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**NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE**
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APRIL 1994 NUMBER 596 - Part I

# Solar-Geophysical Data prompt reports

Data for March, February 1994, and Late Data

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**NATIONAL GEOPHYSICAL DATA CENTER**
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# SOLAR-GEOPHYSICAL DATA

Number 596

(Issued in Two Parts)

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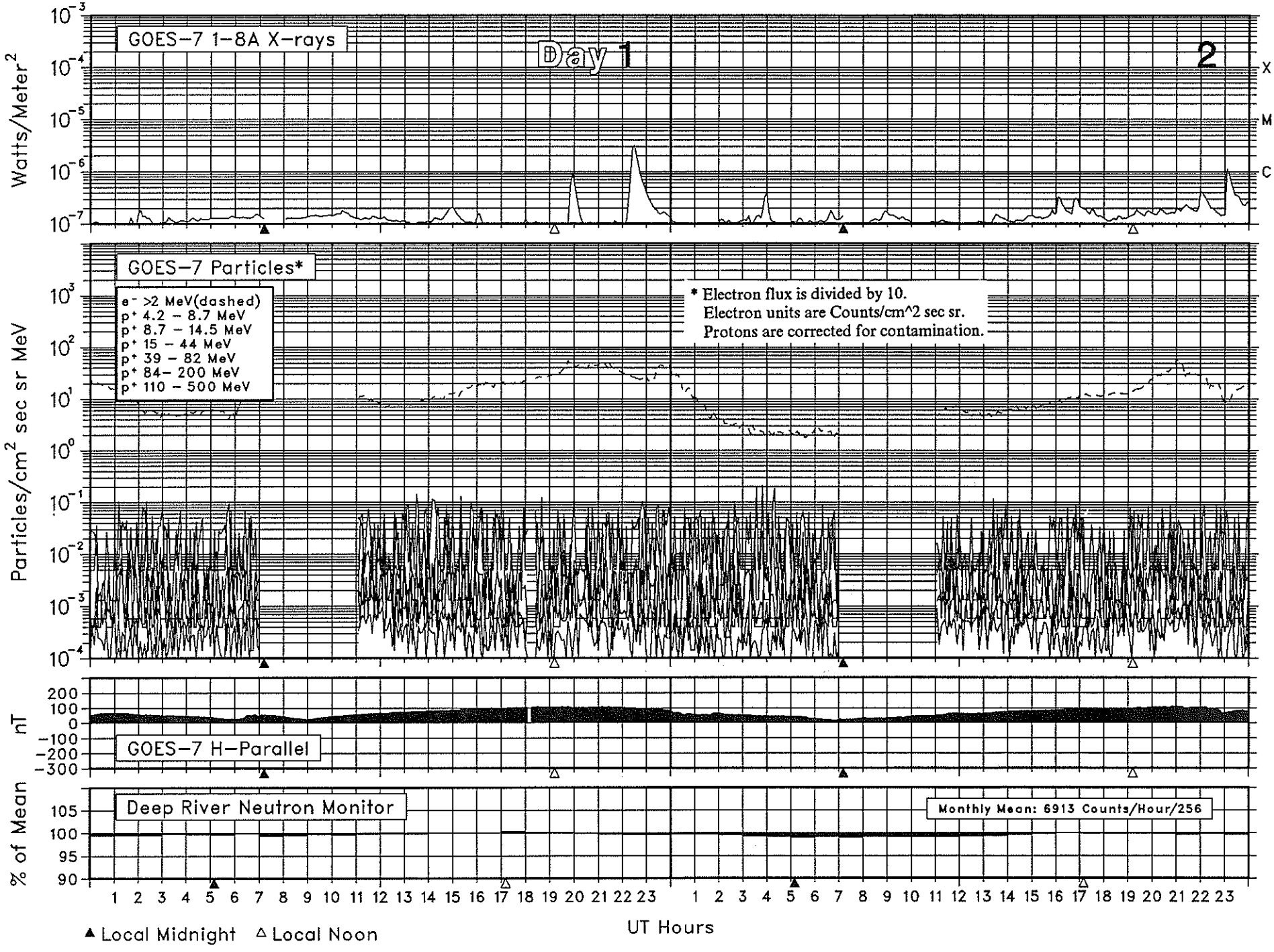
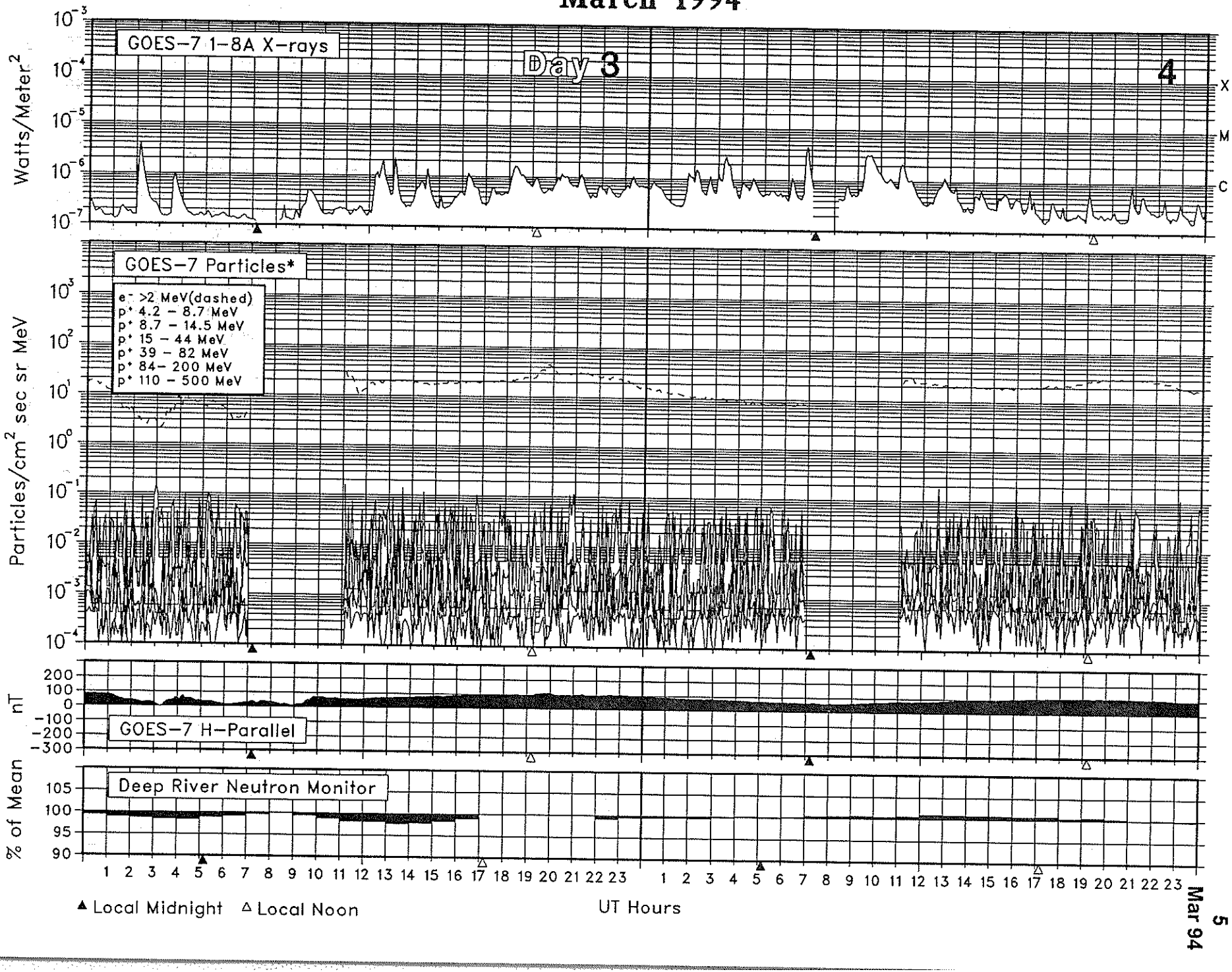
## March 1994

