

Sondrestrom
James Vickrey
SRI International

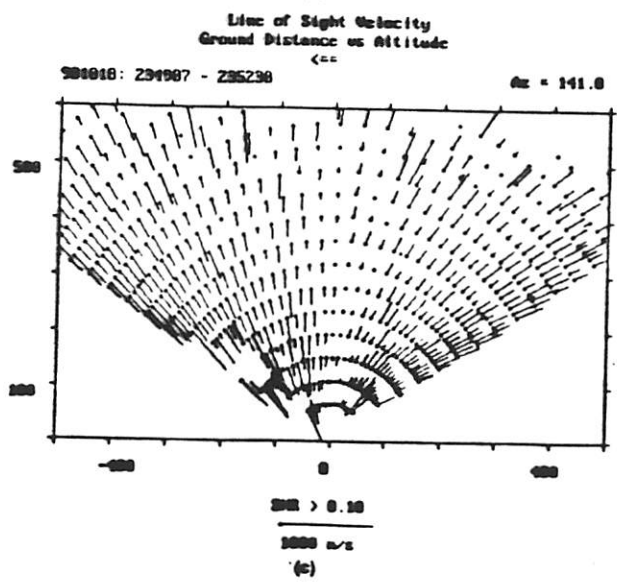
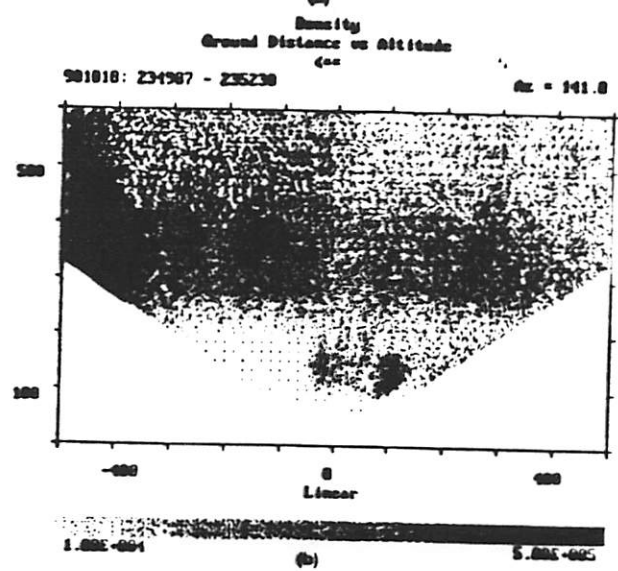
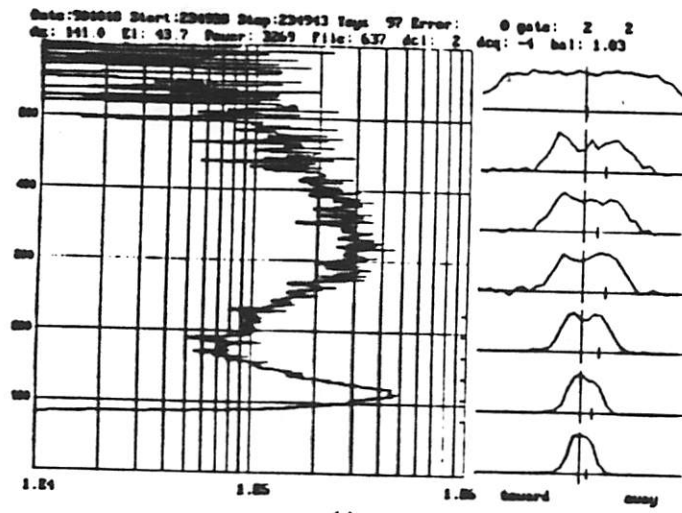


Figure 2. Examples of real-time displays available to the visiting scientist at Sondrestrom. (a) Plasma density profile and the incoherent scatter spectra observed at a number of altitudes. (b) Gray-scale map of the plasma-density distribution as a function of altitude and ground distance from the radar throughout an elevation scan of the radar antenna. (c) Line-of-sight velocity component of the ionosphere measured simultaneously with (b).

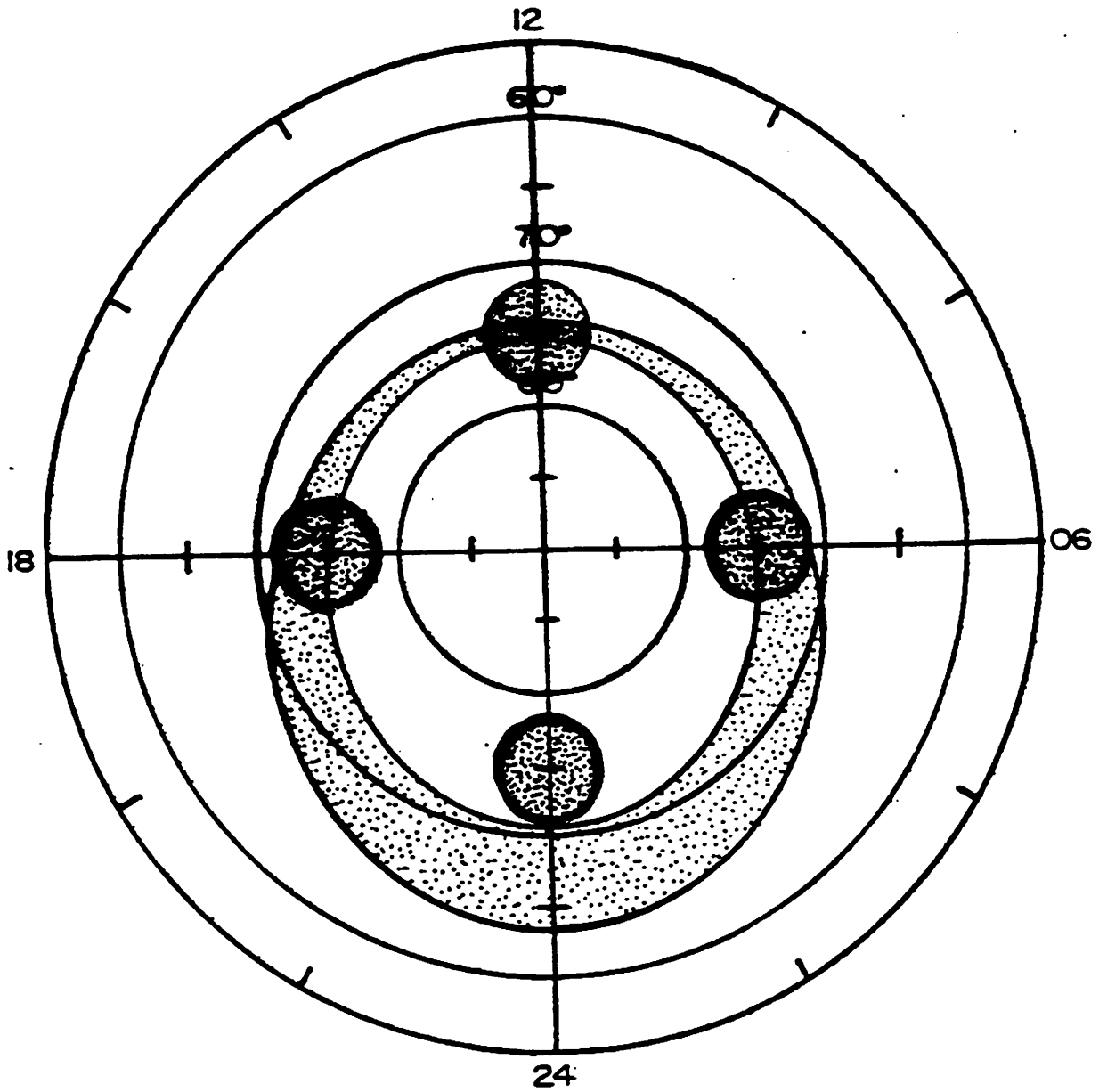


Figure 8.2 A Magnetic Local Time (MLT) versus Invariant Latitude plot of the auroral oval with the E-region fields of view of a radar located at 75° A placed at 06, 12, 18 and 24 hours MLT.

