

JAN 8 1948

Basic Radio Propagation Predictions

F O R A P R I L 1 9 4 8
T h r e e M o n t h s i n A d v a n c e

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CRPL Series D



Number 41

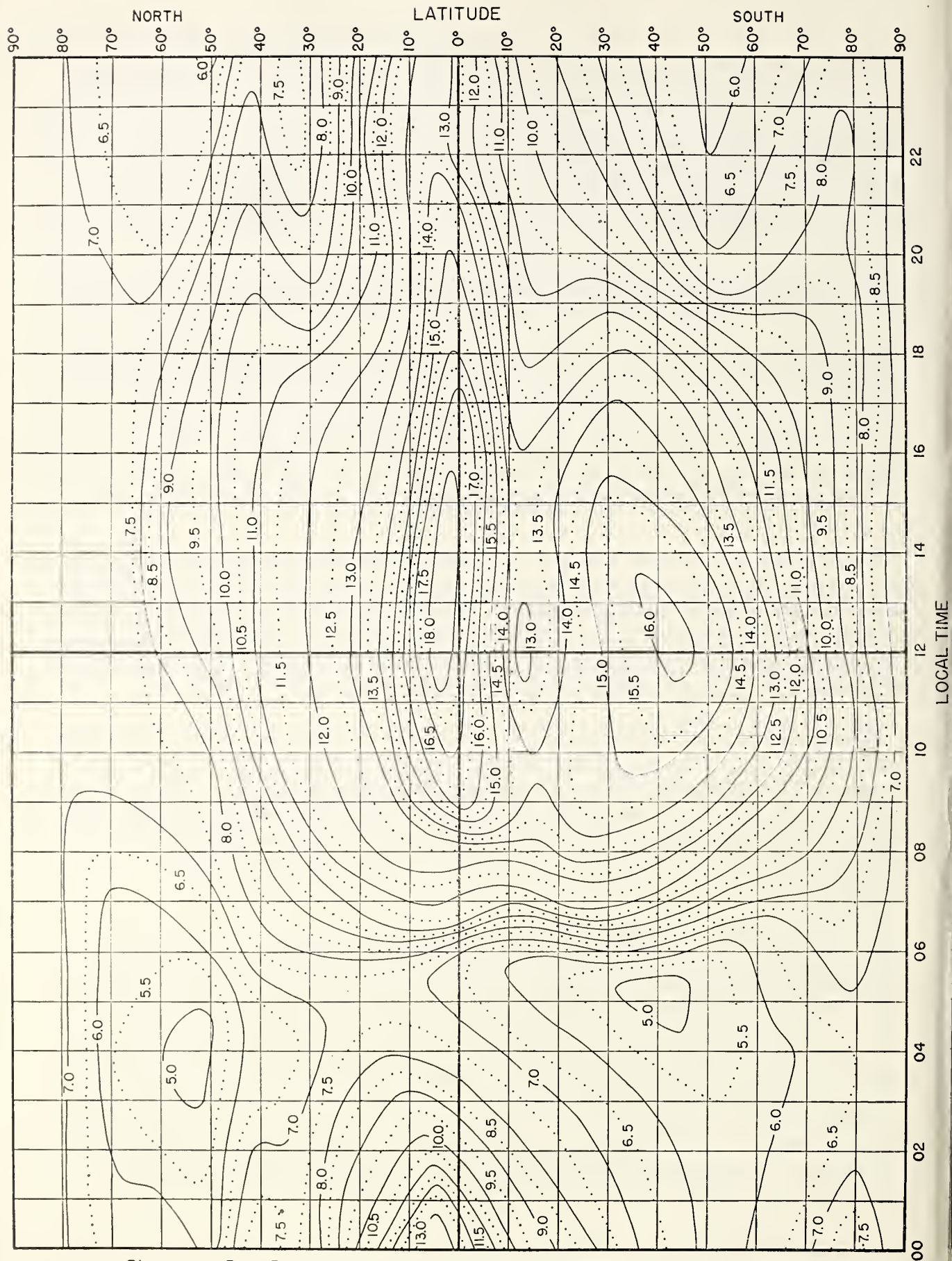


Fig. 1. F_2 ZERO-MUF, IN Mc, W ZONE, PREDICTED FOR APRIL 1948.