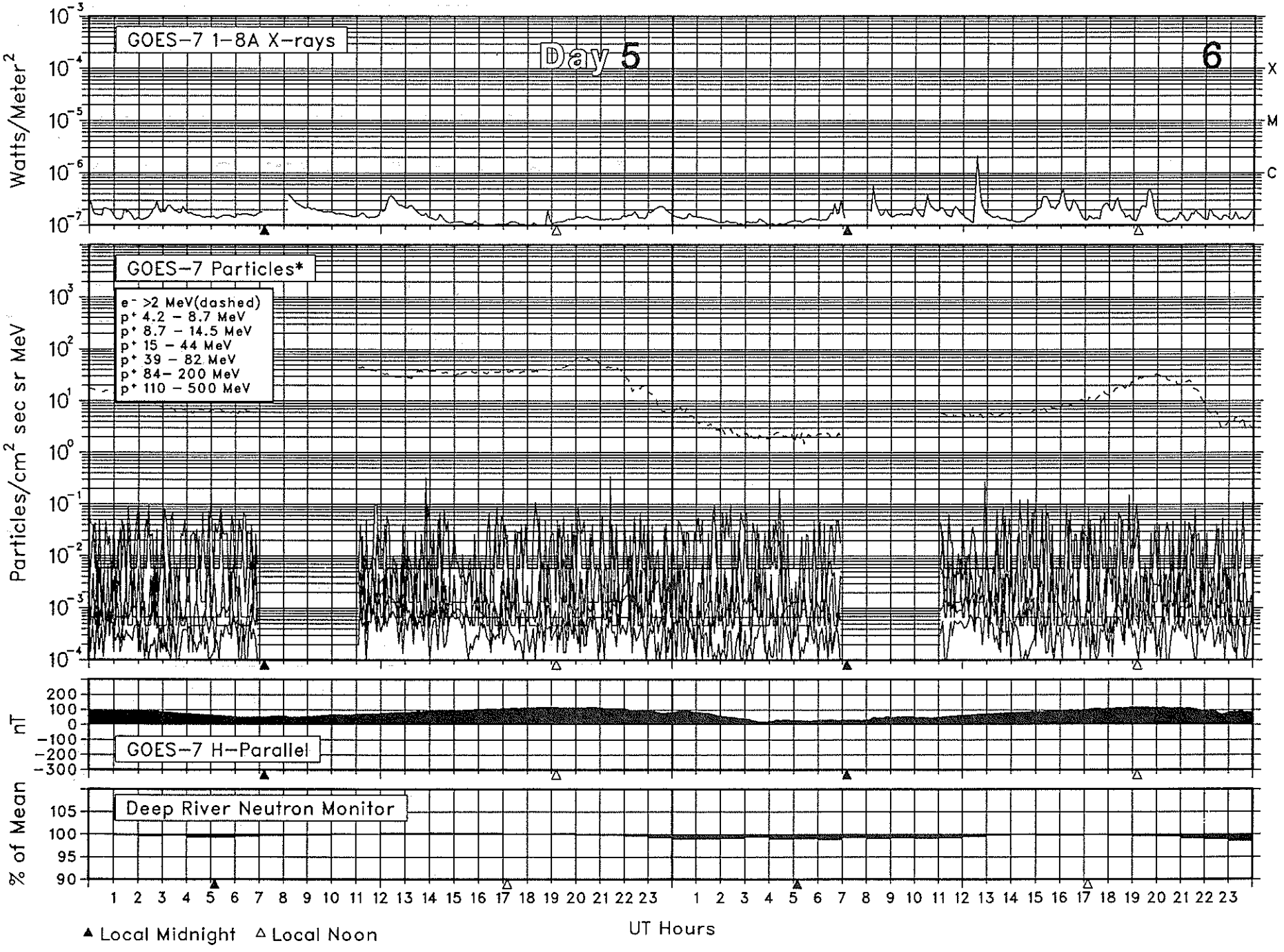




# SOLAR-TERRESTRIAL ENVIRONMENT
## March 1994



# SOLAR-TERRESTRIAL ENVIRONMENT
## March 1994