Ionospheric Conditions Over Sondrestrom

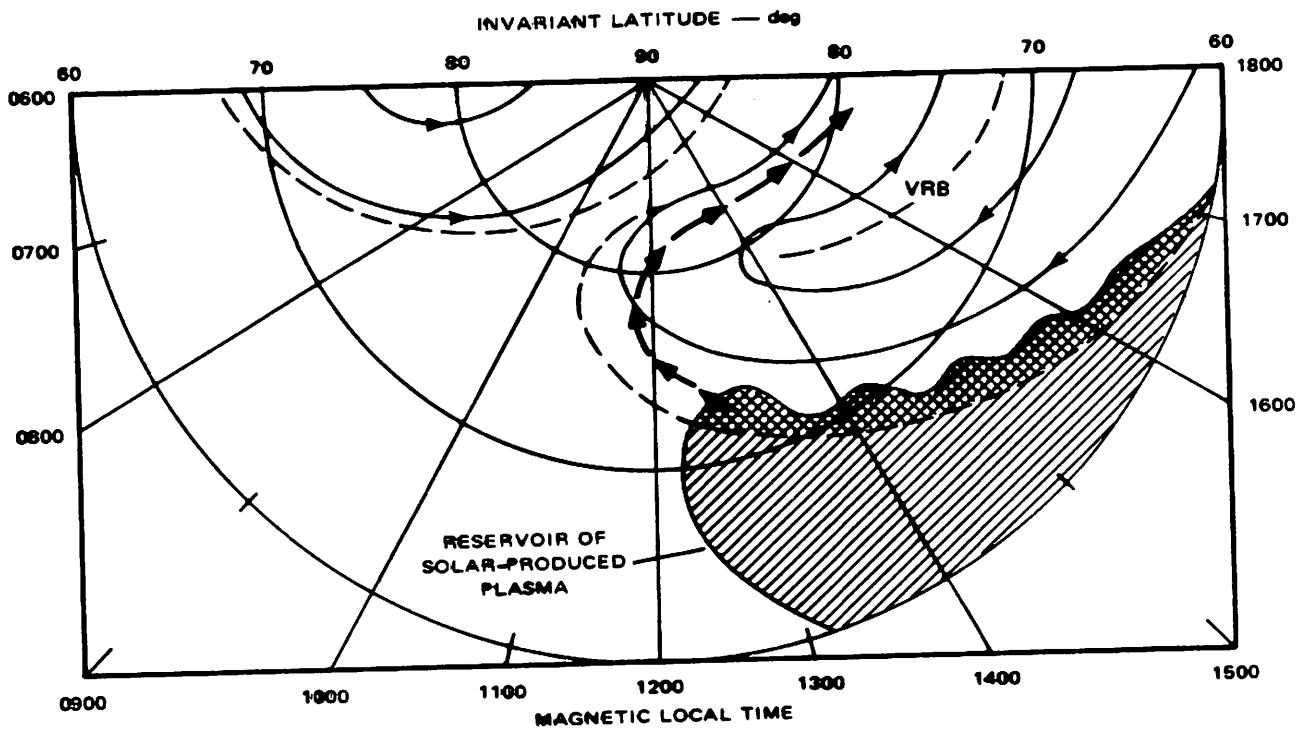
Jim Vickrey

or

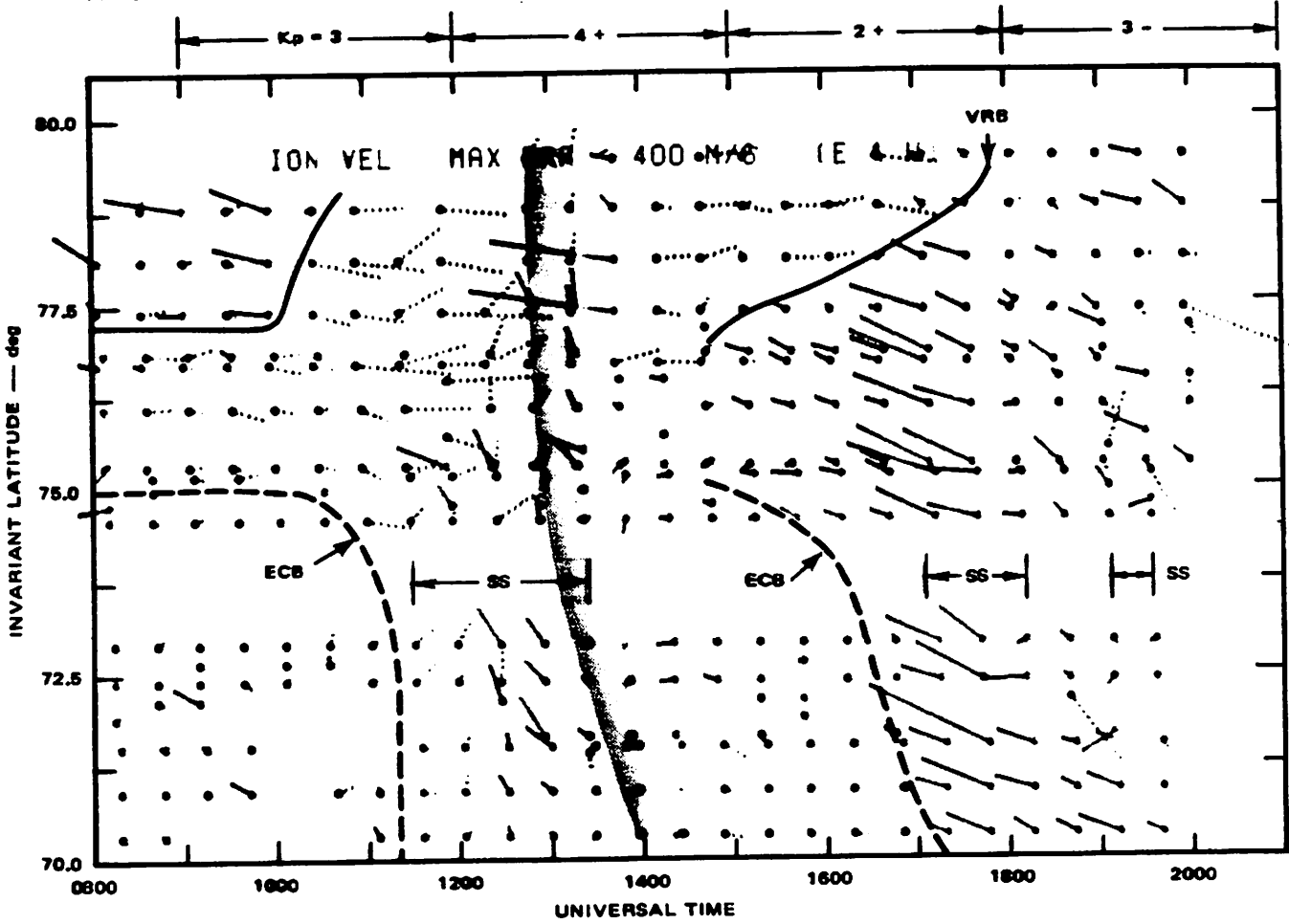
"One man's view of structure in
Ne, Te, Ti, Vi, ...etc as you

♪ - "WALK AROUND THE CLOCK" - ♪
in Sondrestrom"

