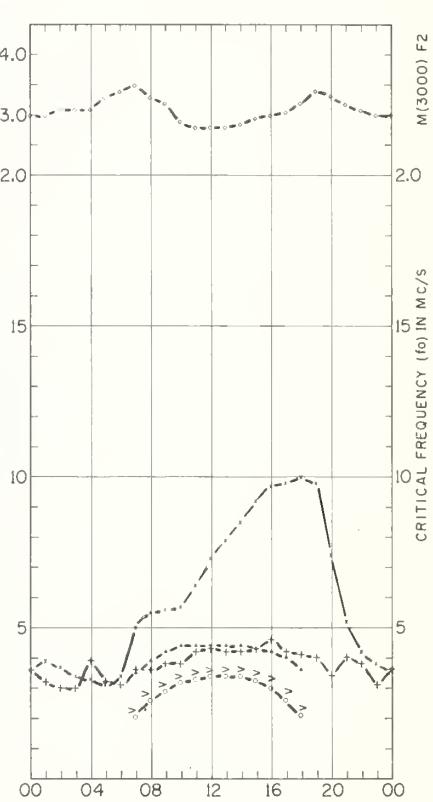
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| CHAR. | HR. | 00  | 01 | 02 | 03 | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |     |     |     |
|-------|-----|-----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| foF2  | MED | 36  | 39 | 37 | 34 | 33  | 31  | 34  | 50  | 55  | 56  | 57  | 64  | 73  | 79  | 85  | 92  | 97  | 98  | 100 | 98  | 74  | 52  | 42  | 38  |     |     |     |
|       | CNT | 31  | 31 | 31 | 31 | 31  | 31  | 31  | 31  | 31  | 29  | 29  | 28  | 29  | 29  | 31  | 31  | 31  | 31  | 31  | 31  | 31  | 31  | 30  | 30  |     |     |     |
|       | U Q | 40  | 40 | 40 | 40 | 39  | 35  | 39  | 52  | 60  | 60  | 64  | 72  | 83  | 89  | 94  | 100 | 103 | 104 | 106 | 106 | 85  | 58  | 47  | 42  |     |     |     |
|       | 00  | L Q | 30 | 29 | 30 | 30  | 30  | 28  | 31  | 45  | 49  | 51  | 52  | 54  | 62  | 69  | 79  | 85  | 85  | 91  | 90  | 87  | 65  | 45  | 35  | 31  |     |     |
| foF1  | MED |     |    |    |    | U   | U   |     | U   | R   | U   | U   | U   | U   | U   | U   | U   | U   | U   | U   | U   |     |     |     |     |     |     |     |
|       | CNT |     |    |    |    | 350 | 390 | 420 | 440 | 440 | 440 | 440 | 440 | 440 | 440 | 440 | 440 | 420 | 420 | 430 | 430 | 430 | 430 | 430 | 430 | 430 |     |     |
|       | U Q |     |    |    |    | 5   | 8   | 18  | 15  | 4   | 1   | 2   | 2   | 6   | 7   | 16  | 7   |     |     |     |     |     |     |     |     |     |     |     |
| foE   | MED |     |    |    |    | 360 | 420 | 430 | 450 | 460 |     |     |     | 440 | 430 | 410 | 360 |     |     |     |     |     |     |     |     |     |     |     |
|       | CNT |     |    |    |    | 300 | 390 | 420 | 430 | 440 |     |     |     | 420 | 410 | 400 | 360 |     |     |     |     |     |     |     |     |     |     |     |
|       | 10  | L Q |    |    |    | D R | D R | D R | D R | D R | D R | D R | D R | D R | D R | D R | D R | D R | D R | D R | D R | D R | D R | D R | D R |     |     |     |
| foEs  | MED |     |    |    |    | 205 | 260 | 290 | 320 | 330 | 340 | 340 | 340 | 325 | 300 | 260 | 210 |     |     |     |     |     |     |     |     |     |     |     |
|       | CNT |     |    |    |    | 17  | 26  | 24  | 21  | 22  | 19  | 22  | 25  | 26  | 25  | 20  | 15  |     |     |     |     |     |     |     |     |     |     |     |
|       | U Q |     |    |    |    | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   |     |     |     |
| foEs  | CNT |     |    |    |    | 36  | 32  | 30  | 30  | 39  | 32  | 31  | 36  | 36  | 38  | 38  | 42  | 43  | 42  | 42  | 43  | 46  | 42  | 41  | 40  | 34  |     |     |
|       | U Q |     |    |    |    | 20  | 13  | 16  | 17  | 14  | 21  | 25  | 28  | 30  | 30  | 29  | 30  | 31  | 31  | 31  | 30  | 30  | 31  | 31  | 28  | 27  |     |     |
|       | 30  | L Q |    |    |    | 42  | 39  | 40  | 41  | 43  | 44  | 42  | 54  | 45  | 55  | 44  | 60  | 52  | 53  | 53  | 73  | 66  | 59  | 54  | 52  | 53  |     |     |
| M     | MED |     |    |    |    | 28  | 26  | 27  | 24  | 30  | 28  | 30  | 28  | 39  | 38  | 39  | 40  | 69  | 40  | 36  | 33  | 30  | 31  | 31  | 30  | 31  |     |     |
|       | CNT |     |    |    |    | 300 | 300 | 310 | 310 | 310 | 330 | 340 | 350 | 330 | 320 | 290 | 280 | 280 | 280 | 285 | 295 | 300 | 305 | 320 | 340 | 332 | 318 |     |
|       | U Q |     |    |    |    | 31  | 31  | 31  | 31  | 31  | 28  | 30  | 29  | 30  | 27  | 27  | 24  | 27  | 26  | 31  | 30  | 29  | 30  | 30  | 30  | 28  |     |     |
| F2    | MED |     |    |    |    | 300 | 310 | 315 | 320 | 330 | 350 | 360 | 360 | 350 | 340 | 310 | 288 | 280 | 290 | 295 | 300 | 310 | 315 | 330 | 345 | 350 |     |     |
|       | CNT |     |    |    |    | 300 | 310 | 315 | 320 | 330 | 350 | 360 | 360 | 350 | 340 | 310 | 288 | 280 | 290 | 295 | 300 | 310 | 315 | 330 | 345 | 350 |     |     |
|       | 03  | L Q |    |    |    | 290 | 295 | 300 | 300 | 310 | 318 | 325 | 320 | 320 | 290 | 275 | 270 | 270 | 275 | 280 | 285 | 290 | 300 | 310 | 330 | 320 | 310 |     |
| h'F2  | MED |     |    |    |    | U   |     |     |     | 280 | 282 | 330 | 370 | 370 | 360 | 350 | 345 | 325 | 300 | 290 | 262 |     |     |     |     |     |     |     |
|       | CNT |     |    |    |    | 7   | 16  | 23  | 26  | 27  | 29  | 29  | 31  | 31  | 31  | 31  | 30  | 26  |     |     |     |     |     |     |     |     |     |     |
|       | U Q |     |    |    |    | 290 | 298 | 365 | 400 | 390 | 405 | 372 | 360 | 340 | 325 | 310 | 285 |     |     |     |     |     |     |     |     |     |     |     |
| h'E   | MED |     |    |    |    | 04  | L Q |     |     | 250 | 255 | 295 | 335 | 350 | 342 | 335 | 315 | 310 | 290 | 280 | 255 |     |     |     |     |     |     |     |
|       | CNT |     |    |    |    | E S | E A | E S | E B | E B | E S | E B | E B | E B | E B | E B | E B | E B | E B | E B | E B | E B | E B | E B | E B | E B |     |     |
|       | U Q |     |    |    |    | 115 | 107 | 107 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 |     |
| h'F   | MED |     |    |    |    | 24  | CNT |     |     | 17  | 26  | 24  | 21  | 22  | 19  | 22  | 25  | 26  | 25  | 20  | 15  |     |     |     |     |     |     |     |
|       | U Q |     |    |    |    | E S | E S | E S | E S | E S | E S | E S | E S | E S | A   | A   | E A | E A | A   | A   | E A | E A | E A | E A | E A | E A | E A |     |
|       | 16  | L Q |    |    |    | MED | 300 | 290 | 270 | 260 | 260 | 250 | 240 | 210 | 200 | 200 | 185 | 190 | 220 | 230 | 225 | 220 | 212 | 220 | 225 | 230 | 210 | 230 |
| CHAR. | HR. | 00  | 01 | 02 | 03 | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |     |     |     |



BANGKOK  
THAILAND  
MAY 1

LAT. 13°7'N LDNG.100.6E SWEEP 1.00 MC TD 25.0 MC IN 30 SEC TIME 105.0E

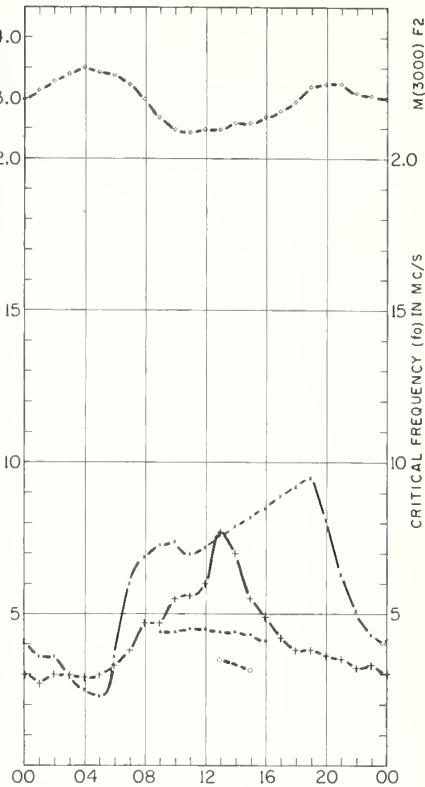
6505

BANGKOK

105.0E

MAY 1965

| CHAR. | HR: | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |     |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| foF2  | MED | 41  | 36  | 36  | 29  | 25  | 23  | 36  | 60  | 69  | 73  | 74  | 70  | 72  | 76  | 79  | 82  | 85  | 89  | 92  | 95  | 81  | 63  | 51  | 43  |     |
|       | CNT | 18  | 14  | 13  | 12  | 10  | 6   | 30  | 31  | 31  | 27  | 28  | 26  | 29  | 29  | 31  | 29  | 30  | 31  | 30  | 28  | 31  | 29  | 27  | 25  |     |
|       | U Q | 45  | 42  | 44  | 34  | 28  | 24  | 39  | 61  | 75  | 77  | 77  | 74  | 77  | 78  | 85  | 86  | 88  | 92  | 100 | 97  | 88  | 72  | 62  | 52  |     |
|       | OO  | L Q | 37  | 31  | 29  | 25  | 22  | 22  | 32  | 56  | 66  | 70  | 68  | 65  | 67  | 70  | 75  | 78  | 79  | 82  | 60  | 91  | 73  | 57  | 41  | 31  |
| foF1  | MED |     |     |     |     |     |     |     |     | 440 | 440 | 450 | 450 | 440 | 440 | 430 | 410 |     |     |     |     |     |     |     |     |     |
|       | CNT |     |     |     |     |     |     |     |     | 1   | 20  | 22  | 22  | 20  | 19  | 13  | 14  | 10  | 2   |     |     |     |     |     |     |     |
|       | U Q |     |     |     |     |     |     |     |     | 440 | 450 | 450 | 450 | 450 | 440 | 450 | 440 |     |     |     |     |     |     |     |     |     |
|       | 10  | L Q |     |     |     |     |     |     |     | 430 | 440 | 440 | 440 | 440 | 430 | 430 | 410 |     |     |     |     |     |     |     |     |     |
| foE   | MED |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 350 | 315 |     |     |     |     |     |     |     |     |     |
|       | CNT |     |     |     |     |     |     |     |     | 1   |     | 2   |     | 3   |     | 4   | 1   |     |     |     |     |     |     |     |     |     |
|       | MED | 30  | 27  | 30  | 30  | 29  | 30  | 33  | 38  | 47  | 47  | 55  | 56  | 60  | 77  | 70  | 55  | 49  | 42  | 38  | 38  | 36  | 35  | 32  | 33  |     |
|       | CNT | 13  | 18  | 17  | 20  | 22  | 21  | 15  | 23  | 26  | 24  | 24  | 28  | 26  | 22  | 23  | 25  | 24  | 24  | 22  | 16  | 12  | 11  | 15  | 9   |     |
| foEs  | U Q | 35  | 36  | 42  | 43  | 36  | 36  | 43  | 55  | 70  | 52  | 67  | 80  | 91  | 100 | 85  | 76  | 73  | 53  | 47  | 58  | 43  | 40  | 35  | 37  |     |
|       | 30  | L Q | 25  | 20  | 21  | 22  | 24  | 21  | 30  | 32  | 35  | 37  | 40  | 46  | 46  | 50  | 46  | 39  | 36  | 35  | 36  | 32  | 33  | 32  | 30  | 32  |
| M     | MED | 300 | 315 | 330 | 342 | 353 | 345 | 340 | 325 | 300 | 270 | 250 | 245 | 250 | 250 | 260 | 260 | 270 | 280 | 295 | 320 | 325 | 325 | 310 | 305 |     |
| 3000  | CNT | 18  | 14  | 13  | 12  | 10  | 6   | 30  | 31  | 31  | 26  | 28  | 26  | 29  | 29  | 29  | 29  | 30  | 31  | 30  | 28  | 31  | 29  | 27  | 25  |     |
| F2    | U Q | 305 | 330 | 340 | 350 | 355 | 350 | 345 | 335 | 320 | 280 | 265 | 260 | 255 | 257 | 270 | 270 | 280 | 290 | 310 | 332 | 340 | 335 | 320 | 310 |     |
|       | 03  | L Q | 290 | 300 | 317 | 335 | 325 | 330 | 330 | 310 | 280 | 255 | 240 | 240 | 245 | 245 | 252 | 260 | 260 | 265 | 280 | 305 | 315 | 305 | 300 | 295 |
|       | MED |     |     |     |     |     |     |     |     | 280 | 300 | 355 | 380 | 400 | 400 | 400 | 375 | 350 | 335 | 340 | 340 |     |     |     |     |     |
| h'F2  | CNT |     |     |     |     |     |     |     |     | 5   | 21  | 16  | 25  | 26  | 29  | 29  | 31  | 26  | 23  | 16  | 4   |     |     |     |     |     |
|       | U Q |     |     |     |     |     |     |     |     | 300 | 317 | 370 | 400 | 410 | 410 | 400 | 380 | 360 | 370 | 350 | 385 |     |     |     |     |     |
|       | 04  | L Q |     |     |     |     |     |     |     | 275 | 300 | 313 | 353 | 380 | 390 | 385 | 360 | 340 | 320 | 313 | 285 |     |     |     |     |     |
| h'E   | MED |     |     |     |     |     |     |     |     | 117 | 110 |     |     | 110 | 120 | 120 | 120 |     |     |     |     |     |     |     |     |     |
|       | CNT |     |     |     |     |     |     |     |     | 1   | 2   | 4   | 3   | 2   | 2   | 3   | 3   | 7   | 5   | 1   |     |     |     |     |     |     |
|       | MED | 310 | 288 | 260 | 250 | 250 | 275 | 260 | 240 | 230 | 210 | 210 | 210 | 200 | 200 | 220 | 210 | 220 | 230 | 250 | 240 | 230 | 248 | 280 | 300 |     |
| h'F   | CNT | 29  | 28  | 27  | 25  | 19  | 10  | 31  | 29  | 28  | 24  | 24  | 22  | 20  | 19  | 14  | 19  | 24  | 25  | 29  | 31  | 31  | 30  | 29  | 28  |     |
|       | U Q | 350 | 310 | 280 | 280 | 280 | 300 | 280 | 247 | 240 | 245 | 240 | 230 | 210 | 200 | 230 | 240 | 232 | 255 | 260 | 245 | 260 | 260 | 295 | 320 |     |
|       | 16  | L Q | 300 | 260 | 240 | 240 | 230 | 250 | 260 | 230 | 215 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 220 | 240 | 230 | 220 | 230 | 270 | 285 |
| CHAR. | HR: | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |     |



HUANCAYO  
PERU

LAT: 12°05' LONG: 75°3W SHEEP 0.25 MC TD 20.0 MC IN 108 SEC TIME 75.0W

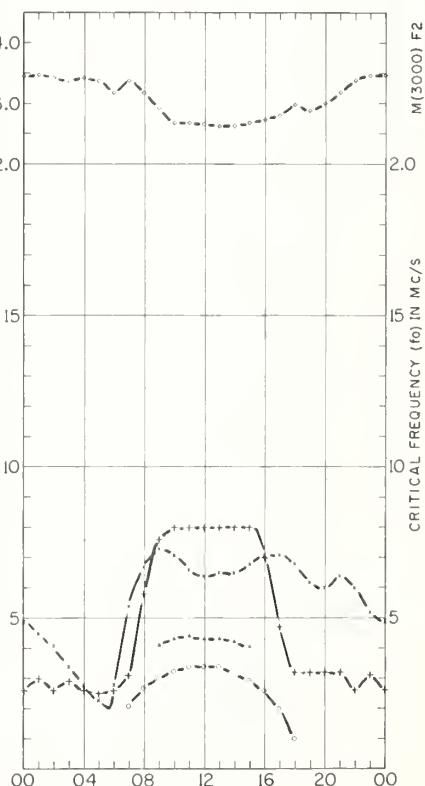
6505

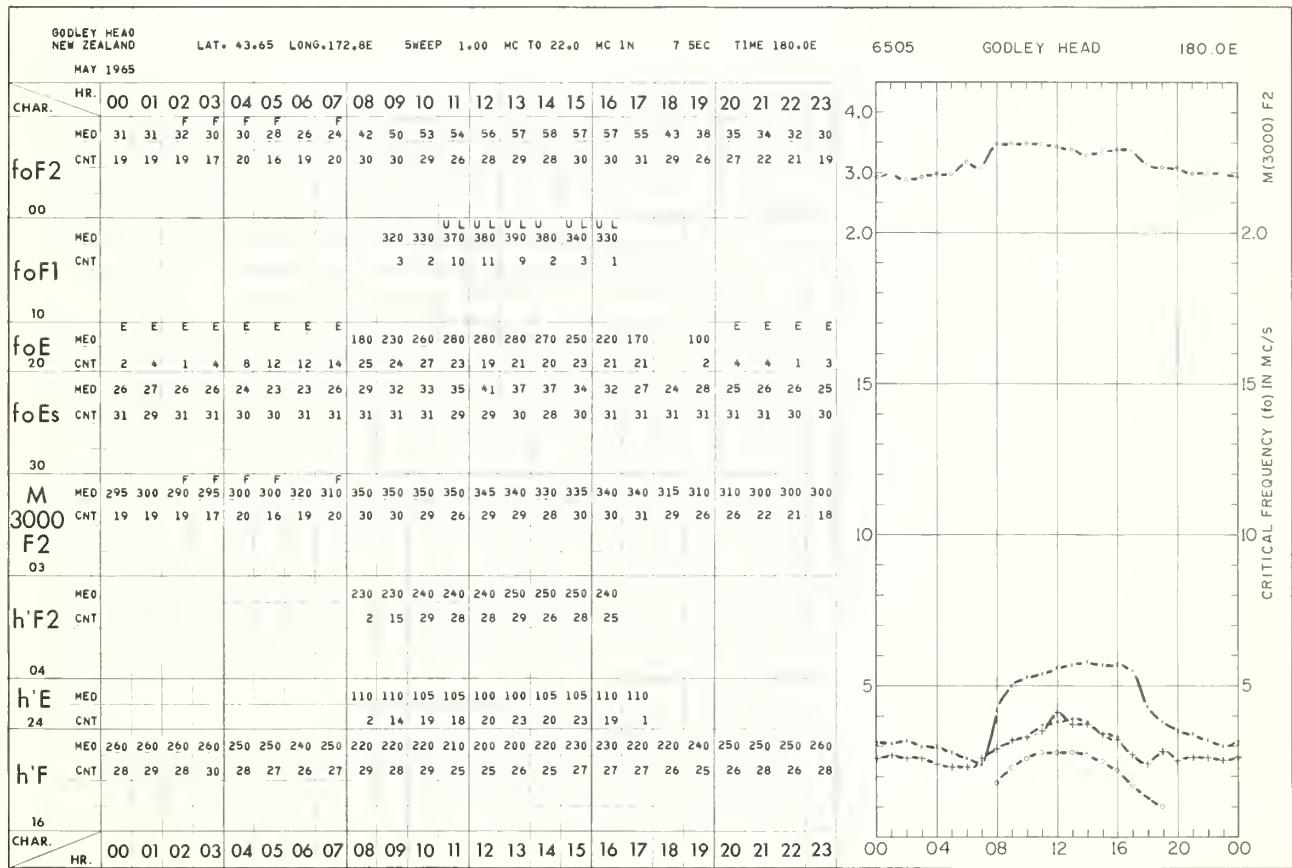
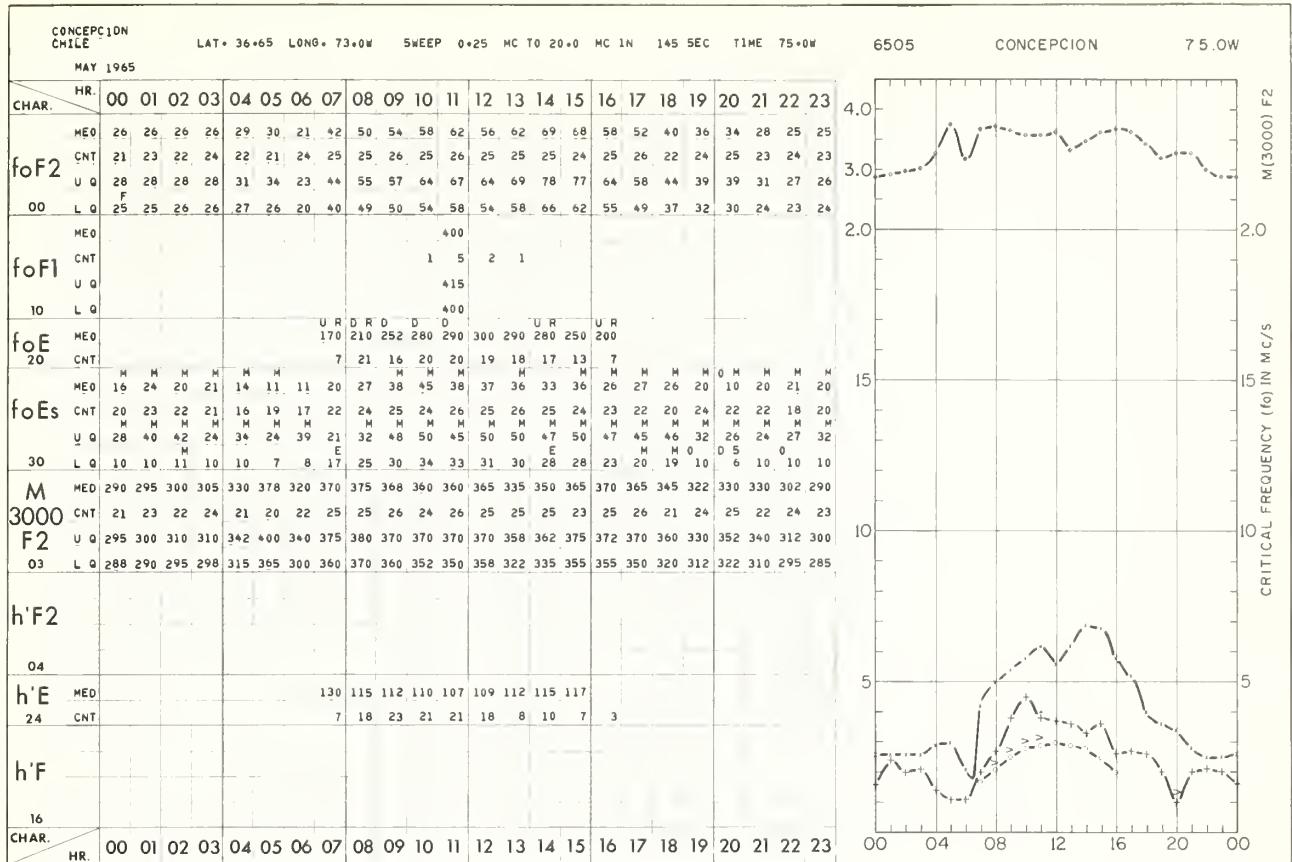
HUANGAYO

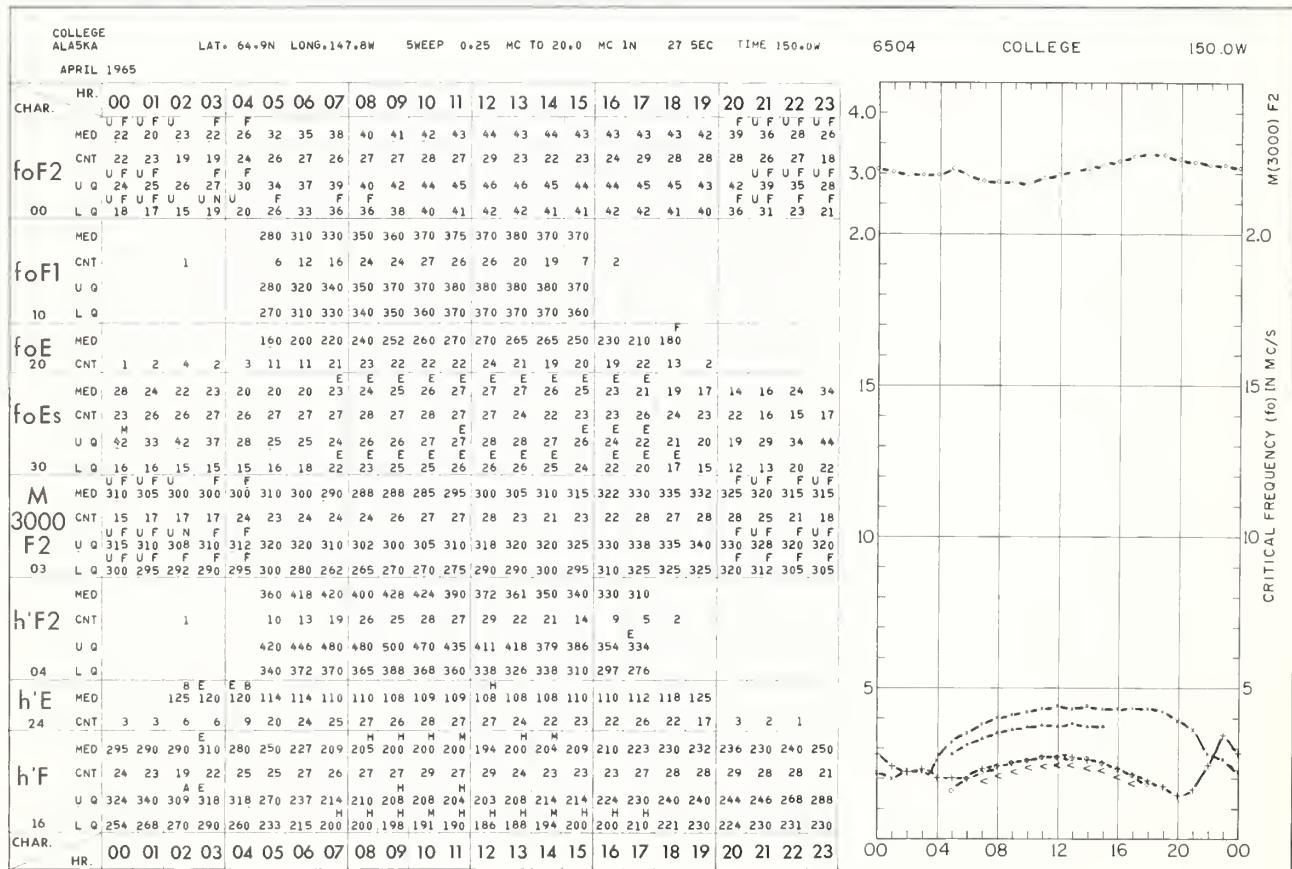
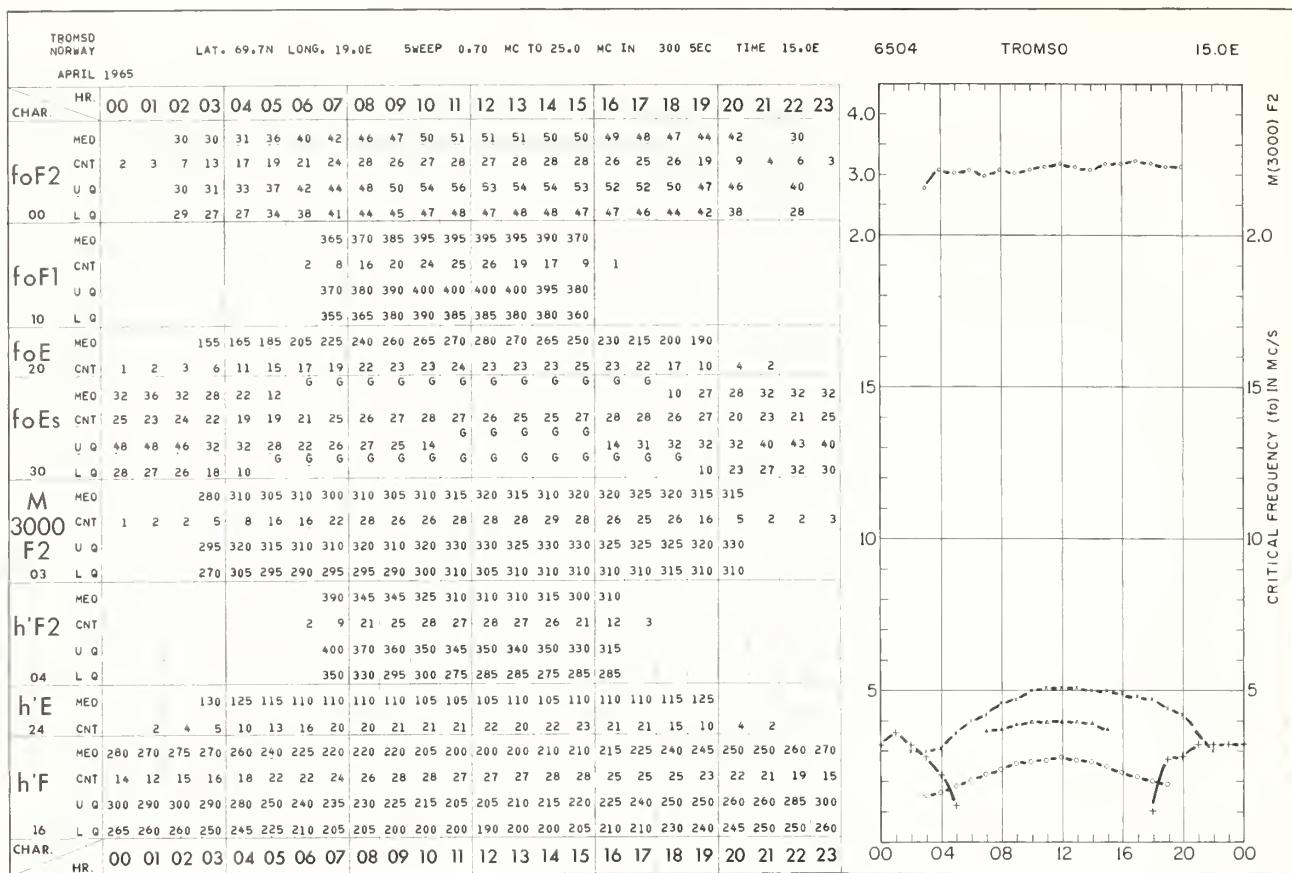
75 QW

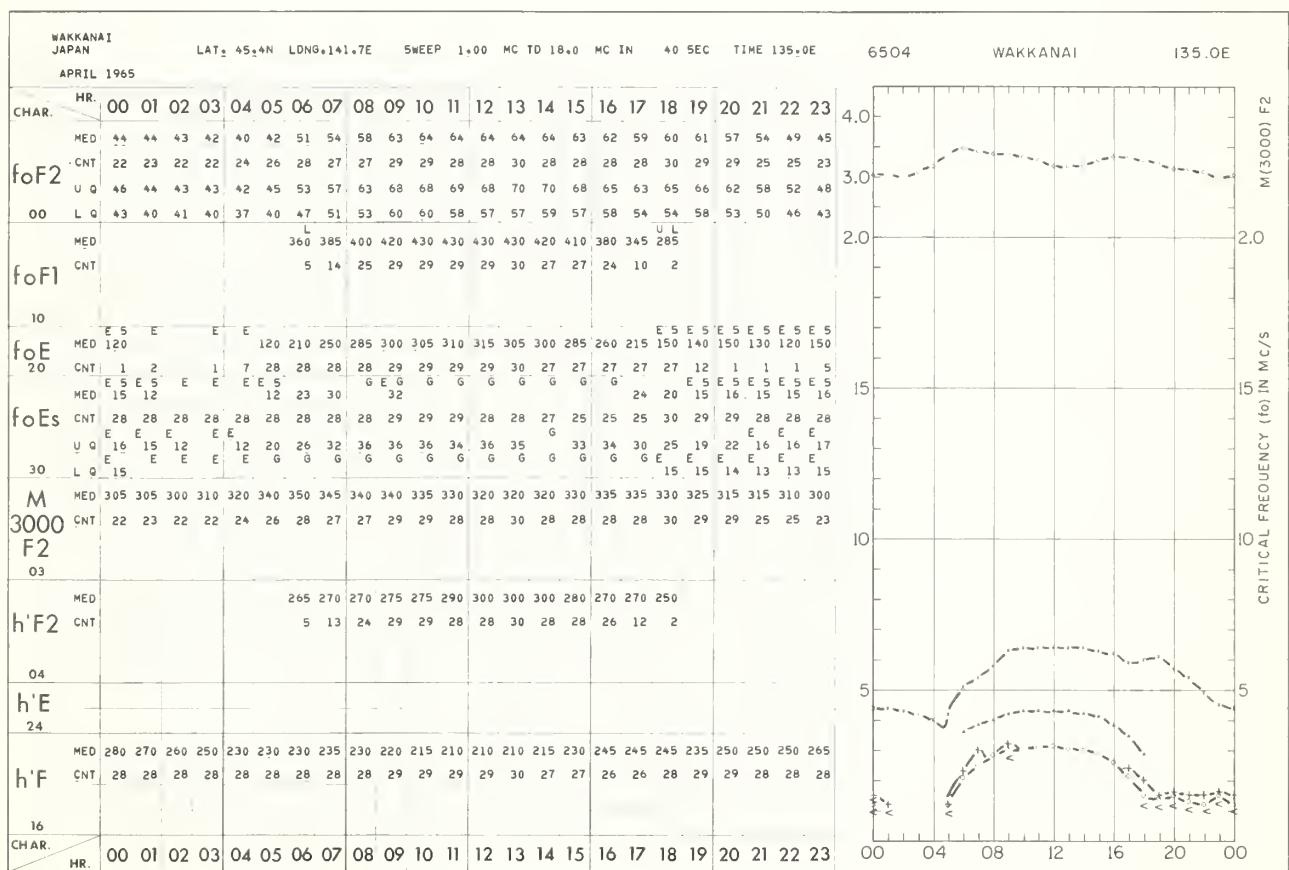
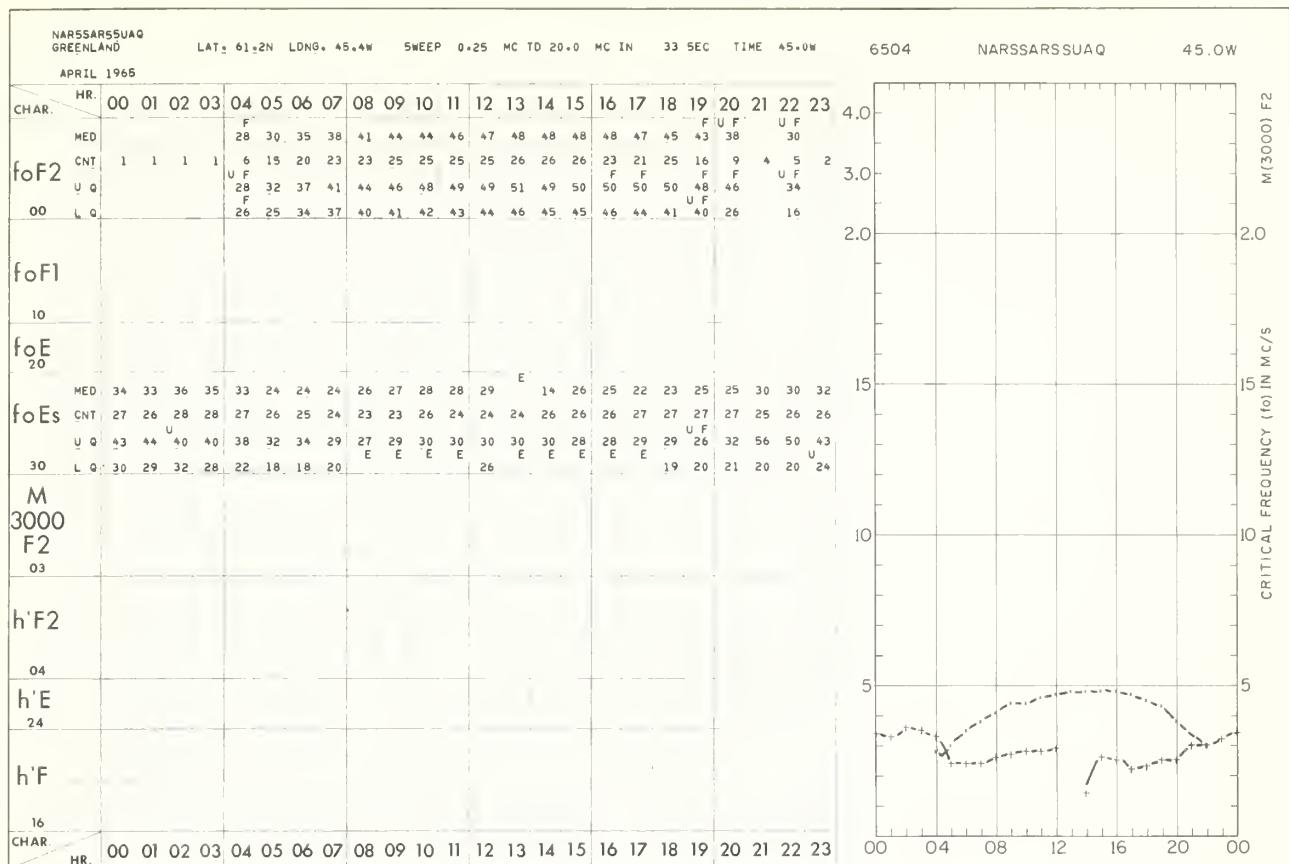
May 1865