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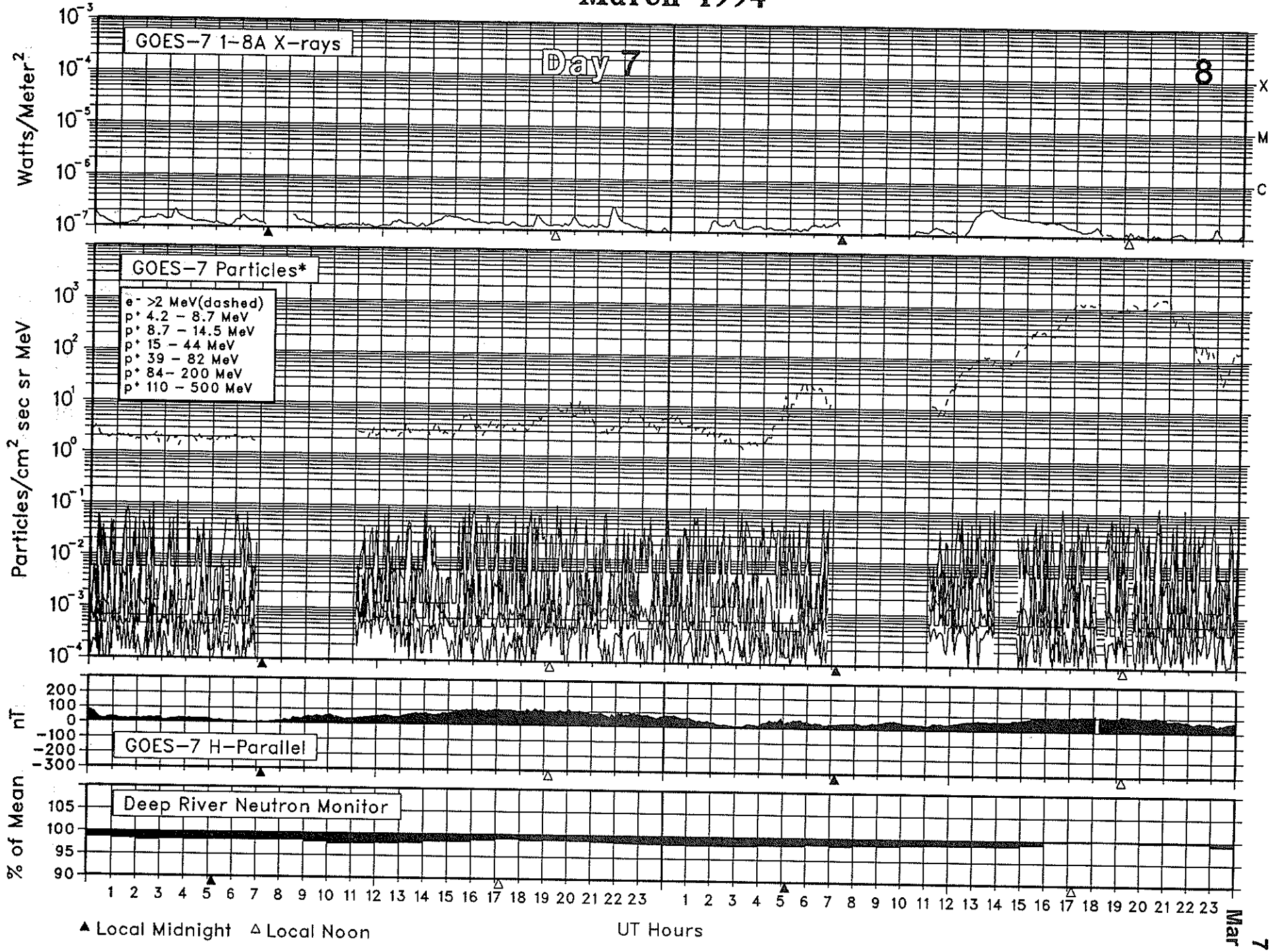
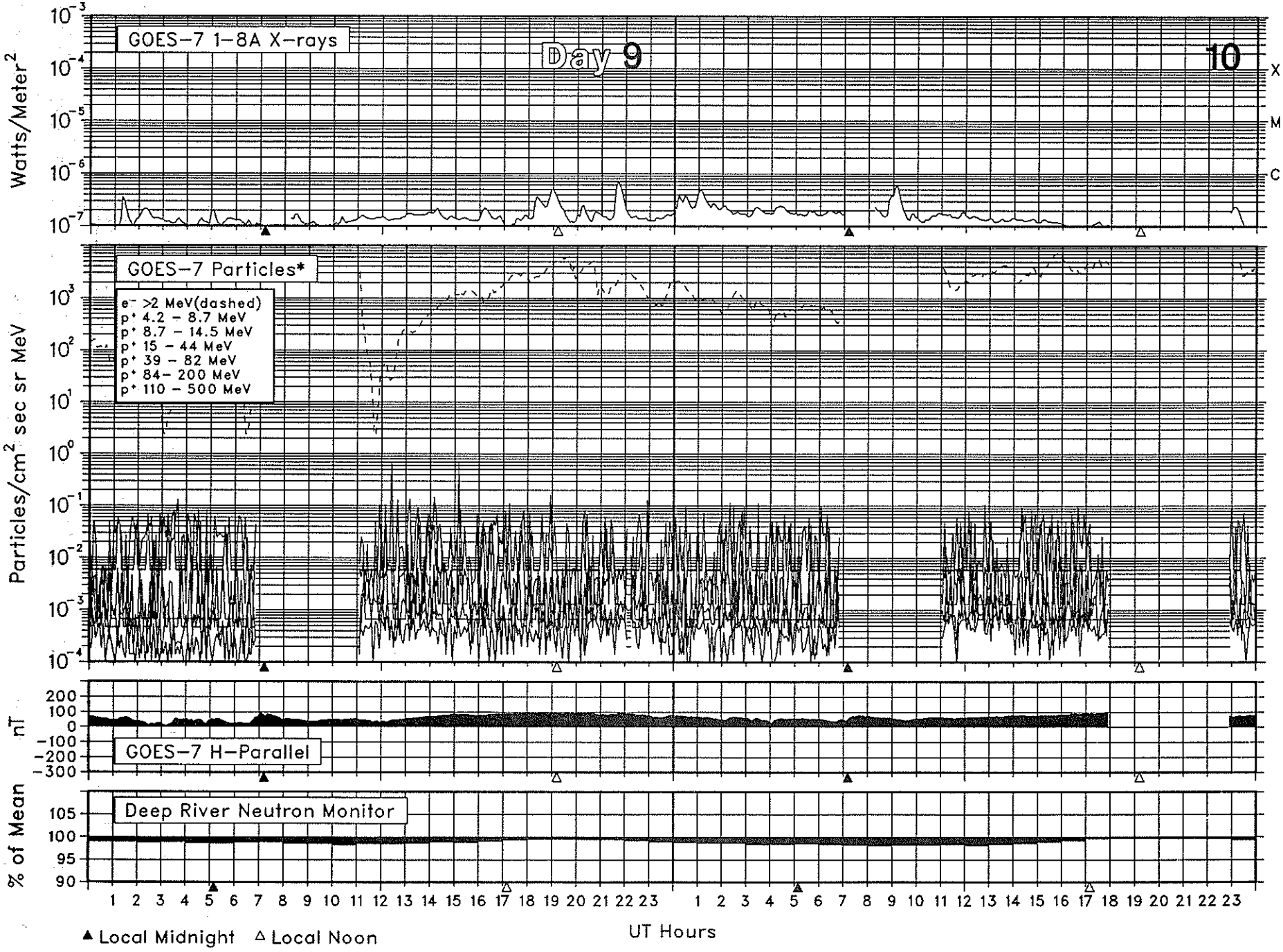
## March 1994