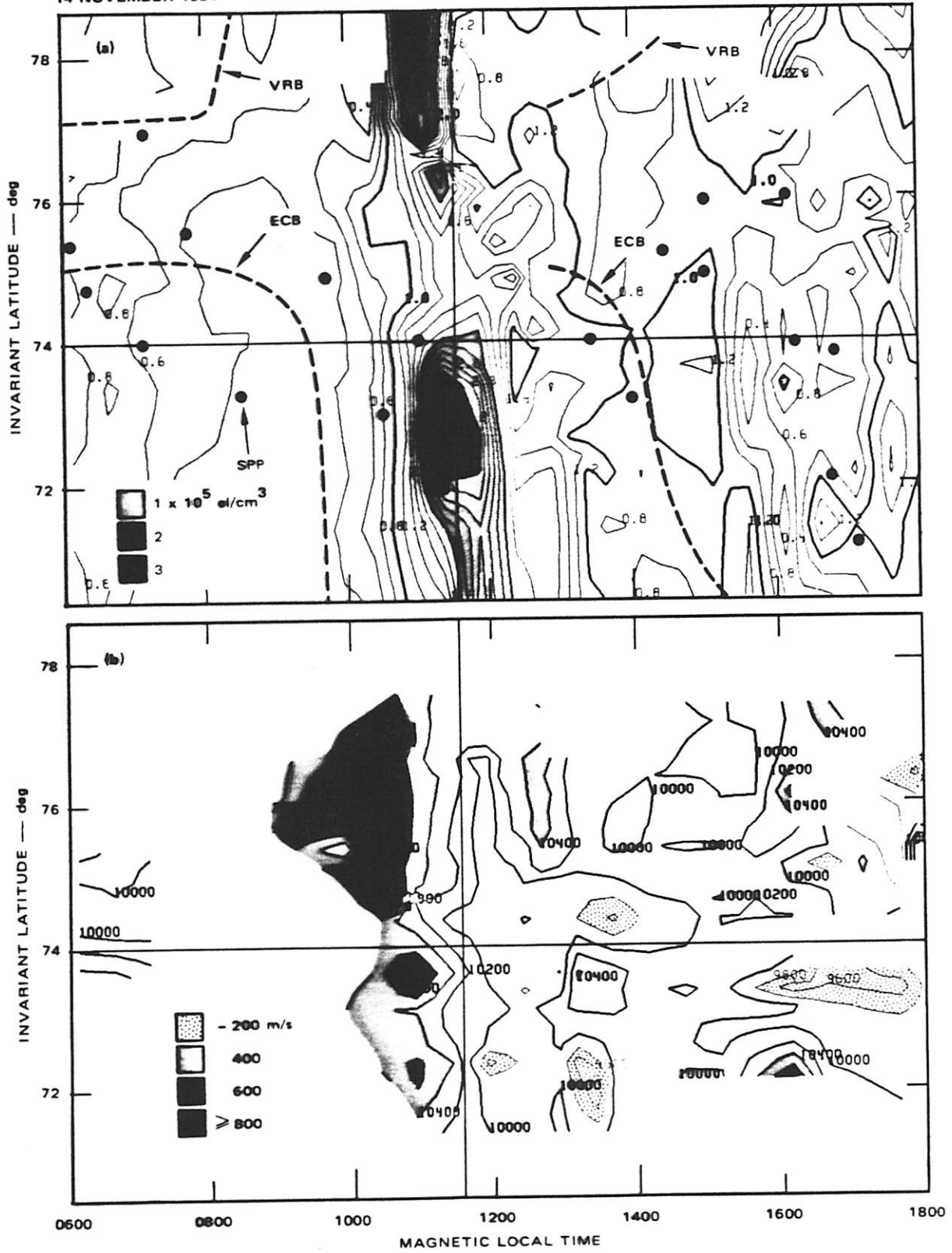
Tsunoda et al. 1989



14 NOVEMBER 1984



14 NOVEMBER 1984



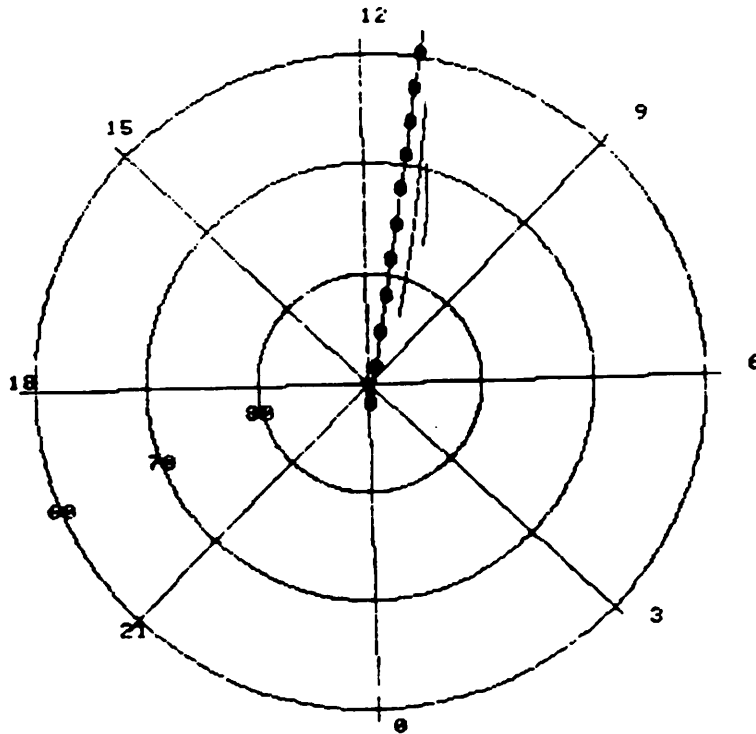
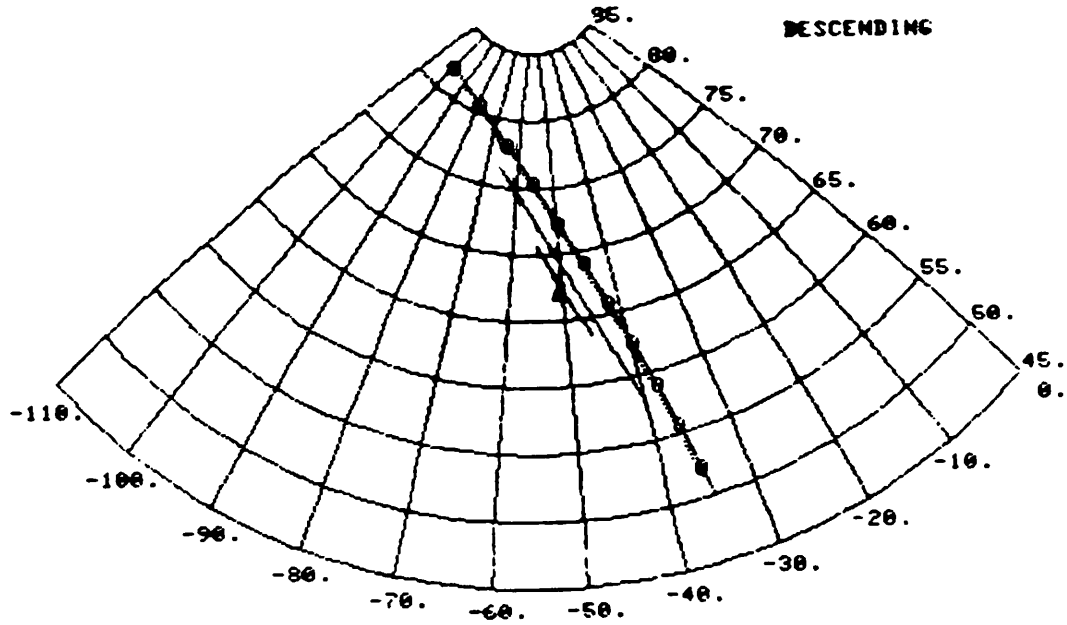
HILAT Sondre Stromfjord