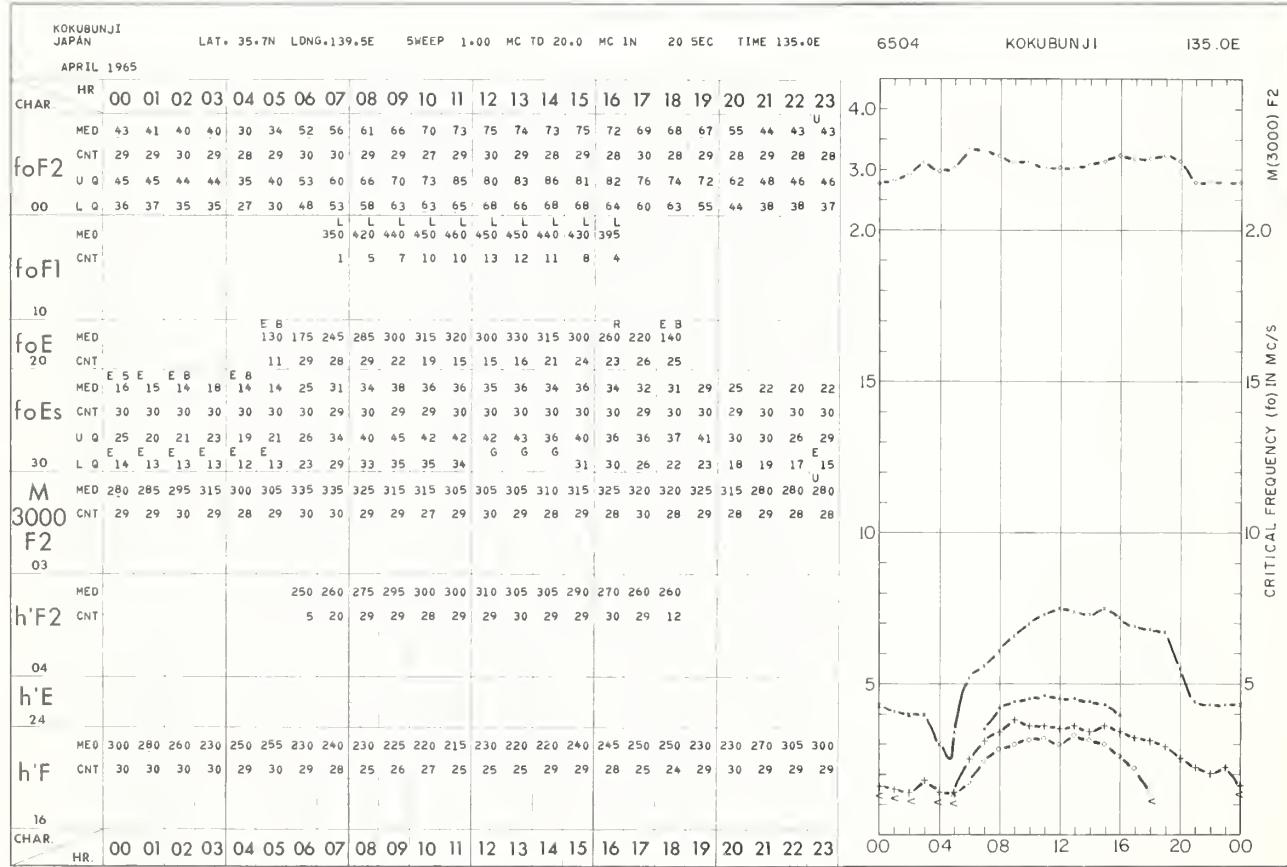
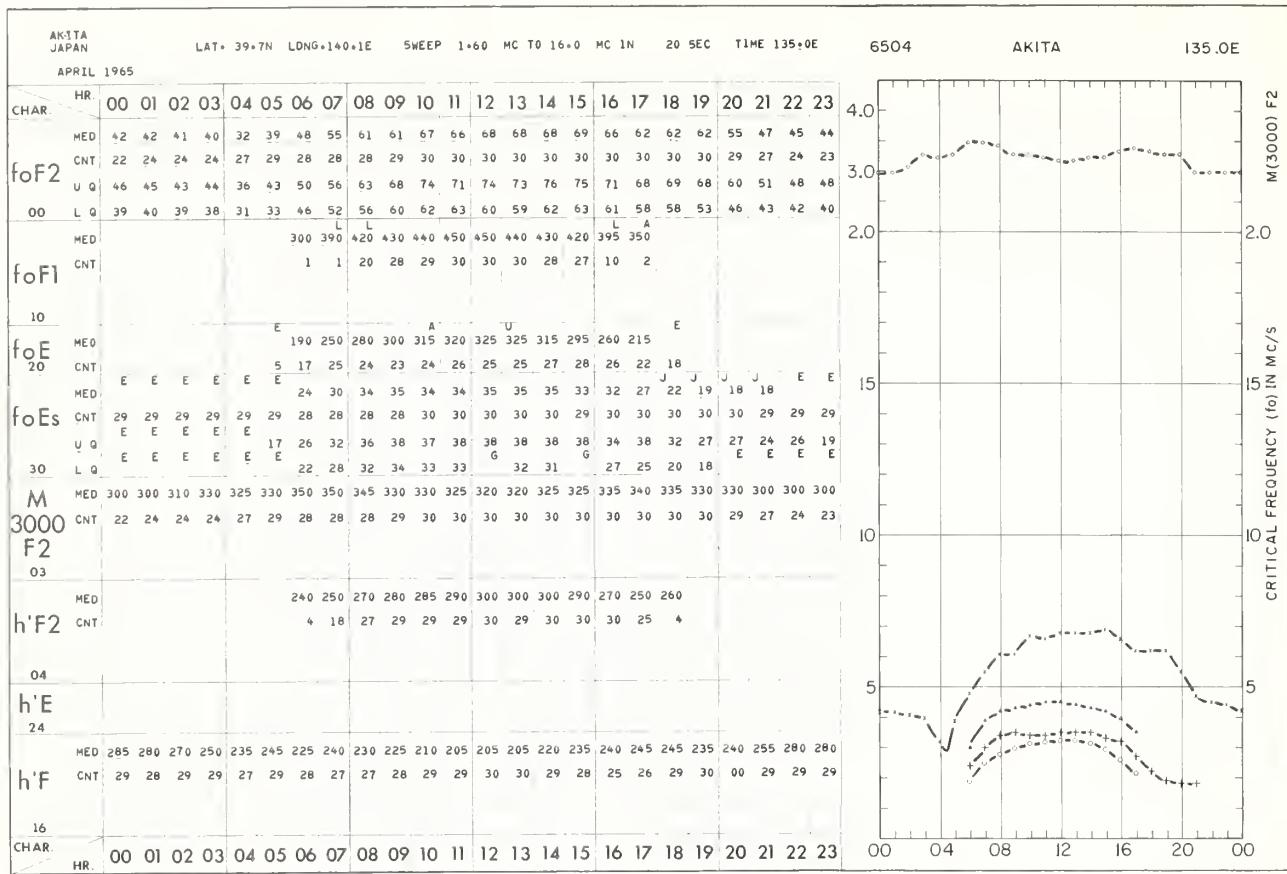
| CHAR. | HR. | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |    |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| foF2  | MED | 49  | 45  | 41  | 34  | 28  | 23  | 28  | 54  | 67  | 73  | 71  | 66  | 64  | 65  | 65  | 68  | 71  | 71  | 68  | 62  | 60  | 64  | 60  | 52  |    |
|       | CNT | 29  | 31  | 31  | 30  | 28  | 27  | 30  | 30  | 31  | 31  | 31  | 30  | 30  | 31  | 31  | 31  | 31  | 31  | 31  | 31  | 31  | 29  | 28  | 29  |    |
|       | U Q | 52  | 51  | 46  | 41  | 37  | 30  | 31  | 55  | 70  | 75  | 77  | 71  | 68  | 69  | 68  | 73  | 75  | 76  | 72  | 67  | 64  | 67  | 64  | 55  |    |
|       | 00  | L Q | 42  | 39  | 35  | 30  | 24  | 19  | 25  | 52  | 65  | 70  | 66  | 63  | 63  | 61  | 61  | 65  | 67  | 67  | 65  | 58  | 57  | 56  | 51  | 46 |
| foF1  | MED |     |     |     |     |     |     |     |     | 410 | 430 | 440 | 430 | 430 | 420 |     |     |     |     |     |     |     |     |     |     |    |
|       | CNT |     |     |     |     |     |     |     |     | 17  | 28  | 29  | 29  | 30  | 31  | 8   |     |     |     |     |     |     |     |     |     |    |
|       | U Q |     |     |     |     |     |     |     |     | 420 | 430 | 440 | 445 | 440 | 430 | 410 |     |     |     |     |     |     |     |     |     |    |
| 10    | L Q |     |     |     |     |     |     |     |     | 410 | 420 | 430 | 430 | 430 | 420 | 400 |     |     |     |     |     |     |     |     |     |    |
| foE   | MED |     |     |     |     |     |     |     |     | U   | U   | U   | U   | U   | U   | U   | U   | U   | U   | U   | U   | U   | U   | U   | U   |    |
| 20    | CNT | 210 | 270 | 300 | 325 | 340 | 340 | 345 | 320 | 295 | 260 | 200 | 100 |     |     |     |     |     |     |     |     |     |     |     |     |    |
|       | MED | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   |    |
|       | U Q | 26  | 30  | 26  | 29  | 26  | 25  | 26  | 31  | 58  | 76  | 80  | 80  | 80  | 80  | 80  | 80  | 70  | 47  | 32  | 32  | 32  | 32  | 26  | 31  | 31 |
| foEs  | CNT | 29  | 31  | 31  | 31  | 31  | 30  | 31  | 31  | 31  | 30  | 29  | 29  | 29  | 30  | 31  | 31  | 31  | 31  | 30  | 30  | 31  | 31  | 30  | 30  | 30 |
|       | MED | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   |    |
|       | U Q | 32  | 32  | 31  | 31  | 30  | 26  | 32  | 48  | 70  | 80  | 90  | 90  | 90  | 87  | 80  | 80  | 72  | 50  | 47  | 42  | 38  | 33  | 33  | 32  | 32 |
| 30    | L Q | 26  | 25  | 23  | 23  | 23  | 23  | 25  | 25  | 27  | 60  | 80  | 80  | 80  | 80  | 80  | 80  | 73  | 60  | 42  | 26  | 25  | 26  | 23  | 23  | 25 |
| M     | MED | 348 | 350 | 345 | 338 | 345 | 340 | 320 | 340 | 320 | 295 | 270 | 270 | 268 | 265 | 265 | 270 | 275 | 282 | 300 | 290 | 302 | 320 | 340 | 348 |    |
| 3000  | CNT | 28  | 29  | 30  | 30  | 28  | 27  | 31  | 31  | 31  | 30  | 29  | 29  | 28  | 29  | 30  | 30  | 30  | 30  | 29  | 30  | 27  | 23  | 26  |     |    |
| F2    | U Q | 358 | 355 | 360 | 350 | 350 | 355 | 330 | 350 | 335 | 305 | 280 | 275 | 272 | 270 | 270 | 280 | 285 | 300 | 310 | 312 | 315 | 335 | 355 | 360 |    |
| 03    | L Q | 340 | 335 | 330 | 320 | 325 | 320 | 300 | 320 | 300 | 275 | 265 | 258 | 260 | 260 | 260 | 265 | 270 | 275 | 285 | 285 | 285 | 305 | 330 | 340 |    |
| h'F2  | 04  |     |     |     |     |     |     |     |     | 110 | 103 | 100 | 100 | 100 | 100 | 100 | 100 | 101 | 101 | 105 |     |     |     |     |     |    |
| h'E   | MED |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
|       | CNT | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 31  | 31  | 31  | 31  | 30  | 30  | 31  | 31  | 31  | 31  | 29  | 3   |     | 1   | 1   | 1   | 1   |    |
| h'F   | 16  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| CHAR. |     | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |    |











**TAIPEI CHINA** LAT. 25°0N LONG. 121.5E SWEEP 1.00 MC TO 25.0 MC IN 27 SEC TIME 120.0E 6504 TAIPEI 120.0E APRIL 1965

**CHAR.** HR. 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23

**foF2**

|     | MED             | 54 44 50 36 | 26 27 46 58 | 64 66 78       | U U U U         | 92 111 122 129 | 120 104     | 94 88 72 63 | 69 58 54 |
|-----|-----------------|-------------|-------------|----------------|-----------------|----------------|-------------|-------------|----------|
| CNT | 13 20 23 22     | 16 4 29 28  | 30 29 30    | 28 26 25 26    | 24 26 26        | 20 11          | 4 5 12      |             |          |
| U Q | U U             | U 64 70 44  | 28 34 50 62 | 69 72 81 101   | 116 134 142 138 | 129 112        | U 78 66 70  | 68 62       |          |
| 00  | L Q 46 40 44 30 | 21 26 43 55 | 59 62 73    | 88 102 105 108 | 100 95 76       | 70 63          | 52 63 48 51 |             |          |
| MED |                 | 450 450     |             | 470 430 410    |                 |                |             |             |          |

**foF1**

|             | CNT               | 2 1   | 1 2 1               |                 |                 |                 |                 |
|-------------|-------------------|---|---------------------|-----------------|-----------------|-----------------|-----------------|
| 10          |                   |   |                     |                 |                 |                 |                 |
| <b>foE</b>  |                   |   |                     |                 |                 |                 |                 |
| 20          |                   |   |                     |                 |                 |                 |                 |
| <b>foEs</b> | MED               | 30 32 42 44 44 44   | 53 46 44 42         | 39 40 40 27     |                 |                 |                 |
| CNT         | 30 30 30 30 30 30 | 10 21 18 24 24 20   | 16 17 15 20         | 22 25 26 30     | 30 30 30 30     |                 |                 |
| 30          |                   |   |                     |                 |                 |                 |                 |
| <b>M</b>    | MED               | 300 320 360 360   | 325 280 350 350     | 345 315 290 295 | 310 315 320 325 | 340 340 350 350 | 320 290 290 300 |
| 3000        | CNT               | 11 16 17 19   | 10 1 28 26          | 27 27 29 20     | 16 19 17 19     | 25 21 21 15     | 8 1 2 12        |
| <b>F2</b>   | U Q               | 320 330 365 370   | 335 360 360         | 350 330 300 310 | 315 325 330 330 | 340 350 350 350 | 350 330 310     |
| 03          | L Q               | 290 310 350 345   | 305 45 350          | 330 310 280 285 | 300 310 310 320 | 330 330 340 340 | 340 340 310 290 |
| <b>h'F2</b> | MED               |   | 245 265 300 330 330 | 310 295 280 270 | 255 245         |                 |                 |
| CNT         |                   | 5 27 25 29 29   | 28 27 26 26         | 28 25           |                 |                 |                 |
| 04          |                   |   |                     |                 |                 |                 |                 |
| <b>h'E</b>  |                   |   |                     |                 |                 |                 |                 |
| 24          |                   |   |                     |                 |                 |                 |                 |
| <b>h'F</b>  | MED               | 300 270 220 210   | 250 305 230 230     | 230 220 230 230 | 230 220 220 230 | 230 250 300 320 | 305 305         |
| CNT         | 19 24 28 21       | 11 1 28 25  | 10 7 2              | 3 7 12 11       | 27 20 10 5      | 6 17            |                 |
| 16          | <b>CHAR.</b>      | HR. 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 |                     |                 |                 |                 |                 |

CRITICAL FREQUENCY (f<sub>c</sub>) IN MC/S

AHMEDABAD  
INDIA  
APRIL 1965

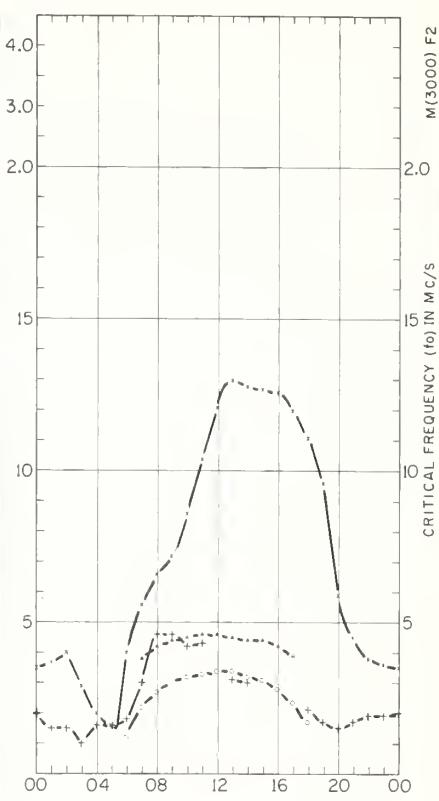
LAT. 23.0N LDNG. 72.6E SWEEP 0.60 MC TD 25.0 MC IN 300 SEC TIME 75.0E

6504

AHMEDABAD

75.0E

| CHAR. | HR. | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| foF2  | MED | 35  | 37  | 40  | 29  | 20  | 16  | 40  | 56  | 66  | 72  | 86  | 104 | 121 | 130 | 128 | 127 | 126 | 120 | 111 | 96  | 59  | 45  | 38  | 36  |
|       | CNT | 22  | 23  | 24  | 23  | 20  | 18  | 17  | 22  | 28  | 27  | 28  | 26  | 26  | 27  | 27  | 26  | 29  | 28  | 27  | 25  | 28  | 25  | 23  | 20  |
| foF1  | MED |     |     |     |     |     |     |     |     | 380 | 420 | 440 | 450 | 460 | 460 | 450 | 440 | 440 | 420 | 390 |     |     |     |     |     |
|       | CNT |     |     |     |     |     |     |     |     | 8   | 22  | 26  | 27  | 22  | 23  | 24  | 25  | 26  | 27  | 19  |     |     |     |     |     |
| foE   | MED |     |     |     |     |     |     |     |     | 120 | 220 | 270 | 300 | 320 | 330 | 340 | 340 | 320 | 310 | 280 | 235 | 170 |     |     |     |
|       | CNT |     |     |     |     |     |     |     |     | 3   | 12  | 12  | 13  | 13  | 17  | 19  | 17  | 19  | 22  | 24  | 22  | 5   |     |     |     |
| foEs  | MED | 20  | 15  | 15  | 10  | 16  | 16  | 18  | 30  | 46  | 46  | 42  | 43  |     | 31  | 30  |     |     | 21  | 17  | 15  | 17  | 19  | 19  |     |
|       | CNT | 25  | 25  | 24  | 23  | 23  | 22  | 18  | 20  | 28  | 27  | 28  | 28  | 27  | 27  | 27  | 28  | 29  | 29  | 28  | 27  | 28  | 26  | 25  | 25  |
| h'F2  | MED |     |     |     |     |     |     |     |     | 250 | 275 | 300 | 355 | 360 | 350 | 330 | 300 | 290 | 270 | 250 | 240 |     |     |     |     |
|       | CNT |     |     |     |     |     |     |     |     | 9   | 23  | 27  | 27  | 25  | 26  | 27  | 28  | 28  | 29  | 23  | 4   |     |     |     |     |
| h'E   | MED |     |     |     |     |     |     |     |     | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 |     |     |     |     |
|       | CNT |     |     |     |     |     |     |     |     | 3   | 12  | 12  | 12  | 14  | 18  | 18  | 14  | 18  | 21  | 23  | 22  | 3   |     |     |     |
| h'F   | MED | 310 | 290 | 250 | 225 | 255 | 290 | 250 | 245 | 230 | 220 | 210 | 210 | 235 | 225 | 225 | 240 | 230 | 235 | 245 | 215 | 220 | 250 | 300 | 330 |
|       | CNT | 22  | 25  | 22  | 22  | 19  | 18  | 18  | 20  | 26  | 24  | 27  | 21  | 22  | 23  | 22  | 25  | 27  | 25  | 27  | 27  | 25  | 24  | 25  |     |
| CHAR. | HR. | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |



MANILA  
LUZON  
APRIL 1965

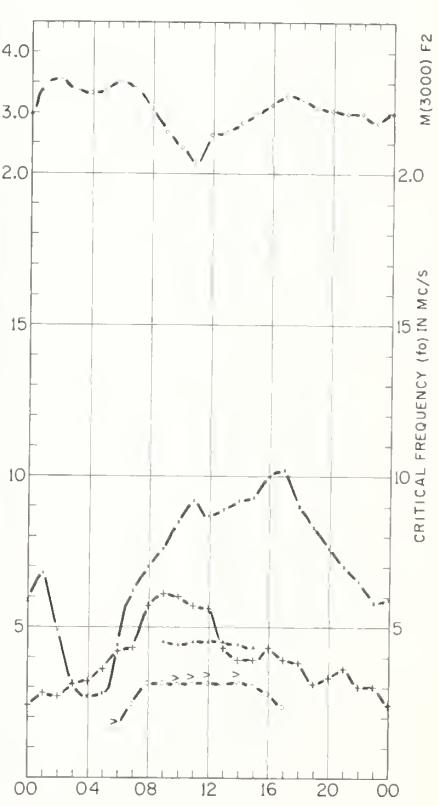
LAT. 14.7N LDNG. 121.1E SWEEP 0.25 MC TD 20.0 MC IN 27 SEC TIME 120.0E

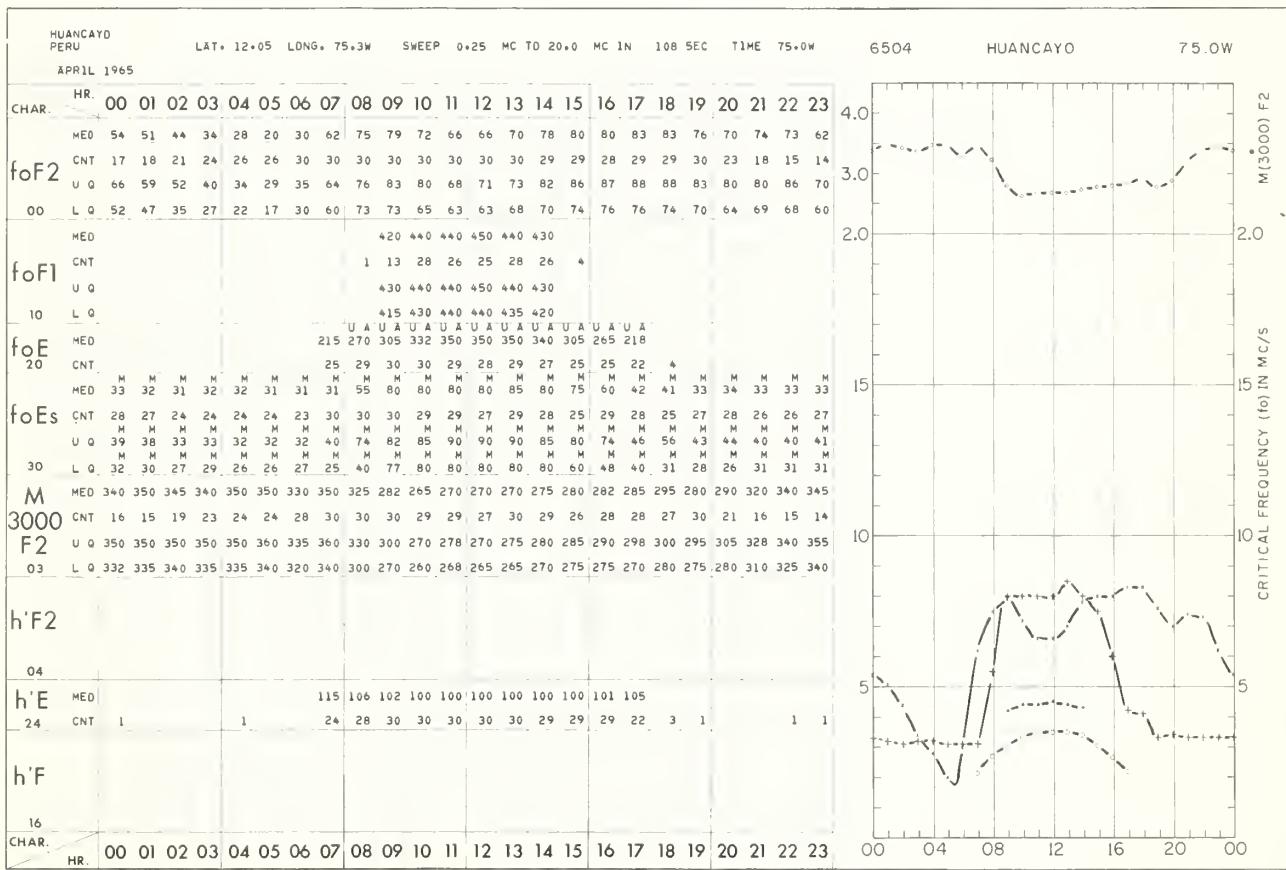
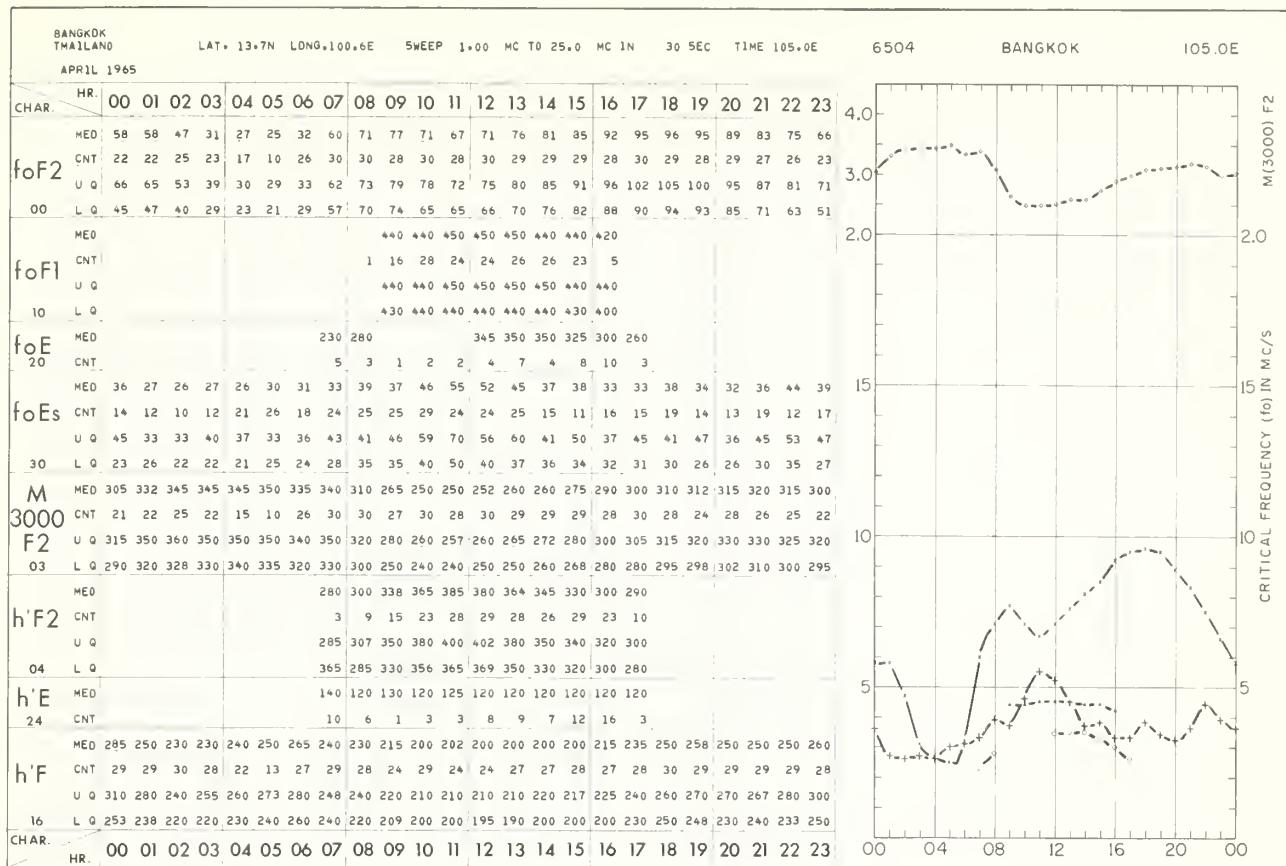
6504

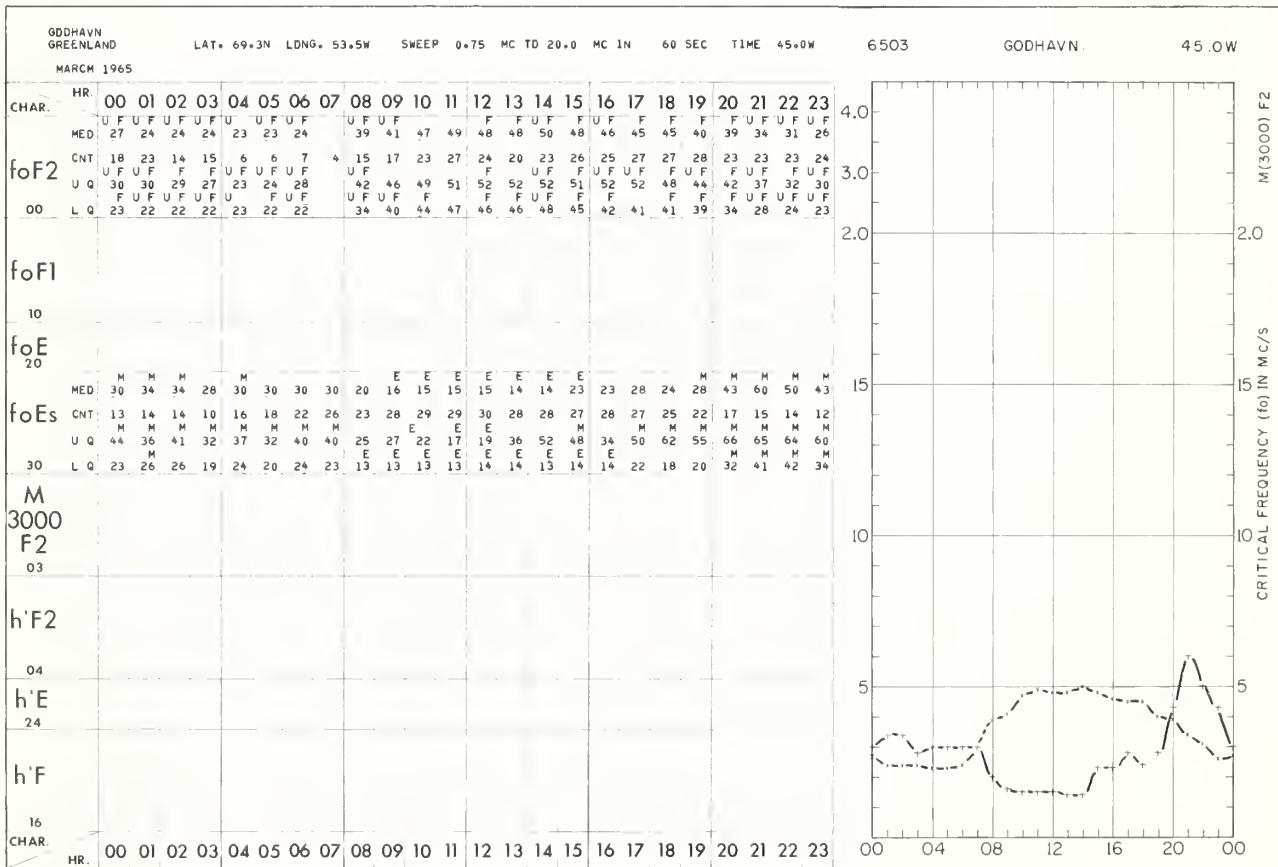
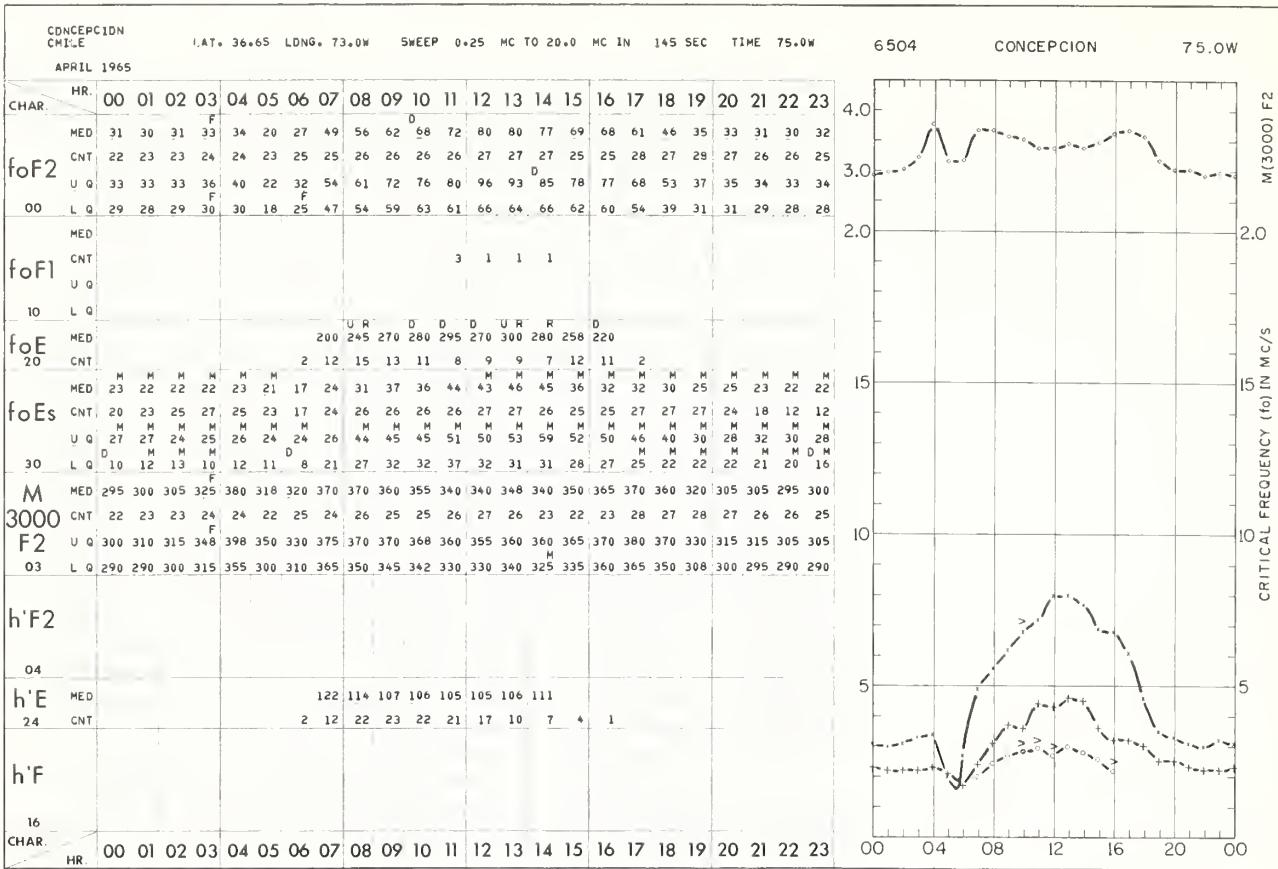
MANILA

120.0E

| CHAR. | HR. | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |     |     |     |     |     |
|-------|-----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| foF2  | MED | 59 | 68 | 49 | 32 | 27 | 28 | 44 | 62 | 70  | 76  | 85  | 92  | 87  | 89  | 92  | 93  | 100 | 102 | 90  | 83  | 76  | 70  | 65  | 58  |     |     |     |     |     |
|       | CNT | 21 | 23 | 24 | 24 | 17 | 10 | 29 | 28 | 29  | 29  | 12  | 5   | 13  | 23  | 30  | 29  | 29  | 26  | 30  | 30  | 27  | 28  | 24  | 21  | 18  |     |     |     |     |
| foF1  | MED | U  | Q  | 72 | 86 | 52 | 37 | 25 | 32 | 46  | 64  | 74  | 80  | 86  | 94  | 92  | 93  | 96  | 104 | 110 | 112 | 104 | 87  | 82  | 79  | 78  | 65  |     |     |     |
|       | CNT | L  | Q  | 56 | 59 | 41 | 28 | 21 | 24 | 43  | 60  | 66  | 75  | 82  | 90  | 82  | 83  | 87  | 93  | 94  | 92  | 86  | 78  | 68  | 61  | 58  | 50  |     |     |     |
| foE   | MED |    |    |    |    |    |    |    |    | 450 | 440 | 450 | 450 | 450 | 450 | 440 | 430 |     |     |     |     |     |     |     |     |     |     |     |     |     |
|       | CNT |    |    |    |    |    |    |    |    | 1   | 10  | 13  | 14  | 13  | 13  | 6   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |
| foEs  | MED |    |    |    |    |    |    |    |    | D   | S   | U   | S   | U   | D   | S   | S   | 5   | 5   | 7   | 7   | 2   |     |     |     |     |     |     |     |     |
|       | CNT |    |    |    |    |    |    |    |    | 160 | 245 | 315 | 315 | 310 | 310 | 315 | 310 | 320 | 305 | 280 | 235 |     |     |     |     |     |     |     |     |     |
| foEs  | MED |    |    |    |    |    |    |    |    | 1   | 5   | 1   | 4   | 3   | 2   | 3   | 6   | 6   | 7   | 7   | 2   |     |     |     |     |     |     |     |     |     |
|       | CNT |    |    |    |    |    |    |    |    | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   | M   |     |     |     |     |     |
| foEs  | MED | 28 | 29 | 30 | 29 | 29 | 30 | 30 | 30 | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |     |     |     |     |
| foEs  | CNT | 28 | 29 | 30 | 29 | 29 | 30 | 30 | 30 | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |     |     |     |     |
| h'F2  | MED |    |    |    |    |    |    |    |    | D   | S   | U   | S   | U   | D   | S   | S   | 5   | 5   | 7   | 7   | 2   |     |     |     |     |     |     |     |     |
|       | CNT |    |    |    |    |    |    |    |    | 160 | 245 | 315 | 315 | 310 | 310 | 315 | 310 | 320 | 305 | 280 | 235 |     |     |     |     |     |     |     |     |     |
| h'E   | MED |    |    |    |    |    |    |    |    | E   | S   | U   | S   | U   | D   | S   | S   | 5   | 5   | 7   | 7   | 2   |     |     |     |     |     |     |     |     |
|       | CNT |    |    |    |    |    |    |    |    | 117 | 113 | 109 | 111 | 109 | 109 | 109 | 109 | 111 | 113 | 115 |     |     |     |     |     |     |     |     |     |     |
| h'F   | MED |    |    |    |    |    |    |    |    | 1   | 9   | 10  | 12  | 10  | 14  | 18  | 15  | 15  | 17  | 14  | 3   |     |     |     |     |     |     |     |     |     |
|       | CNT |    |    |    |    |    |    |    |    | 275 | 230 | 200 | 230 | 230 | 220 | 190 | 190 | 190 | 190 | 185 | 195 | 205 | 215 | 230 | 245 | 250 | 260 | 270 | 290 | 295 |
| CHAR. | HR. | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |     |     |     |     |     |