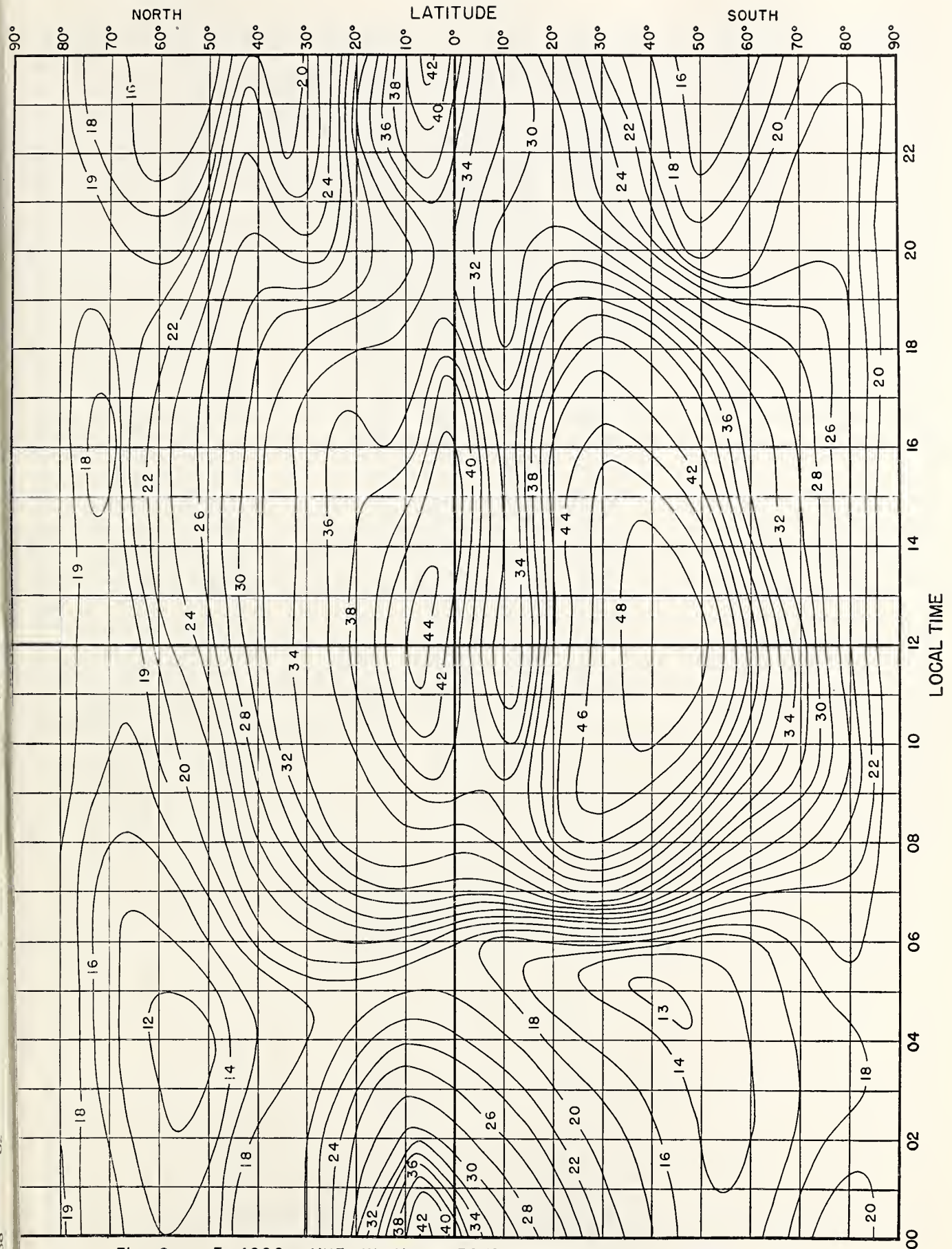


Fig. 2. $F_2 4000 - MUF$, IN Mc, W ZONE, PREDICTED FOR APRIL 1948.

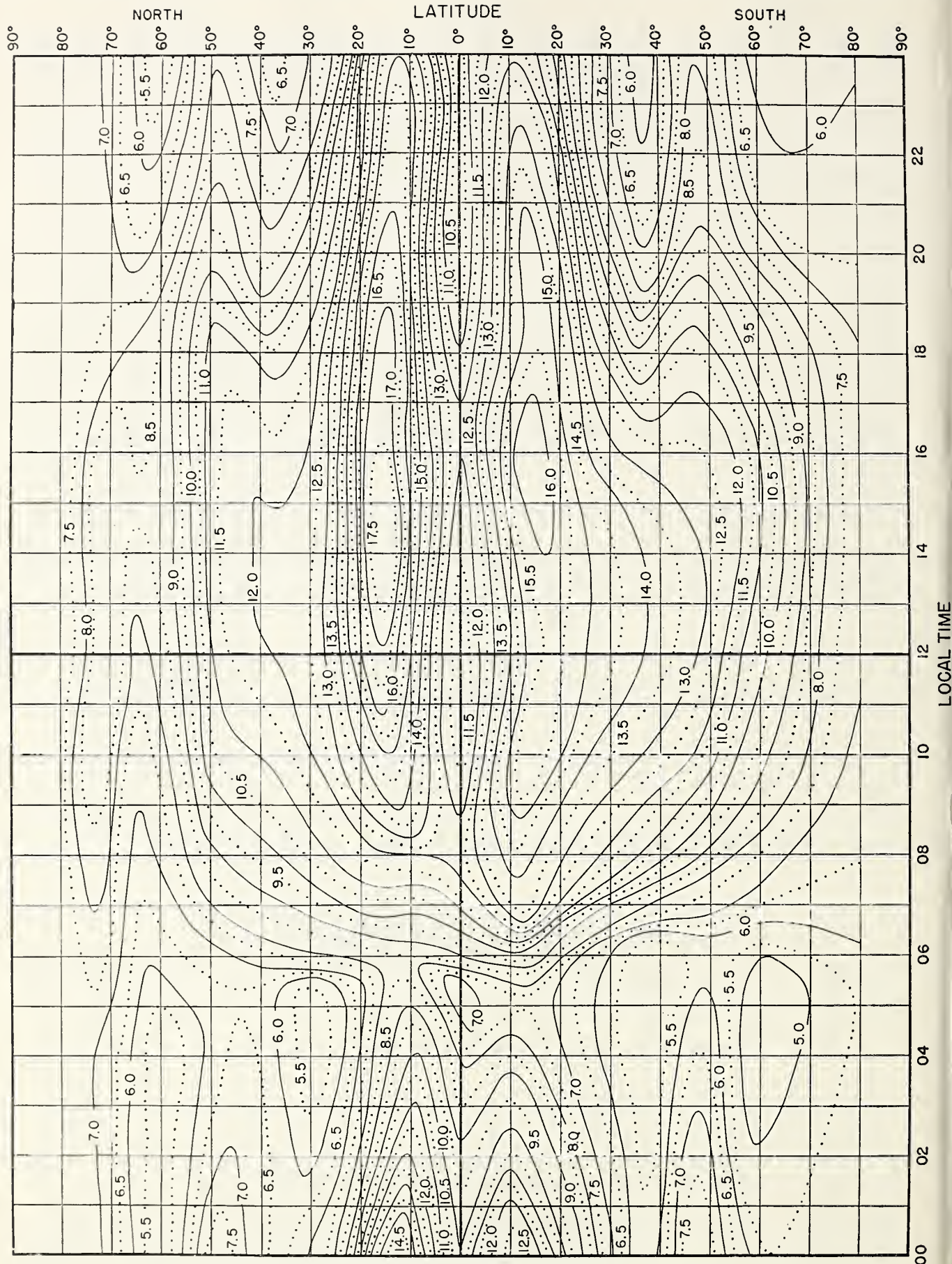


Fig. 3. F₂ ZERO-MUF, IN Mc, I ZONE, PREDICTED FOR APRIL 1948.