day 167, 1984

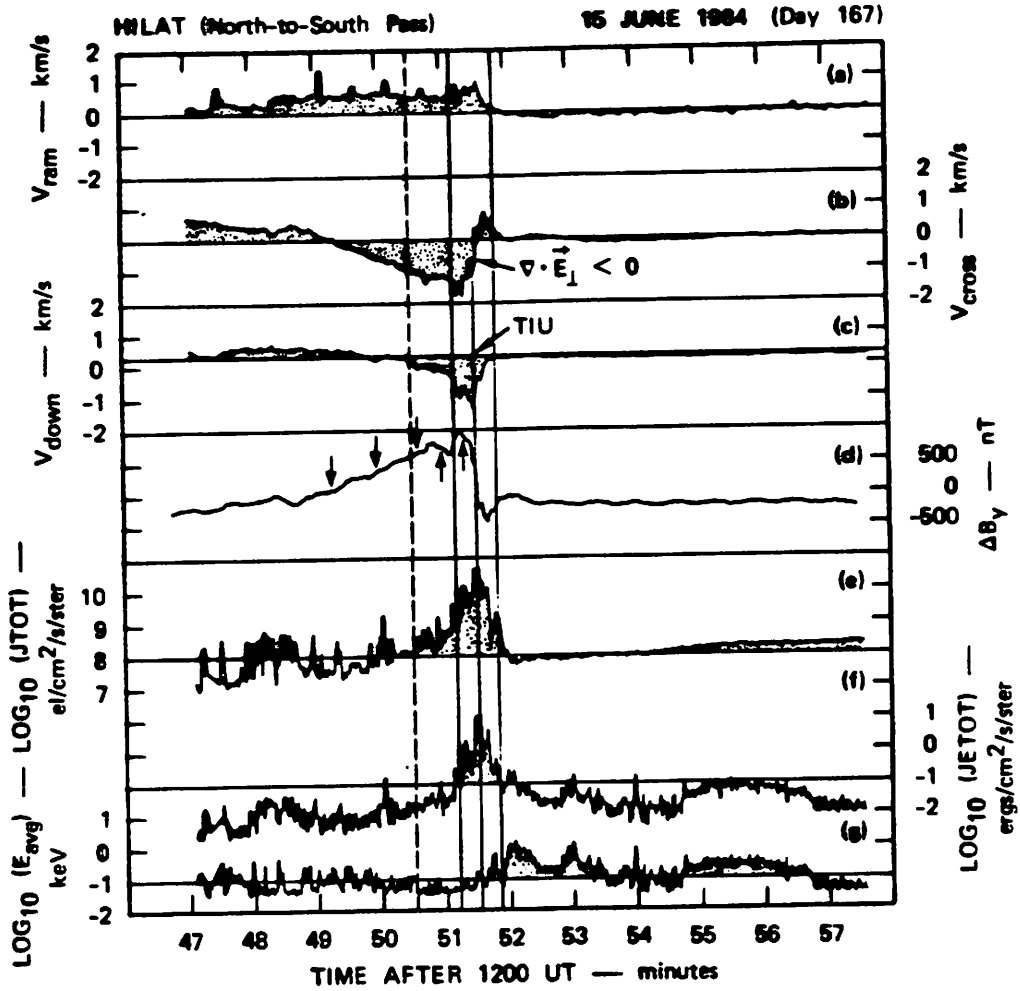
maximum elevation: 67.4

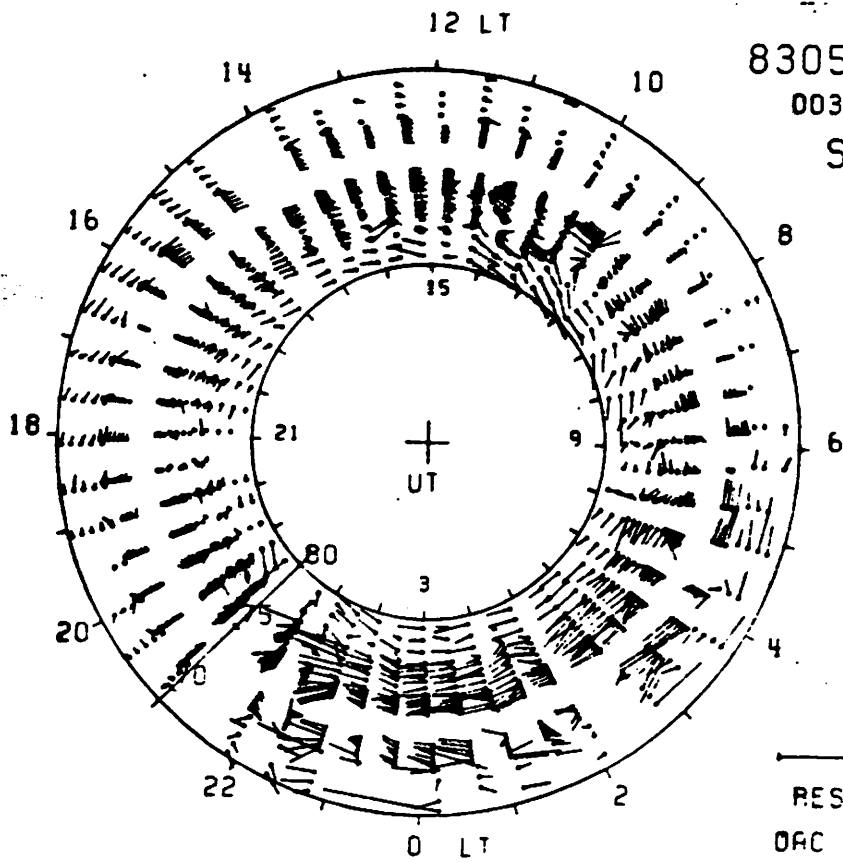
218-02

1245 UT

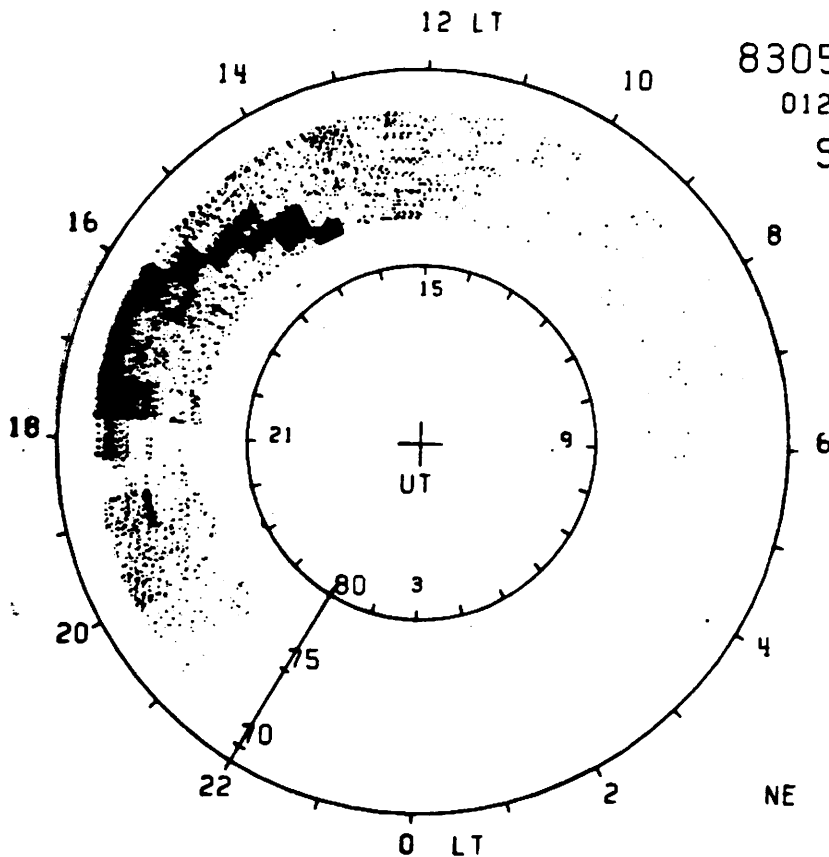


Tsunoda et al





830518 TO 830518
003839 235755 UT
SONDRESTROM



830518 TO 830519