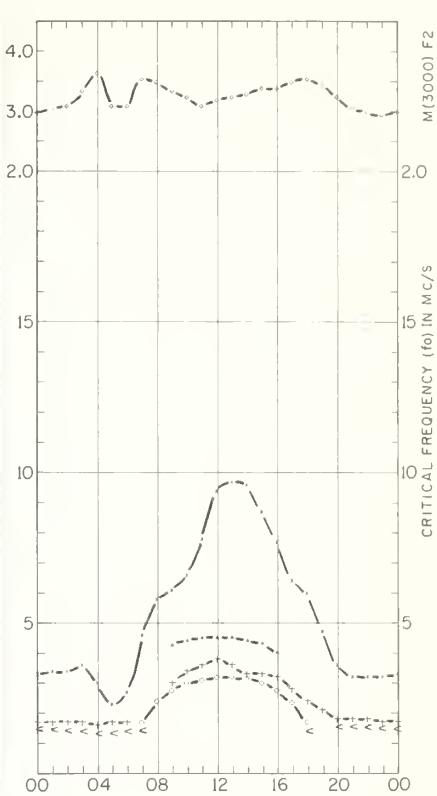


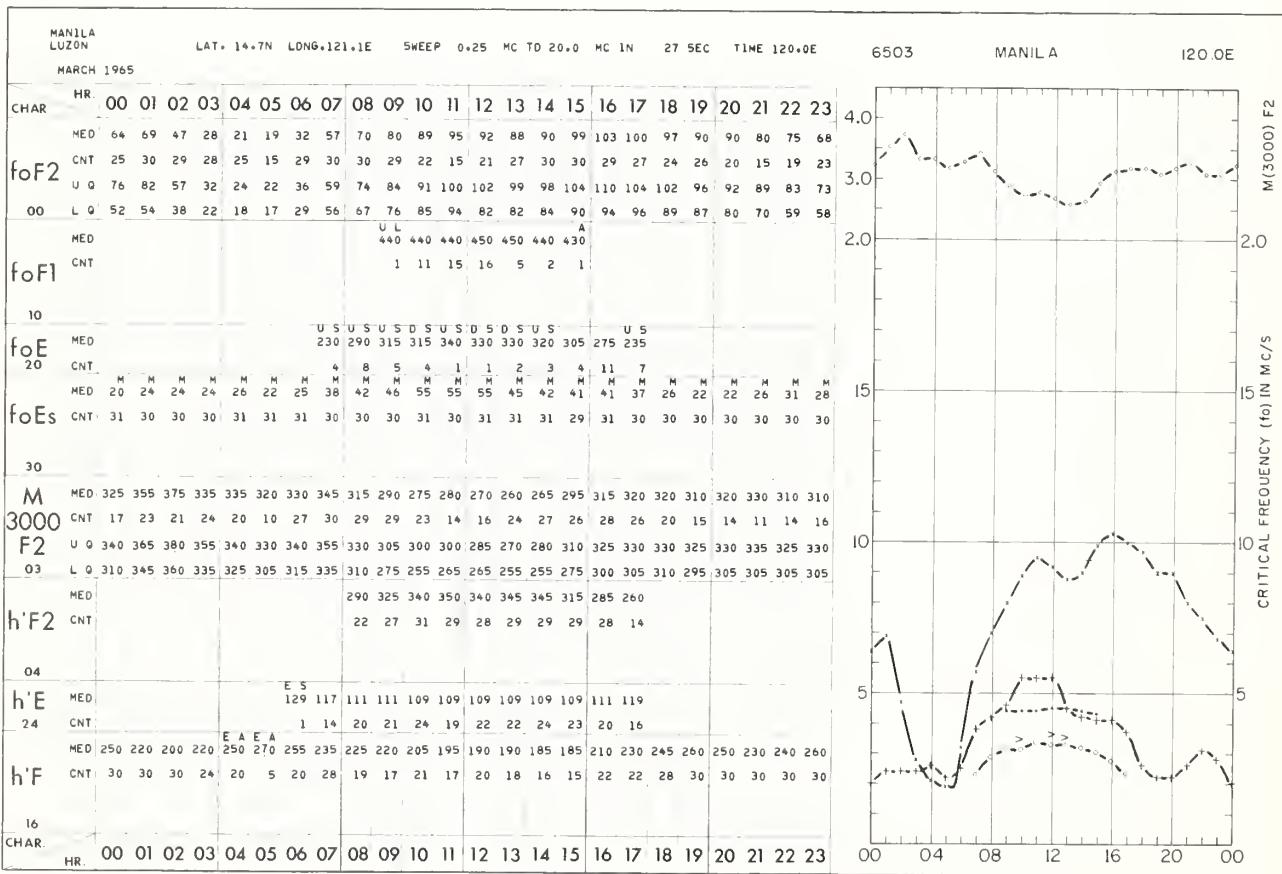
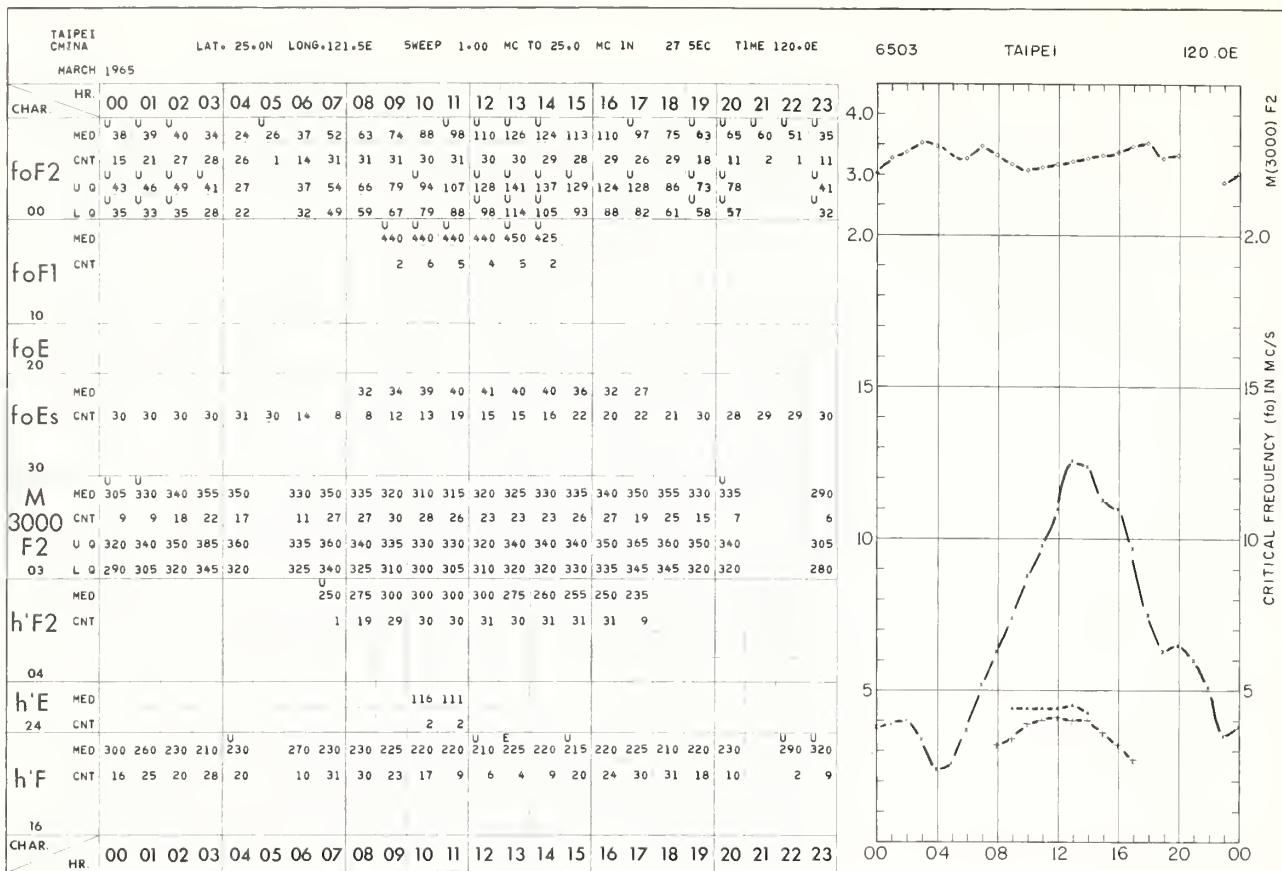


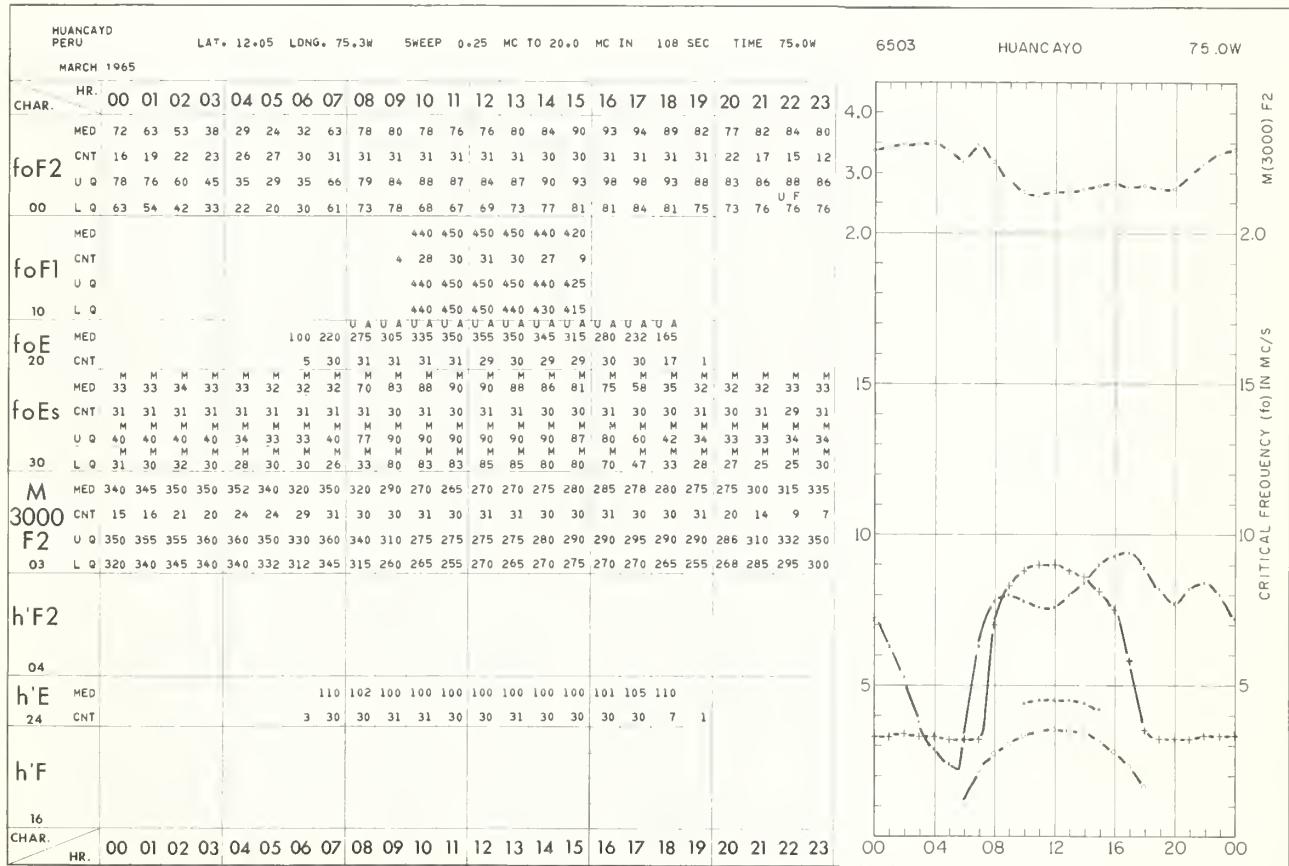
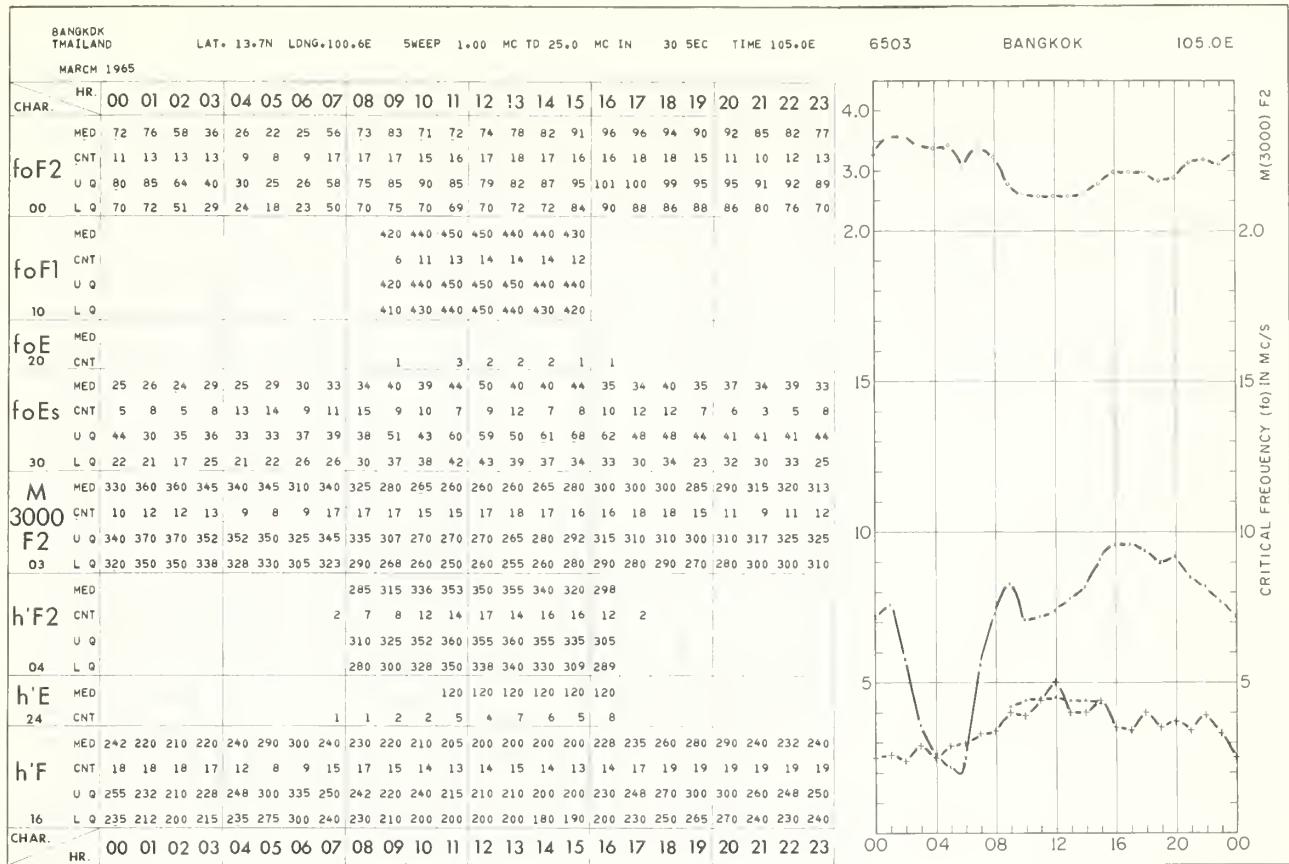
YAMAGAWA JAPAN LAT. 61°2N LDNG. 130.6E SWEEP 0.55 MC TD 17.0 MC IN 20 SEC TIME 135°0E

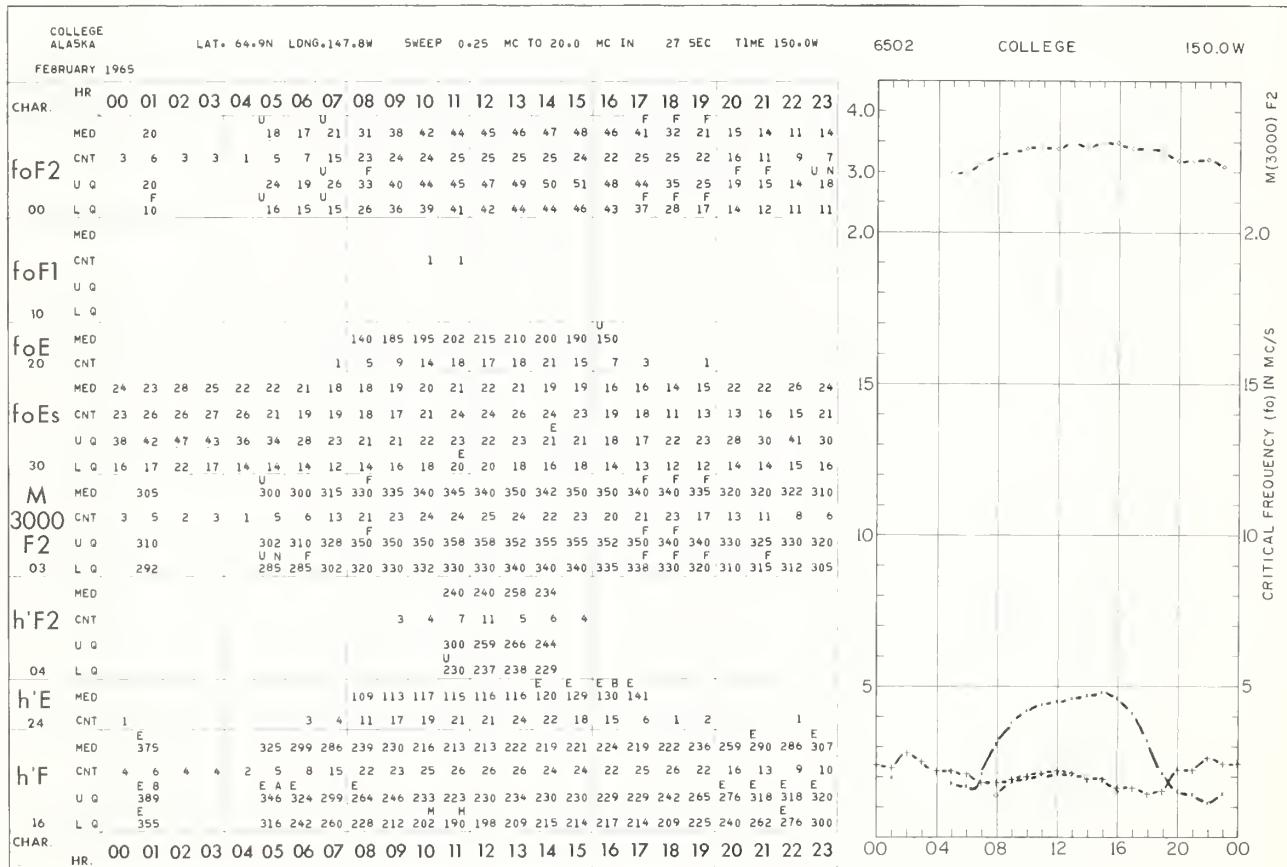
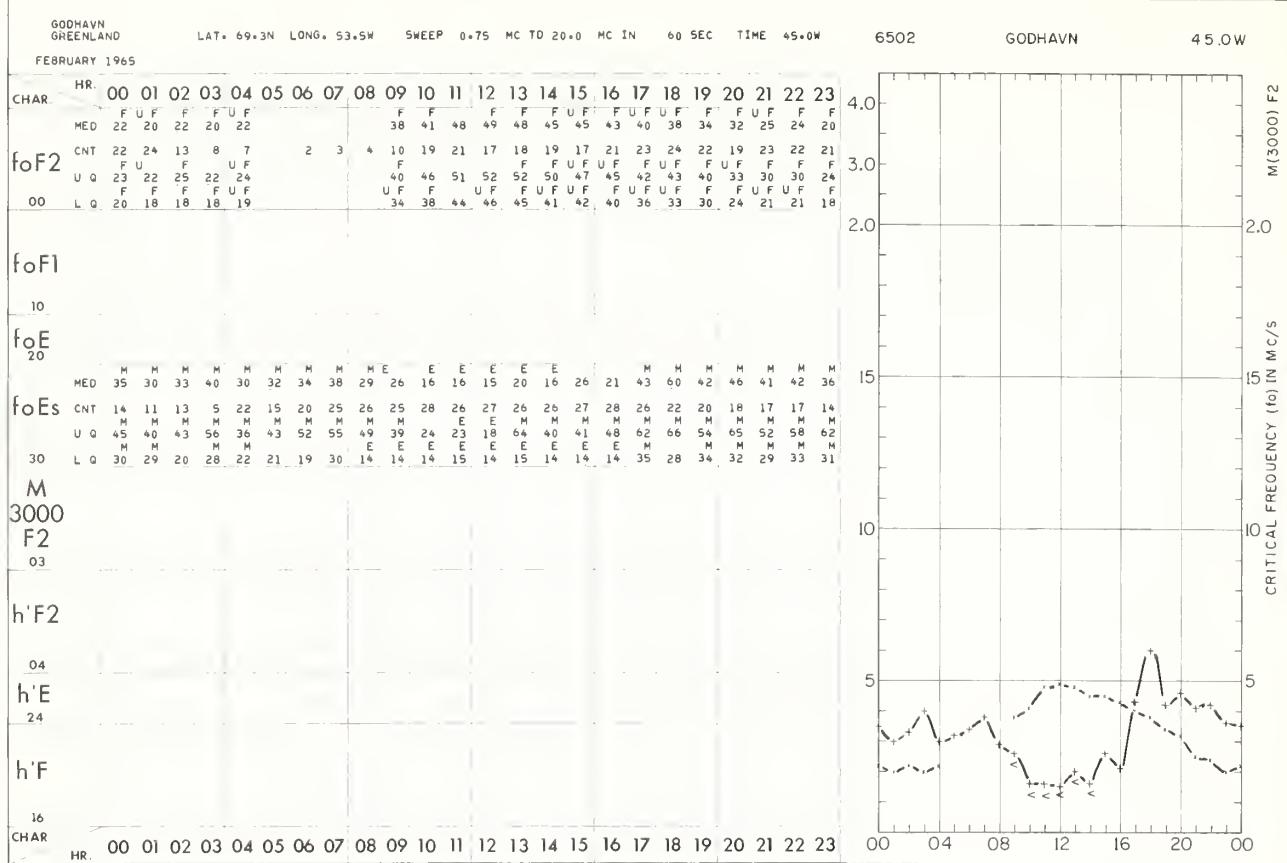
MARCH 1965

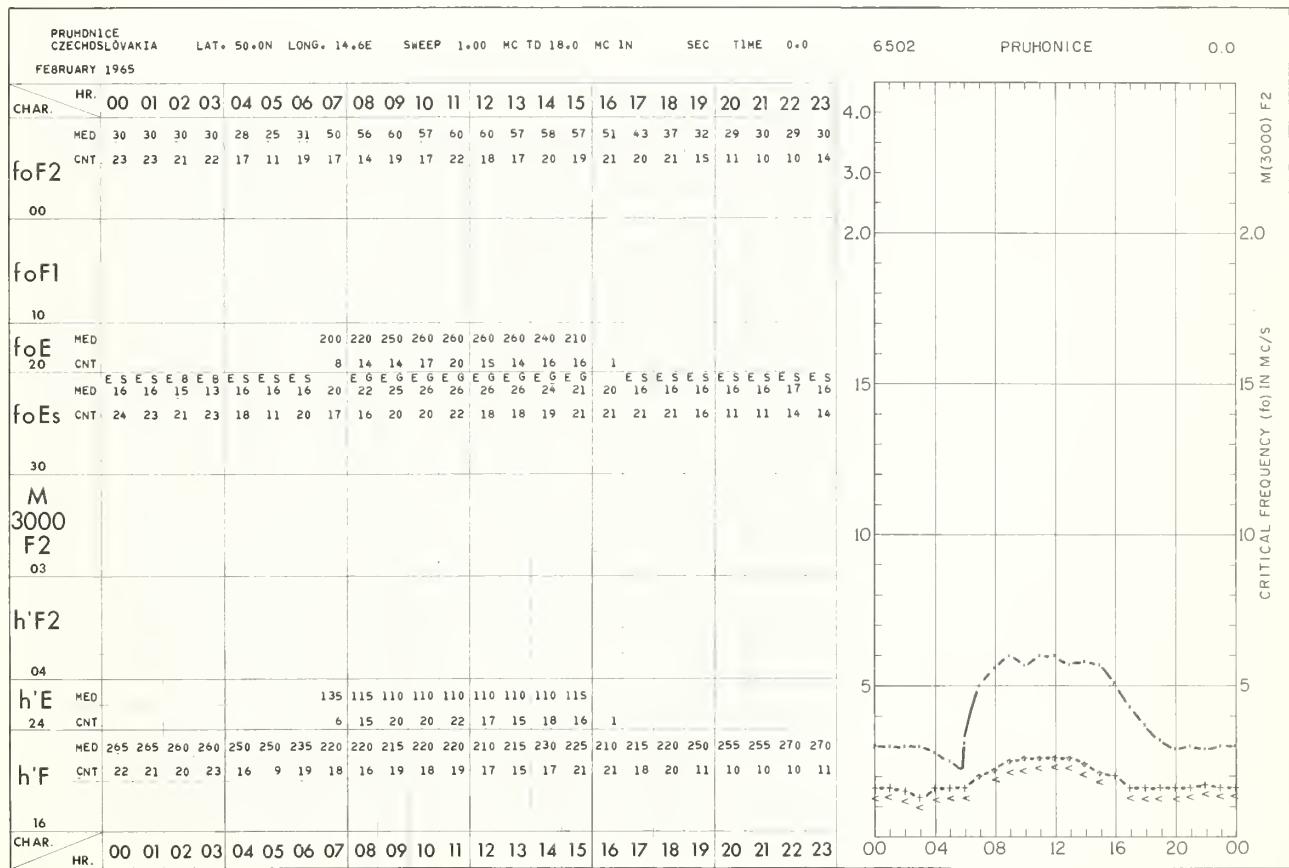
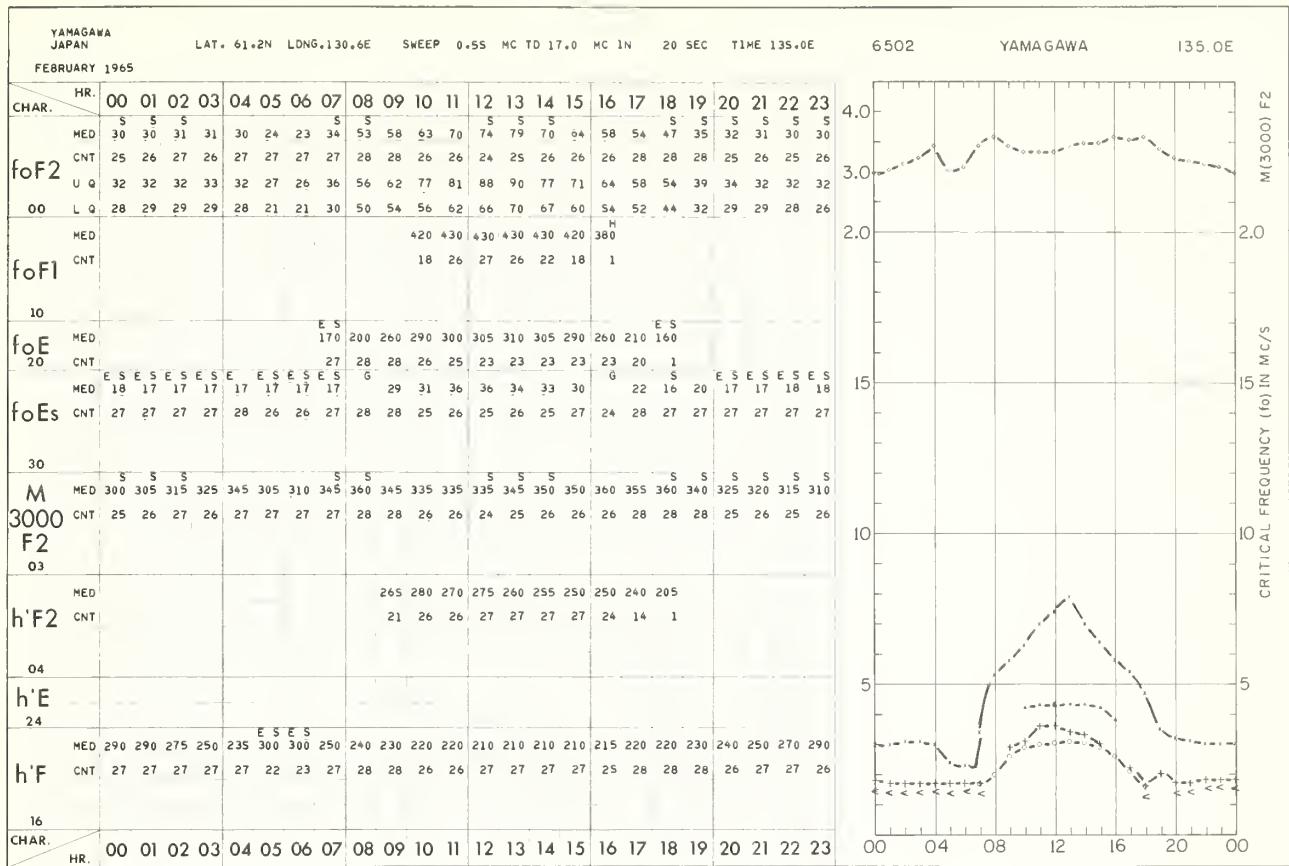
| CHAR. | HR.   | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |
|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| foF2  | HR.   | U   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   |
|       | CHAR. | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |
| foF2  | CNT   | 33  | 34  | 34  | 36  | 30  | 23  | 27  | 46  | 58  | 61  | 66  | 78  | 94  | 97  | 96  | 87  | 77  | 64  | 60  | 47  | 36  | 32  | 32  | 32  |
|       | U Q   | 35  | 36  | 36  | 40  | 33  | 27  | 29  | 49  | 59  | 64  | 76  | 85  | 101 | 106 | 106 | 92  | 80  | 79  | 62  | 52  | 43  | 34  | 34  | 33  |
| foF2  | 00    | L Q | 32  | 32  | 32  | 34  | 28  | 21  | 24  | 44  | 55  | 60  | 64  | 72  | 84  | 90  | 88  | 77  | 68  | 63  | 55  | 40  | 33  | 30  | 30  |
|       | MED   |     |     |     |     |     |     |     |     | 425 | 440 | 450 | 450 | 450 | 440 | 430 | 400 |     |     |     |     |     |     |     |     |
| foF1  | CNT   |     |     |     |     |     |     |     |     | 2   | 24  | 30  | 30  | 29  | 29  | 29  | 7   |     |     |     |     |     |     |     |     |
| foE   | 10    |     |     |     |     |     |     |     |     | E   | S   |     | R   |     |     | E   | S   |     |     |     |     |     |     |     |     |
| foE   | 20    | MED |     |     |     |     |     |     |     | 170 | 240 | 275 | 300 | 310 | 320 | 320 | 315 | 300 | 275 | 235 | 170 |     |     |     |     |
| foE   | 20    | CNT |     |     |     |     |     |     |     | 29  | 30  | 30  | 29  | 26  | 24  | 22  | 22  | 26  | 26  | 26  | 26  | 5   |     |     |     |
| foEs  | 20    | MED | E   | E   | E   | E   | E   | E   | E   | E   | E   | E   | E   | E   | E   | E   | E   | E   | E   | E   | E   | E   | E   | E   |     |
| foEs  | 20    | CNT | 17  | 17  | 17  | 17  | 16  | 17  | 17  | 17  | 29  | 29  | 29  | 29  | 29  | 30  | 30  | 29  | 29  | 31  | 30  | 30  | 31  | 29  | 29  |
| foEs  | 30    | MED | 18  | 18  | 17  | 18  | 18  | 17  | 18  | 17  | 29  | 29  | 29  | 29  | 29  | 30  | 30  | 30  | 30  | 31  | 30  | 30  | 31  | 29  | 29  |
| foEs  | 30    | CNT | 18  | 17  | 17  | 17  | 16  | 16  | 17  | 17  | 28  | 33  | 36  | 38  | 39  | 39  | 37  | 37  | 35  | 35  | 32  | 24  | 24  | 23  | 20  |
| M     | 3000  | MED | 17  | 17  | 17  | 17  | 16  | 16  | 17  | 17  | 16  | G   | 28  | 33  | 34  | 34  | 34  | 34  | 34  | 34  | 34  | 35  | 35  | 35  | 35  |
| F2    | 03    | MED | US  | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   | S   |     |
| h'F2  | CNT   | 300 | 305 | 310 | 335 | 365 | 310 | 310 | 355 | 350 | 355 | 325 | 310 | 320 | 325 | 330 | 340 | 340 | 350 | 355 | 345 | 325 | 305 | 300 | 295 |
| h'F2  | CNT   | 27  | 25  | 25  | 28  | 27  | 29  | 29  | 29  | 30  | 28  | 27  | 26  | 28  | 28  | 28  | 28  | 27  | 28  | 26  | 25  | 27  | 27  | 26  | 28  |
| h'E   | 04    | MED |     |     |     |     |     |     |     | 250 | 270 | 290 | 300 | 290 | 280 | 270 | 255 | 255 | 250 |     |     |     |     |     |     |
| h'E   | 24    | CNT |     |     |     |     |     |     |     | 11  | 29  | 30  | 30  | 30  | 30  | 30  | 30  | 31  | 30  | 22  |     |     |     |     |     |
| h'F   | 16    | MED | 300 | 300 | 275 | 250 | 205 | 295 | 285 | 230 | 235 | 230 | 220 | 220 | 210 | 210 | 225 | 220 | 225 | 235 | 230 | 225 | 240 | 260 | 290 |
| h'F   | CNT   | 29  | 29  | 29  | 29  | 29  | 29  | 28  | 29  | 30  | 30  | 30  | 30  | 30  | 30  | 29  | 29  | 29  | 29  | 29  | 30  | 26  | 27  | 29  | 28  |
| CHAR. | HR.   | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |











BANGKOK THAILAND LAT. 13°7'N LONG. 100°6'E SWEEP 1.00 MC TO 25.0 MC IN 30 SEC TIME 105.0E 6502 BANGKOK 105.0E

FEBRUARY 1965

|       | HR  | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |     |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| CHAR: | MED | 43  | 39  | 35  | 29  | 21  | 21  |     | 43  | 62  | 71  | 78  | 71  | 70  | 69  | 71  | 75  | 77  | 83  | 82  | 77  | 70  | 65  | 57  | 49  |     |
| foF2  | CNT | 20  | 21  | 20  | 20  | 11  | 3   |     | 23  | 23  | 21  | 19  | 21  | 18  | 20  | 19  | 21  | 22  | 22  | 22  | 18  | 19  | 17  | 16  | 16  |     |
|       | U Q | 51  | 50  | 43  | 35  | 26  | 23  |     | 46  | 64  | 75  | 83  | 79  | 82  | 71  | 82  | 81  | 83  | 86  | 87  | 85  | 76  | 69  | 60  | 54  |     |
|       | 00  | L Q | 38  | 34  | 31  | 25  | 21  | 20  |     | 40  | 60  | 69  | 73  | 67  | 65  | 67  | 68  | 70  | 72  | 74  | 75  | 72  | 66  | 62  | 53  | 46  |
|       | MEQ |     |     |     |     |     |     |     | 420 | 430 | 440 | 440 | 440 | 440 | 440 | 430 | 420 |     |     |     |     |     |     |     |     |     |
| foF1  | CNT |     |     |     |     |     |     |     | 14  | 19  | 19  | 13  | 8   | 17  | 15  | 8   |     |     |     |     |     |     |     |     |     |     |
|       | U Q |     |     |     |     |     |     |     | 420 | 430 | 440 | 440 | 440 | 440 | 440 | 440 | 420 |     |     |     |     |     |     |     |     |     |
| 10    | L Q |     |     |     |     |     |     |     | 410 | 420 | 430 | 440 | 430 | 430 | 420 | 410 |     |     |     |     |     |     |     |     |     |     |
| foE   | MEQ |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 20    | CNT |     |     |     |     |     |     |     | 2   | 2   | 1   |     |     |     |     | 1   |     |     |     |     |     |     |     |     |     |     |
| foEs  | MEQ | 36  | 45  | 34  | 23  | 21  | 31  | 33  | 30  | 31  | 37  | 40  | 40  | 58  | 50  | 48  | 40  | 40  | 40  | 41  | 38  | 38  | 33  | 33  | 37  | 34  |
|       | CNT | 8   | 7   | 7   | 5   | 7   | 4   | 4   | 3   | 7   | 8   | 7   | 8   | 10  | 13  | 11  | 12  | 12  | 11  | 9   | 10  | 8   | 13  | 12  | 9   |     |
|       | U Q | 38  | 45  | 35  | 28  | 24  | 44  | 37  | 36  | 35  | 41  | 42  | 47  | 65  | 62  | 78  | 53  | 60  | 70  | 51  | 44  | 42  | 44  | 41  | 44  |     |
| 30    | L Q | 30  | 27  | 22  | 21  | 21  | 23  | 30  | 28  | 31  | 35  | 36  | 37  | 41  | 45  | 42  | 36  | 33  | 32  | 31  | 27  | 29  | 29  | 29  | 29  |     |
| M     | MEQ | 338 | 340 | 340 | 353 | 353 | 320 |     | 335 | 323 | 298 | 275 | 280 | 262 | 263 | 275 | 275 | 290 | 300 | 305 | 310 | 315 | 320 | 330 | 335 |     |
| 3000  | CNT | 18  | 19  | 18  | 20  | 10  | 3   |     | 21  | 20  | 20  | 19  | 21  | 18  | 20  | 17  | 21  | 22  | 21  | 20  | 17  | 17  | 15  | 14  | 15  |     |
| F2    | U Q | 345 | 360 | 360 | 360 | 360 | 333 |     | 340 | 337 | 310 | 310 | 295 | 270 | 270 | 277 | 287 | 300 | 307 | 317 | 327 | 330 | 330 | 345 | 345 |     |
| 03    | L Q | 30  | 330 | 325 | 330 | 340 | 330 | 315 |     | 325 | 303 | 275 | 270 | 270 | 260 | 250 | 263 | 265 | 270 | 285 | 290 | 303 | 300 | 310 | 320 | 325 |
|       | MEQ |     |     |     |     |     |     |     | 320 | 340 | 340 | 380 | 371 | 360 | 340 | 310 | 285 |     |     |     |     |     |     |     |     |     |
| h'F2  | CNT |     |     |     |     |     |     |     | 2   | 15  | 19  | 20  | 18  | 20  | 17  | 17  | 18  | 7   | 1   |     |     |     |     |     |     |     |
|       | U Q |     |     |     |     |     |     |     | 340 | 388 | 365 | 400 | 400 | 375 | 350 | 348 | 330 |     |     |     |     |     |     |     |     |     |
| 04    | L Q |     |     |     |     |     |     |     | 305 | 315 | 325 | 360 | 355 | 340 | 320 | 308 | 270 |     |     |     |     |     |     |     |     |     |
| h'E   | MED |     |     |     |     |     |     |     | 120 | 120 | 120 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 24    | CNT |     |     |     |     |     |     |     | 3   | 5   | 6   | 1   | 1   |     | 1   | 2   | 3   | 1   |     |     |     |     |     |     |     |     |
|       | MEQ | 248 | 240 | 234 | 240 | 250 | 290 |     | 250 | 230 | 220 | 218 | 210 | 200 | 200 | 200 | 220 | 240 | 250 | 260 | 245 | 245 | 240 | 240 |     |     |
| h'F   | CNT | 21  | 22  | 22  | 22  | 11  | 4   |     | 23  | 23  | 23  | 19  | 19  | 13  | 10  | 17  | 18  | 19  | 20  | 21  | 22  | 22  | 22  | 20  |     |     |
|       | U Q | 260 | 250 | 250 | 260 | 250 | 305 |     | 250 | 240 | 229 | 225 | 213 | 200 | 239 | 223 | 230 | 255 | 260 | 270 | 260 | 265 | 255 | 254 |     |     |
| 16    | L Q | 230 | 230 | 230 | 215 | 230 | 270 |     | 250 | 230 | 215 | 210 | 200 | 195 | 200 | 187 | 178 | 210 | 225 | 243 | 250 | 230 | 225 | 230 | 232 |     |
| CHAR: | HR  | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |     |

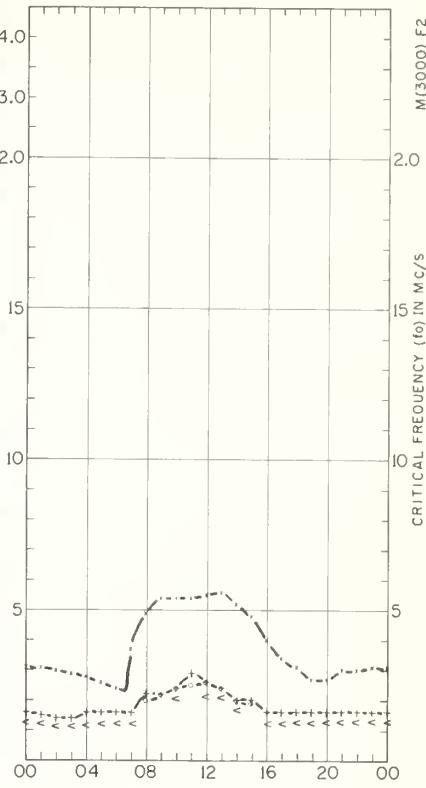
CRITICAL FREQUENCY (fo) IN MC/S

Figure 2 consists of two vertically stacked line graphs. The top graph plots the critical frequency  $fo_{F2}$  (3000-7500 Hz) in Mc/s against time from February 1 to March 1, 1965. The y-axis ranges from 2.0 to 4.0 Mc/s. The bottom graph plots the critical frequency  $fo_E$  (100-1500 Hz) in Mc/s against the same time period. The y-axis ranges from 0 to 15 Mc/s. Both graphs show a significant increase in frequency starting around February 15, peaking around February 25, and then decreasing towards March 1.