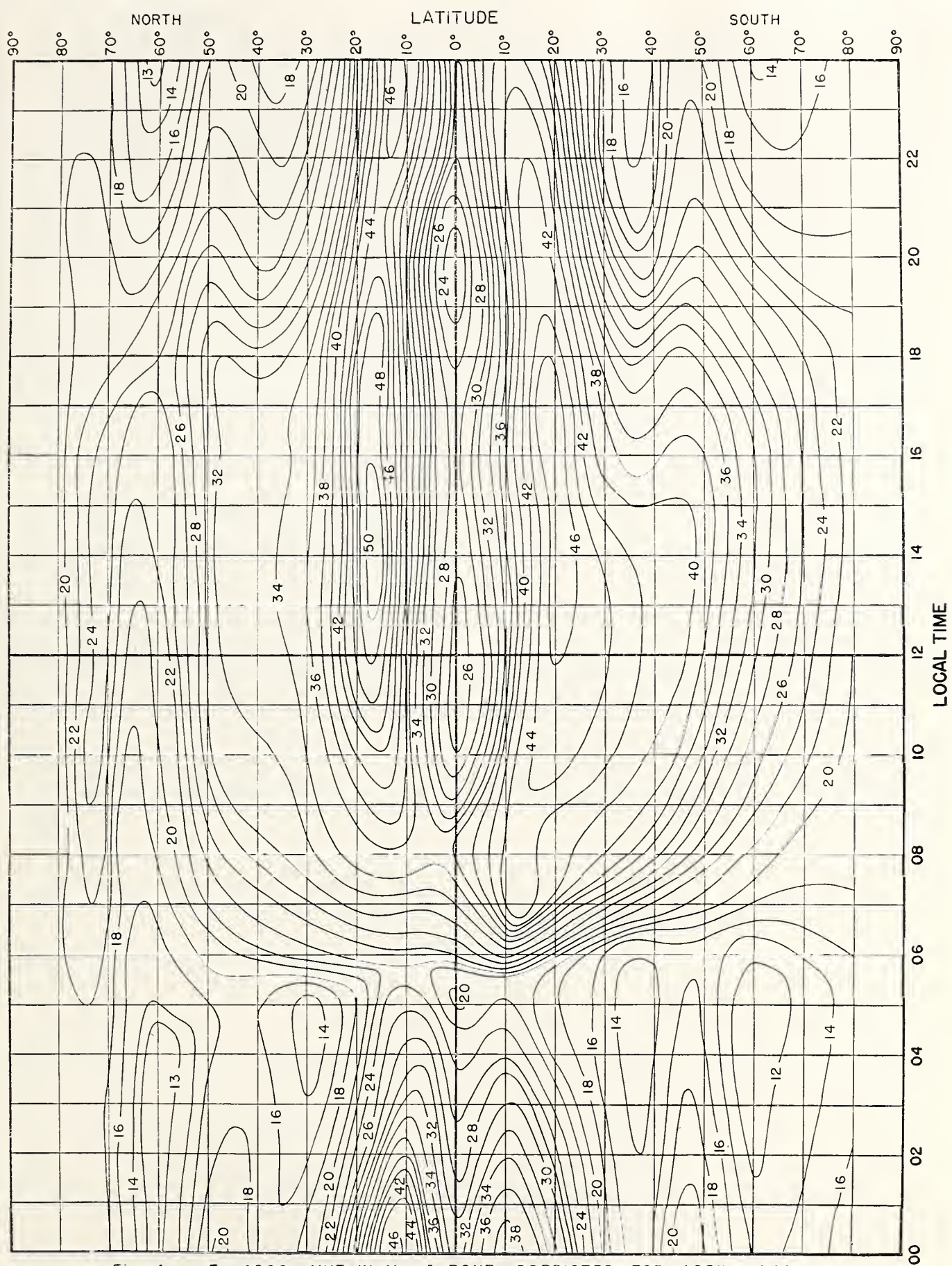


Fig. 4. $F_2 4000 - MUF$, IN Mc, I ZONE, PREDICTED FOR APRIL 1948.