012237 000302 UT
SONDRESTROM

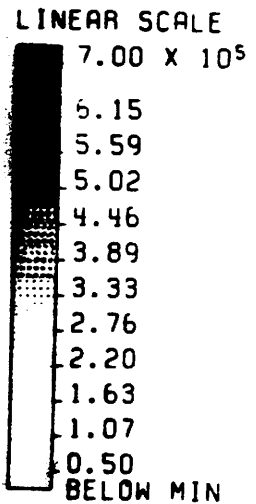
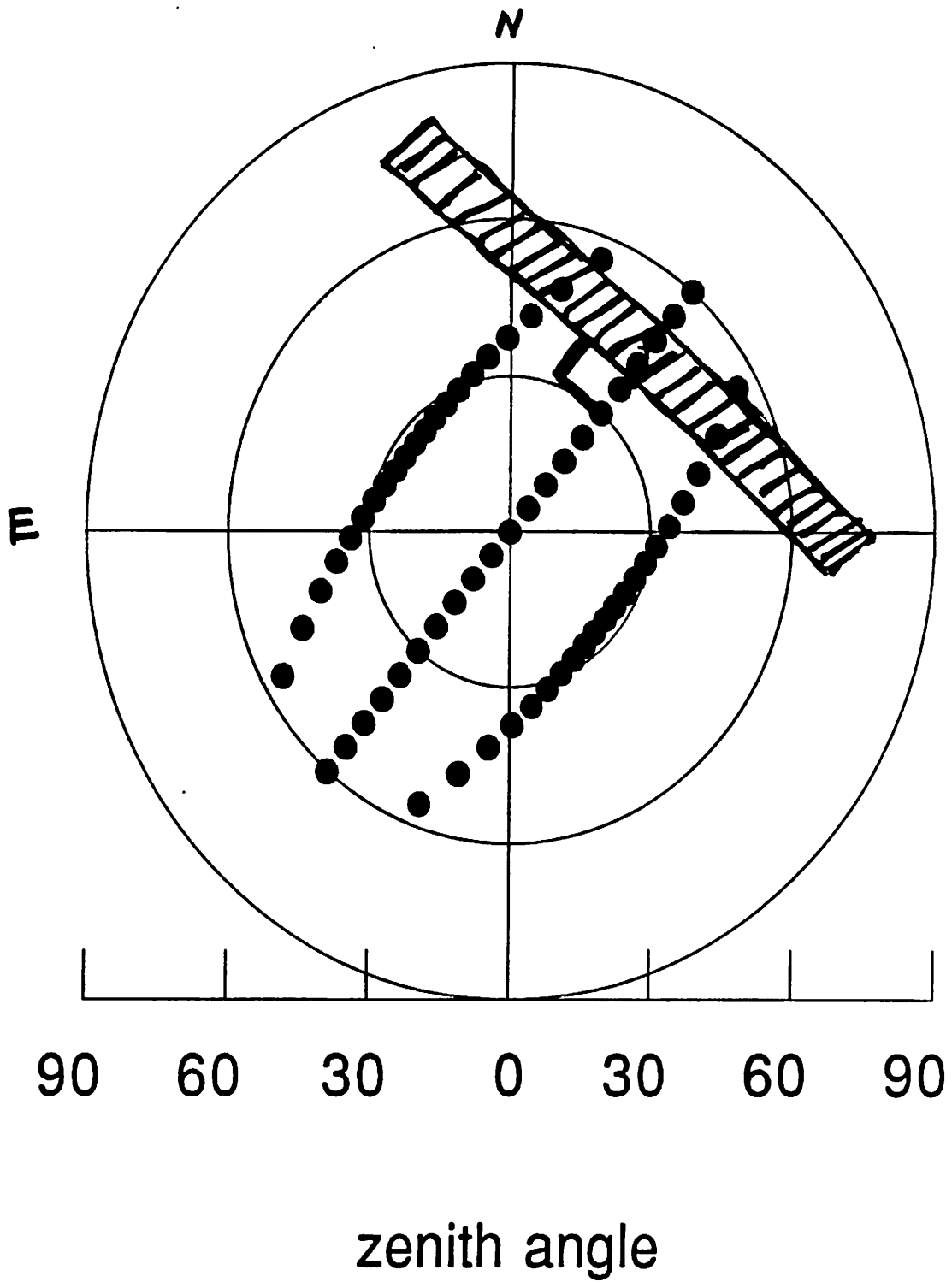
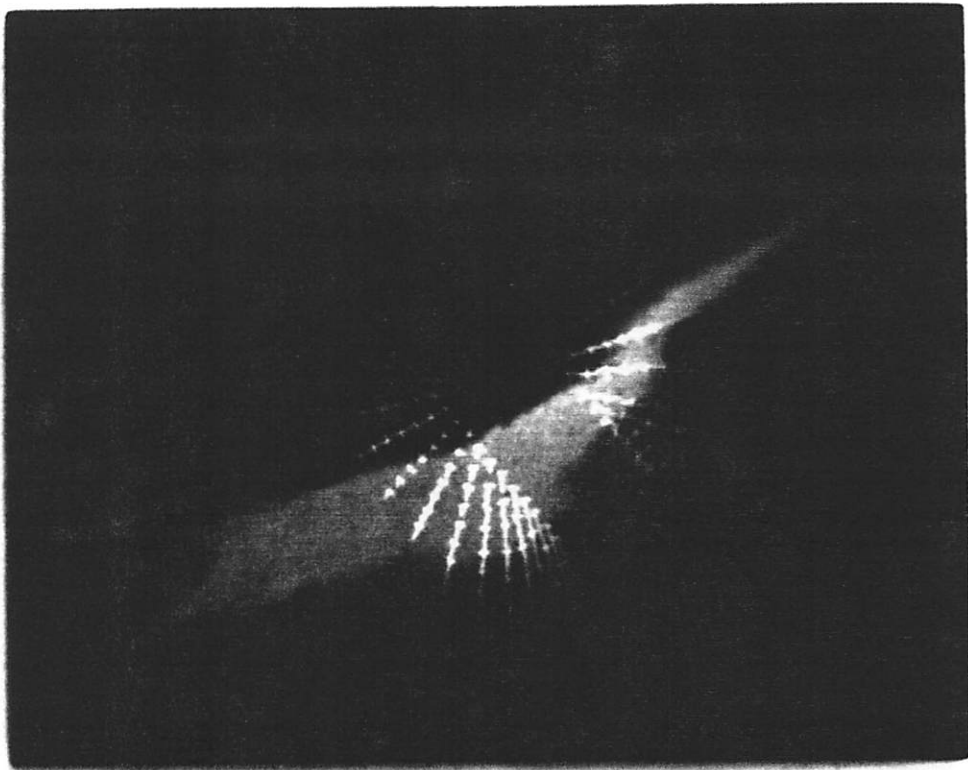


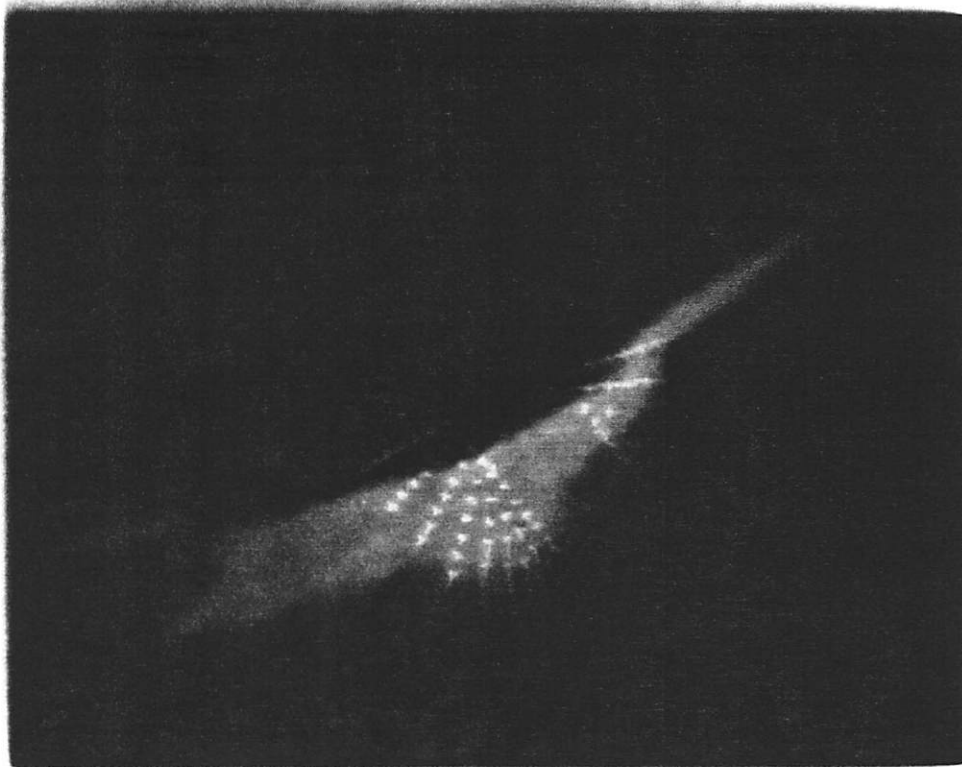
FIGURE 1 ENHANCED F-REGION N_e ALONG VELOCITY REVERSAL