PRUMDNICE  
CZECHOSLOVAKIA LAT. 50°0'N LDN 8° 14.6'E SWFPP 1.00 MC TD 18.0 MC IN SEC TIME 0.0 650I PRUHONICE 0.0  
JANUARY 1965

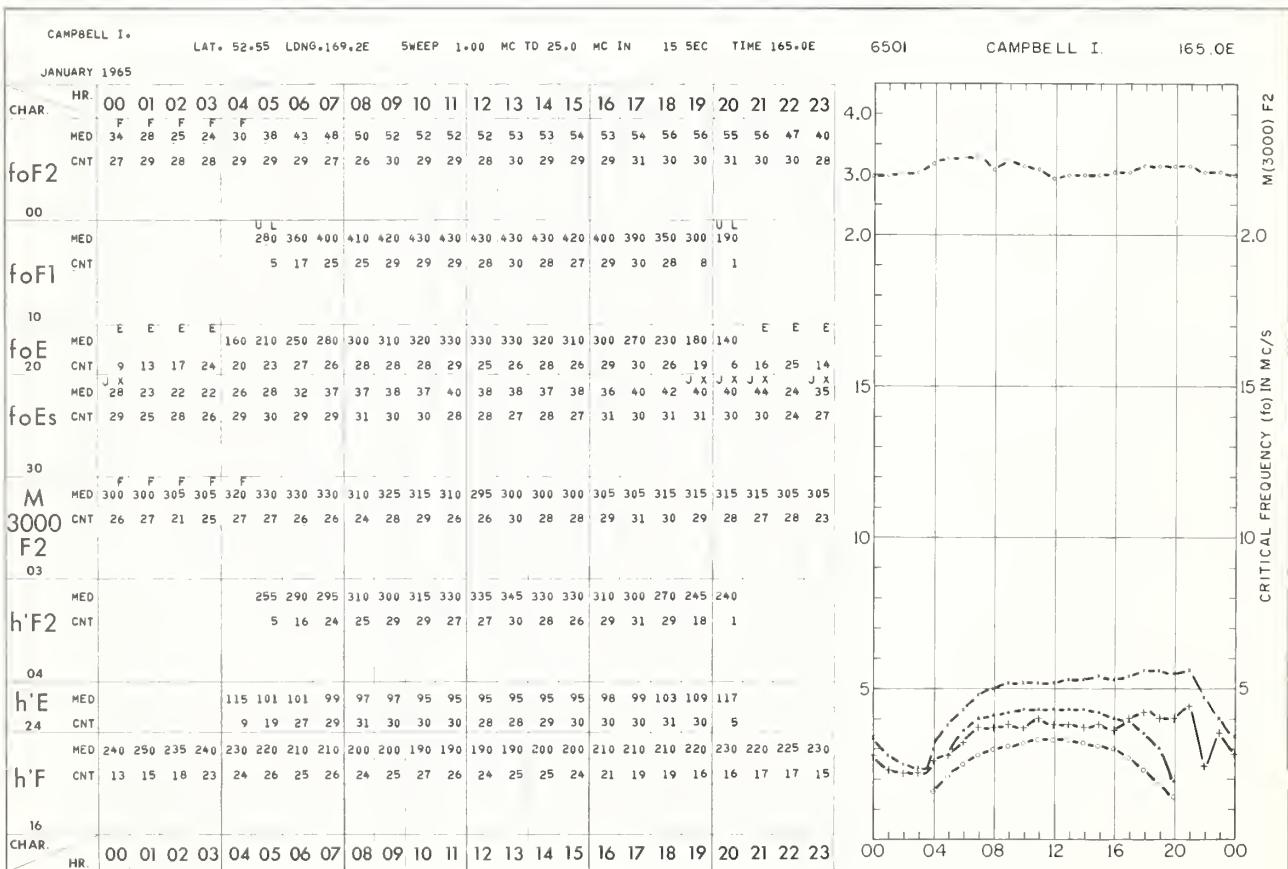
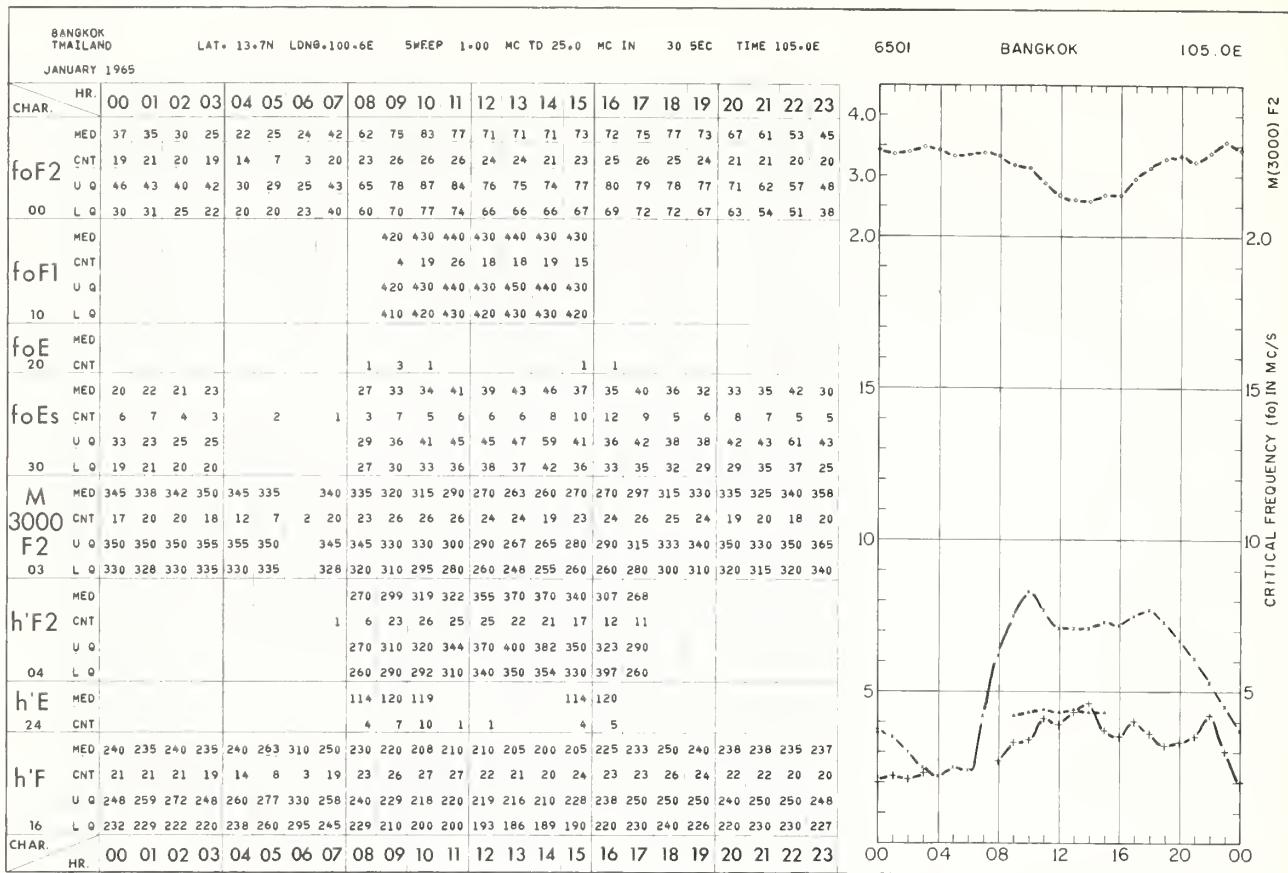
| CHAR. | HR. | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23 |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| foF2  | MED | 31  | 31  | 30  | 29  | 28  | 26  | 24  | 37  | 49  | 54  | 54  | 54  | 55  | 56  | 52  | 48  | 40  | 34  | 31  | 27  | 27  | 30  | 30  | 31 |
|       | CNT | 29  | 28  | 28  | 28  | 26  | 22  | 17  | 25  | 25  | 23  | 27  | 26  | 27  | 29  | 28  | 29  | 24  | 20  | 18  | 20  | 17  | 19  | 28  | 27 |
| foF1  | 00  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| foE   | MED |     |     |     |     |     |     |     |     | 200 | 220 | 240 | 250 | 260 | 240 | 200 | 190 |     |     |     |     |     |     |     |    |
|       | CNT | 3   | 17  | 21  | 16  | 19  | 14  | 16  | 19  | 6   | E 8 | E 8 | E 8 | E 8 | E 8 | E 8 | E 8 | E 8 | E 8 | E 8 | E 8 | E 8 | E 8 | E 8 |    |
| foEs  | MED | 16  | 15  | 14  | 14  | 16  | 16  | 16  | 16  | 22  | 22  | 24  | 29  | 26  | 24  | 20  | 20  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16 |
|       | CNT | 30  | 29  | 29  | 28  | 28  | 24  | 24  | 24  | 25  | 28  | 26  | 26  | 25  | 27  | 27  | 26  | 24  | 23  | 23  | 26  | 23  | 25  | 29  | 28 |
| h'F2  | 03  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| h'E   | MED |     |     |     |     |     |     |     |     | 120 | 115 | 110 | 110 | 110 | 115 | 115 |     |     |     |     |     |     |     |     |    |
|       | CNT | 2   | 16  | 21  | 20  | 21  | 17  | 20  | 21  | 3   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| h'F   | MED | 265 | 260 | 255 | 255 | 240 | 230 | 230 | 215 | 215 | 220 | 225 | 230 | 220 | 240 | 230 | 210 | 210 | 230 | 225 | 245 | 260 | 265 | 270 |    |
|       | CNT | 25  | 29  | 29  | 28  | 19  | 17  | 13  | 26  | 25  | 28  | 25  | 27  | 27  | 26  | 30  | 29  | 21  | 16  | 15  | 14  | 15  | 22  | 22  | 27 |
| CHAR. | HR. | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23 |

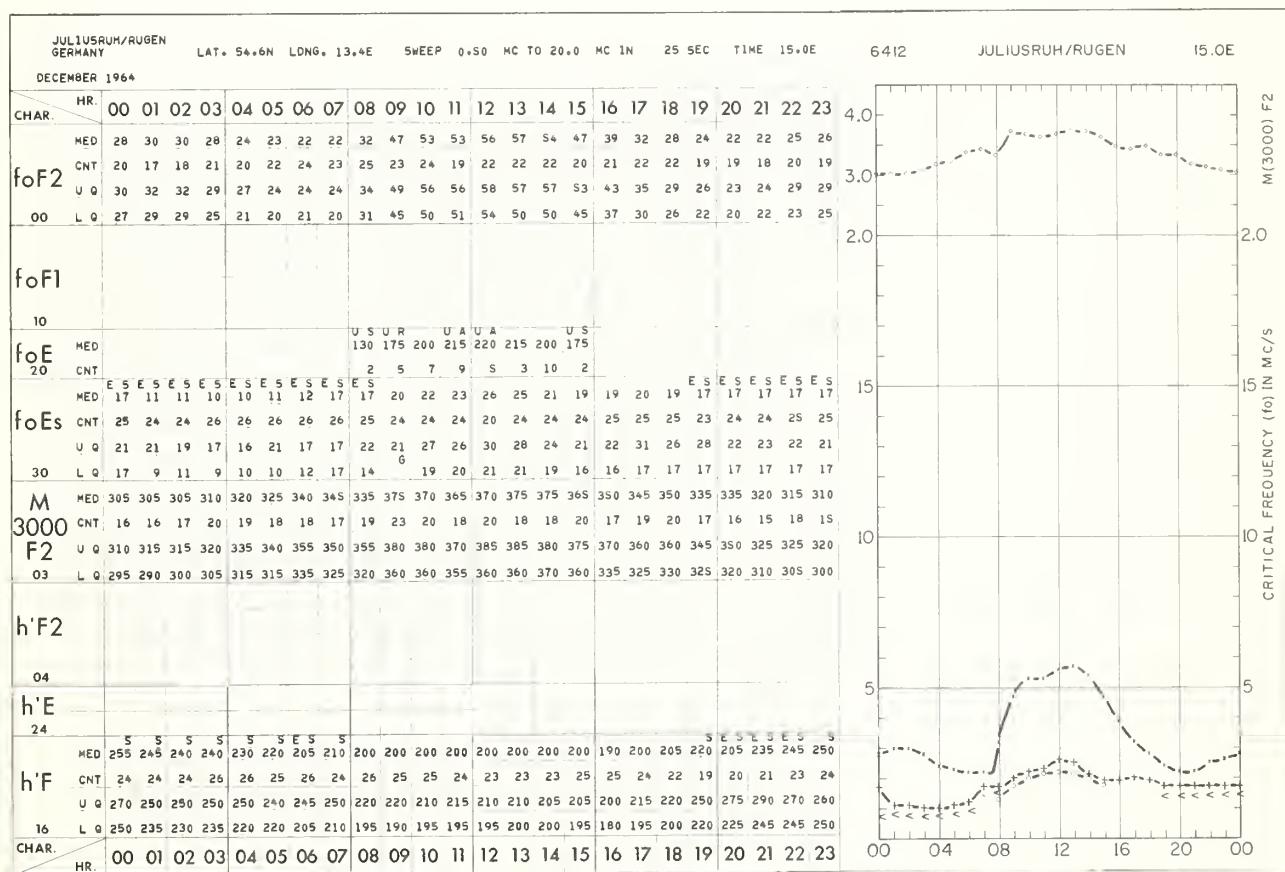
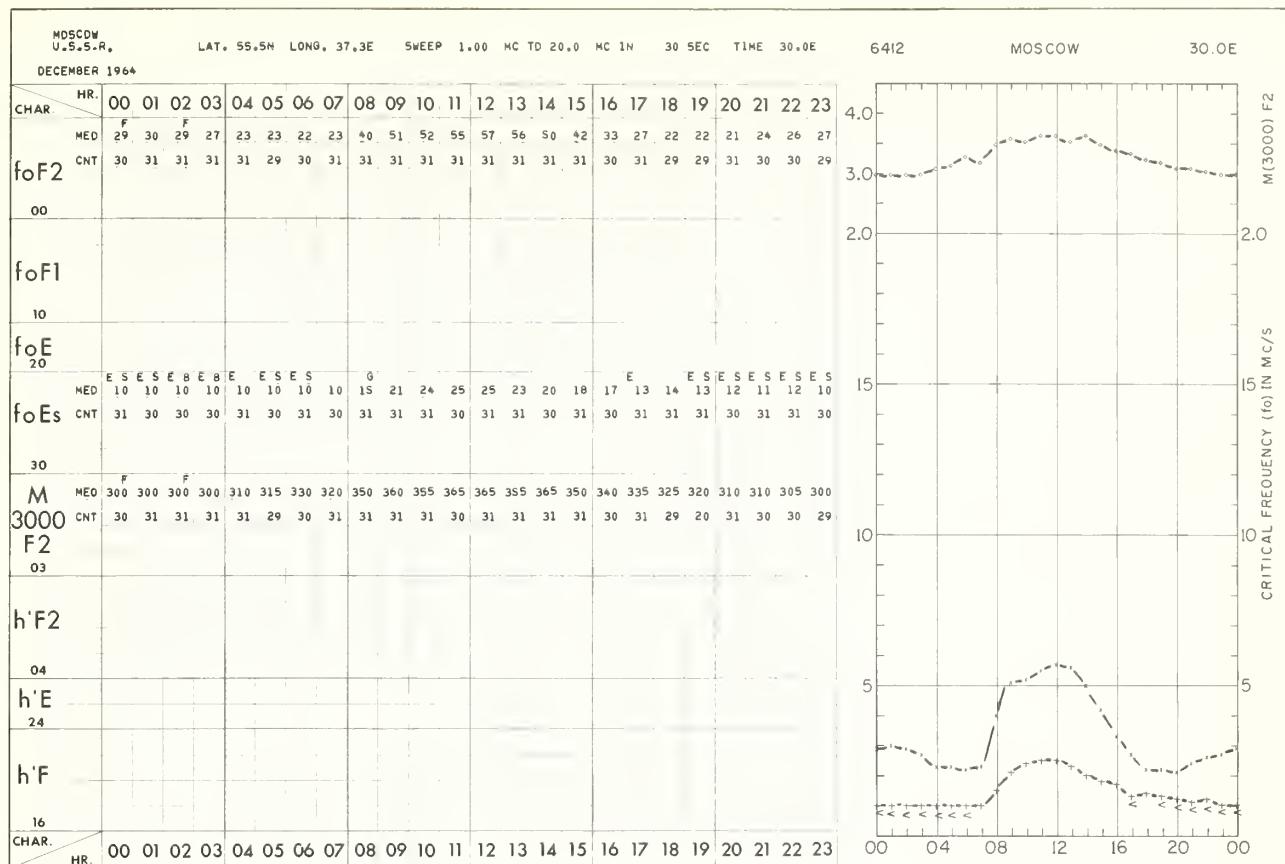
CRITICAL FREQUENCY (fo) IN MC/S

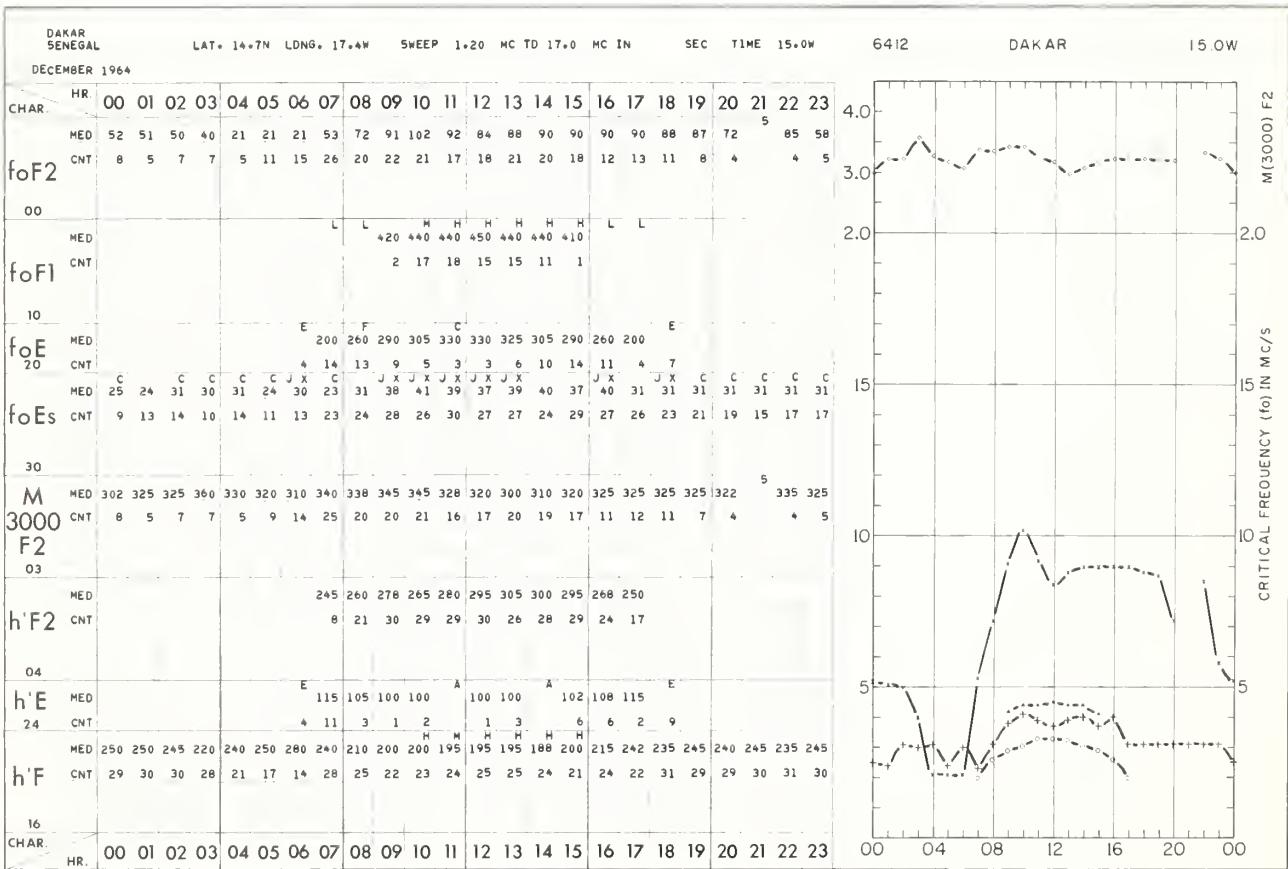
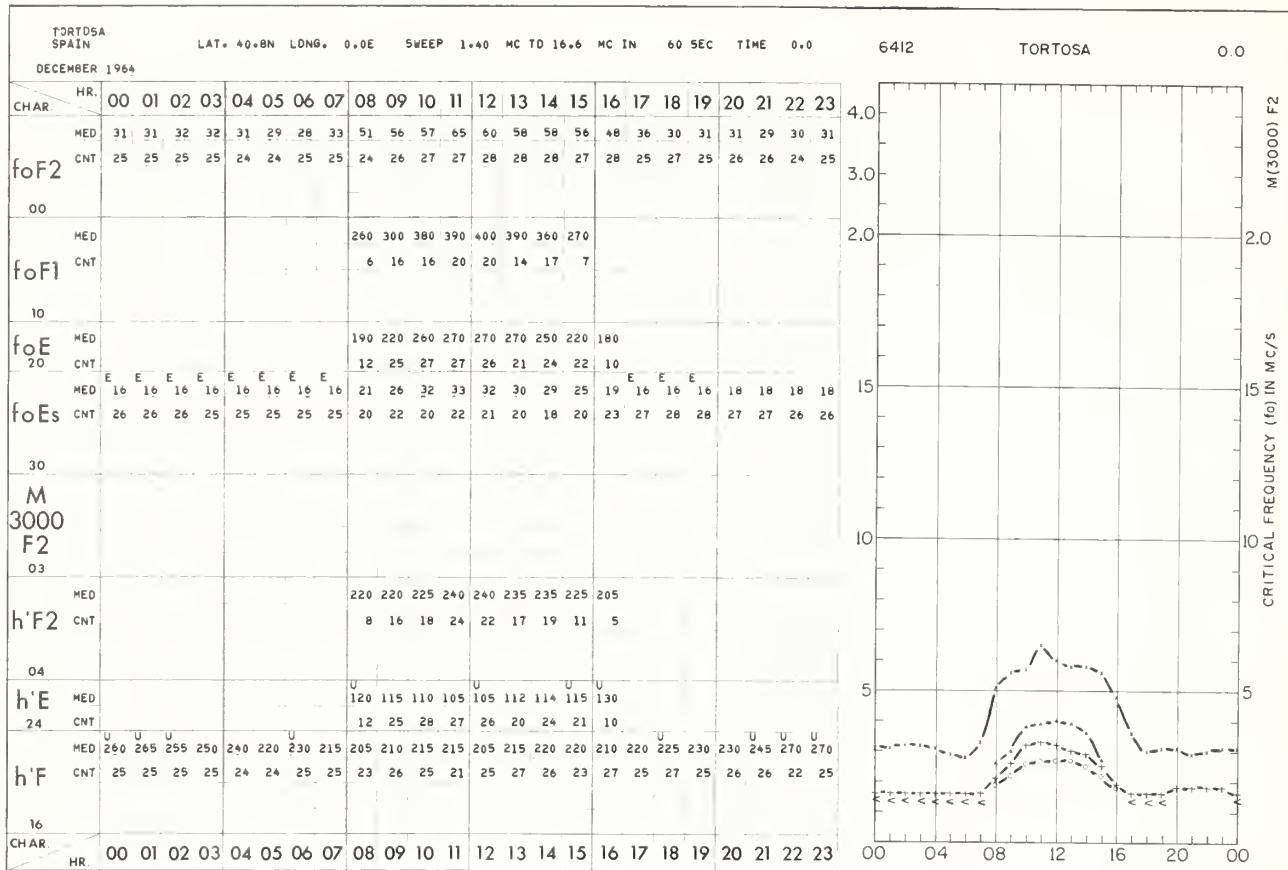


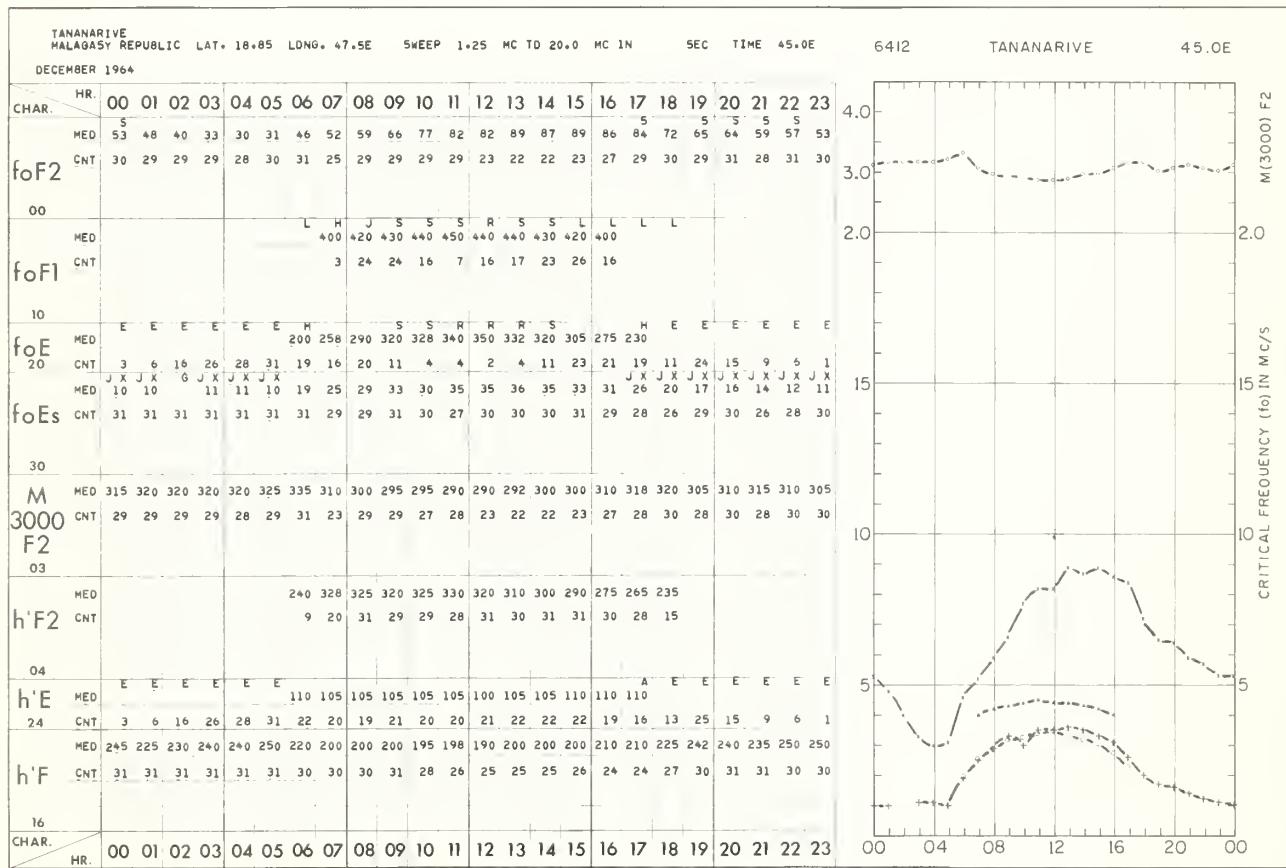
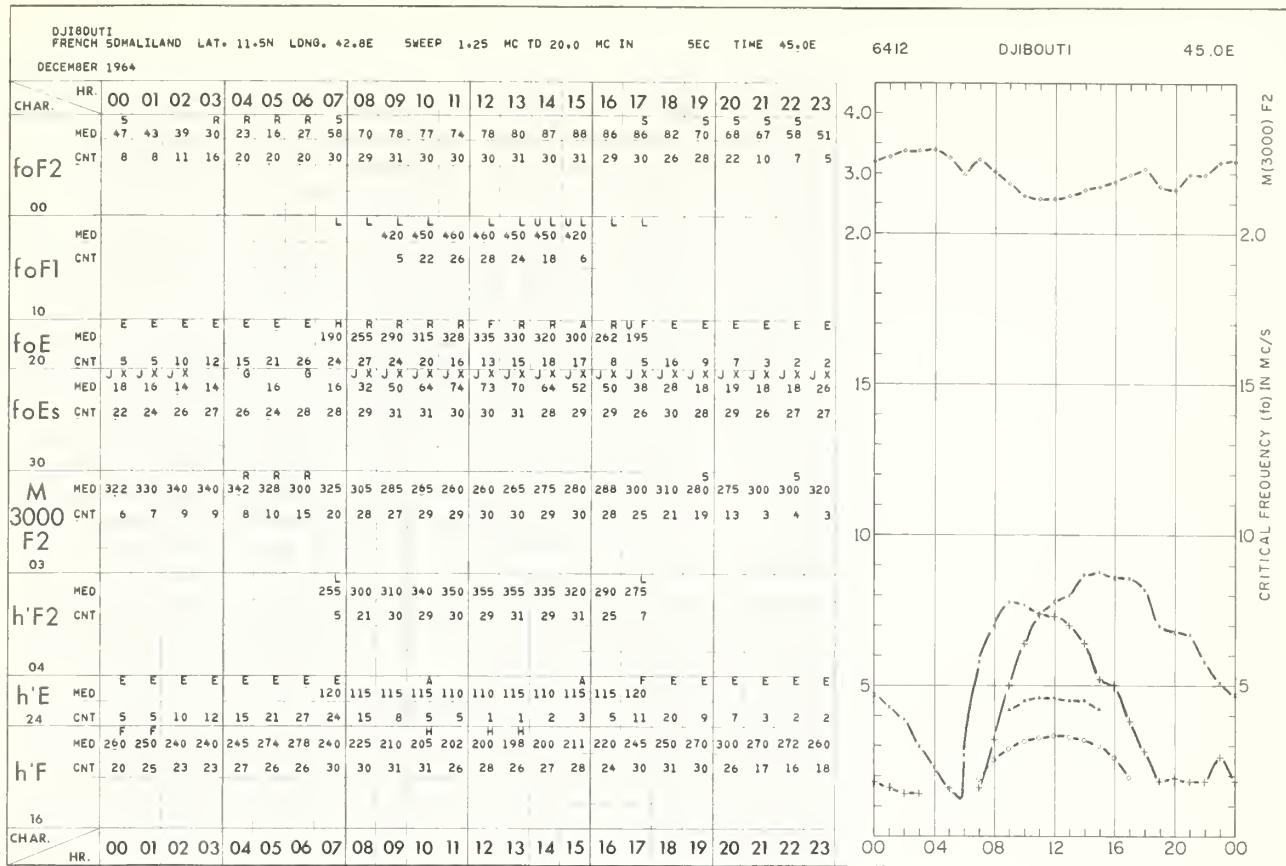
TDR TDSA  
 SPAIN LAT. 40° 8N LONG. 0° 0E SWEEP 1° 40' MC TD 16.6 MC IN 60 SEC TIME 0-0 6501 TORTOSA 0.0  
 JANUARY 1965