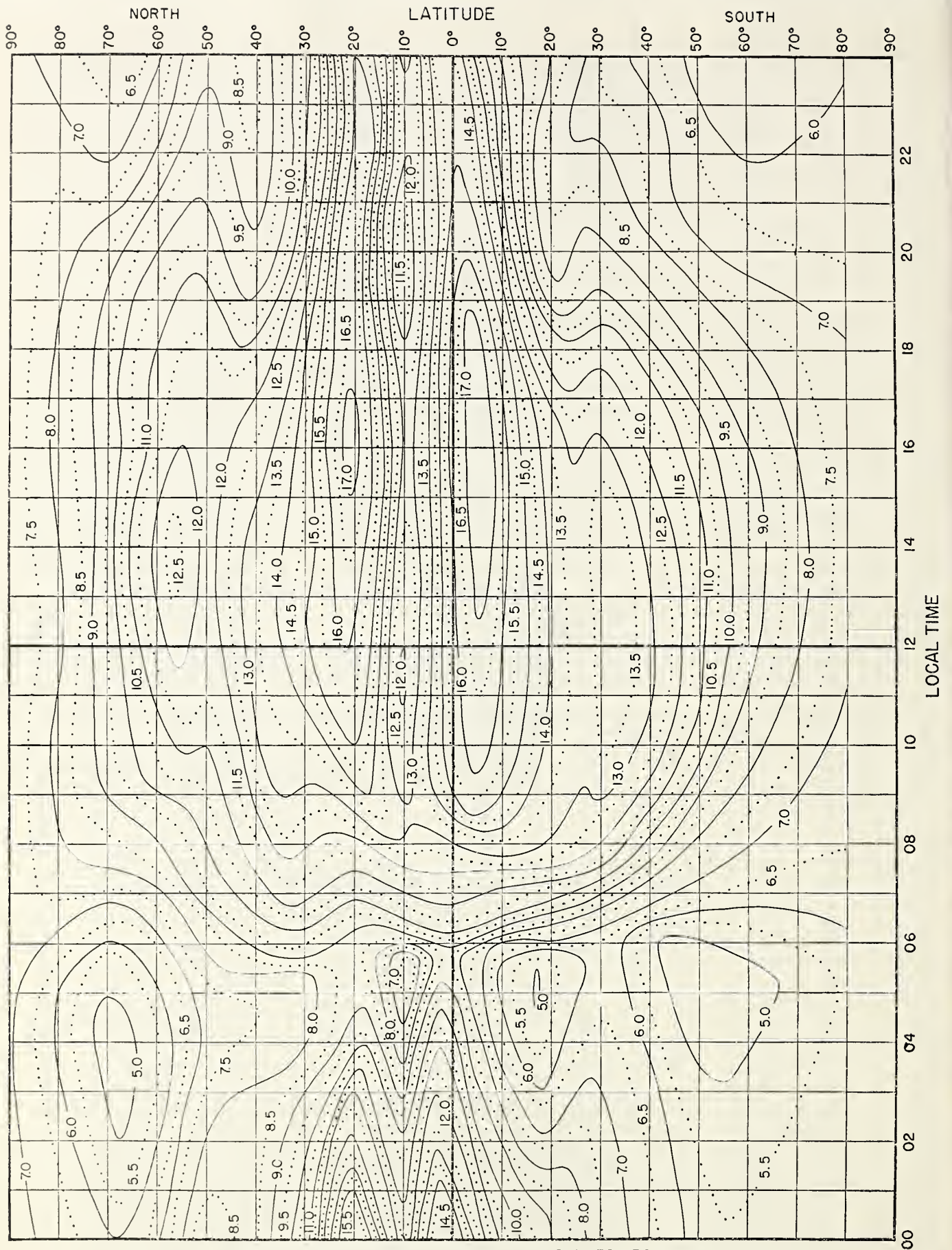


Fig. 5 F_2 ZERO-MUF, IN Mc, E ZONE, PREDICTED FOR APRIL 1948.

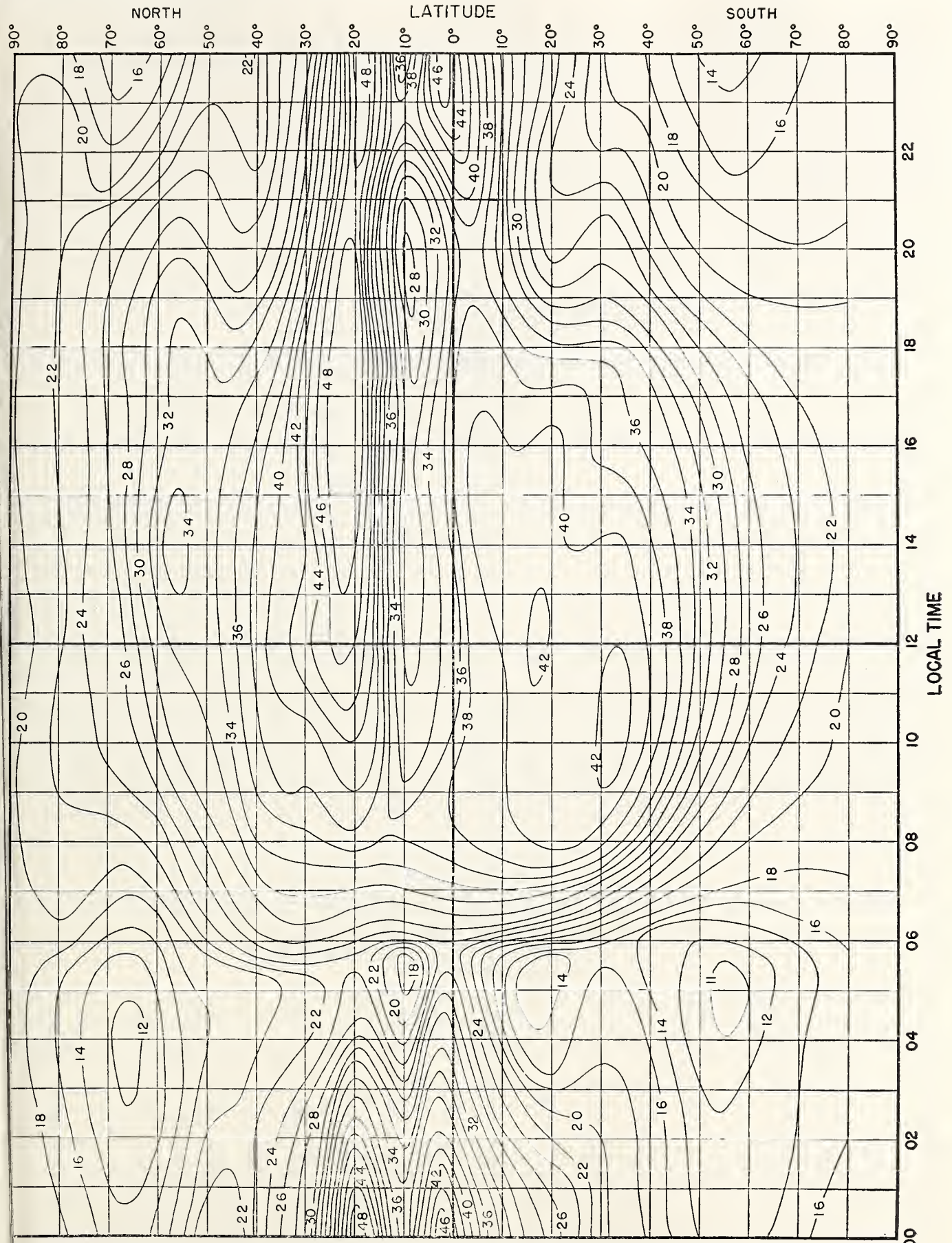


Fig. 6. F_2 4000-MUF, IN Mc, E ZONE, PREDICTED FOR APRIL 1948.