# SOLAR-TERRESTRIAL ENVIRONMENT
## March 1994





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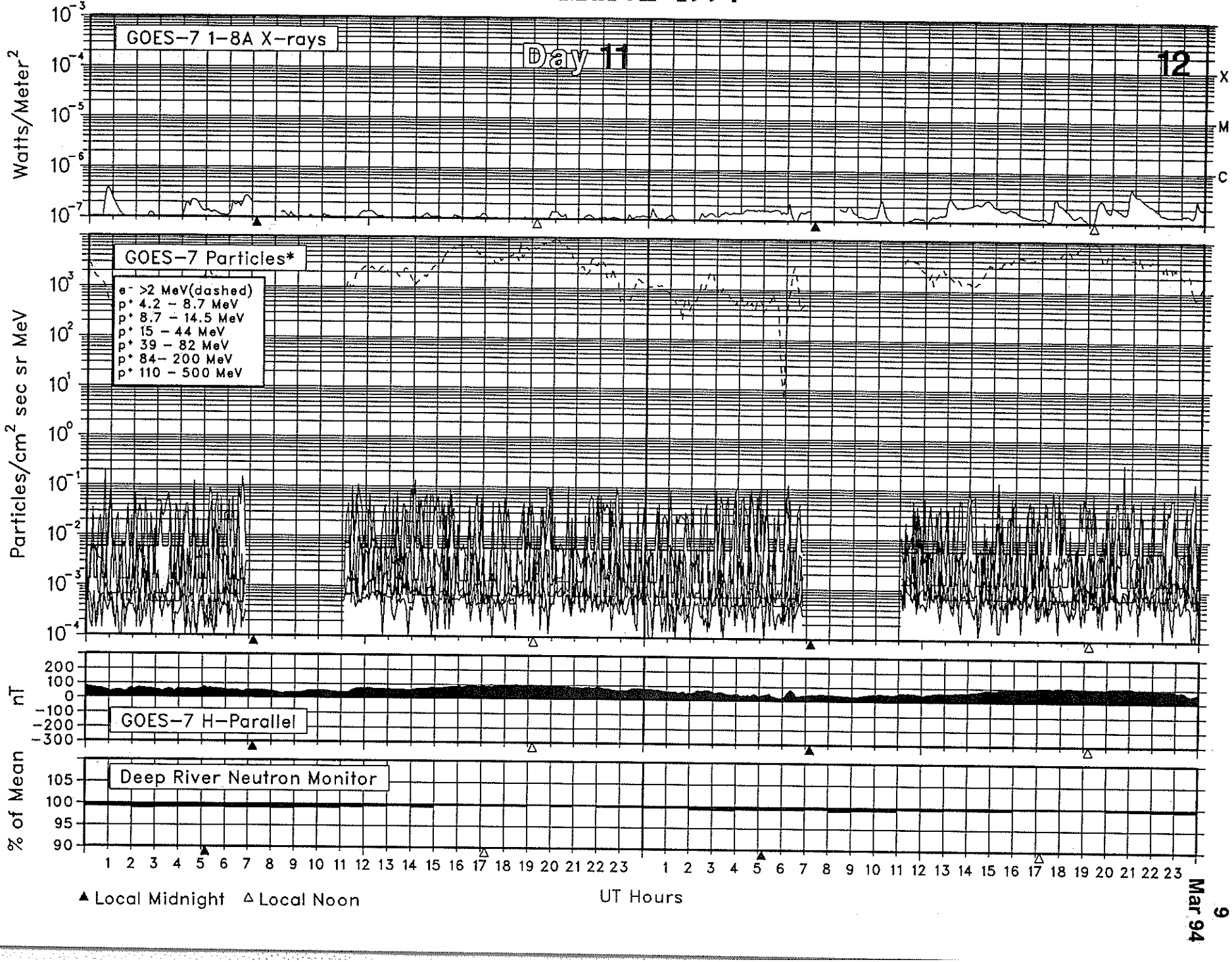