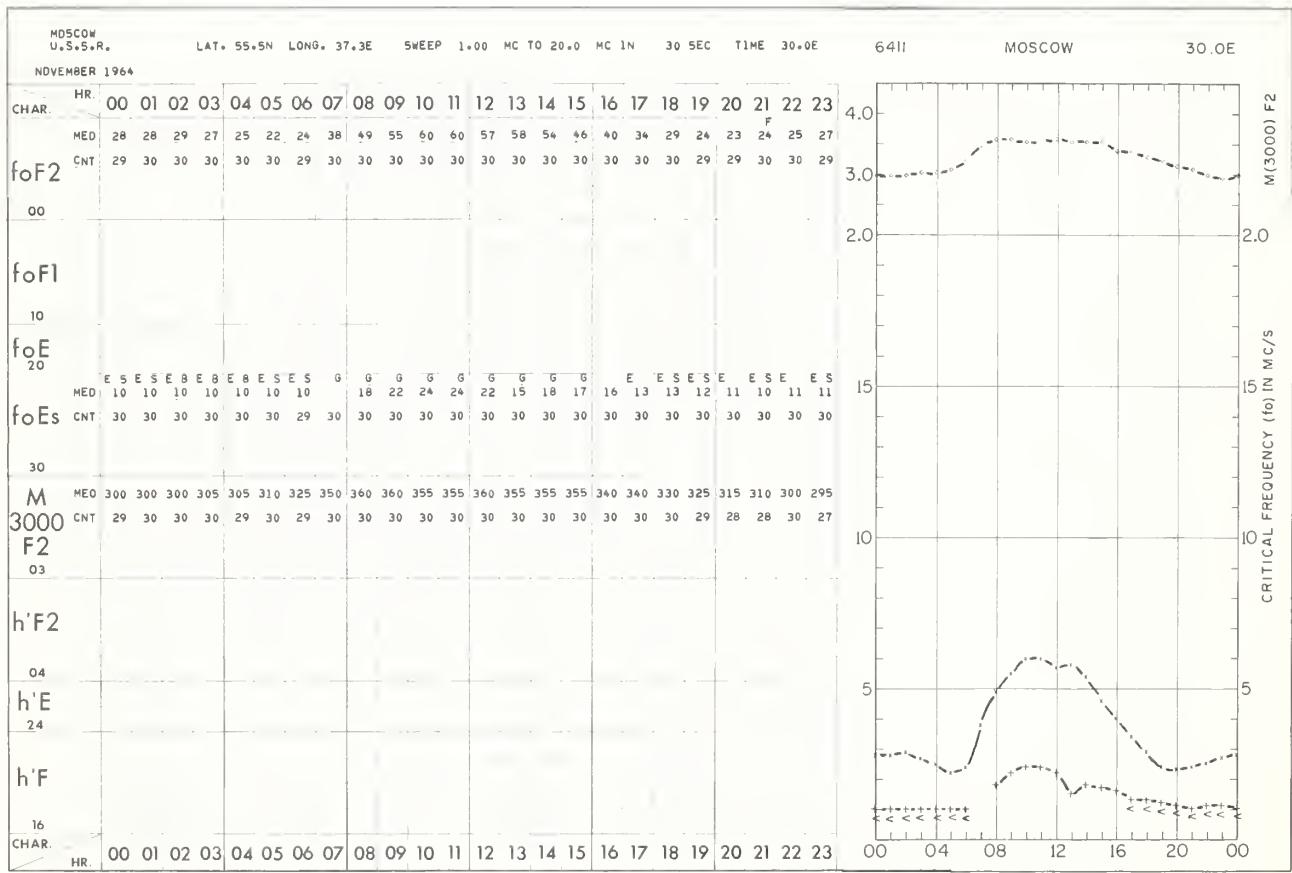
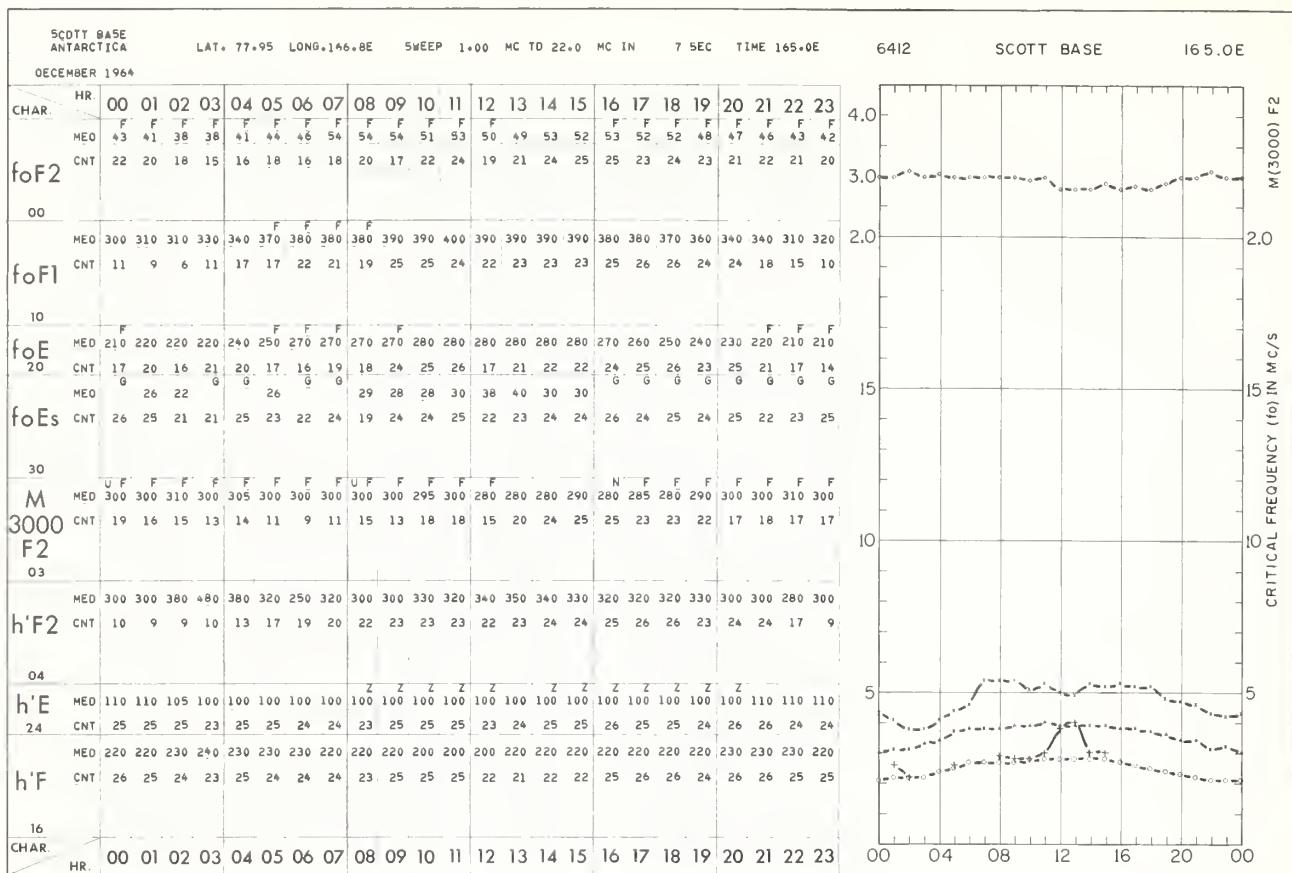
| CHAR. | HR.  | foF2 |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
|-------|------|------|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|
|       |      | 00   | 01 | 02 | 03 | 04 | 05 | 06 | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|       | MED  | 30   | 31 | 31 | 31 | 31 | 27 | 24 | 30  | 46  | 49  | 53  | 62  | 57  | 57  | 56  | 57  | 52 | 42 | 31 | 32 | 32 | 30 | 29 | 31 |
|       | CNT  | 25   | 26 | 28 | 27 | 27 | 25 | 27 | 26  | 26  | 27  | 28  | 28  | 28  | 28  | 29  | 27  | 29 | 28 | 28 | 28 | 27 | 26 | 26 |    |
| foF2  | 00   |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
|       | MED  |      |    |    |    |    |    |    | 240 | 290 | 380 | 400 | 400 | 390 | 370 | 340 | 280 |    |    |    |    |    |    |    |    |
|       | CNT  |      |    |    |    |    |    |    | 6   | 10  | 14  | 22  | 23  | 21  | 20  | 17  | 10  |    |    |    |    |    |    |    |    |
| foF1  | 10   |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
|       | MED  |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
|       | CNT  |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
| foE   | 20   |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
|       | MED  |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
|       | CNT  |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
| foEs  | 30   |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
|       | MED  |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
|       | CNT  |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
| M     | 3000 |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
| F2    |      |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
| 03    |      |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
|       | MED  |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
|       | CNT  |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
| h'F2  | 04   |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
|       | MED  |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
|       | CNT  |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
| h'E   | 24   |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
|       | MED  |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
|       | CNT  |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
| h'F   | 16   |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
|       | MED  |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |
|       | CNT  |      |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |

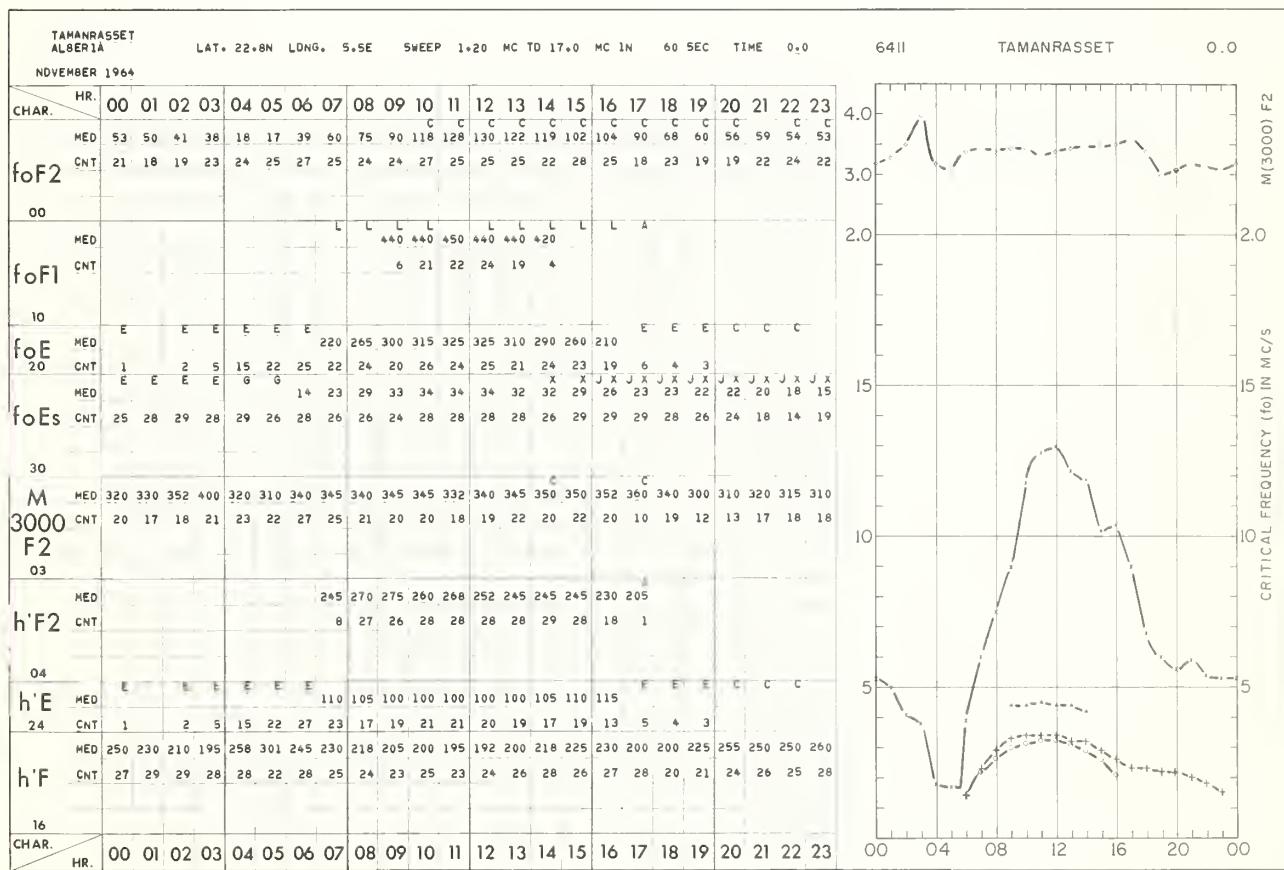
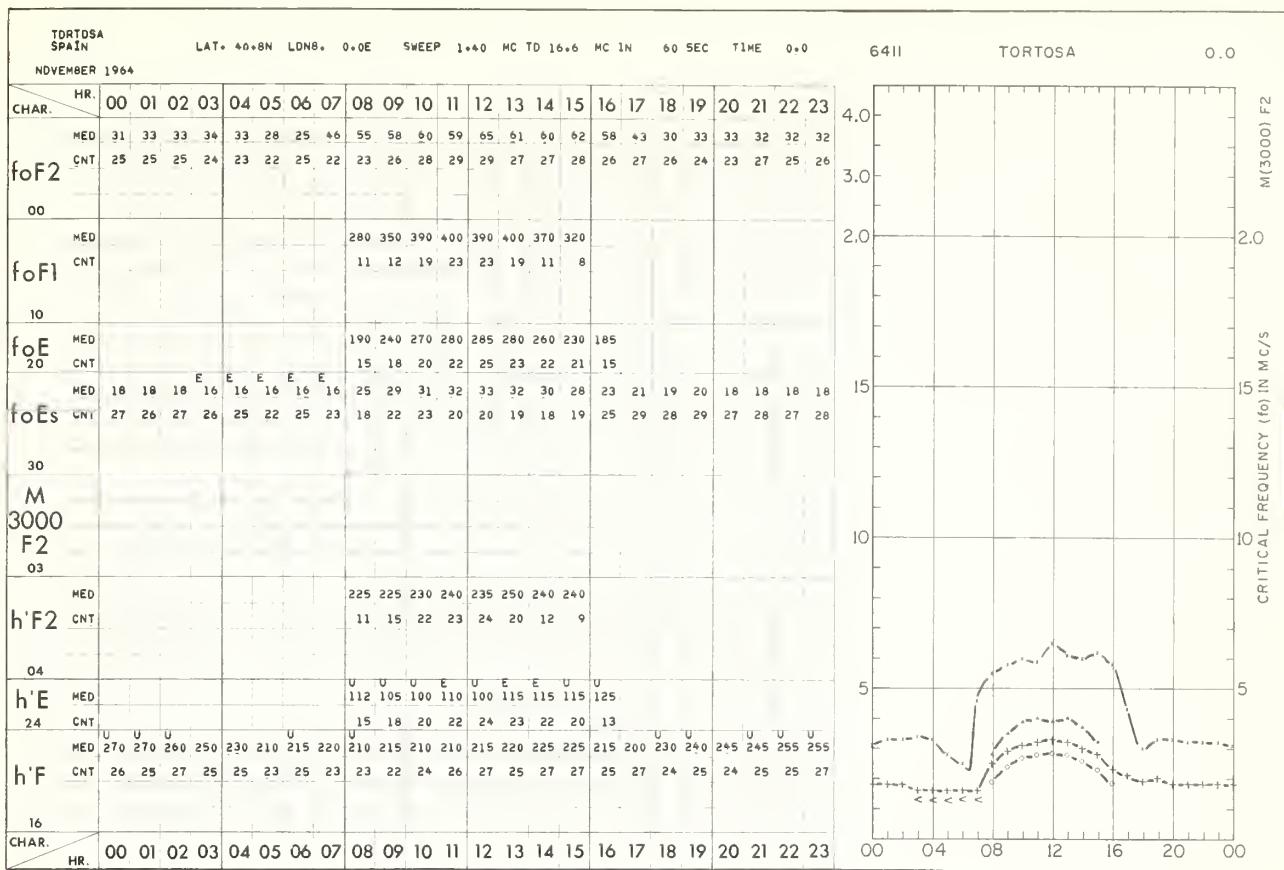


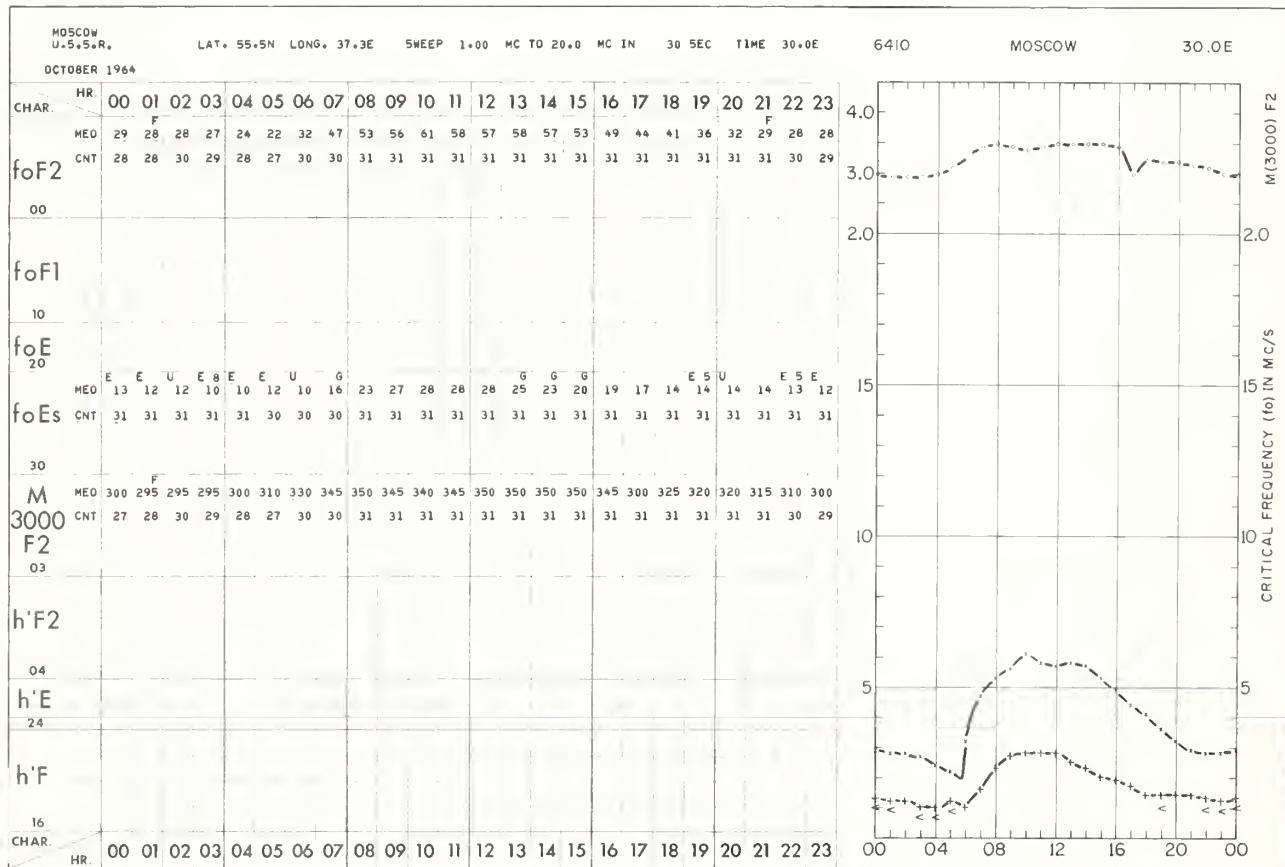
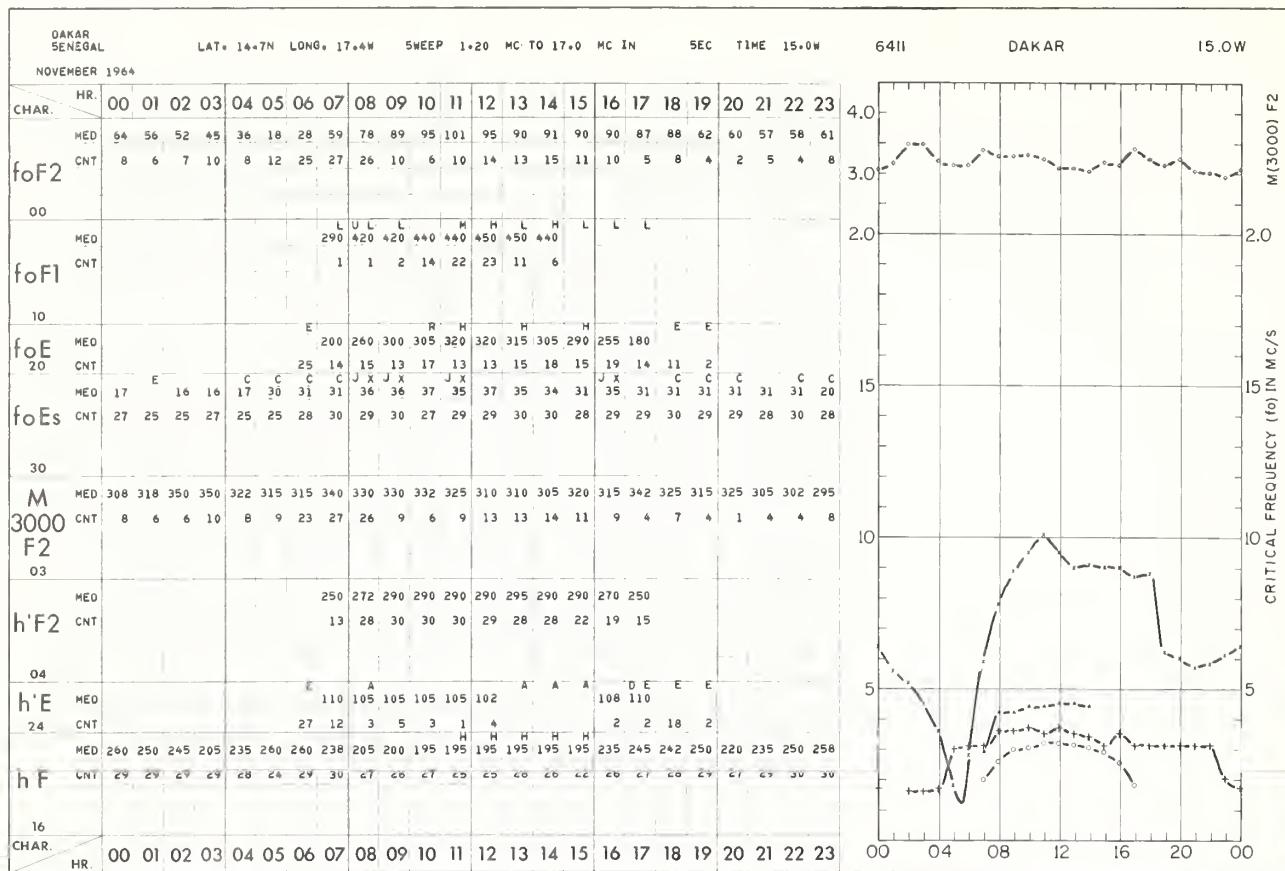


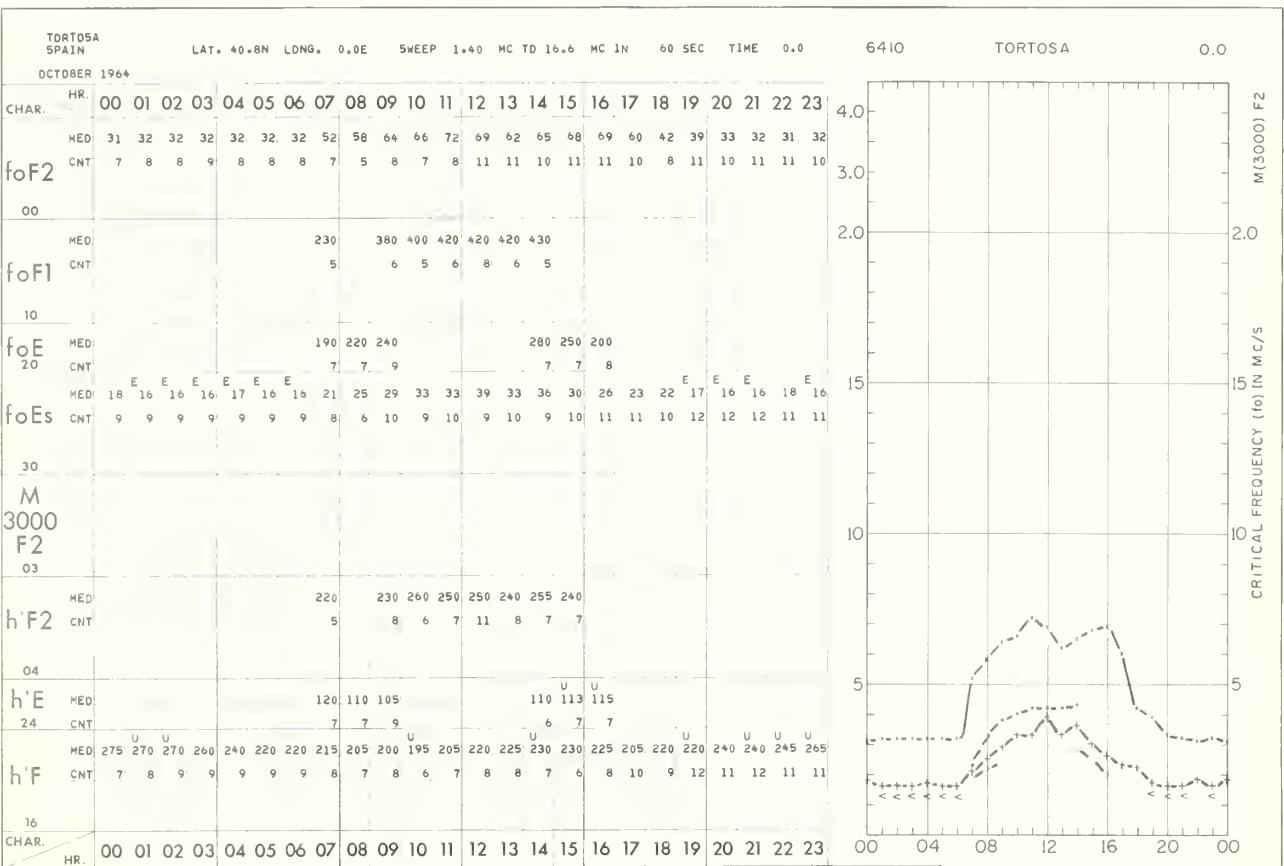
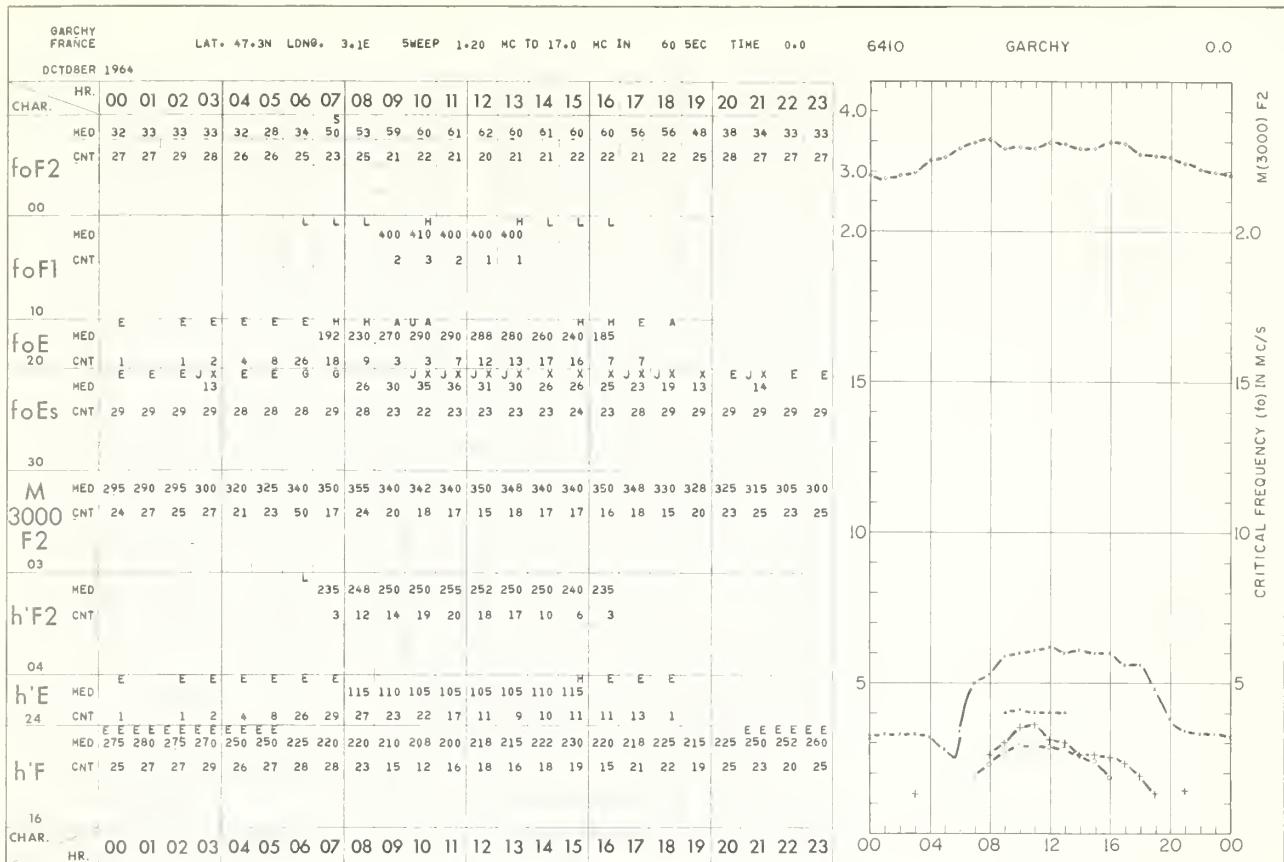


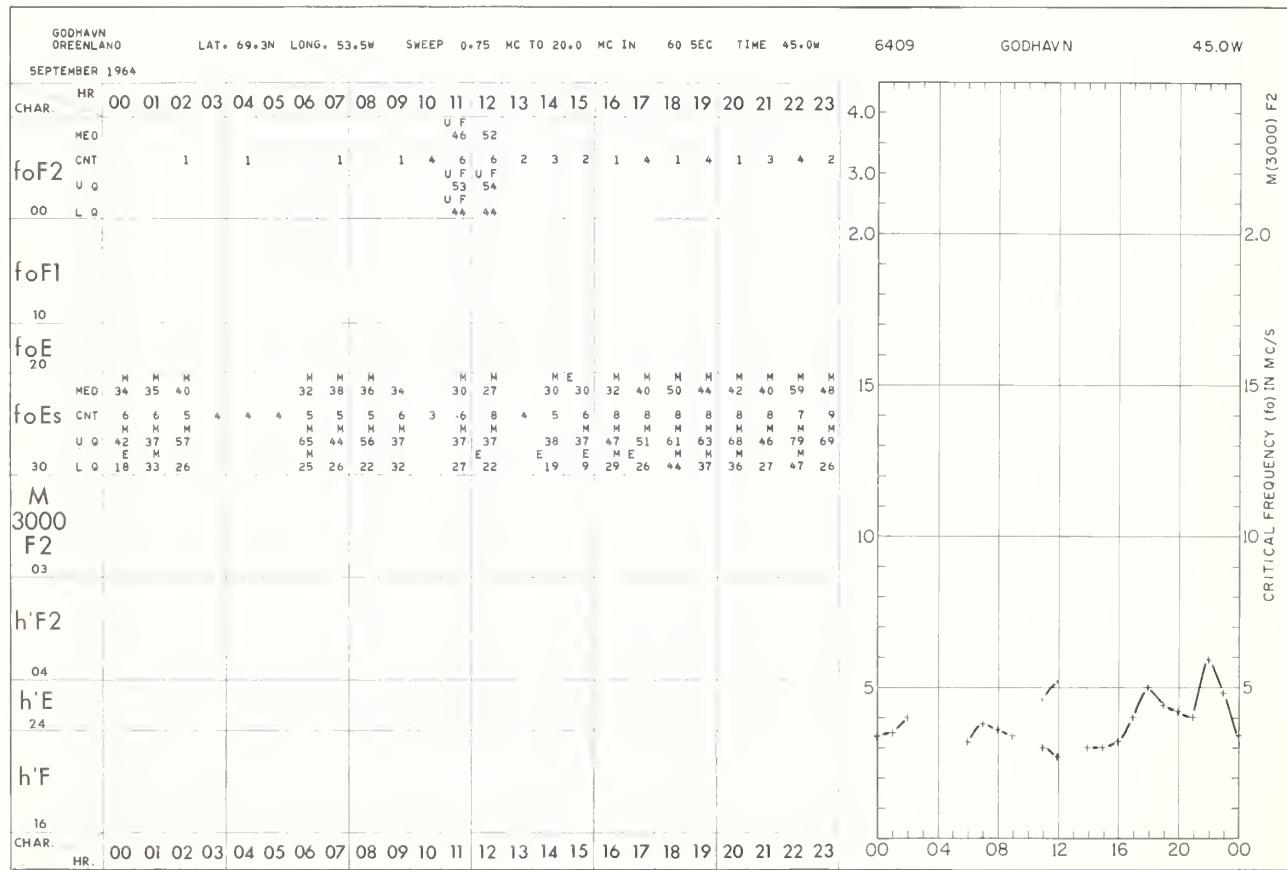
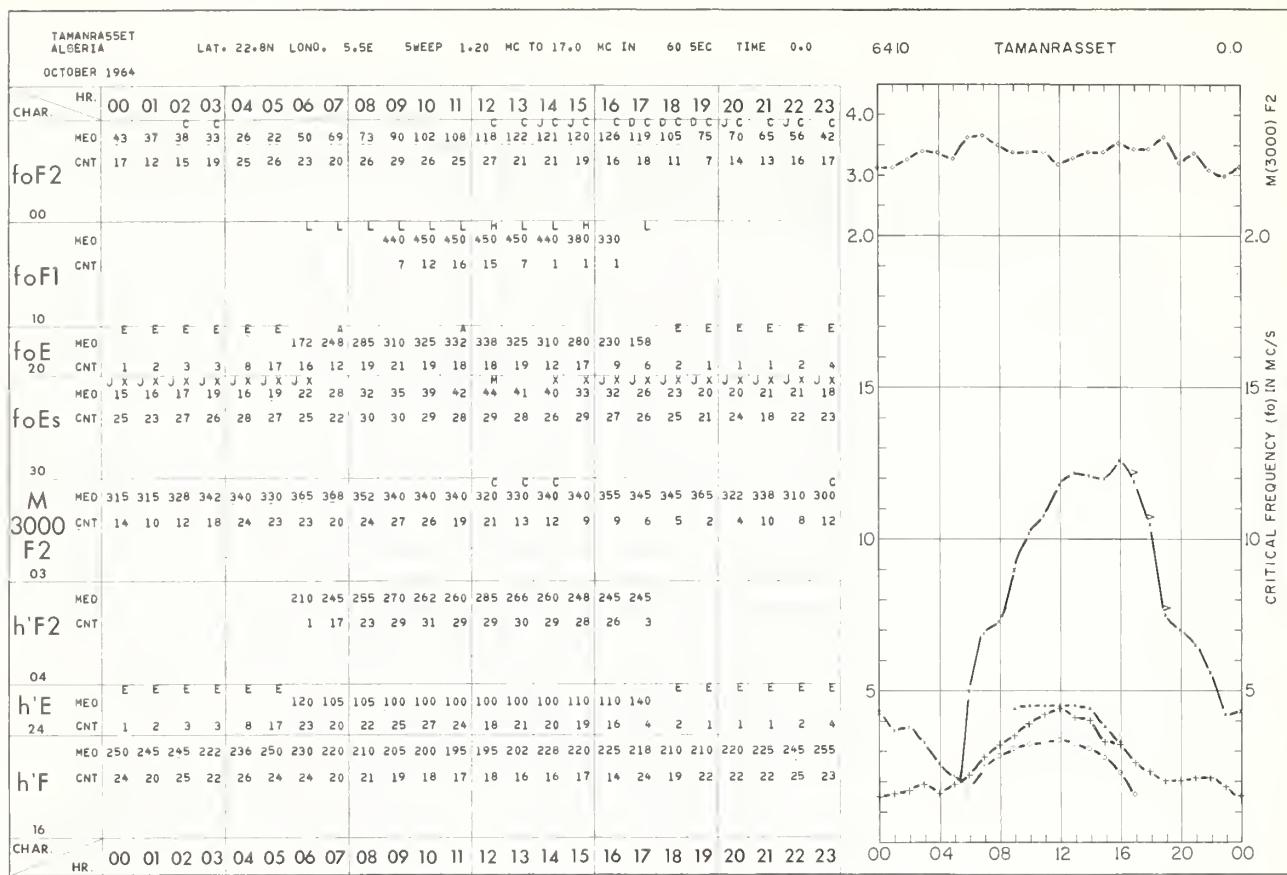


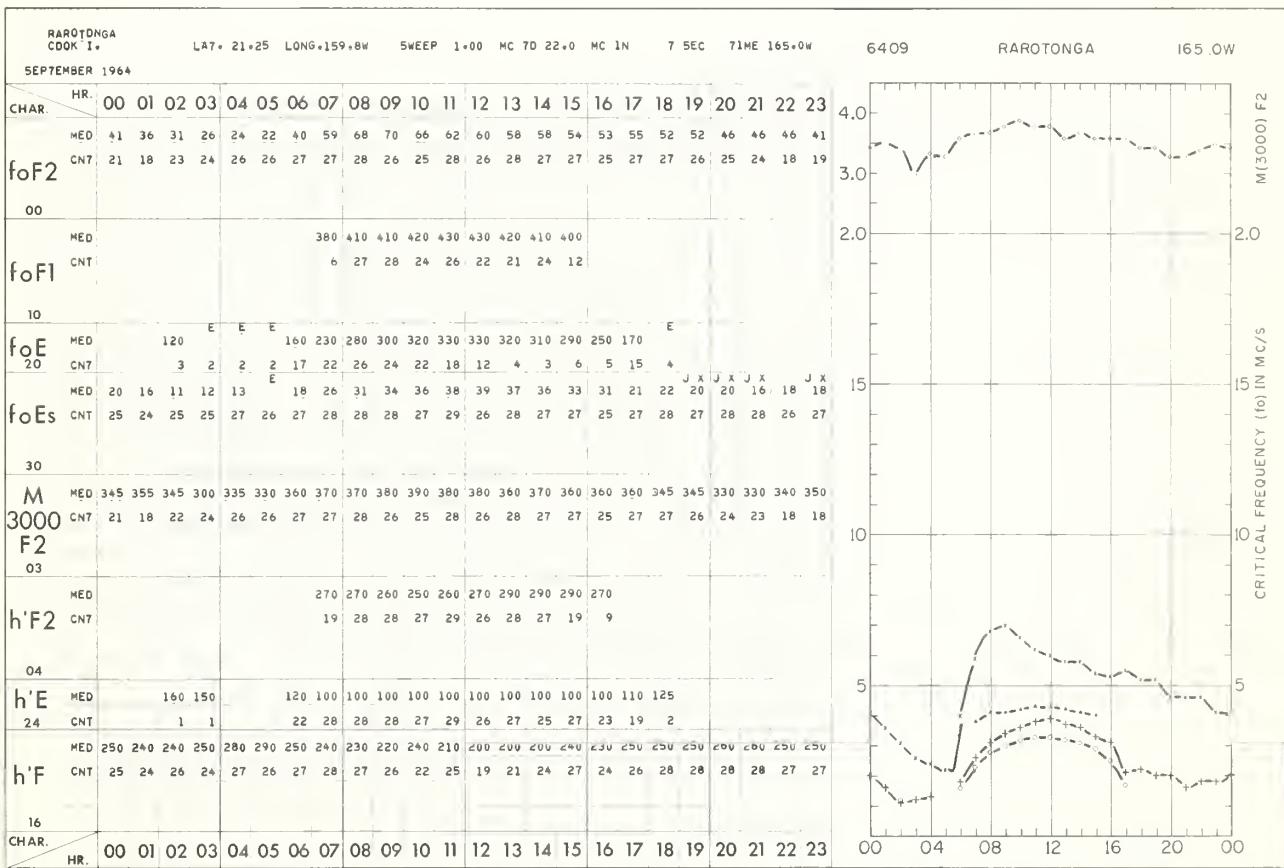
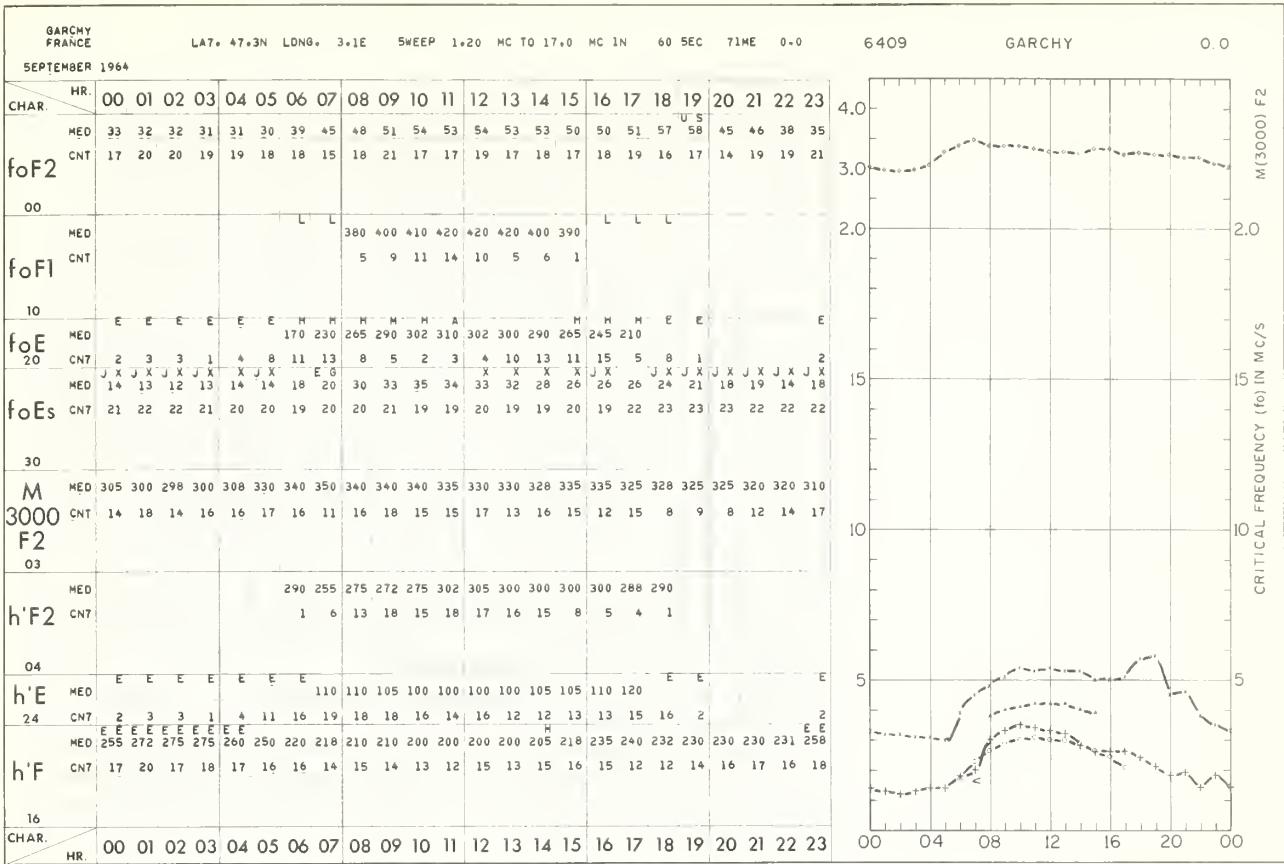