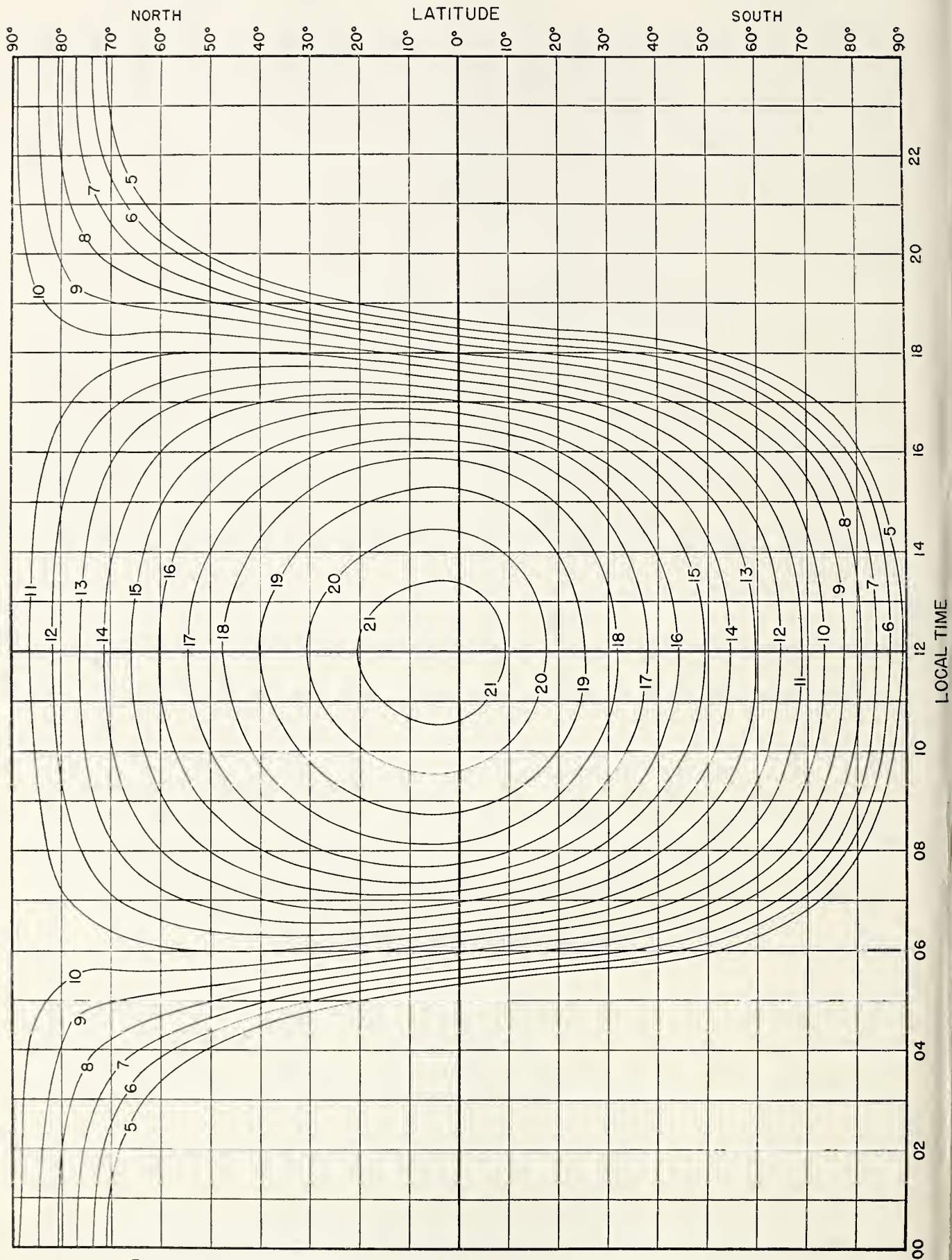


Fig. 7. E-LAYER 2000-MUF, IN Mc, PREDICTED FOR APRIL 1948.