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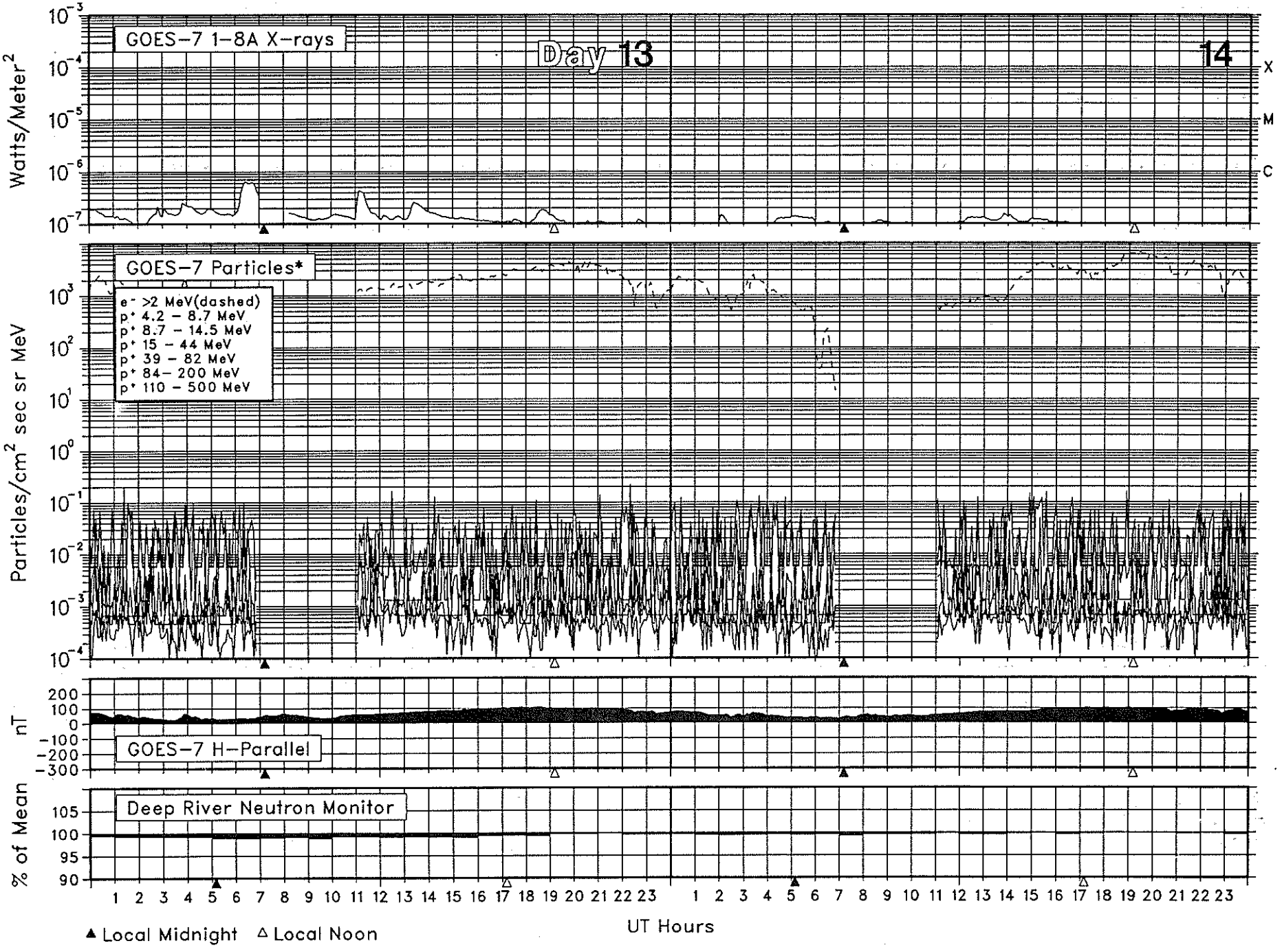

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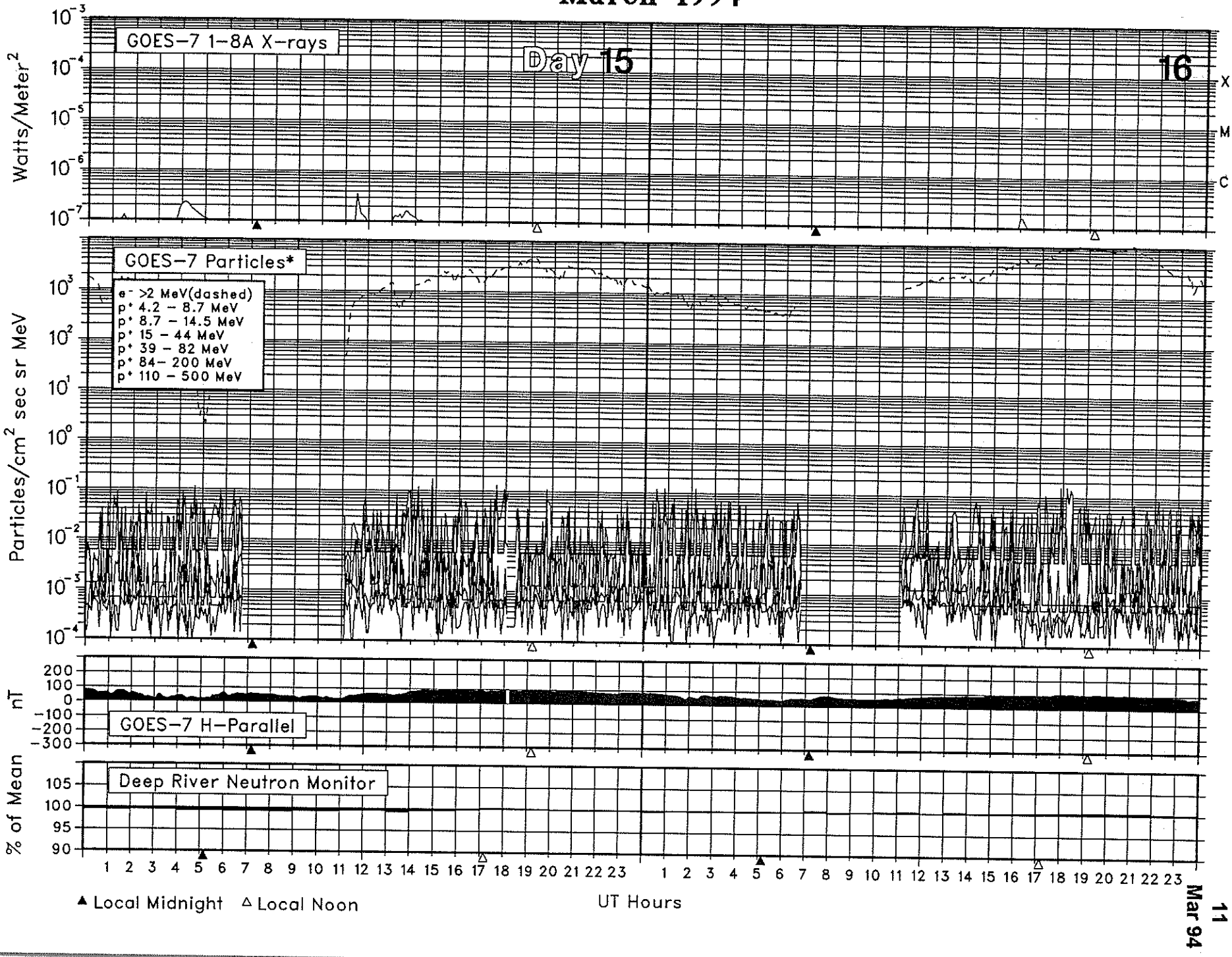
## March 1994