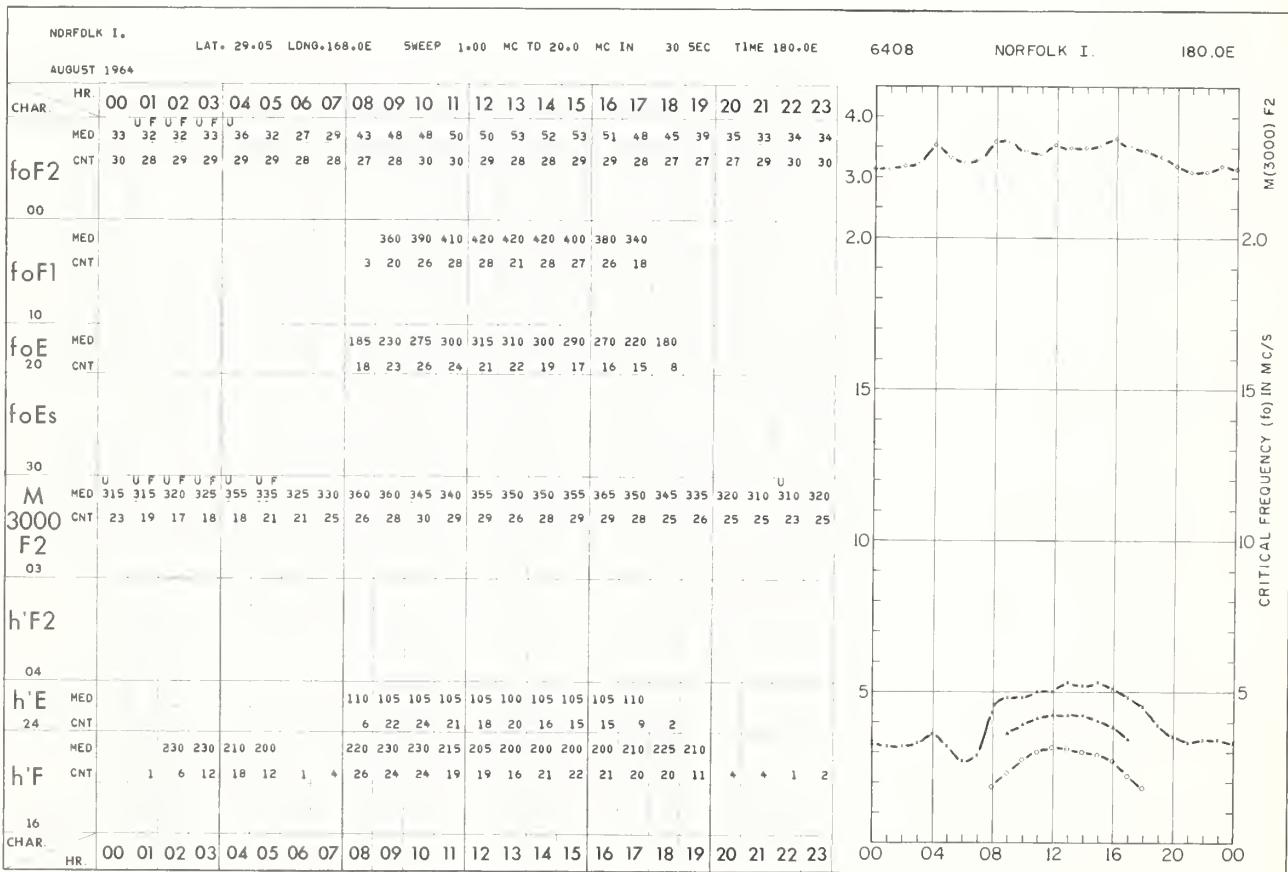
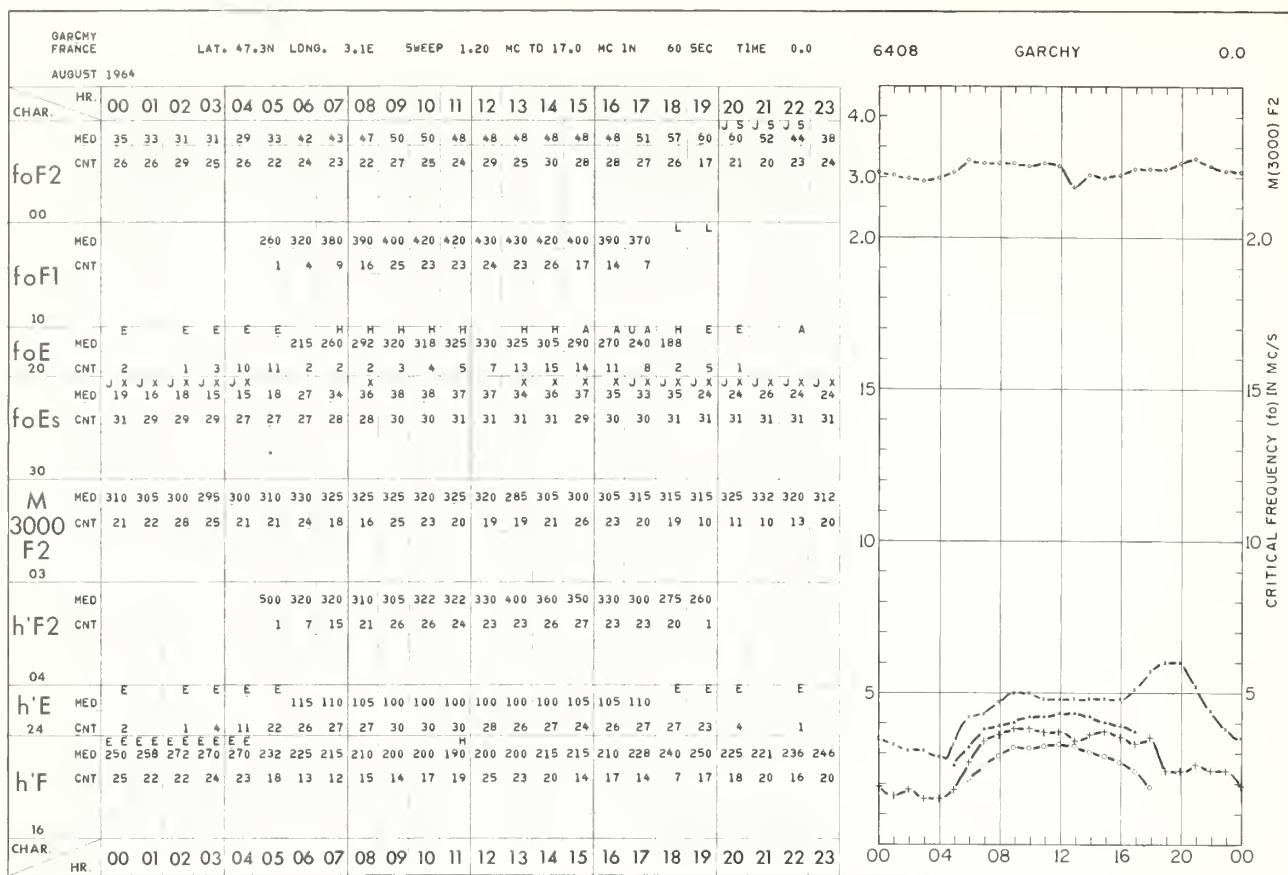


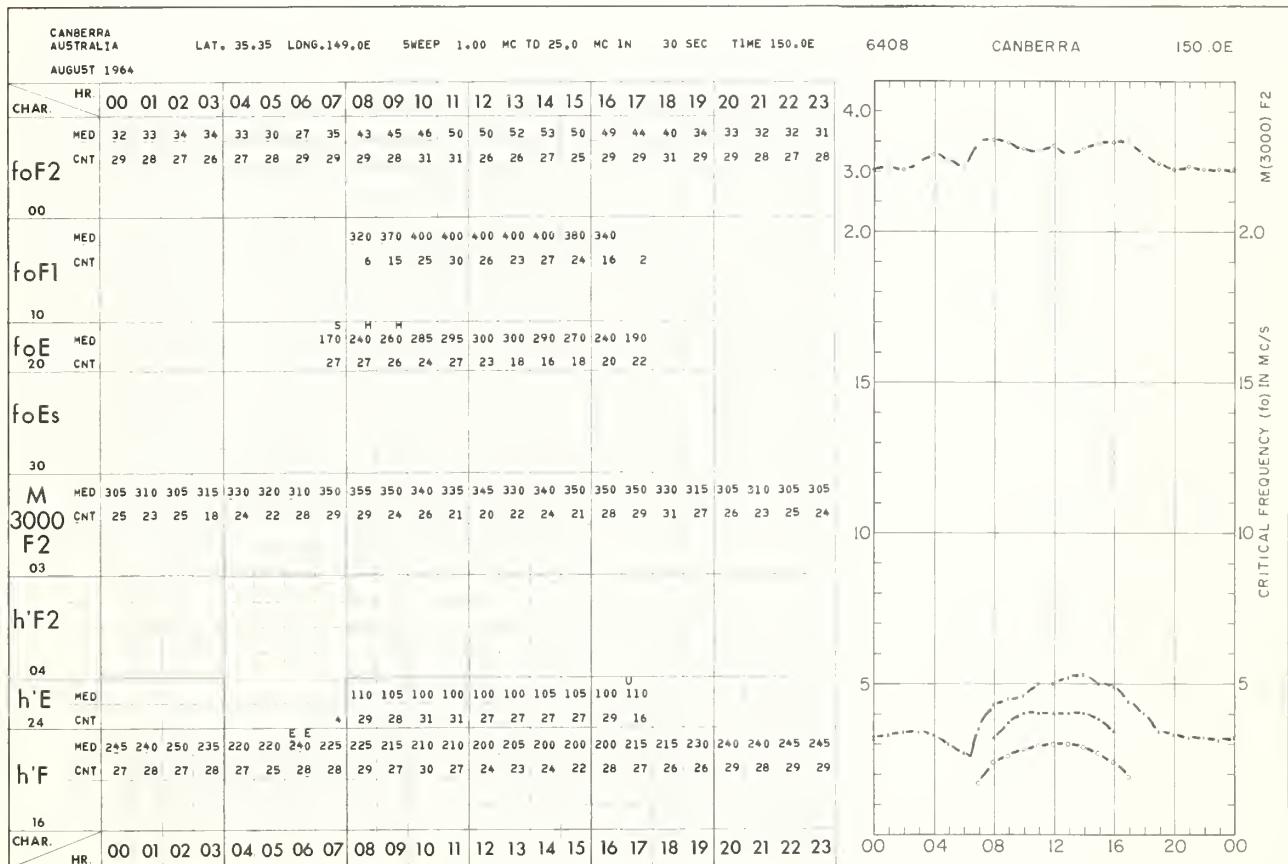
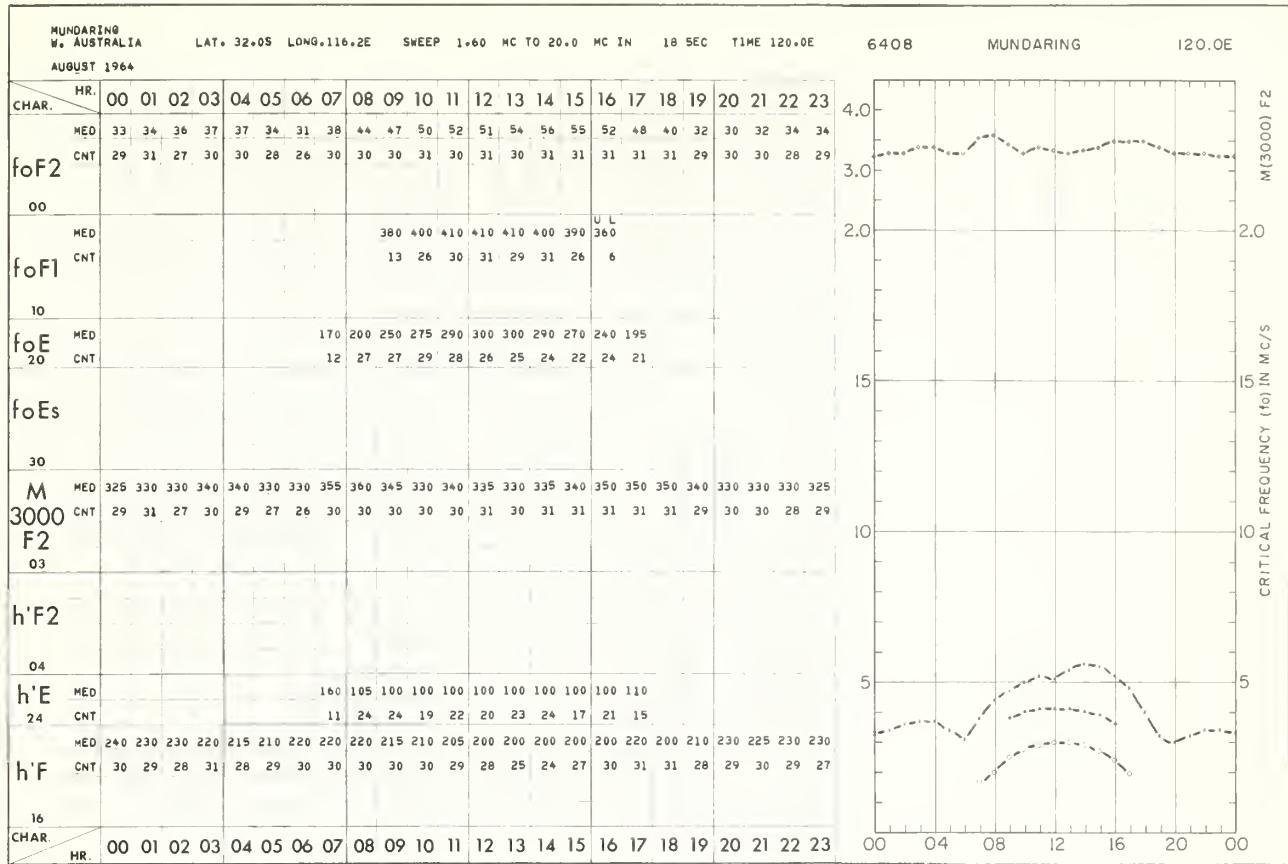


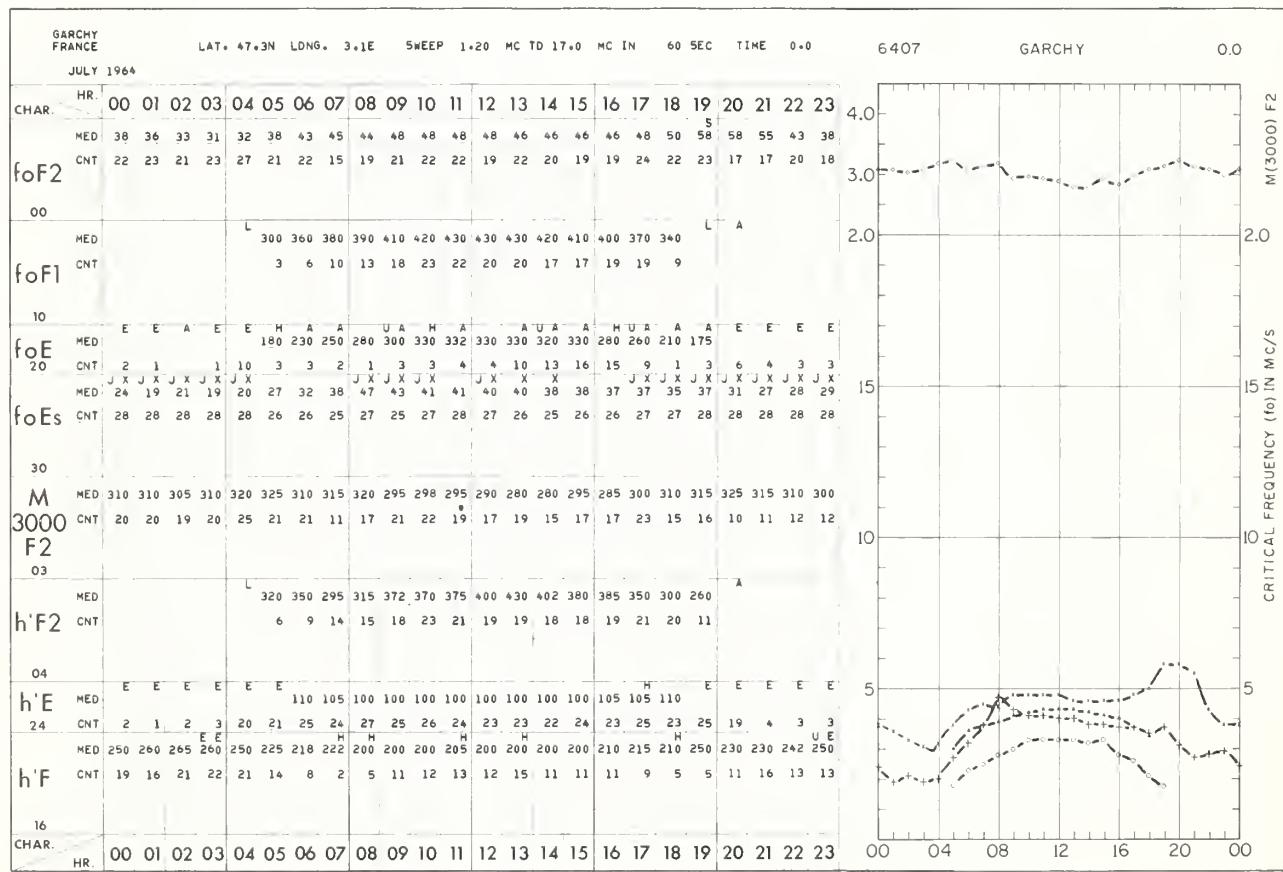
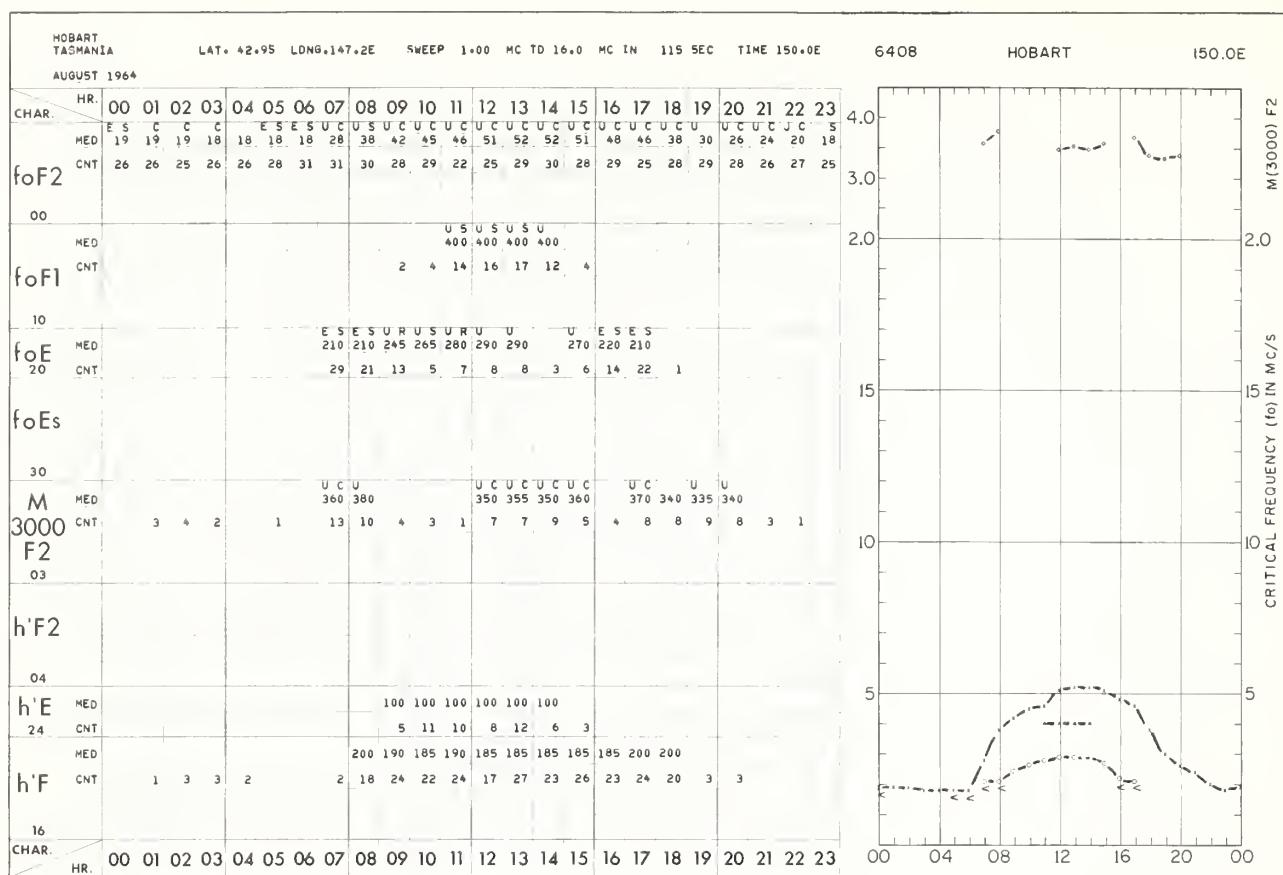












VANIMO  
INDONESIA LAT. 2° 75' LONG. 141.3E SWEEP 1.00 MC TD 20.0 MC 1N 15 SEC TIME 150.0E 6407 VANIMO 150.0E  
JULY 1964

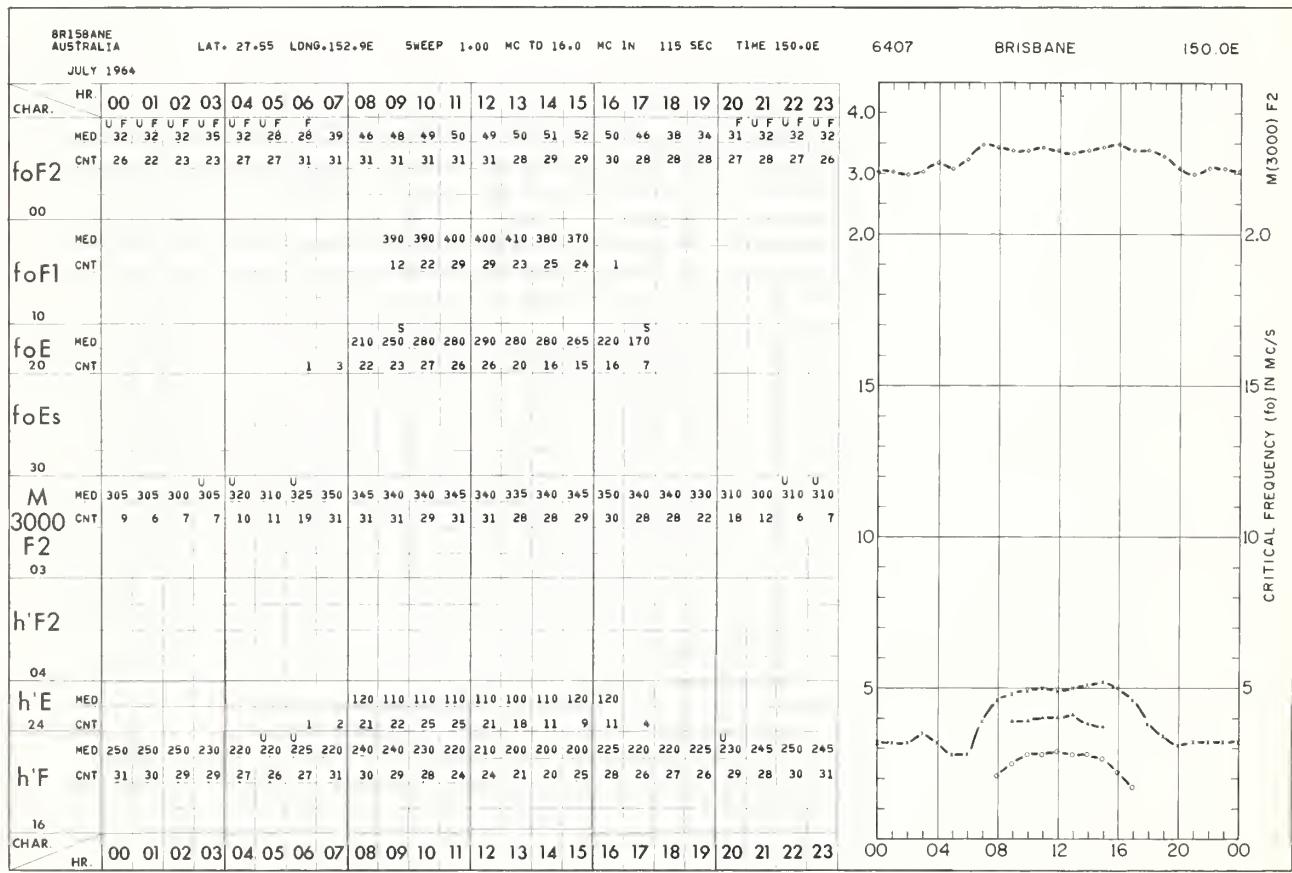
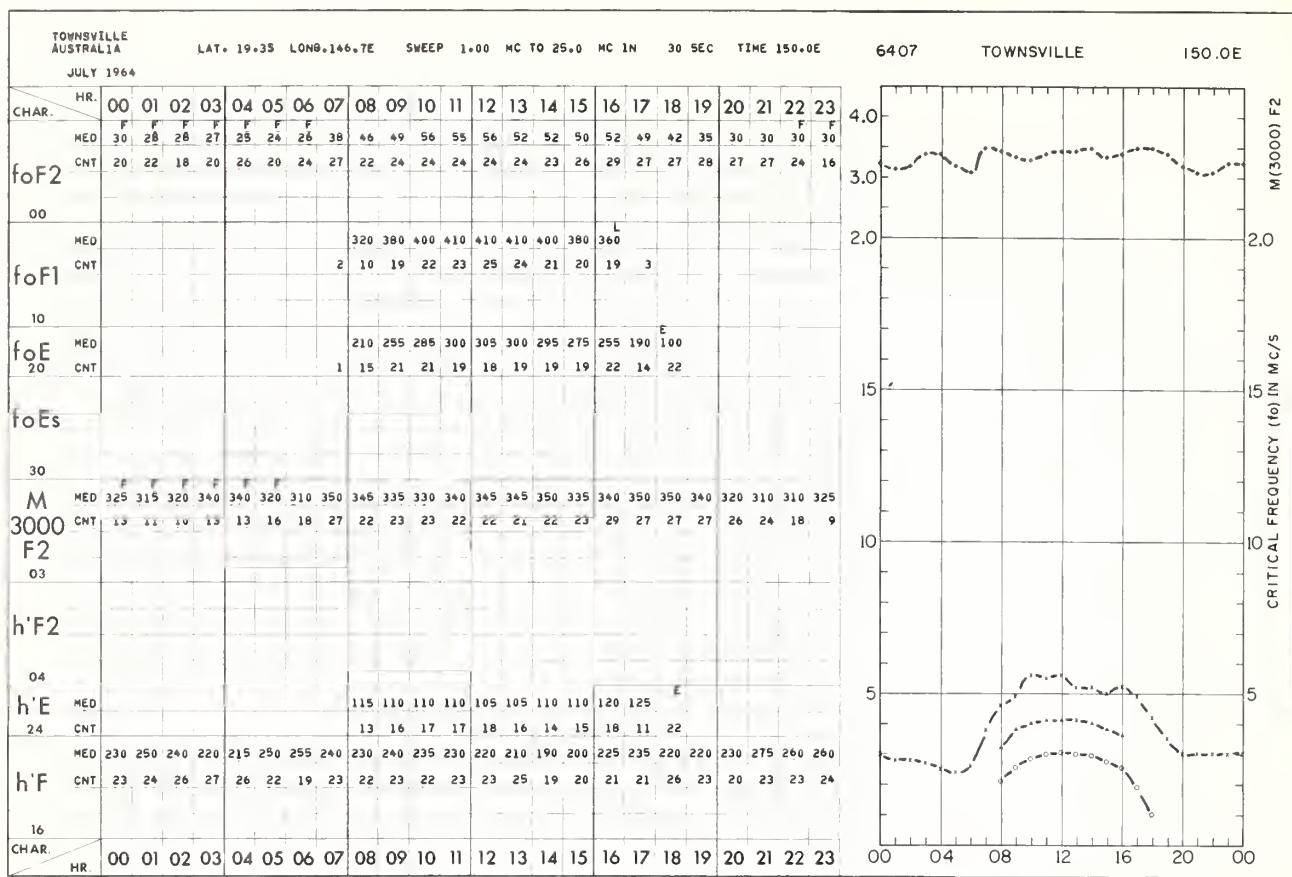
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|-------|-----|----|-----|-----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|---|---|
| foF2  | MED |    |     |     |    |    |    |    |    | 39  | 56  | 72  | 70  | 72  | 72  | 82  | 70  | 73  | 52  | 57  | 56  | 52  | 46  | 33  |    |   |   |
| foF2  | CNT | 3  | 3   | 1   |    |    |    |    |    | 5   | 6   | 7   | 7   | 7   | 6   | 7   | 5   | 5   | 5   | 7   | 6   | 7   | 5   | 3   | 3  |   |   |
| foF1  | 00  |    |     |     |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |   |   |
| foF1  | MED |    |     |     |    |    |    |    |    | 390 | 400 | 410 | 410 | 430 | 420 | 420 | 410 |     |     |     |     |     |     |     |    |   |   |
| foF1  | CNT |    |     |     |    |    |    |    |    | 6   | 8   | 9   | 7   | 6   | 7   | 8   | 5   | 4   | 3   |     |     |     |     |     |    |   |   |
| foE   | 10  |    |     |     |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |   |   |
| foE   | MED |    |     |     |    |    |    |    |    | 185 | 225 | 270 | 305 | 320 | 320 | 305 | 310 |     | 300 |     |     |     |     |     |    |   |   |
| foE   | CNT |    |     |     |    |    |    |    |    | 5   | 6   | 8   | 7   | 7   | 8   | 5   | 6   | 4   | 5   | 2   | 2   |     |     |     |    |   |   |
| foEs  | 30  |    |     |     |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |   |   |
| M     | MED |    |     |     |    |    |    |    |    | 335 | 330 | 340 | 325 | 335 | 340 | 350 | 345 | 350 | 325 | 335 | 325 | 320 | 335 | 340 |    |   |   |
| 3000  | CNT | 3  | 3   | 1   |    |    |    |    |    | 5   | 6   | 7   | 7   | 7   | 7   | 6   | 7   | 5   | 5   | 5   | 7   | 6   | 7   | 5   | 3  | 2 |   |
| F2    | 03  |    |     |     |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |   |   |
| h'F2  | 04  |    |     |     |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |   |   |
| h'E   | MED |    |     |     |    |    |    |    |    | 105 | 105 | 105 |     | 100 |     |     | 100 |     |     |     |     |     |     |     |    |   |   |
| h'E   | CNT |    |     |     |    |    |    |    |    | 4   | 5   | 5   | 6   | 4   | 6   | 4   | 4   | 3   | 5   | 1   | 1   |     |     |     |    |   |   |
| h'F   | MED | U  | 235 | 215 |    |    |    |    |    | 250 | 250 | 225 | 210 | 200 | 200 | 200 | 190 |     | 235 | 240 | 230 | 230 | 230 |     |    |   |   |
| h'F   | CNT | 5  | 6   | 2   |    |    |    |    |    | 1   | 5   | 5   | 7   | 7   | 6   | 6   | 4   | 6   | 5   | 3   | 2   | 5   | 5   | 7   | 6  | 5 | 4 |
| CHAR. | 16  |    |     |     |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |   |   |
| CHAR. | HR. | 00 | 01  | 02  | 03 | 04 | 05 | 06 | 07 | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23 |   |   |

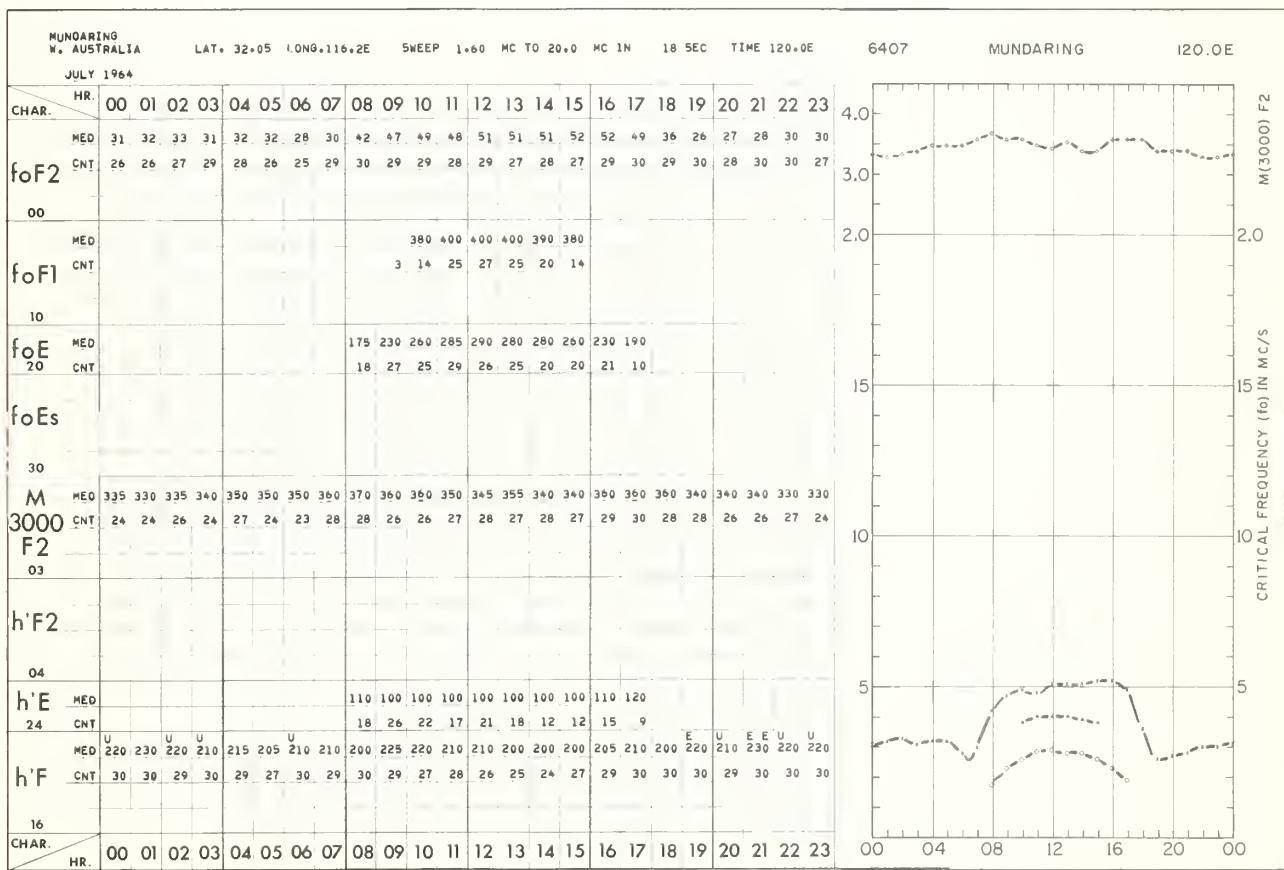
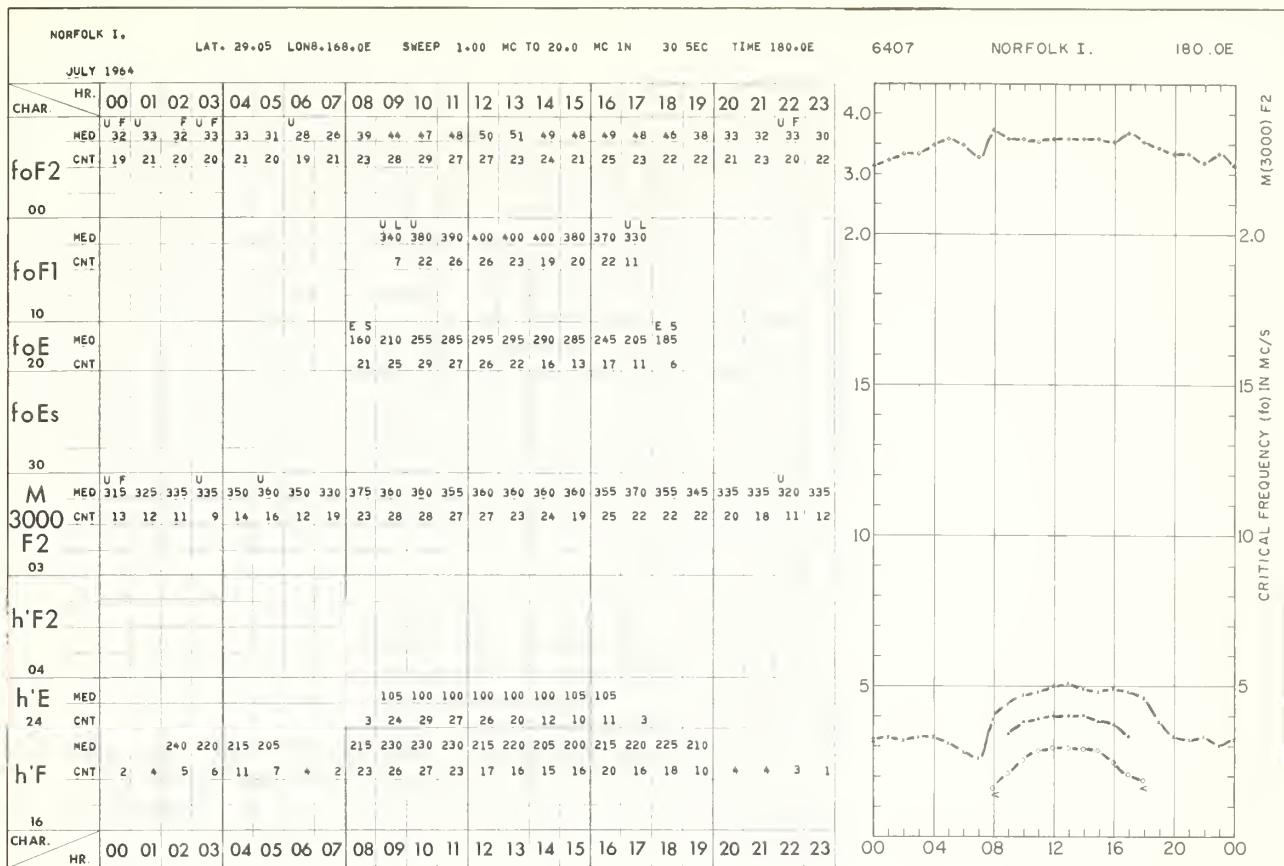