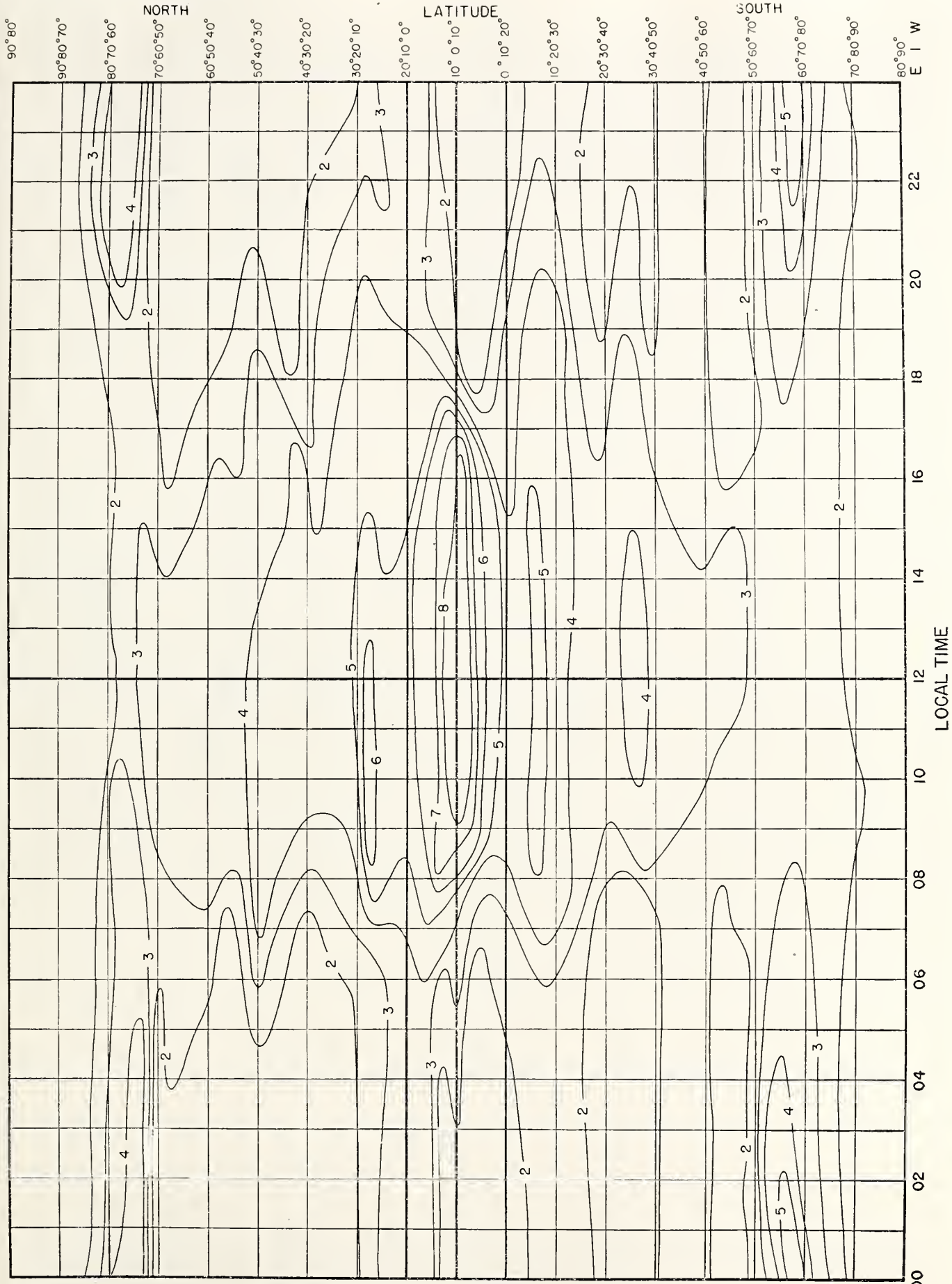


Fig. 8. MEDIAN f_{e_o} , IN Mc, PREDICTED FOR APRIL 1948.