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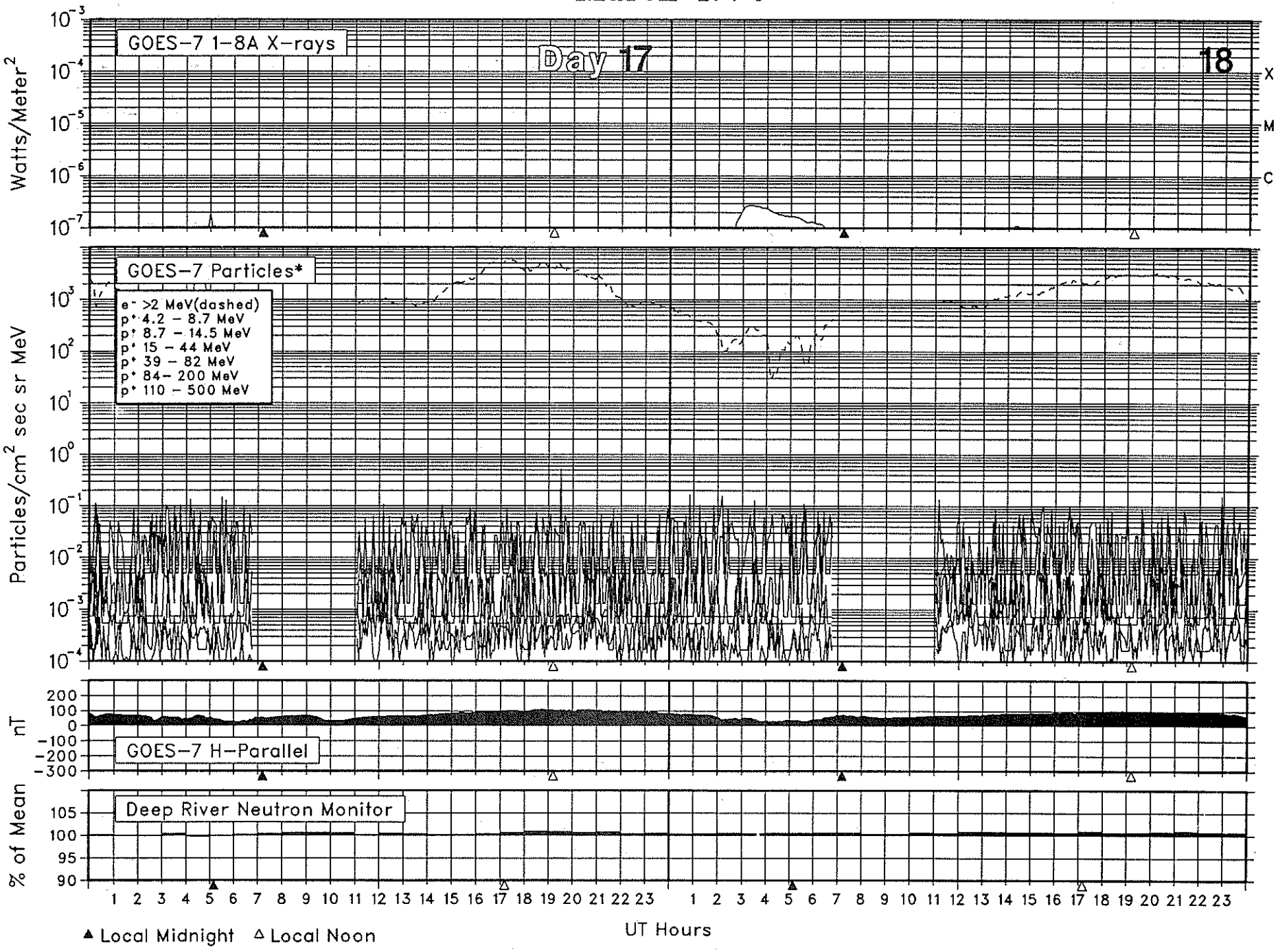

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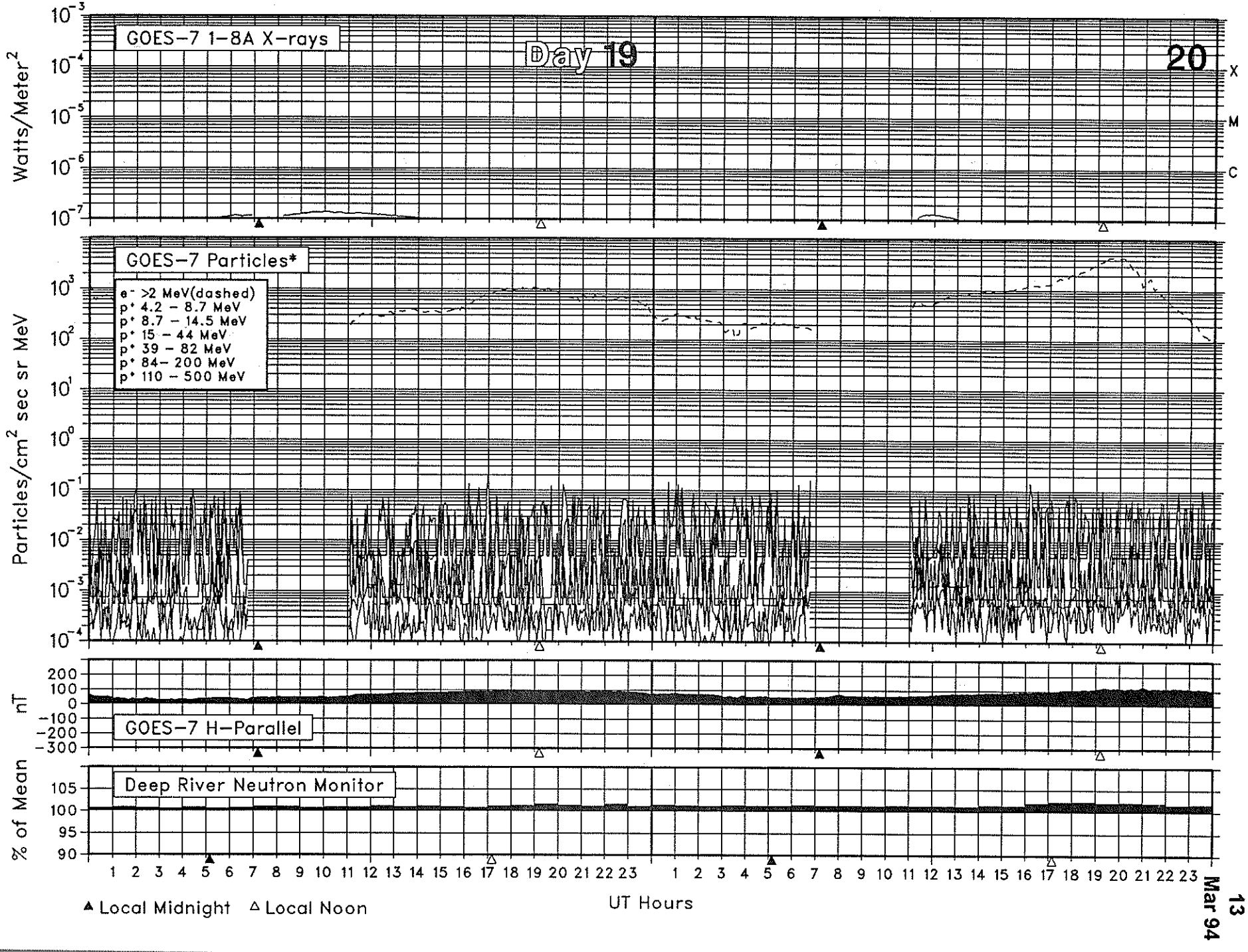