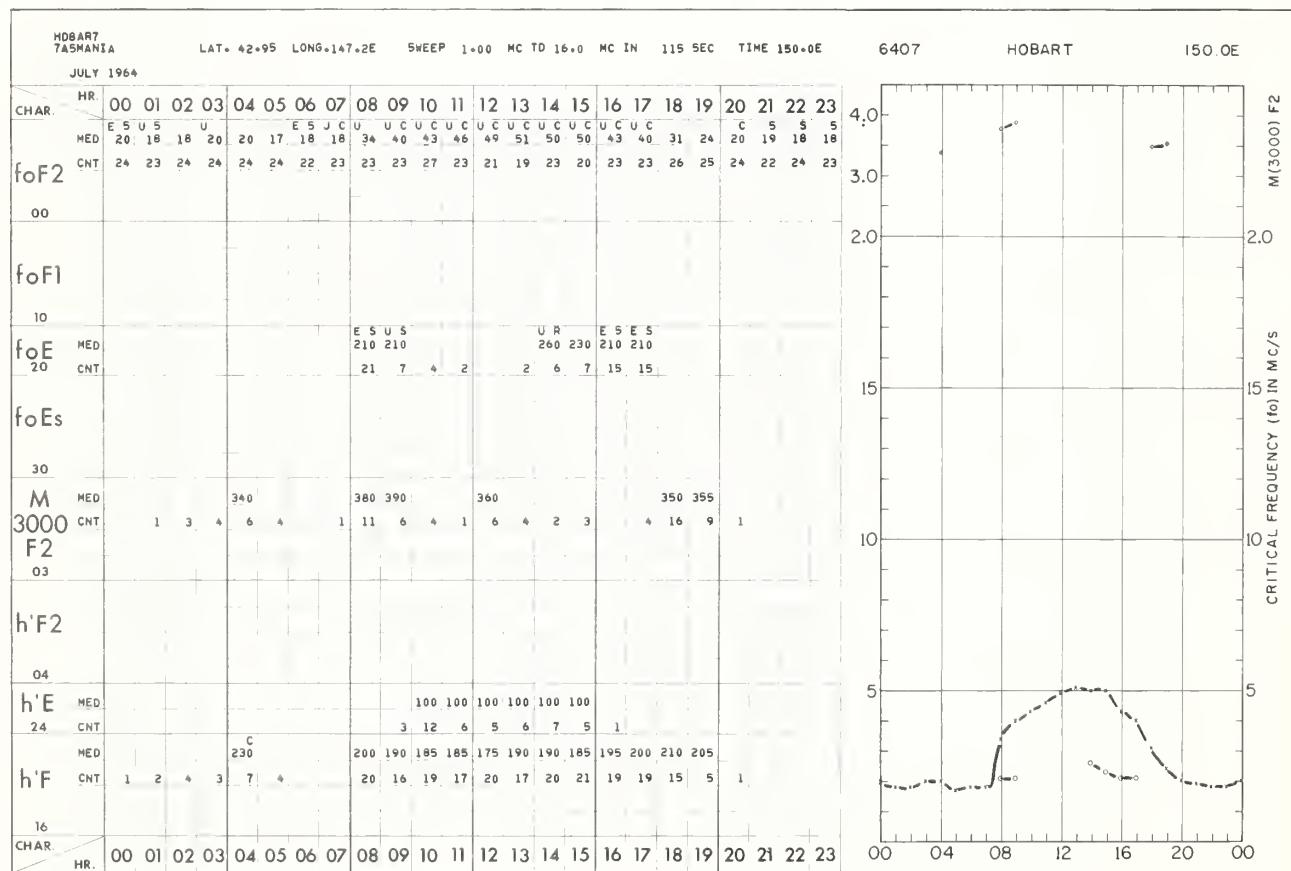
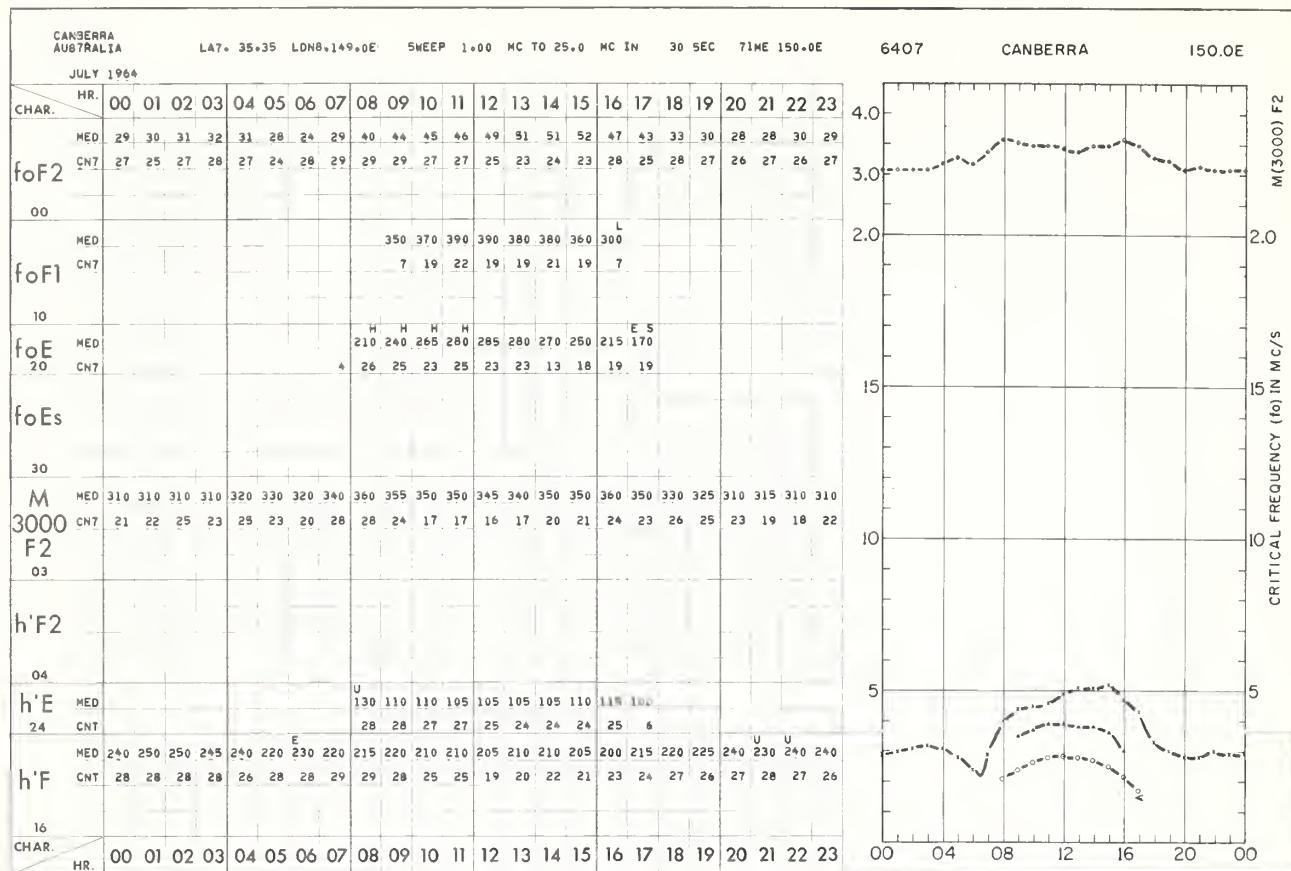
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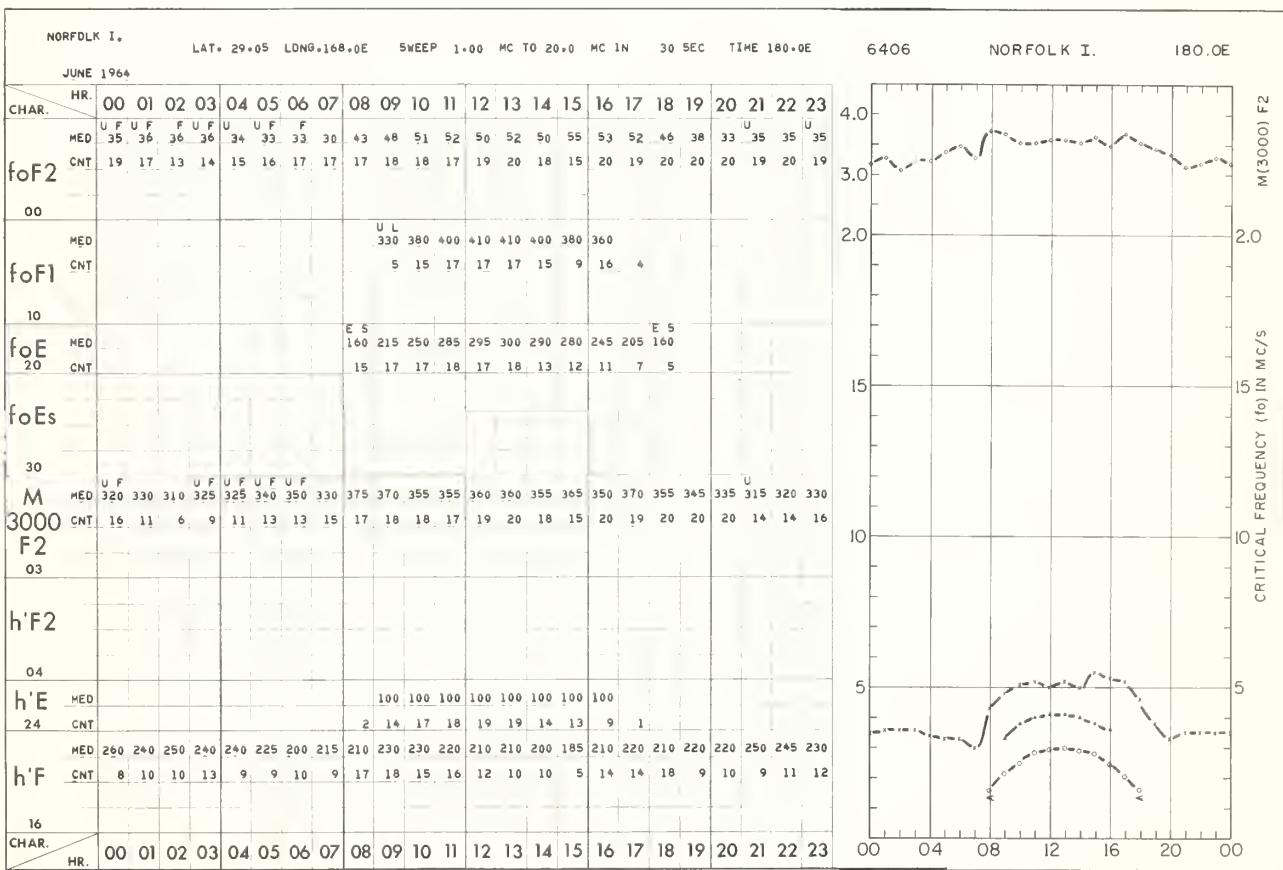
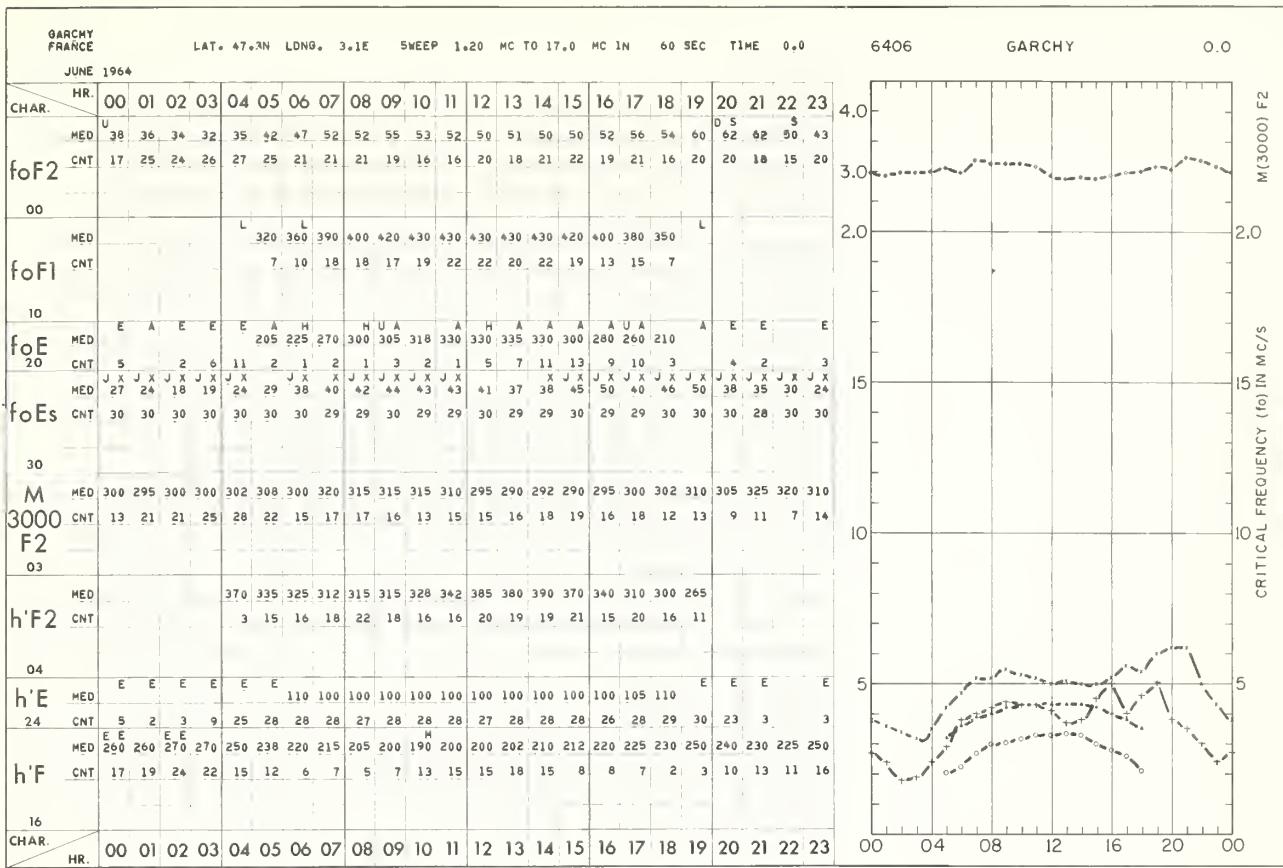
JULY 1964

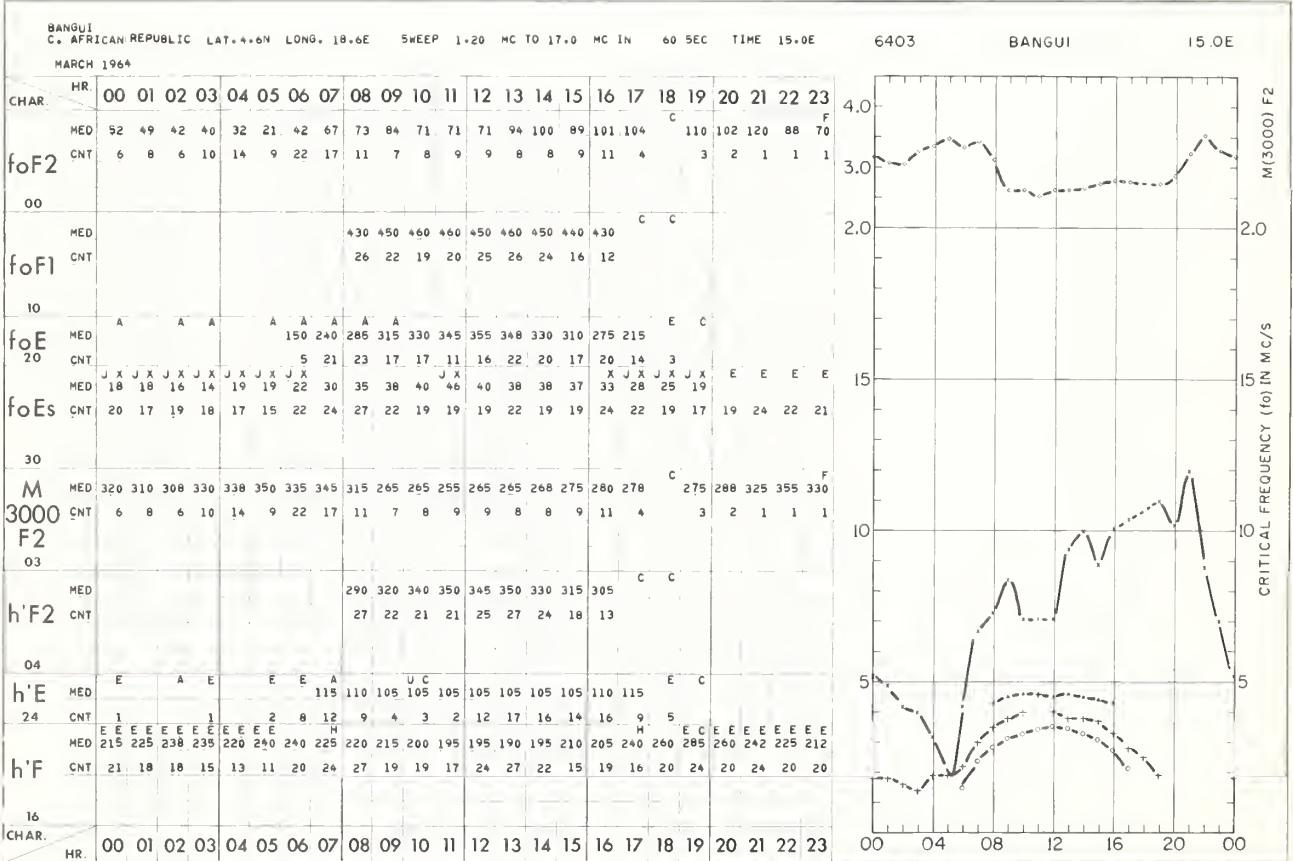
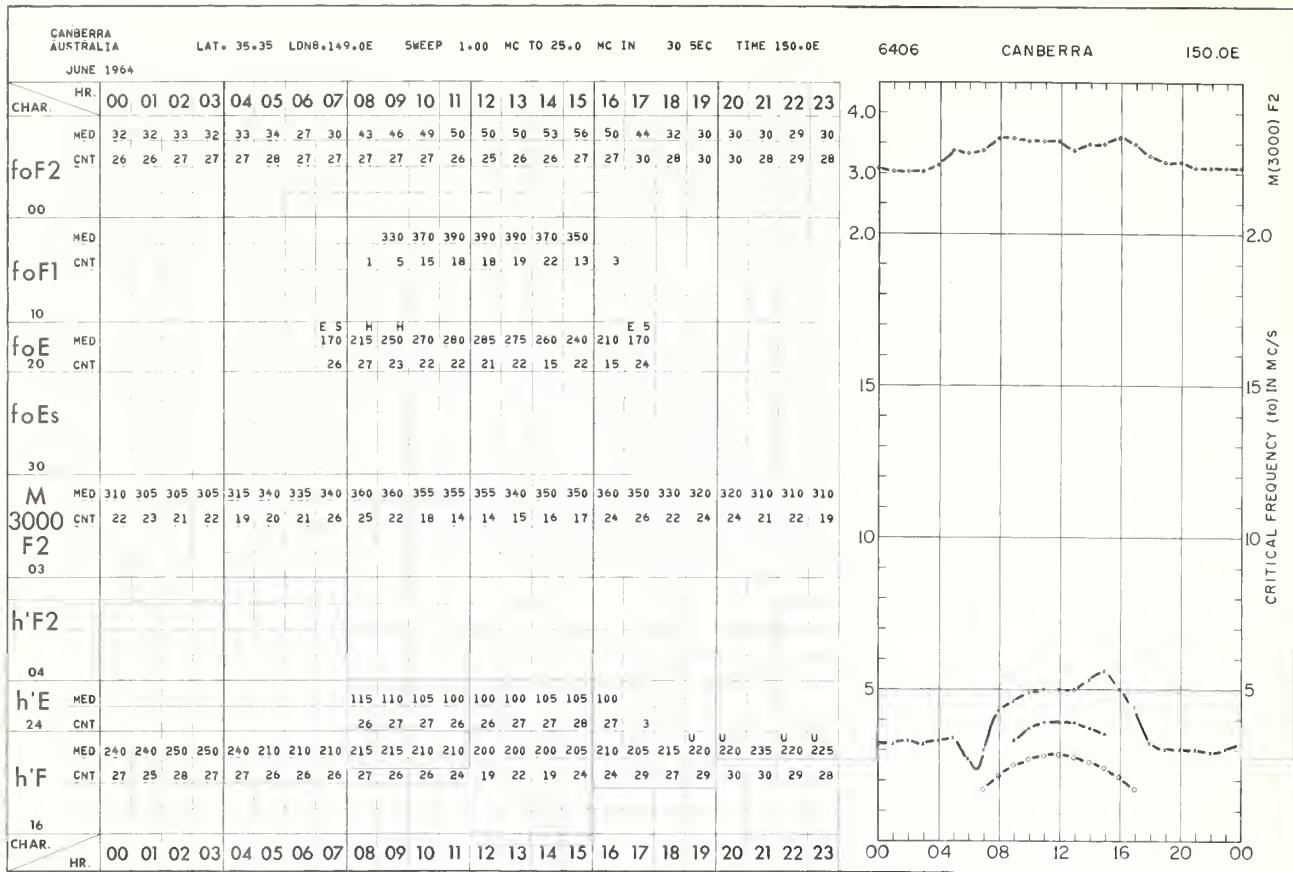
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|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| foF2  | MED | U   | F   | U   | F   | U   | F   | U   | F   | 56  | 68  | 64  | 63  | 63  | 60  | 59  | 54  | 56  | 56  | 50  | 44  | 41  | 30  | 29  | 29  |
|       | CNT | 29  | 25  | 26  | 19  | 15  | 18  | 21  | 43  | 30  | 29  | 29  | 29  | 29  | 30  | 27  | 28  | 28  | 29  | 28  | 30  | 29  | 28  | 25  | 20  |
| foF1  | 00  |     |     |     |     |     |     |     |     | 380 | 410 | 420 | 420 | 430 | 430 | 420 | 410 | 390 | 390 | U   | L   |     |     |     |     |
|       | MED |     |     |     |     |     |     |     |     | 25  | 29  | 29  | 28  | 27  | 27  | 27  | 22  | 21  | 5   |     |     |     |     |     |     |
|       | CNT |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| foEs  | 10  |     |     |     |     |     |     |     |     | 160 | 240 | 280 | 305 | 320 | 330 | 325 | 315 | 300 | 265 | 215 |     |     |     |     |     |
|       | MED |     |     |     |     |     |     |     |     | 20  | 26  | 26  | 28  | 27  | 29  | 28  | 28  | 28  | 26  | 23  | 2   |     |     |     |     |
|       | CNT |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| foEs  | 30  |     |     |     |     |     |     |     |     | U   | F   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|       | M   | 355 | 365 | 400 | 365 | 370 | 345 | 330 | 360 | 360 | 370 | 365 | 365 | 370 | 360 | 360 | 350 | 350 | 365 | 370 | 340 | 355 | 350 | 325 | 330 |
| 3000  | CNT | 8   | 7   | 9   | 8   | 13  | 18  | 24  | 30  | 30  | 29  | 29  | 29  | 28  | 30  | 26  | 25  | 28  | 29  | 28  | 30  | 29  | 25  | 19  | 16  |
| F2    | 03  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| h'F2  | 04  |     |     |     |     |     |     |     |     | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |     |     |     |     |     |
|       | MED |     |     |     |     |     |     |     |     | 13  | 17  | 18  | 18  | 17  | 17  | 21  | 23  | 22  | 20  | 20  |     |     |     |     |     |
|       | CNT |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|       | E   | E   |     |     |     |     |     |     |     | 260 | 220 | 215 | 200 | 200 | 190 | 180 | 180 | 180 | 180 | 185 | 210 | 200 | 210 | 200 | 200 |
|       | MED | 210 | 200 | 190 | 190 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|       | CNT | 24  | 23  | 23  | 17  | 12  | 12  | 13  | 26  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| h'F   | 16  |     |     |     |     |     |     |     |     | 23  | 24  | 23  | 20  | 19  | 18  | 22  | 17  | 15  | 22  | 25  | 27  | 26  | 19  | 20  | 19  |
| CHAR. | HR  | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |

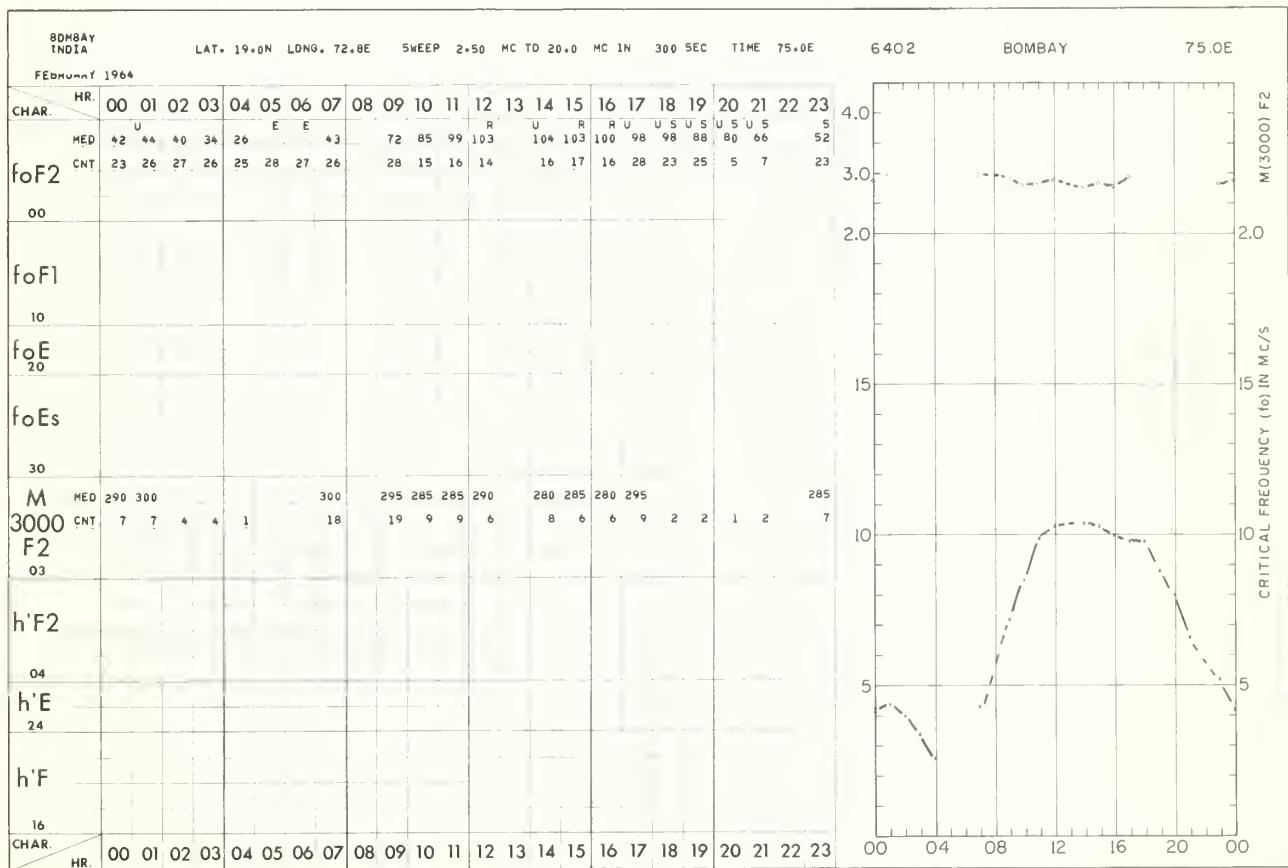
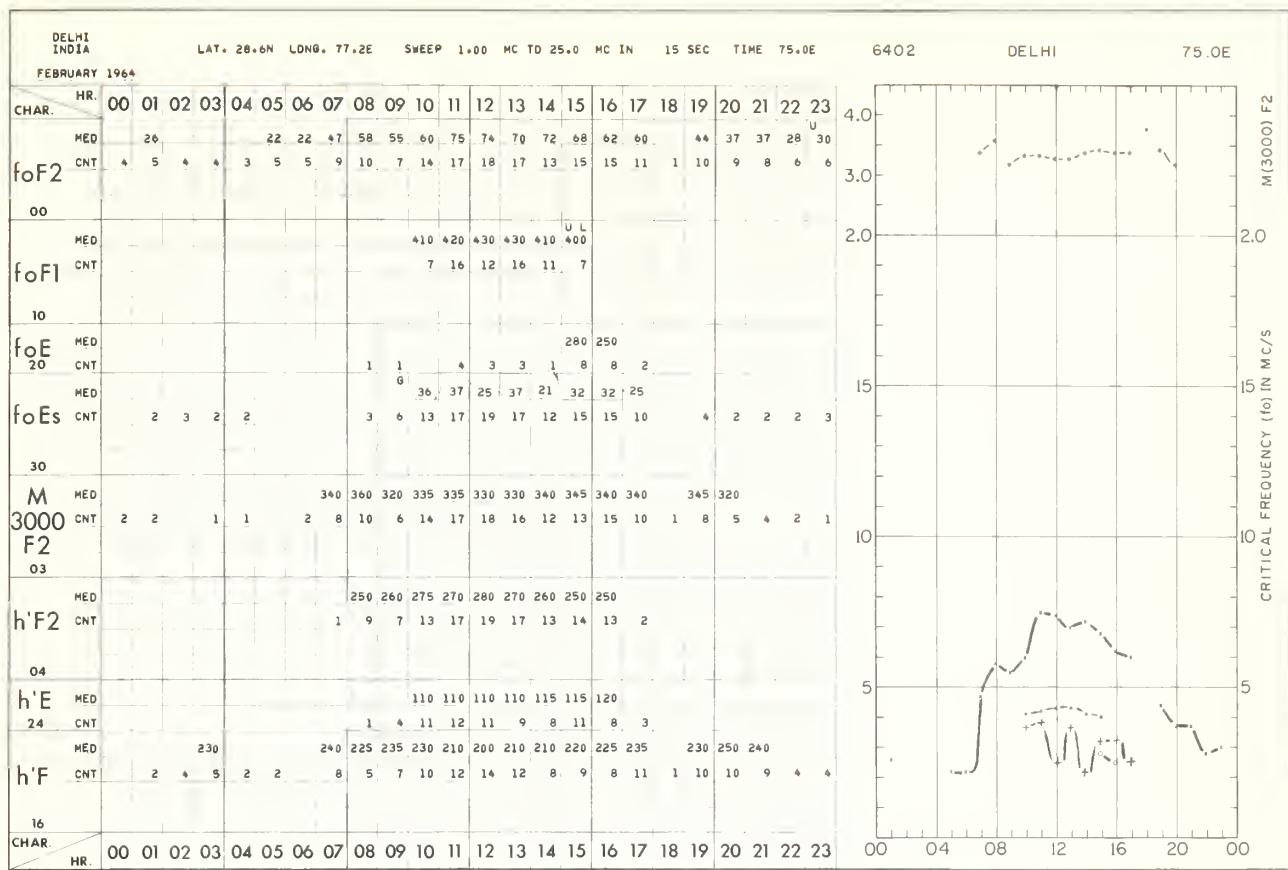


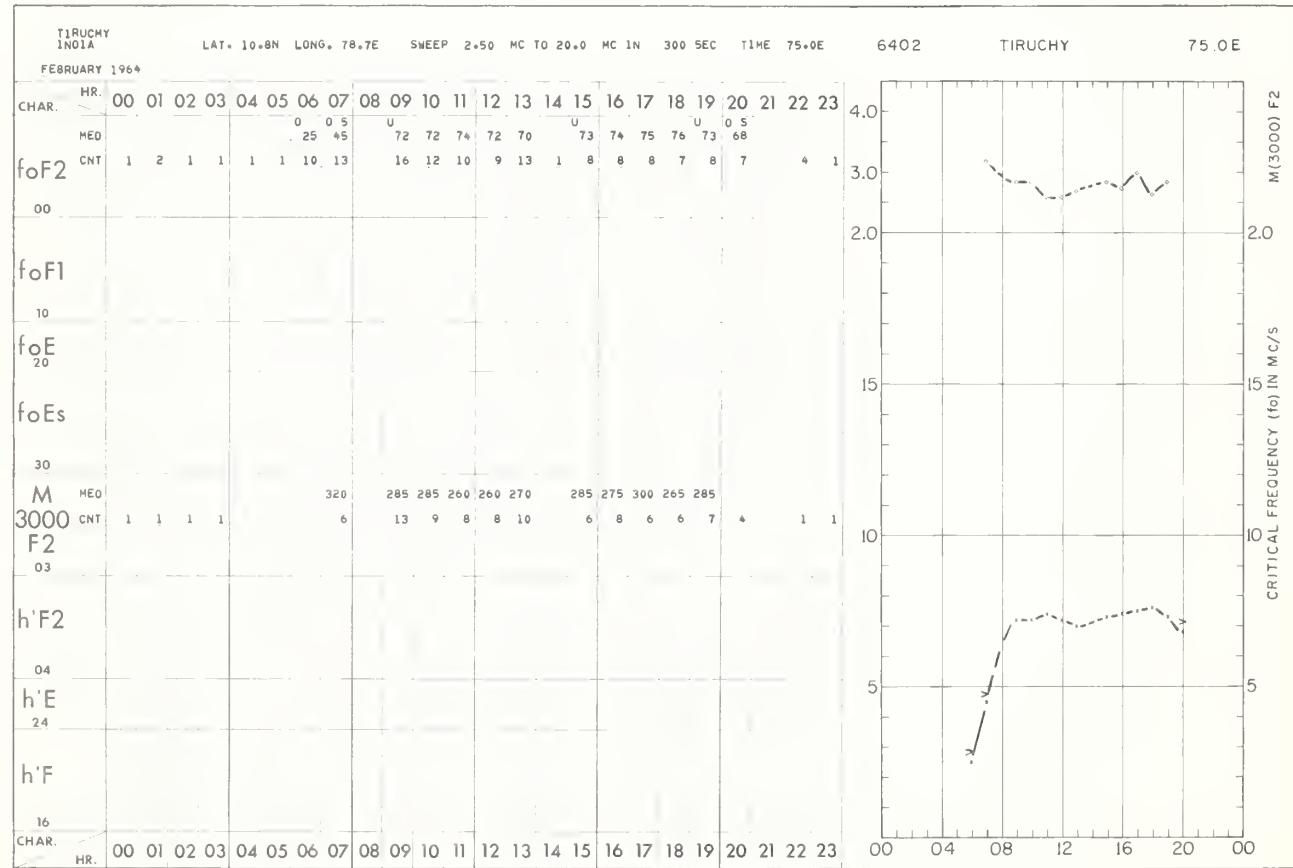
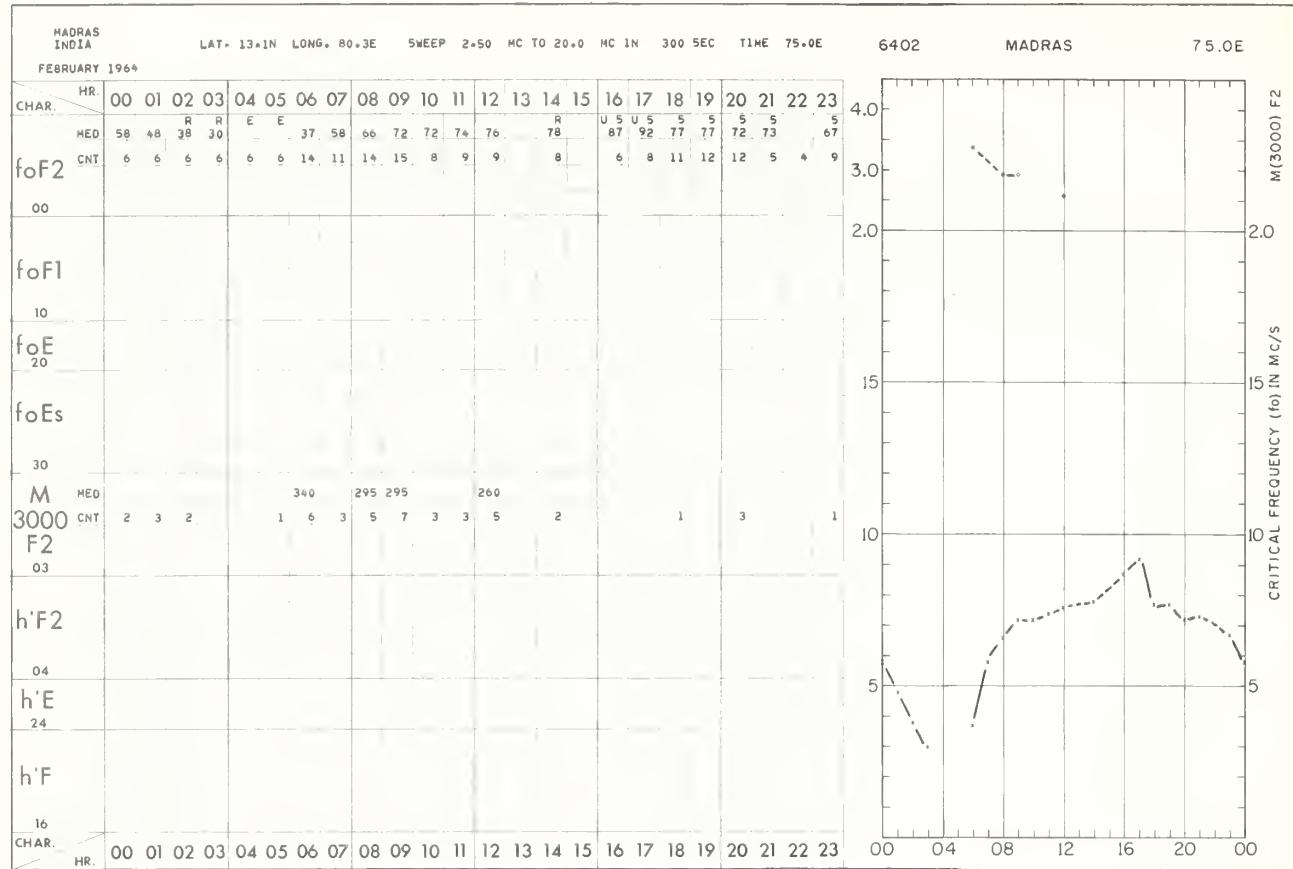