RODEO Look Angles in Azimuth and Elevation Space





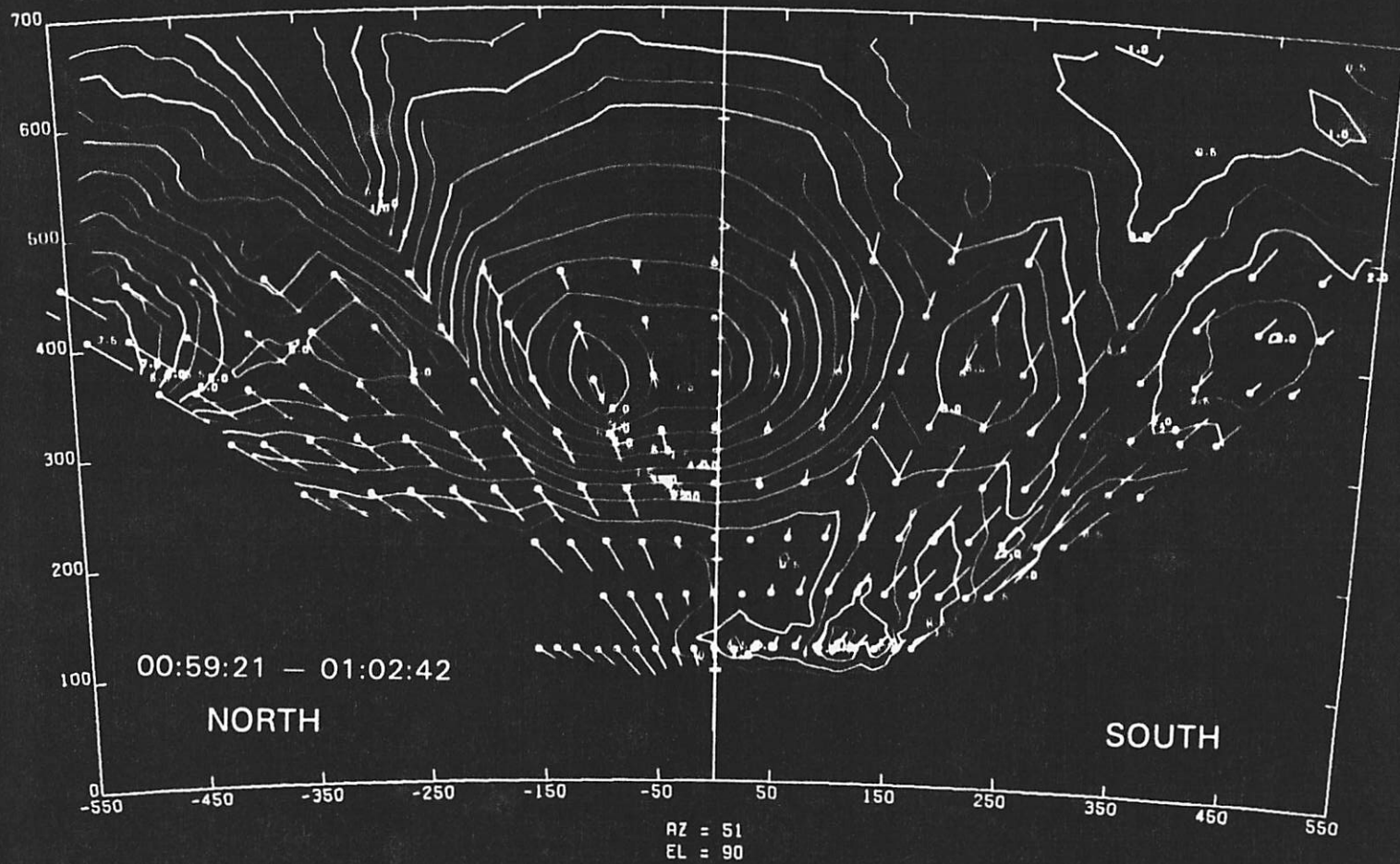
MEASURED RADAR LOS VELOCITY

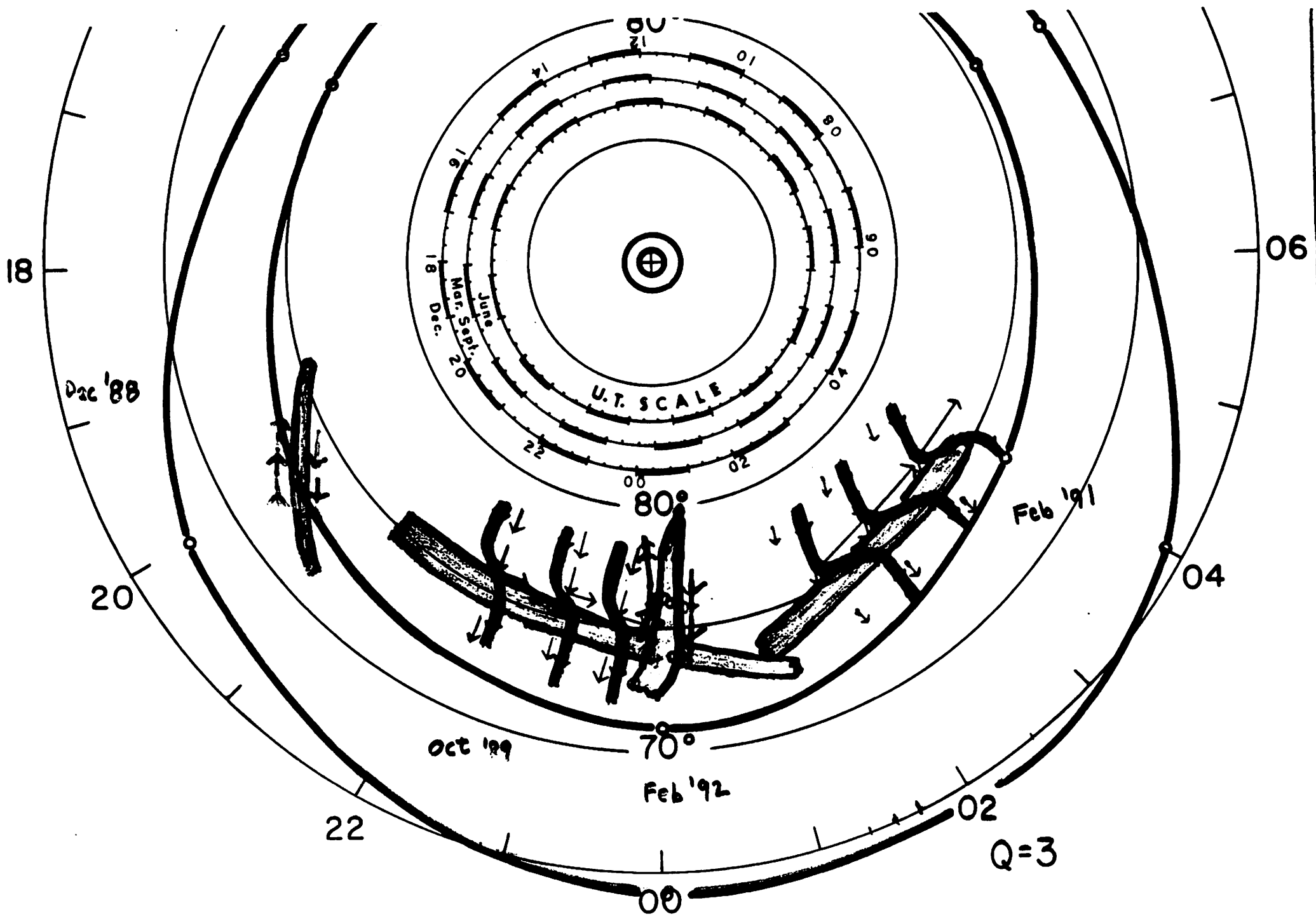


VELOCITY ASSUMED = 500 m/s

ANGLE ASSUMED = 1°

651-01





U.T. SCALE

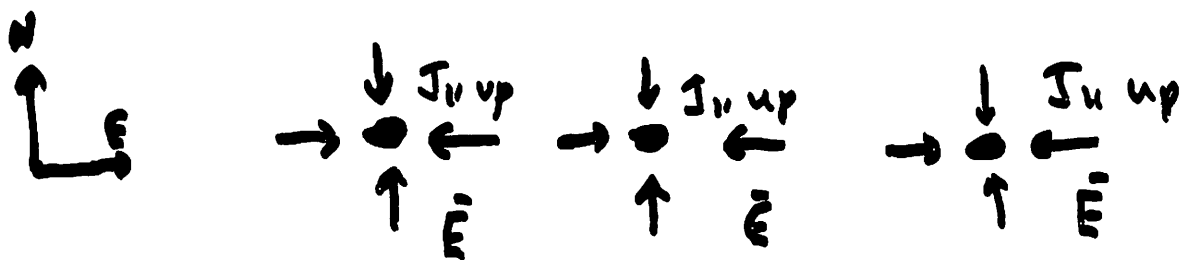
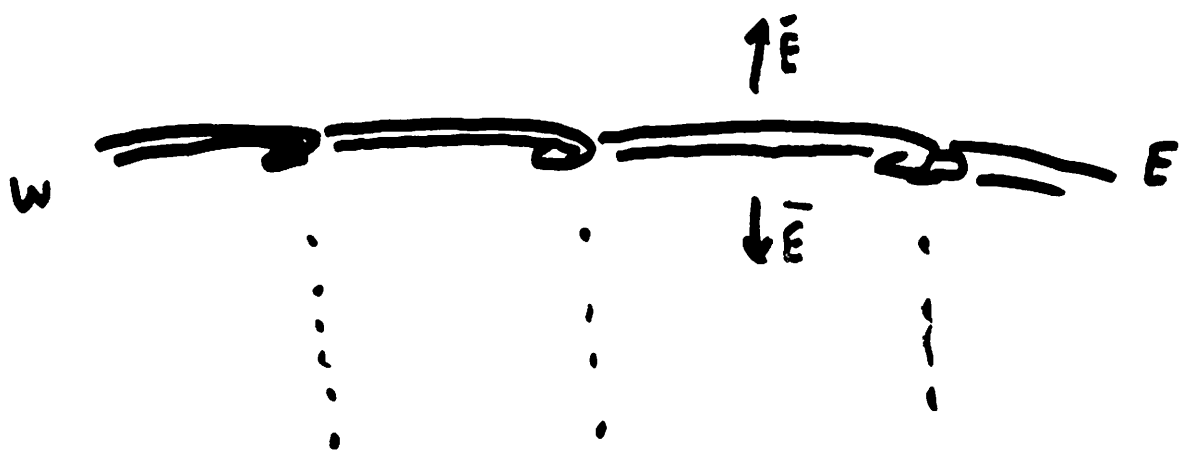
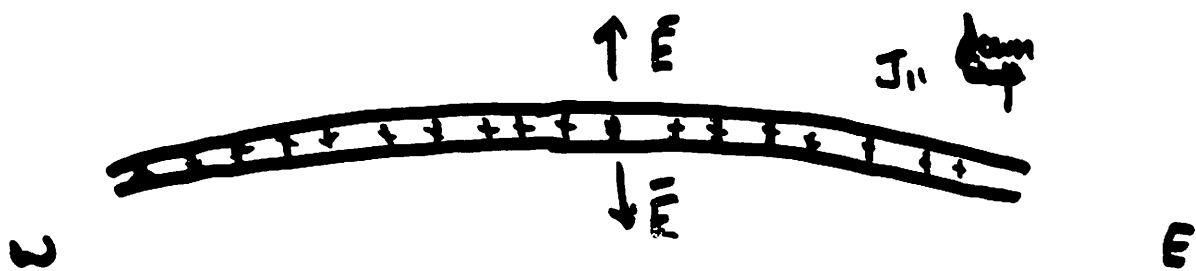
June
Mar. Sept. '20
Dec.