# SOLAR-TERRESTRIAL ENVIRONMENT
## March 1994

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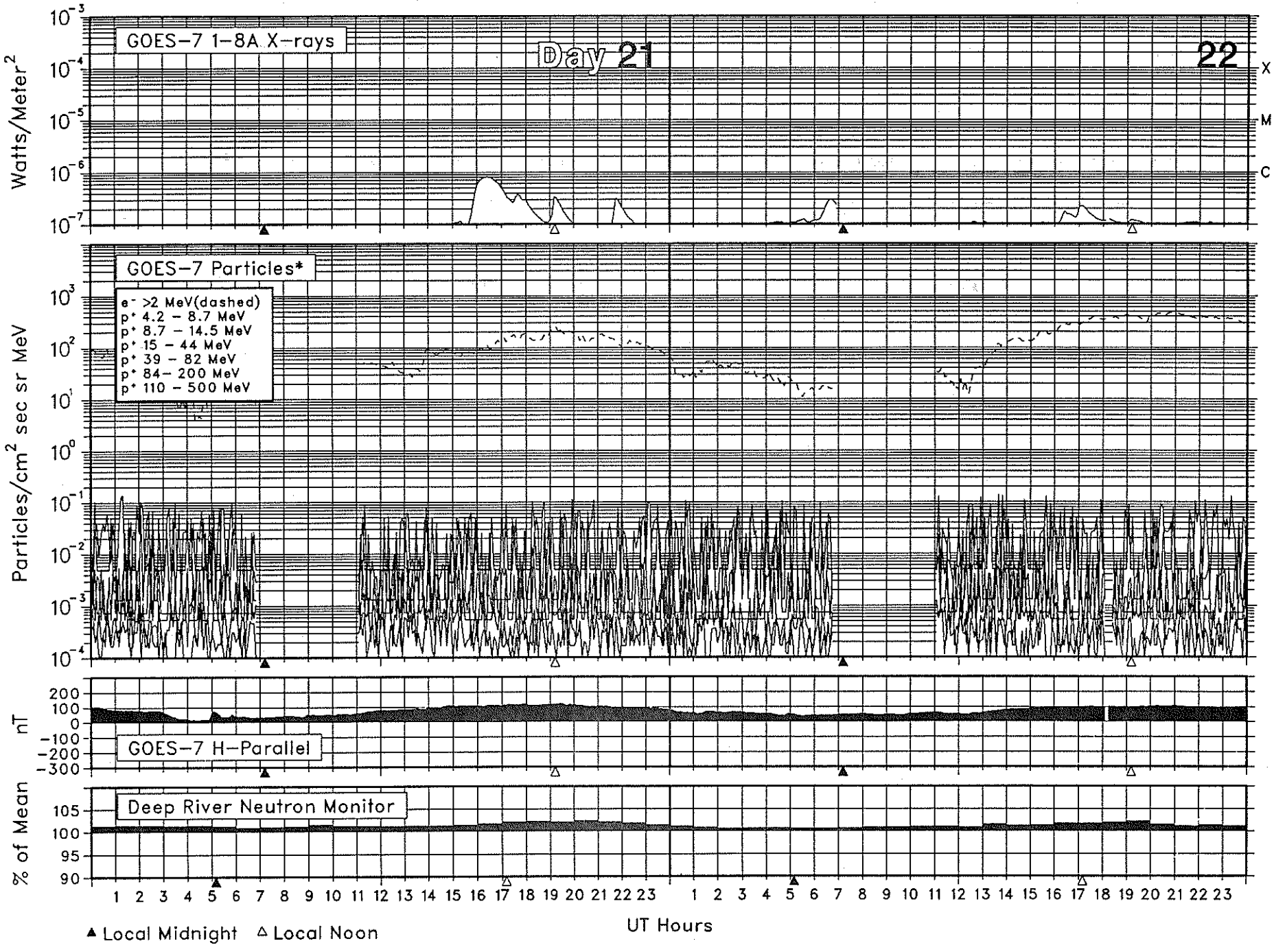