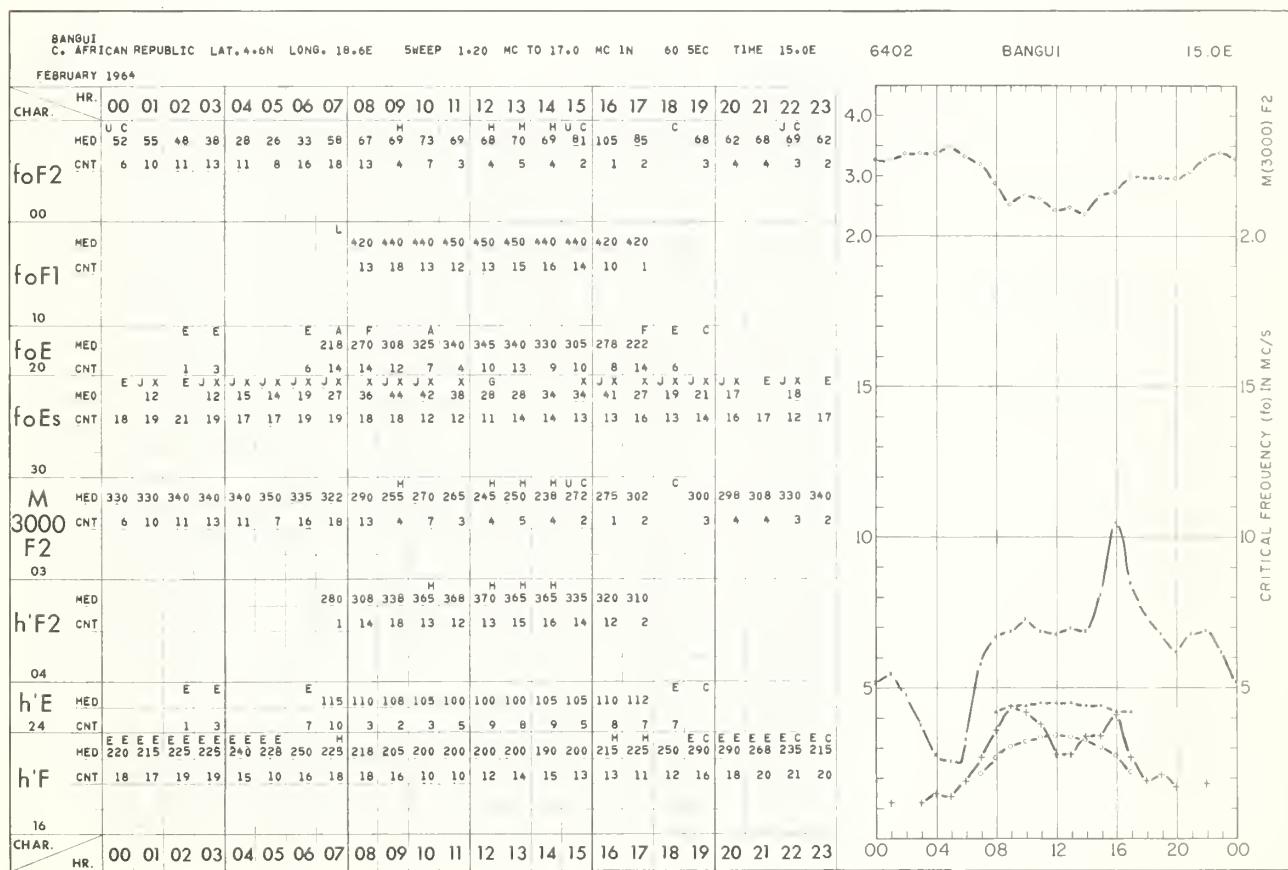
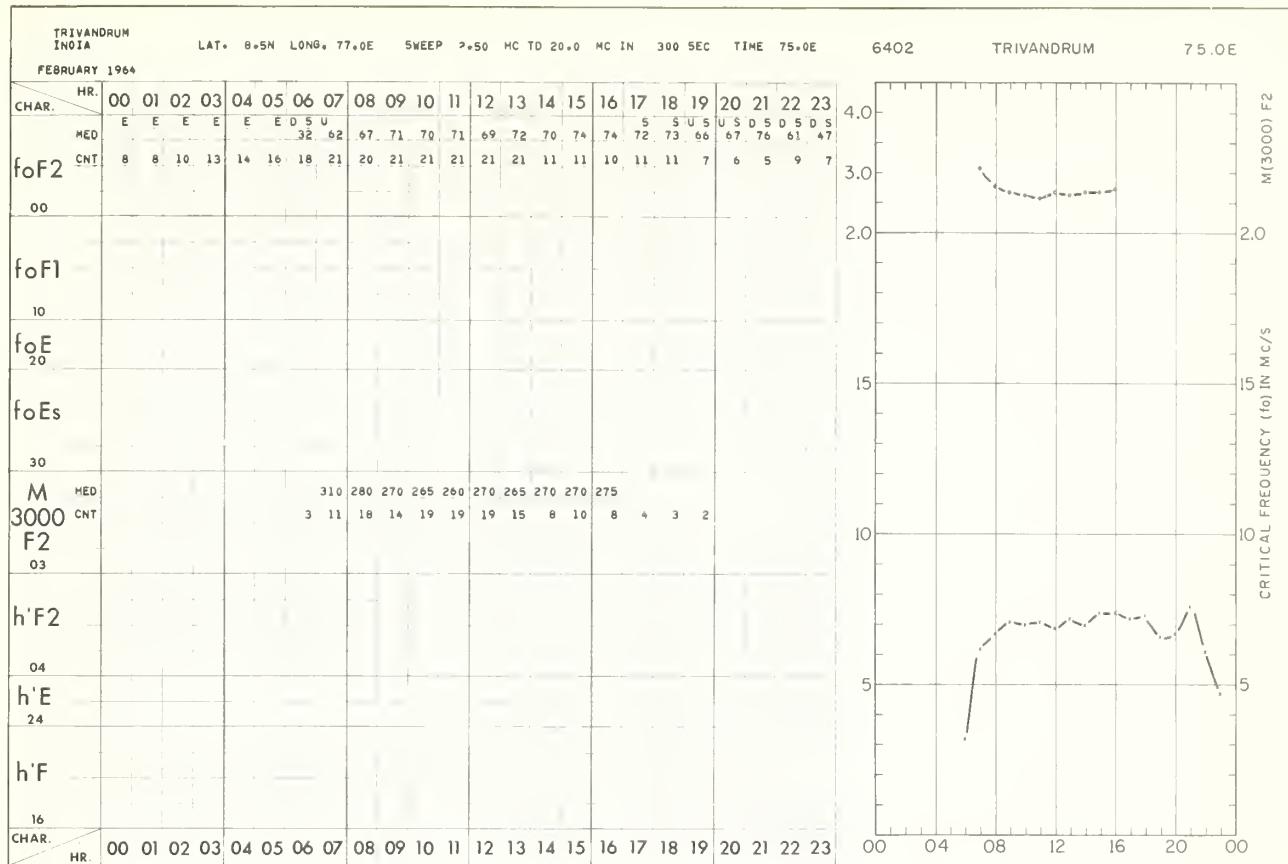


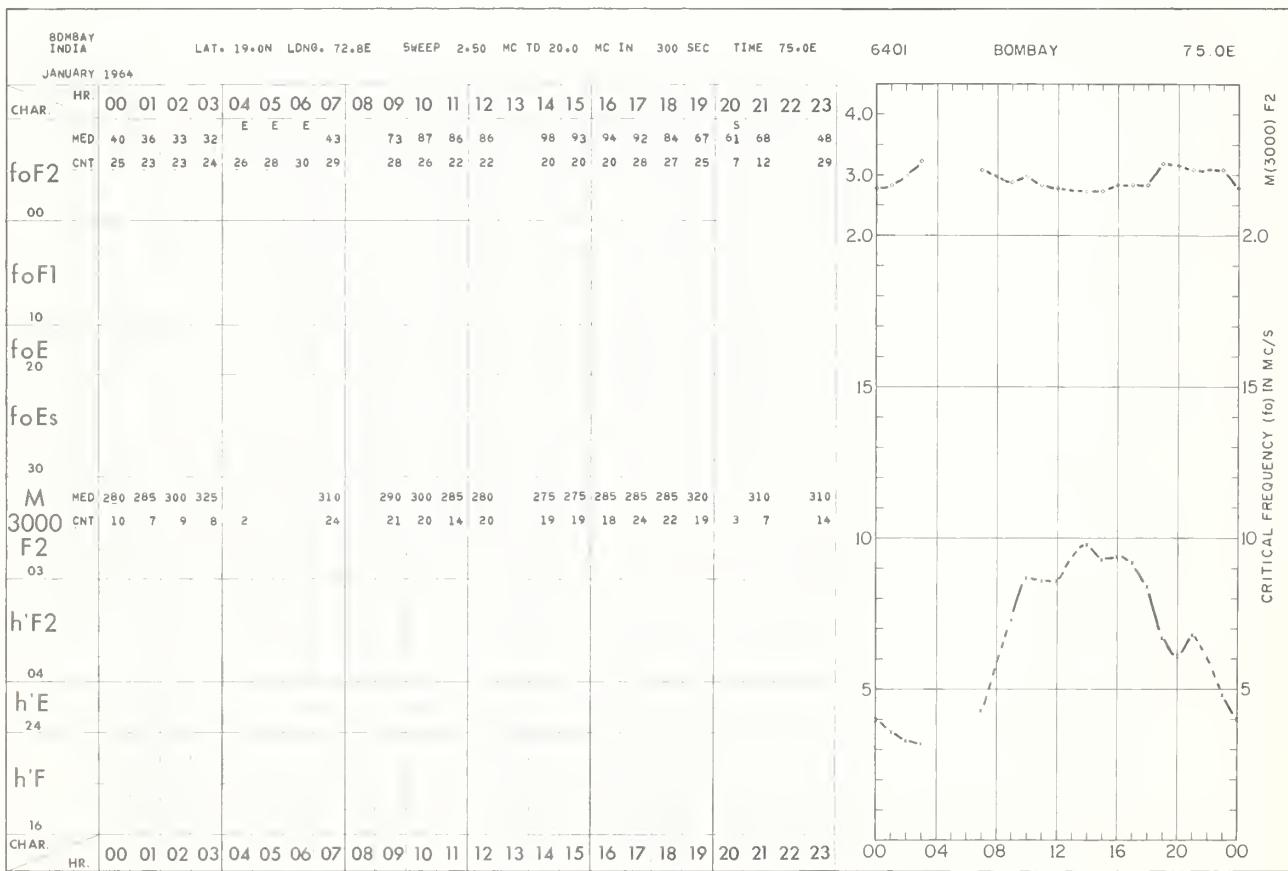
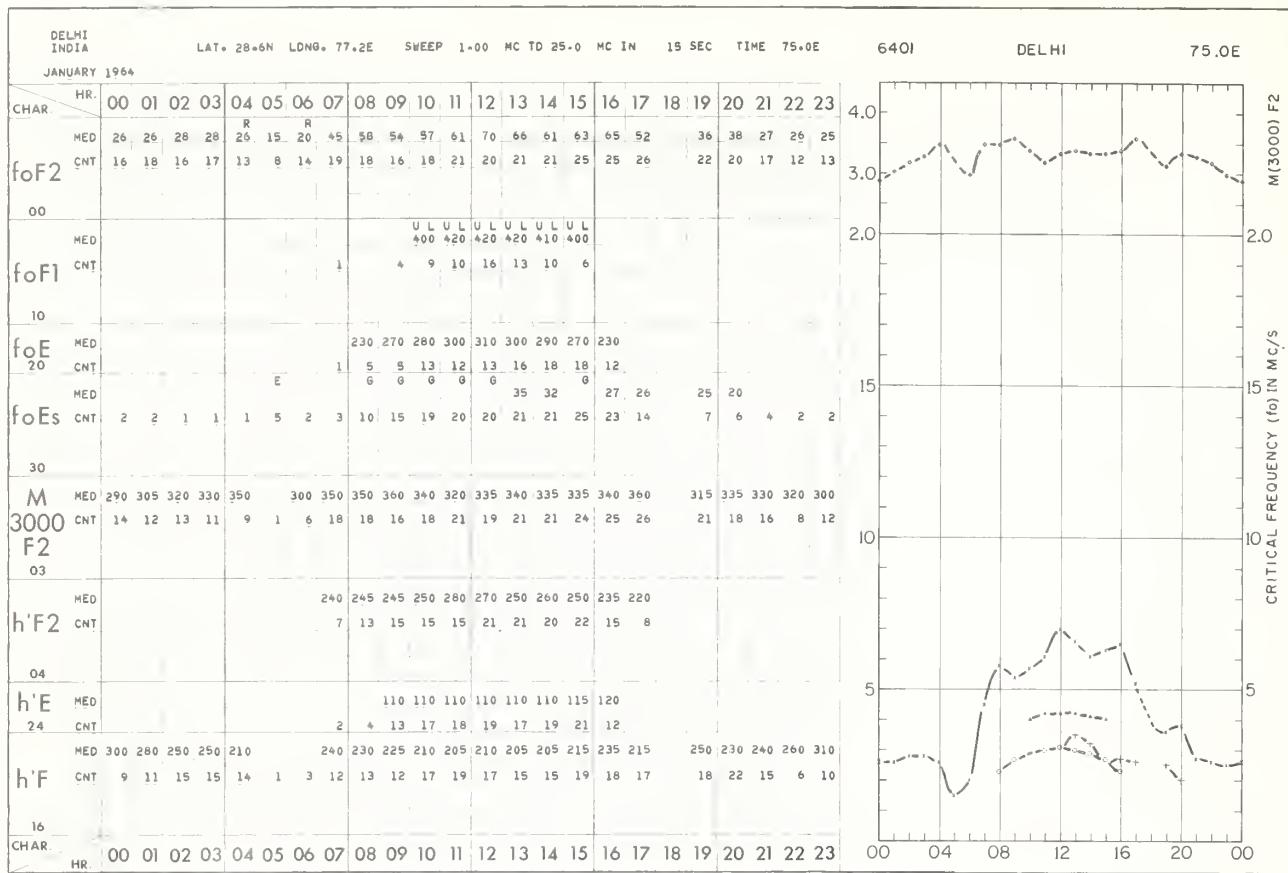


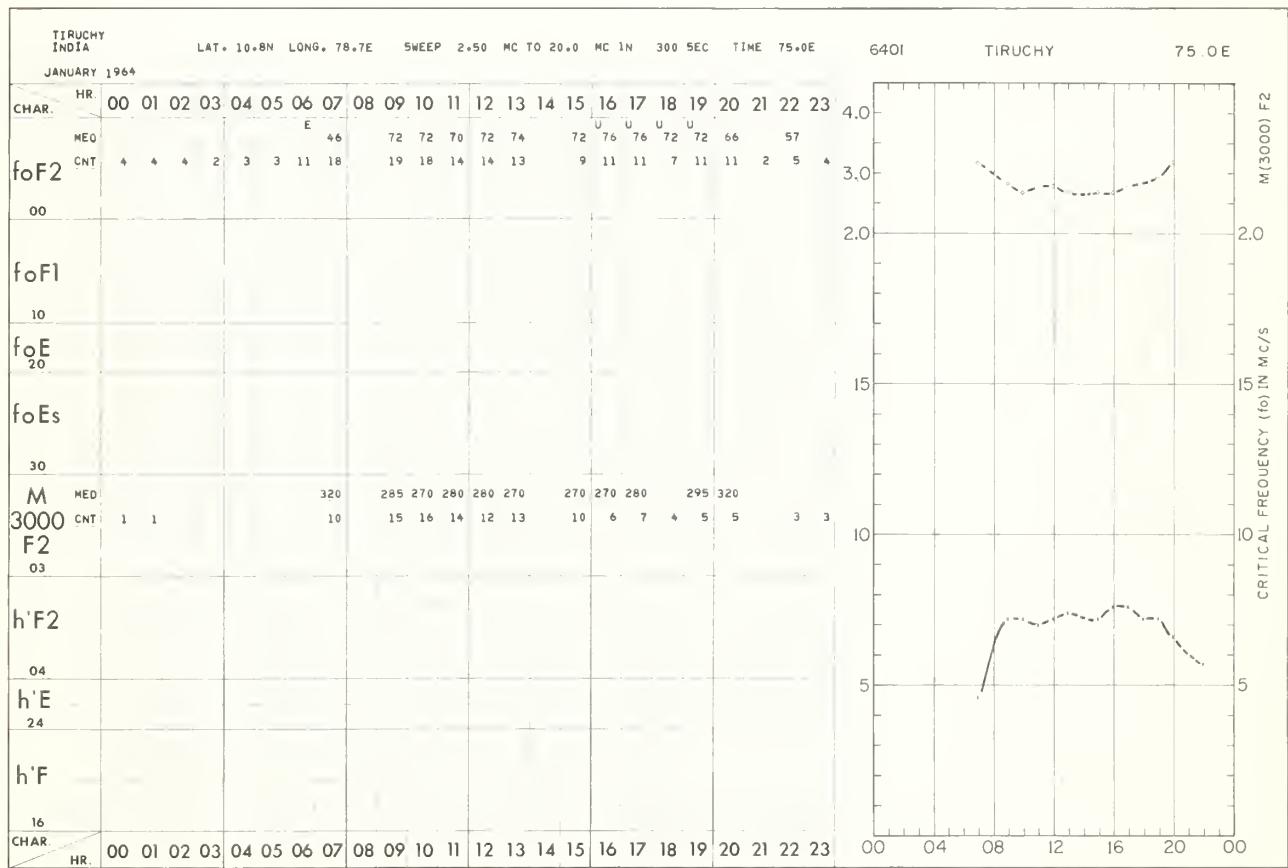
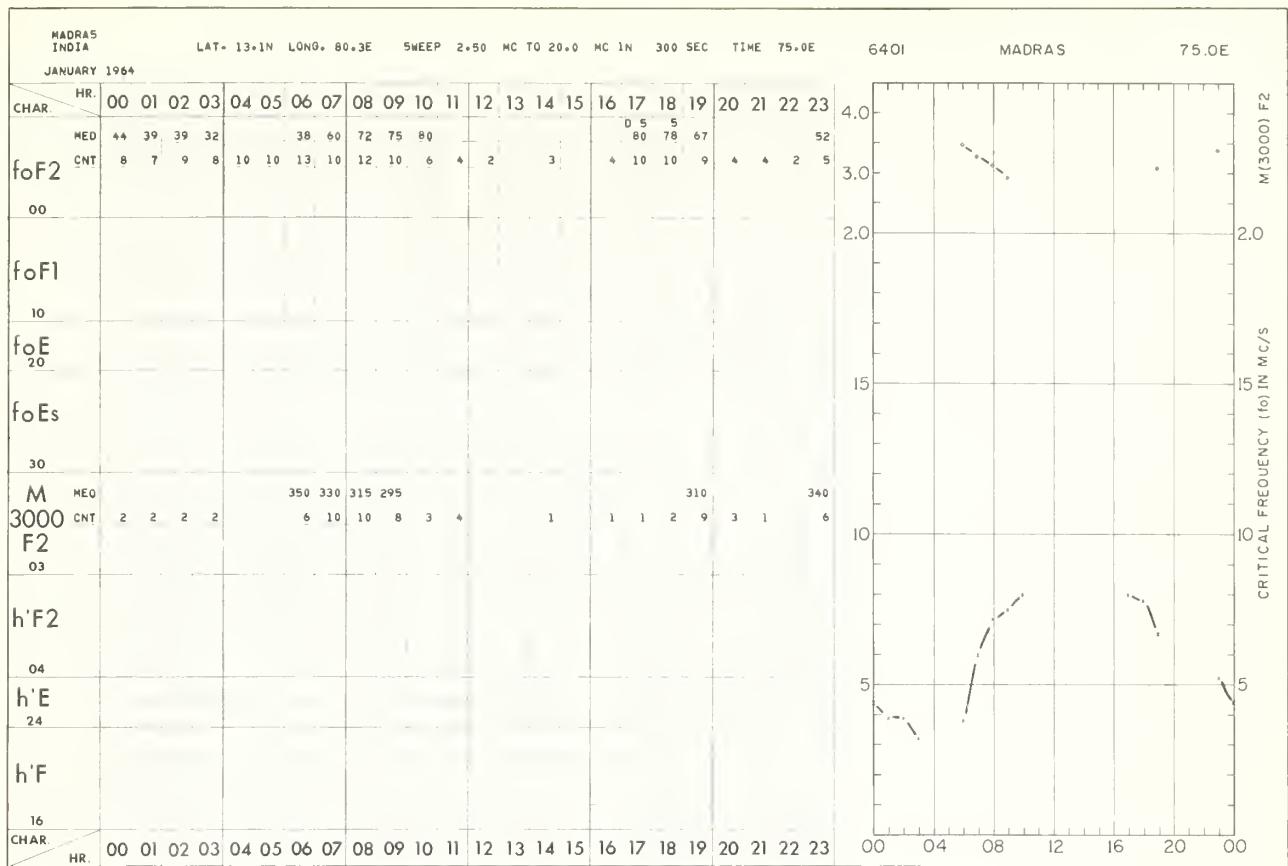


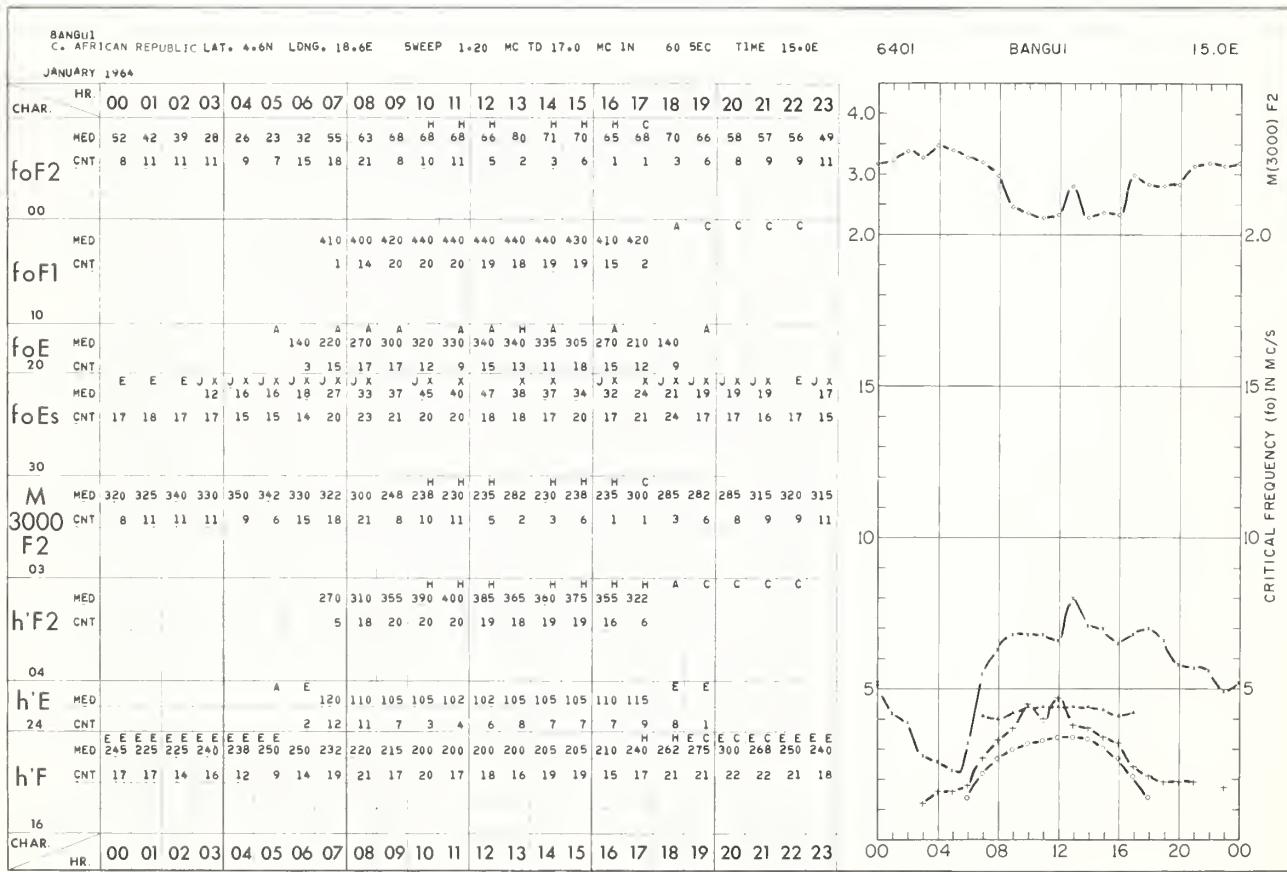
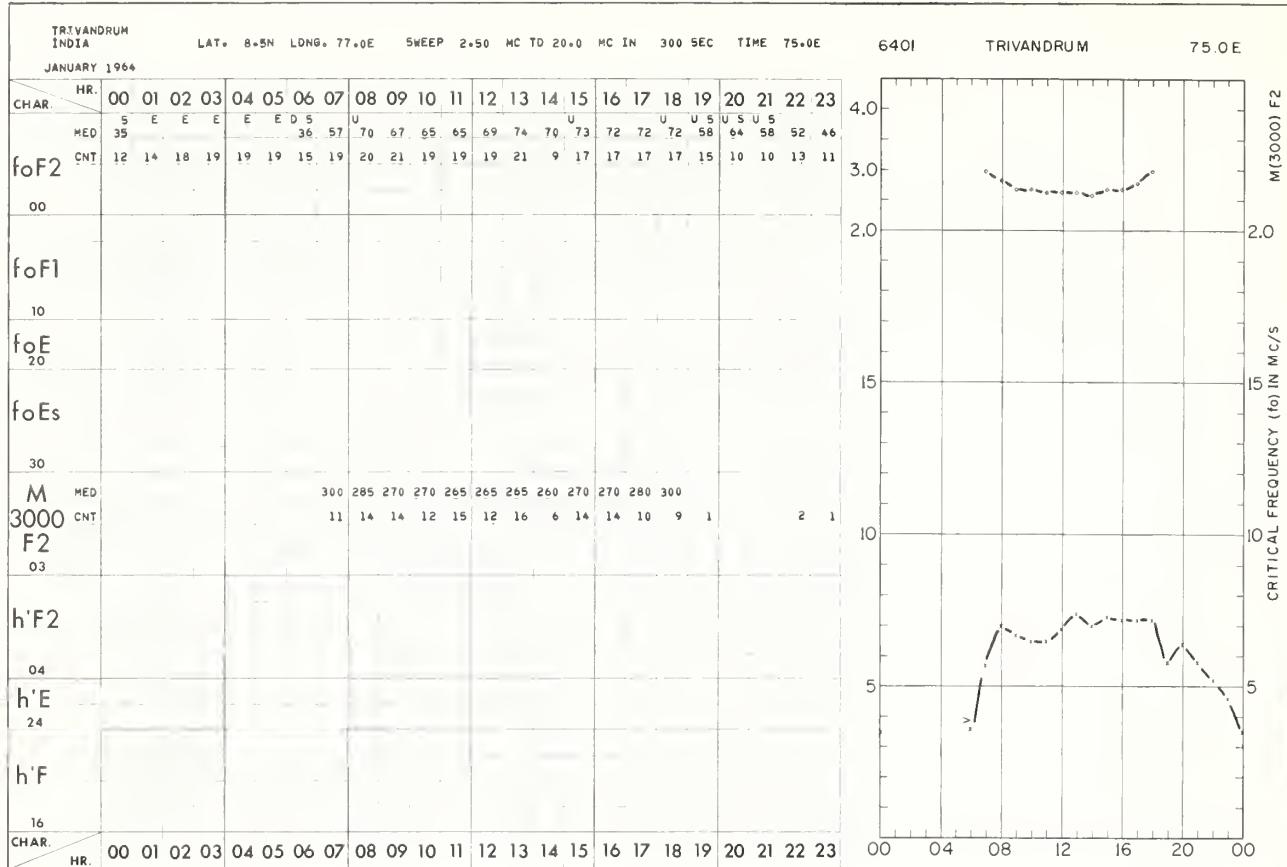












|                 |                     |      |       | PAGE |
|-----------------|---------------------|------|-------|------|
| AHMEDABAD       | INDIA               | 1965 | APR.  | 16   |
| AKITA           | JAPAN               | 1965 | APR.  | 14   |
| ANCHORAGE       | ALASKA              | 1965 | JUNE  | 2    |
| BANGKOK         | THAILAND            | 1965 | JAN.  | 26   |
|                 |                     | 1965 | FEB.  | 24   |
|                 |                     | 1965 | MAR.  | 21   |
|                 |                     | 1965 | APR.  | 17   |
|                 |                     | 1965 | MAY   | 10   |
| BANGUI          | C. AFRICAN REPUBLIC | 1964 | JAN.  | 50   |
|                 |                     | 1964 | FEB.  | 47   |
|                 |                     | 1964 | MAR.  | 44   |
| BOGOTA          | COLOMBIA            | 1965 | JUNE  | 5    |
| BOMBAY          | INDIA               | 1964 | JAN.  | 48   |
|                 |                     | 1964 | FEB.  | 45   |
| BOULDER         | COLORADO            | 1965 | JULY  | 1    |
| BRISBANE        | AUSTRALIA           | 1964 | JULY  | 40   |
| CAMPBELL I.     |                     | 1965 | JAN.  | 26   |
| CANBERRA        | AUSTRALIA           | 1964 | JUNE  | 44   |
|                 |                     | 1964 | JULY  | 42   |
|                 |                     | 1964 | AUG.  | 37   |
| COLLEGE         | ALASKA              | 1965 | FEB.  | 22   |
|                 |                     | 1965 | APR.  | 12   |
| CONCEPCION      | CHILE               | 1965 | APR.  | 18   |
|                 |                     | 1965 | MAY   | 11   |
| DAKAR           | SENEGAL             | 1964 | NOV.  | 32   |
|                 |                     | 1964 | DEC.  | 28   |
| DELHI           | INDIA               | 1964 | JAN.  | 48   |
|                 |                     | 1964 | FEB.  | 45   |
| DJIBOUTI        | FRENCH SOMALILAND   | 1964 | DEC.  | 29   |
| DOURBES         | BELGIUM             | 1965 | MAY   | 7    |
| EL CERILLO      | MEXICO              | 1965 | MAY   | 9    |
|                 |                     | 1965 | JUNE  | 4    |
| FT. BELVOIR     | VIRGINIA            | 1965 | JUNE  | 3    |
| FT. MONMOUTH    | NEW JERSEY          | 1965 | JUNE  | 3    |
| GARCHY          | FRANCE              | 1964 | JUNE  | 43   |
|                 |                     | 1964 | JULY  | 38   |
|                 |                     | 1964 | AUG.  | 36   |
|                 |                     | 1964 | SEPT. | 35   |
|                 |                     | 1964 | OCT.  | 33   |
| GODHAVN         | GREENLAND           | 1964 | SEPT. | 34   |
|                 |                     | 1965 | FEB.  | 22   |
|                 |                     | 1965 | MAR.  | 18   |
| GODLEY HEAD     | NEW ZEALAND         | 1965 | MAY   | 11   |
| GRAND BAHAMA I. |                     | 1965 | MAY   | 8    |
| HOBART          | TASMANIA            | 1964 | JULY  | 42   |
|                 |                     | 1964 | AUG.  | 38   |
| HUANCAYO        | PERU                | 1965 | MAR.  | 21   |
|                 |                     | 1965 | APR.  | 17   |
|                 |                     | 1965 | MAY   | 10   |
| JULIUSRUH/RUGEN | GERMANY             | 1964 | DEC.  | 27   |

|              |                   |      |       |    |
|--------------|-------------------|------|-------|----|
| KIRUNA       | SWEDEN            | 1965 | MAY   | 6  |
| KOKUBUNJI    | JAPAN             | 1965 | APR.  | 14 |
| LYCKSELE     | SWEDEN            | 1965 | MAY   | 6  |
| MADRAS       | INDIA             | 1964 | JAN.  | 49 |
|              |                   | 1964 | FEB.  | 46 |
| MANILA       | Luzon             | 1965 | MAR.  | 20 |
|              |                   | 1965 | APR.  | 16 |
| MOSCOW       | U.S.S.R.          | 1964 | OCT.  | 32 |
|              |                   | 1964 | NOV.  | 30 |
|              |                   | 1964 | DEC.  | 27 |
| MUNDARING    | W. AUSTRALIA      | 1964 | JULY  | 41 |
|              |                   | 1964 | AUG.  | 37 |
| NARSSARSSUAQ | GREENLAND         | 1965 | APR.  | 13 |
| NORFOLK I.   |                   | 1964 | JUNE  | 43 |
|              |                   | 1964 | JULY  | 41 |
|              |                   | 1964 | AUG.  | 36 |
| NURMIJARVI   | FINLAND           | 1965 | JUNE  | 2  |
| PORT MORESBY | PAPUA             | 1964 | JULY  | 39 |
| PRUHONICE    | CZECHOSLOVAKIA    | 1965 | JAN.  | 25 |
|              |                   | 1965 | FEB.  | 23 |
| RAROTONGA    | COOK I.           | 1964 | SEPT. | 35 |
| SCOTT BASE   | ANTARCTICA        | 1964 | DEC.  | 30 |
| SODANKYLA    | FINLAND           | 1965 | JUNE  | 1  |
| TAIPEI       | CHINA             | 1965 | MAR.  | 20 |
|              |                   | 1965 | APR.  | 15 |
|              |                   | 1965 | MAY   | 9  |
| TALARÁ       | PERU              | 1965 | FEB.  | 24 |
| TAMANRASSET  | ALGERIA           | 1964 | OCT.  | 34 |
|              |                   | 1964 | NOV.  | 31 |
| TANANARIVE   | MALAGASY REPUBLIC | 1964 | DEC.  | 29 |
| THULE        | GREENLAND         | 1965 | MAY   | 5  |
| TIRUCHY      | INDIA             | 1964 | JAN.  | 49 |
|              |                   | 1964 | FEB.  | 46 |
| TORTOSA      | SPAIN             | 1964 | OCT.  | 33 |
|              |                   | 1964 | NOV.  | 31 |
|              |                   | 1964 | DEC.  | 28 |
|              |                   | 1965 | JAN.  | 25 |
| TOWNSVILLE   | AUSTRALIA         | 1964 | JULY  | 40 |
| TRIVANDRUM   | INDIA             | 1964 | JAN.  | 50 |
|              |                   | 1964 | FEB.  | 47 |
| TROMSO       | NORWAY            | 1965 | APR.  | 12 |
| UPPSALA      | SWEDEN            | 1965 | MAY   | 7  |
| VANIMO       | INDONESIA         | 1964 | JULY  | 39 |
| WAKKANAI     | JAPAN             | 1965 | APR.  | 13 |
| WARSAW       | POLAND            | 1965 | MAR.  | 19 |
| WHITE SANDS  | NEW MEXICO        | 1965 | MAY   | 8  |
|              |                   | 1965 | JUNE  | 4  |
| YAMAGAWA     | JAPAN             | 1965 | FEB.  | 23 |
|              |                   | 1965 | MAR.  | 19 |
|              |                   | 1965 | APR.  | 15 |

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(A detailed list of CRPL publications is available from the Central Radio Propagation Laboratory on request.)

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A catalog of records and data on file at the U.S. IGY World Data Center A for Airglow and Ionosphere, Boulder Laboratories, National Bureau of Standards, Boulder, Colorado, which includes a fee schedule to cover the cost of supplying copies, is available upon request.

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