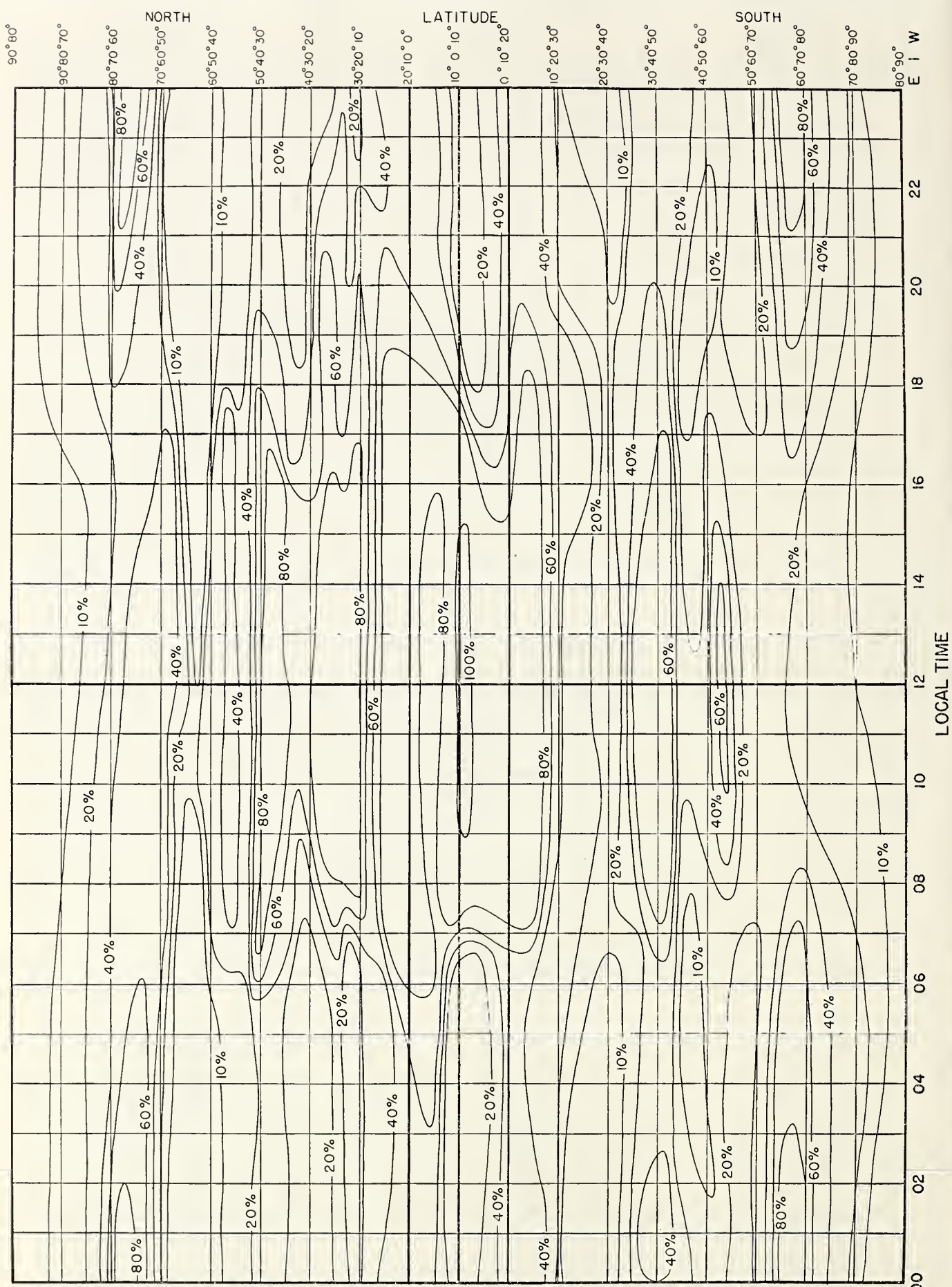
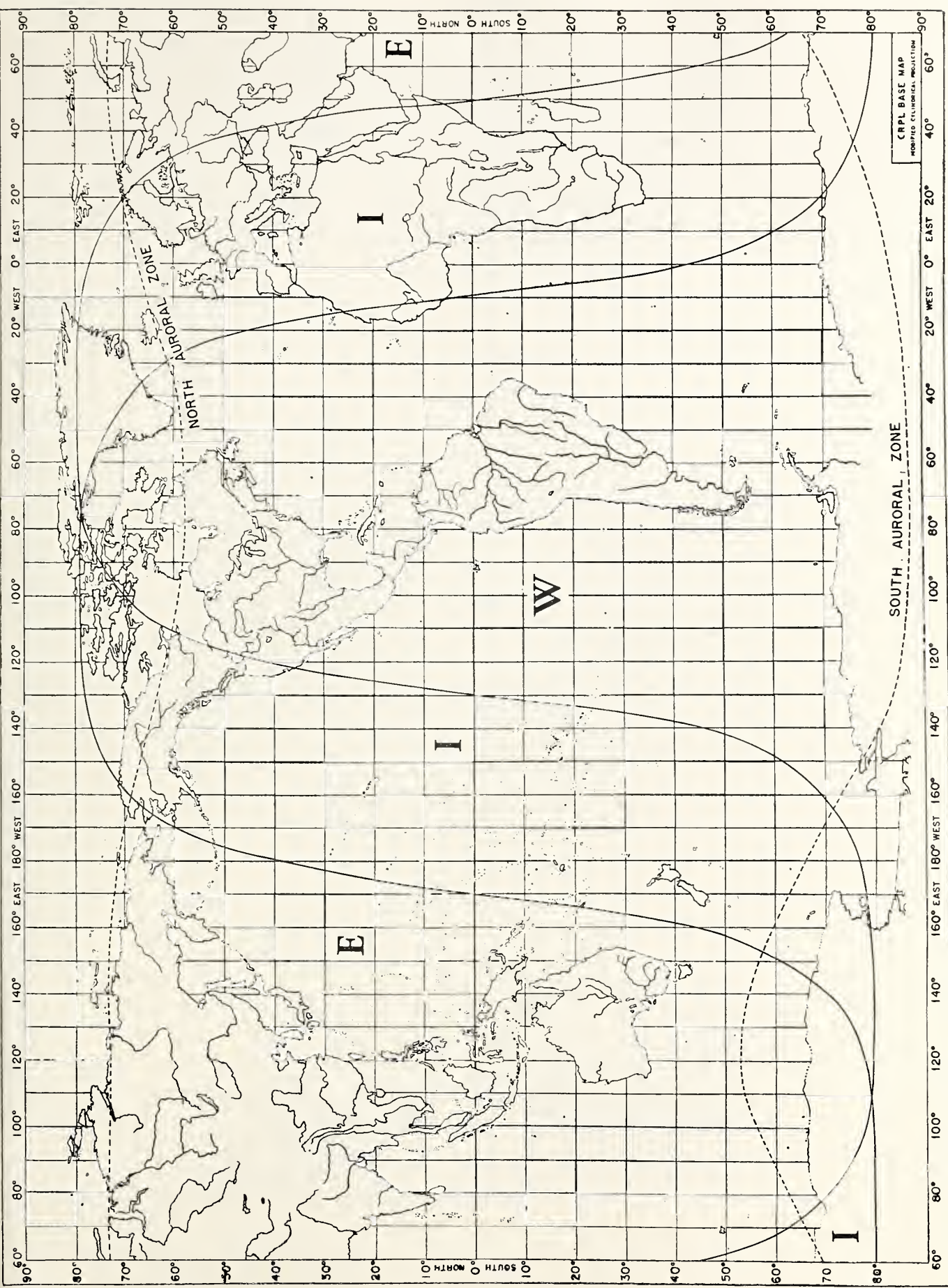
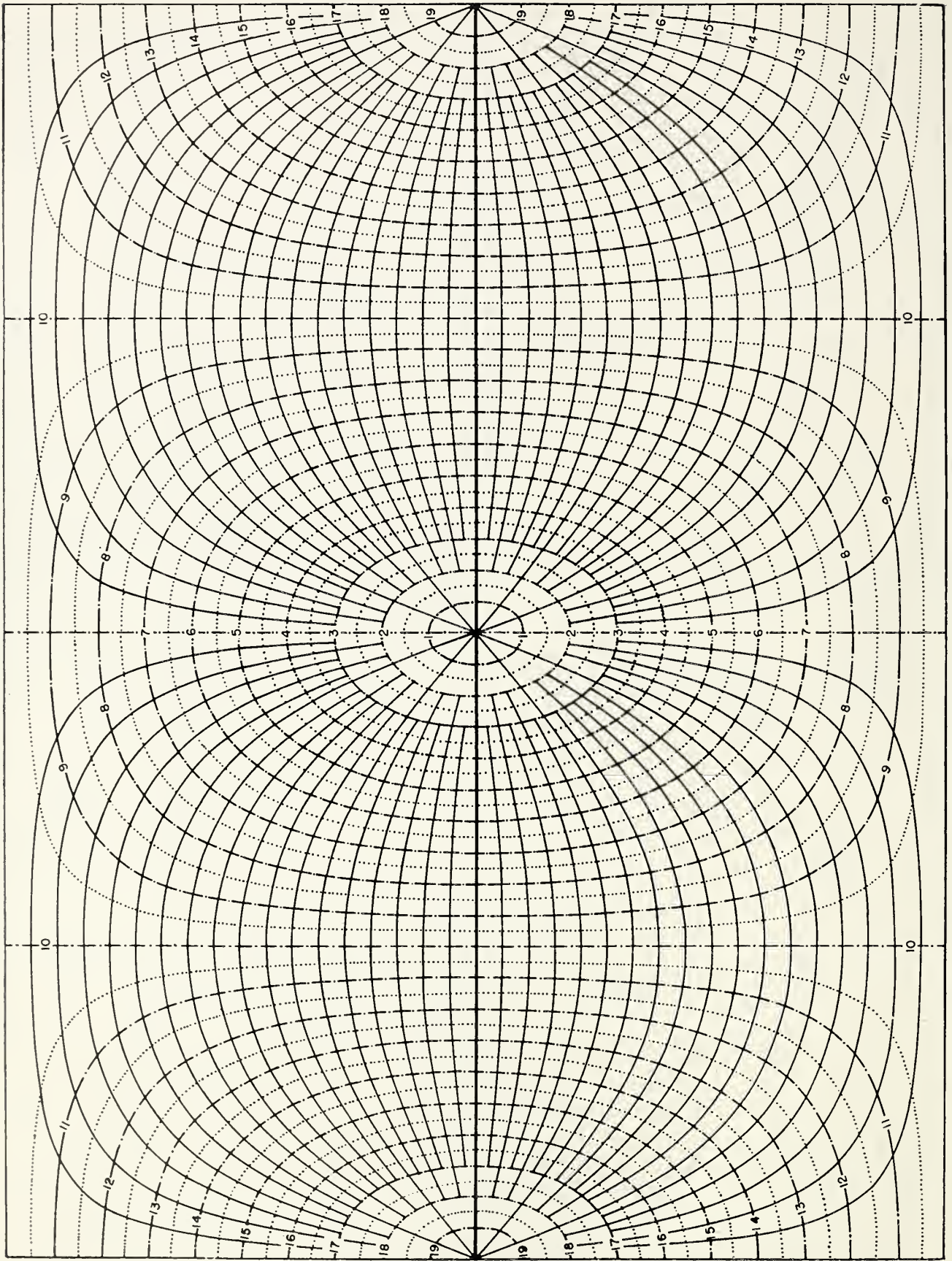


Fig 9. PERCENTAGE OF TIME OCCURRENCE FOR E_s2000-MUF IN EXCESS OF 15 Mc, PREDICTED FOR APRIL 1948.