80°

70°

Feb '92

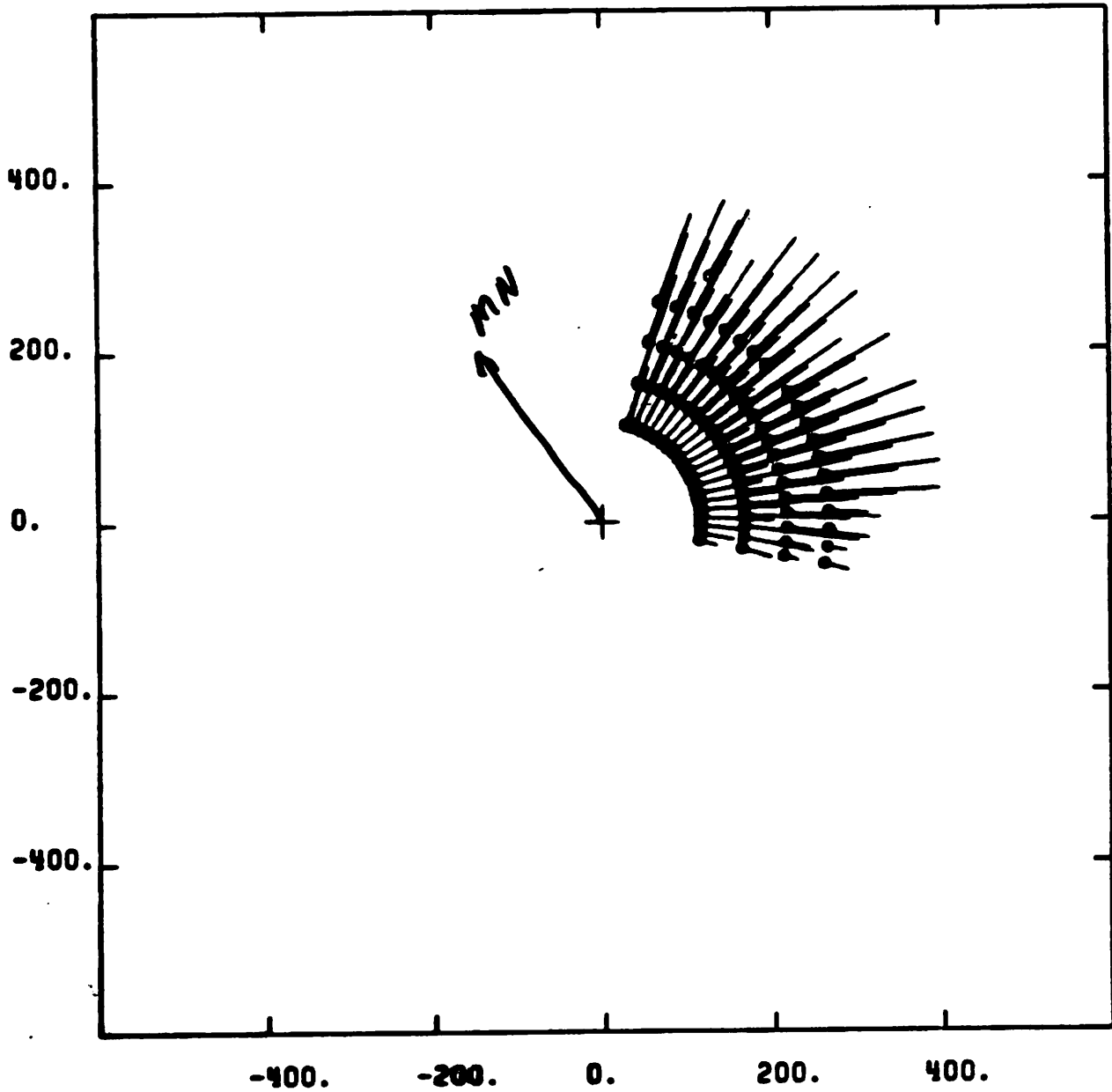
Q=3



PRISIS HORIZONTAL VELOCITY 2000 M/S = 

850123
100406 - 100906

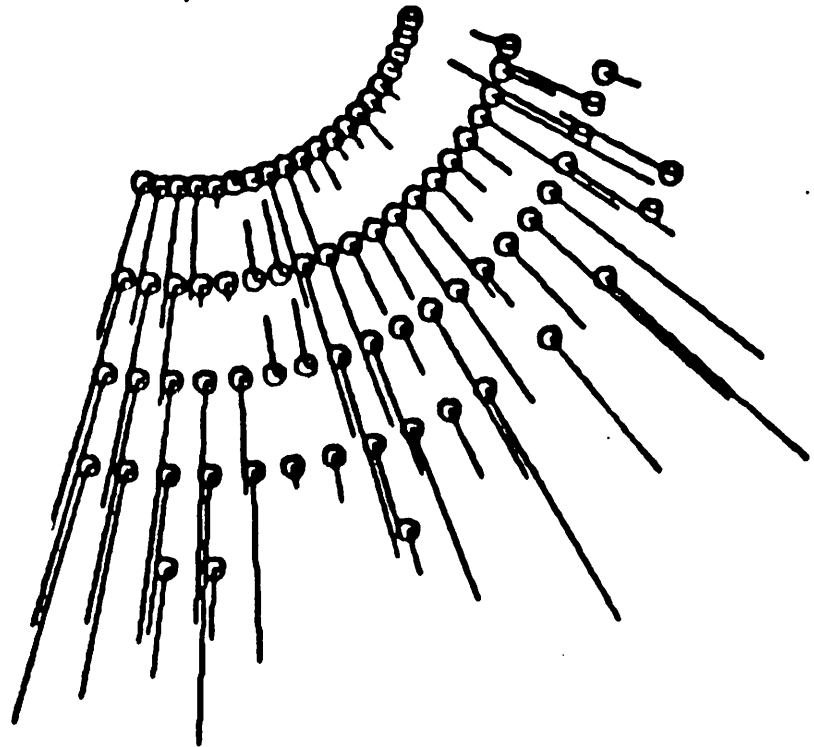
RUNDATE
850226



GROUND DISTANCE
EL = 45.
INT = 15.
VLOS ERR <= 150.

500

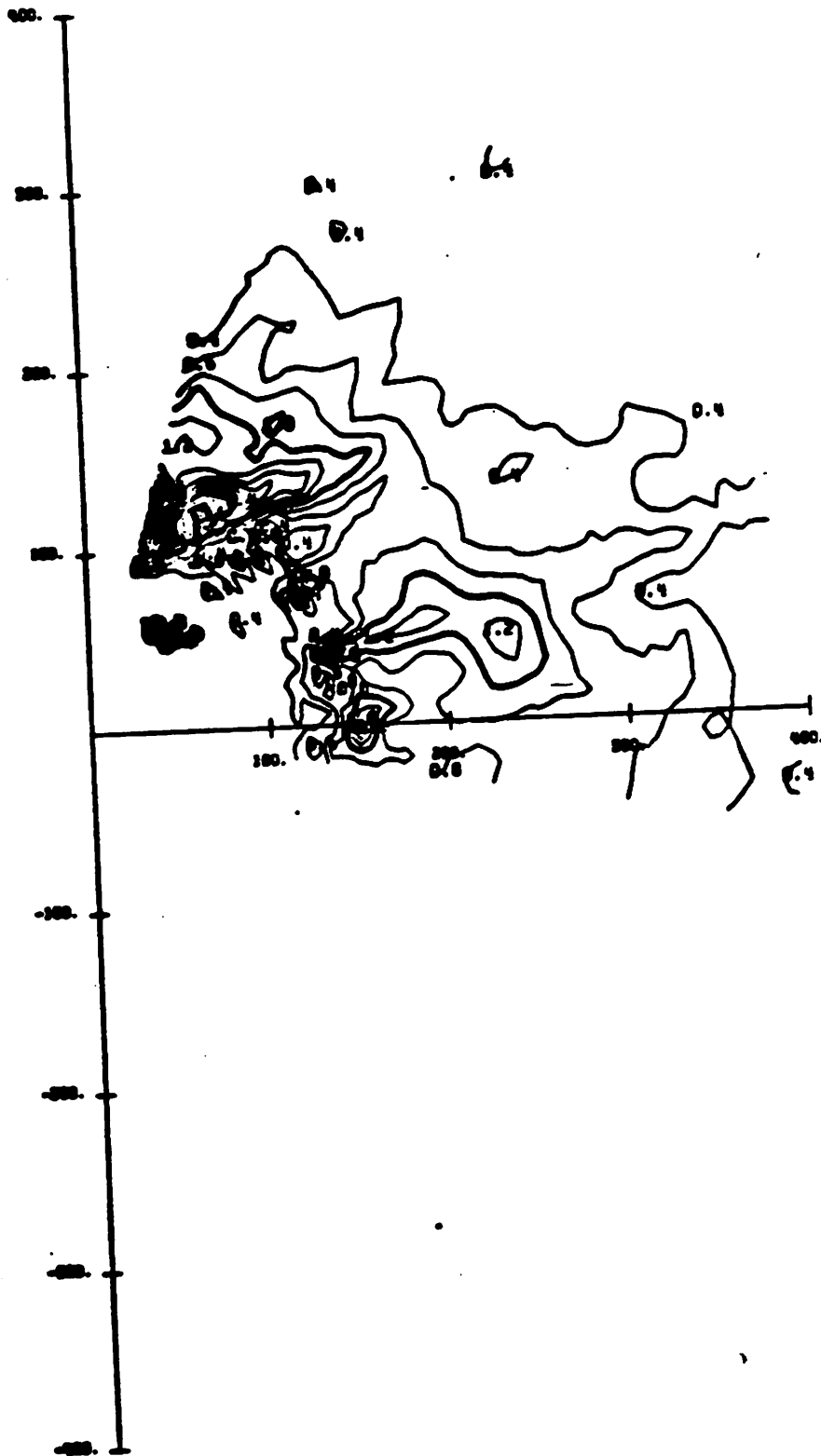
+



050123 UT
101000 - 101459

PRISIS
HE - 10.00 - 5
INT - 15

REPORT
050123



GROUND DISTANCE
EL - 45.

SONDRESTROM RADAR EXPERIMENT REQUEST FORM

The deadline for radar requests is the 10th of the month preceding your desired experiment. Please submit a completed form to: Dr. John D. Kelly, Geoscience and Engineering Center, SRI International, 333 Ravenswood Avenue, Menlo Park, CA 94025, Telephone: (415) 859-3749, FAX: (415) 322-2318, E-Mail, Internet: Kelly @SRI.COM

EXPERIMENT

1. Primary Experimenter and Affiliation:

Collaborators/Affiliation:

2. Scientific Purpose of Experiment:

3. Time Request:

Month:

Periods of Observation: Please be clear about when your window begins and ends (e.g., "from 19 to 06 UT, from the evening of the 8th to the morning of the 14th.").

4. Particular Geophysical Conditions for Observations:

Essential:

Desirable:

5. Ancillary Equipment:

Existing observatory systems to be operated:

Equipment to be shipped to Sondrestrom for experiment:

Site crew support required for preparation/operation of equipment:

PERSONNEL

6. Individuals who will travel to and stay at Sondrestrom:

Name

Dates of Stay

Mode of Travel

OPERATIONAL MODE

7. Radar Mode Choice:

_____ To be selected by SRI

_____ Duplication of previous experiment (Date of that experiment _____)

_____ As specified below:

Waveform combination from Tables I and II: _____

On-line integration time _____

Antenna Mode _____

TABLE I
Currently Available Radar Waveforms
For Ionospheric Observations

<ol style="list-style-type: none"> 1. 320-μs pulse with 14-μs lag sampling 2. 320-μs pulse with 4-μs lag sampling 3. Four 20-μs pulses 4. Five 10-μs pulses 5. 52-μs Barker-coded pulse, 13 baud code, 4-μs baud 6. 28-μs Barker-coded pulse, 7 baud code, 4-μs baud 7. 26-μs Barker-coded pulse, 13 baud code, 2-μs baud 8. 5 pulse, 26-μs lag spacing, 7 baud code, 4-μs baud 9. 5 pulse, 26-μs lag spacing, 13 baud code, 2-μs baud 	<p>Standard Singlepulse Topside Singlepulse Multipulse Multipulse Barker-coded Singlepulse Barker-coded Singlepulse Barker-coded Singlepulse Barker-coded Multipulse Barker-coded Multipulse</p>
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TABLE II
The Current Hardware Setups Allow for the
Following Pairs of Waveforms Listed in Table I

- 1 - 1
- 1 - 3
- 1 - 4
- 1 - 5
- 1 - 6
- 1 - 7
- 1 - 9
- 2 - 3
- 5 - 5
- 8 - 9