WORLD MAP SHOWING ZONES COVERED BY PREDICTED CHARTS, AND AURORAL ZONES.



GREAT CIRCLE CHART CENTERED ON EQUATOR. SOLID LINES REPRESENT GREAT CIRCLES. NUMBERED DOT-DASH LINES INDICATE DISTANCES IN THOUSANDS OF KILOMETERS.

Form for Report to CRPL on Accuracy of Predictions

Name _____ Date _____

Address _____ No. _____ Street _____ City _____ P.O. Zone _____ State _____ Country _____

From (between) _____ to (and) _____ Date _____

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Time (specify zone) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Frequency Used | | | | | | | | | | | | | | | | | | | | | | | | | |
| D-Series Predicted OWF (Regular Layers) | | | | | | | | | | | | | | | | | | | | | | | | | |
| D-series Predicted OWF (Including Es) | | | | | | | | | | | | | | | | | | | | | | | | | |

Further comment (including notes on quality of communication):

CRPL and IRPL Reports

Daily:

Radio disturbance warnings, every half hour from broadcast station WWV of the National Bureau of Standards. Telephoned and telegraphed reports of ionospheric, solar, geomagnetic, and radio propagation data.

Weekly:

CRPL-J. Radio Propagation Forecast (of days most likely to be disturbed during following month).

Semimonthly:

CRPL-Ja. Semimonthly Frequency Revision Factors for CRPL Basic Radio Propagation Prediction Reports.

Monthly:

CRPL-D. Basic Radio Propagation Predictions—Three months in advance. (War Dept. TB 11-499-, monthly supplements to TM 11-499; Navy Dept. DNC-13-1 (), monthly supplements to DNC-13-1.)
CRPL-F. Ionospheric Data.

Quarterly:

*IRPL-A. Recommended Frequency Bands for Ships and Aircraft in the Atlantic and Pacific.
*IRPL-H. Frequency Guide for Operating Personnel.

Nonscheduled reports:

CRPL-1-1. Prediction of Annual Sunspot Numbers.
CRPL-7-1. Preliminary Instructions for Obtaining and Reducing Manual Ionospheric Records.
NBS Circular 465. Instructions for the Use of Basic Radio Propagation Predictions.

Reports issued in past:

IRPL-C61. Report of the International Radio Propagation Conference, 17 April to 5 May 1944.
IRPL-G1 through G12. Correlation of D. F. Errors With Ionospheric Conditions.

IRPL-R. Nonscheduled reports:

- R4. Methods Used by IRPL for the Prediction of Ionosphere Characteristics and Maximum Usable Frequencies.
- R5. Criteria for Ionospheric Storminess.
- R6. Experimental Studies of Ionospheric Propagation as Applied to the Loran System.
- R7. Second Report on Experimental Studies of Ionospheric Propagation as Applied to the Loran System.
- R9. An Automatic Instantaneous Indicator of Skip Distance and MUF.
- R10. A Proposal for the Use of Rockets for the Study of the Ionosphere.
- R11. A Nomographic Method for Both Prediction and Observation Correlation of Ionosphere Characteristics.
- R12. Short Time Variations in Ionospheric Characteristics.
- R14. A Graphical Method for Calculating Ground Reflection Coefficients.
- R15. Predicted Limits for F_2 -layer Radio Transmission Throughout the Solar Cycle.
- R16. Predicted F_2 -layer Frequencies Throughout the Solar Cycle, for Summer, Winter, and Equinox Season.
- R17. Japanese Ionospheric Data—1943.
- R18. Comparison of Geomagnetic Records and North Atlantic Radio Propagation Quality Figures—October 1943 Through May 1945.
- R19. Nomographic Predictions of F_2 -layer Frequencies Throughout the Solar Cycle, for June.
- R20. Nomographic Predictions of F_2 -layer Frequencies Throughout the Solar Cycle, for September.
- R21. Notes on the Preparation of Skip-Distance and MUF Charts for Use by Direction-Finder Stations. (For distances out to 4000 km.)
- R22. Nomographic Predictions of F_2 -layer Frequencies Throughout the Solar Cycle, for December.
- R23. Solar-Cycle Data for Correlation with Radio Propagation Phenomena.
- R24. Relations Between Band Width, Pulse Shape and Usefulness of Pulses in the Loran System.
- R25. The Prediction of Solar Activity as a Basis for Predictions of Radio Propagation Phenomena.
- R26. The Ionosphere as a Measure of Solar Activity.
- R27. Relationships Between Radio Propagation Disturbance and Central Meridian Passage of Sunspots Grouped by Distance From Center of Disc.
- R28. Nomographic Predictions of F_2 -layer Frequencies Throughout the Solar Cycle, for January.
- R30. Disturbance Rating in Values of IRPL Quality-Figure Scale From A. T. & T. Co. Transmission Disturbance Reports to Replace T. D. Figures as Reported.
- R31. North Atlantic Radio Propagation Disturbances, October 1943 Through October 1945.
- R32. Nomographic Predictions of F_2 -layer Frequencies Throughout the Solar Cycle, for February.
- R33. Ionospheric Data on File at IRPL.
- R34. The Interpretation of Recorded Values of fEs .
- R35. Comparison of Percentage of Total Time of Second-Multiple Es Reflections and That of fEs in Excess of 3 Mc.

IRPL-T. Reports on Tropospheric Propagation:

- T1. Radar operation and weather. (Superseded by JANP 101.)
 - T2. Radar coverage and weather. (Superseded by JANP 102.)
- CRPL-T3. Tropospheric Propagation and Radio-Meteorology. (Reissue of Columbia Wave Propagation Group WPG-5.)

*Items bearing this symbol are distributed only by U. S. Navy. They are issued under one cover as the DNC-14 series.