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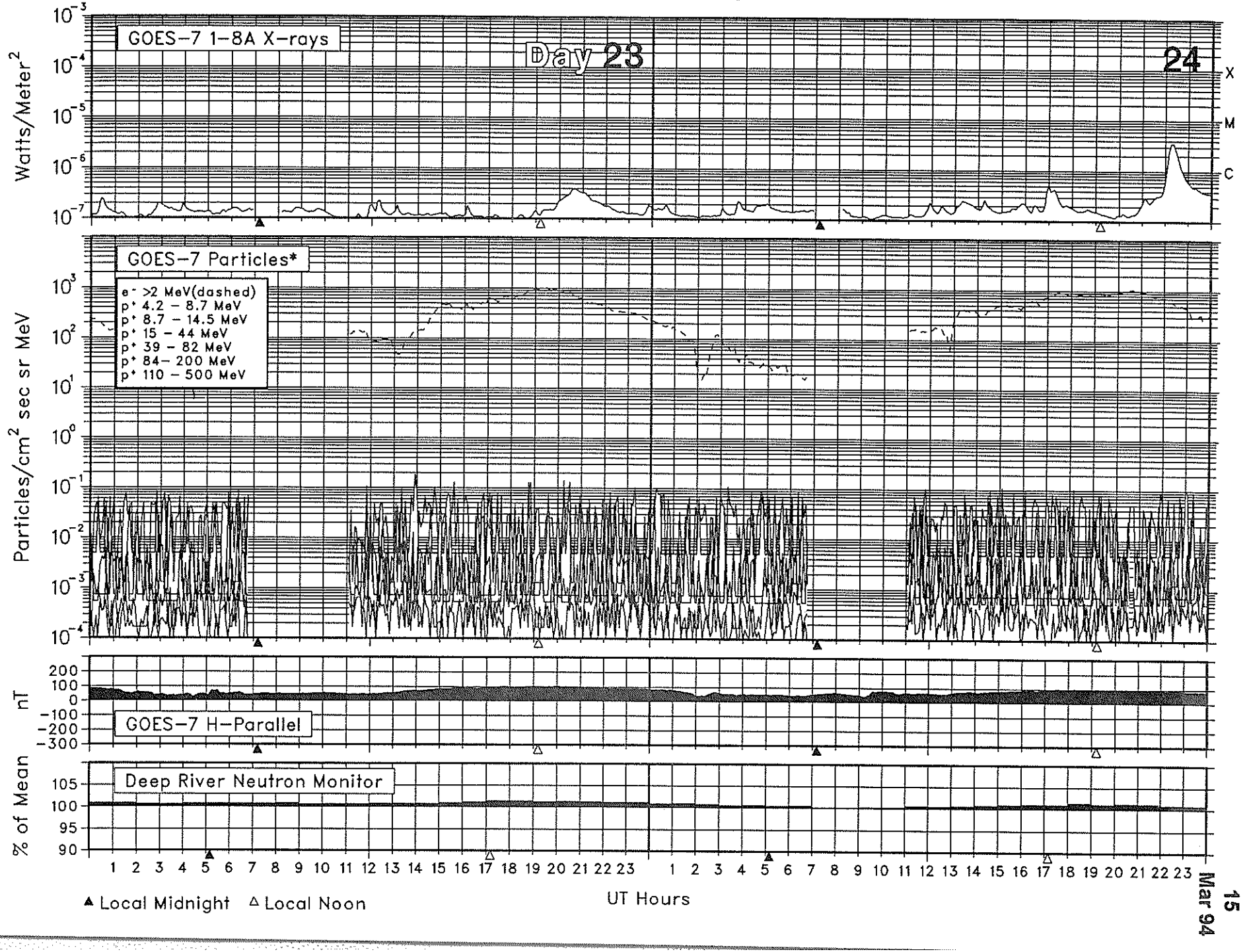


15 Mar 94

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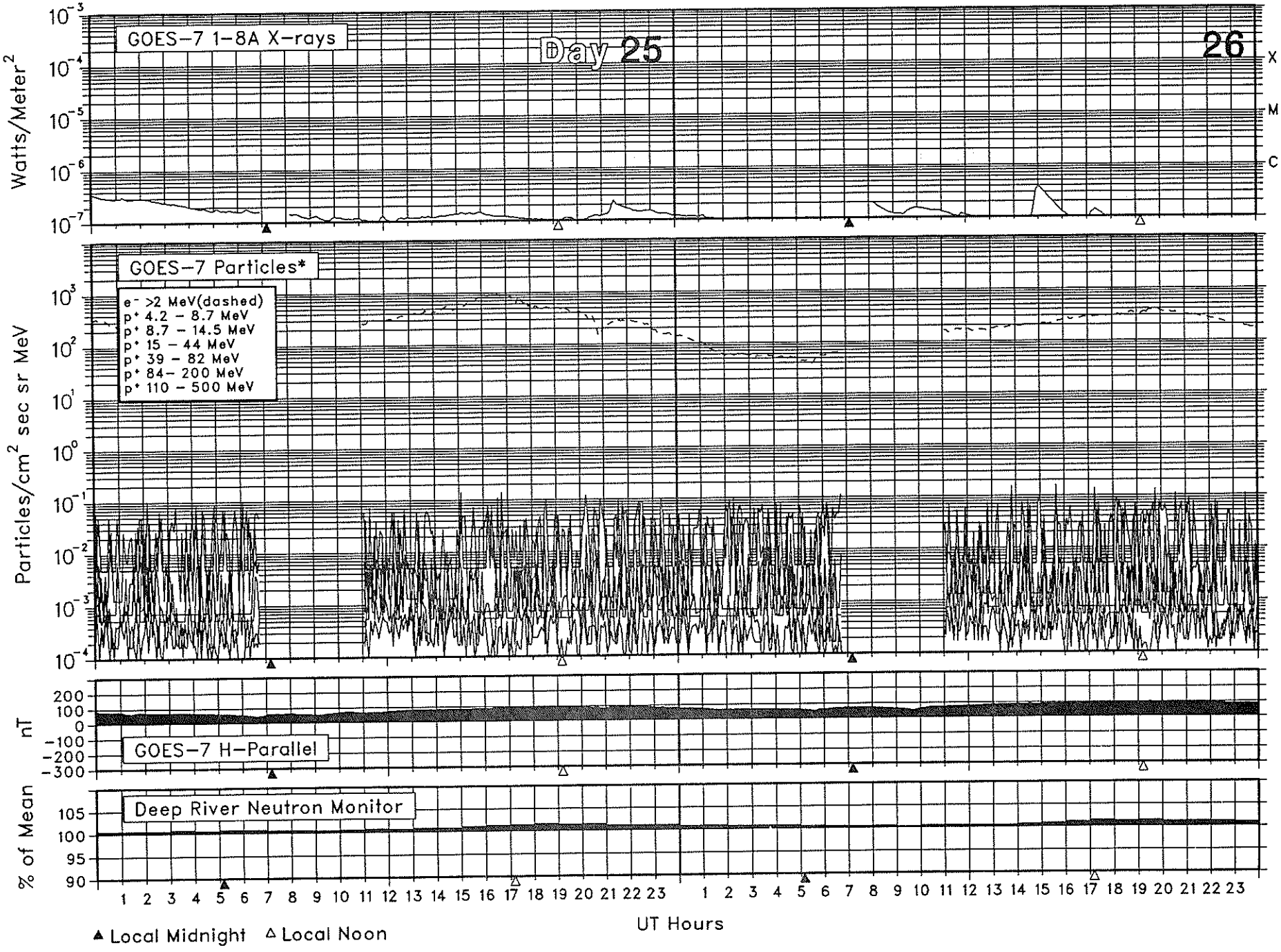
## March 1994





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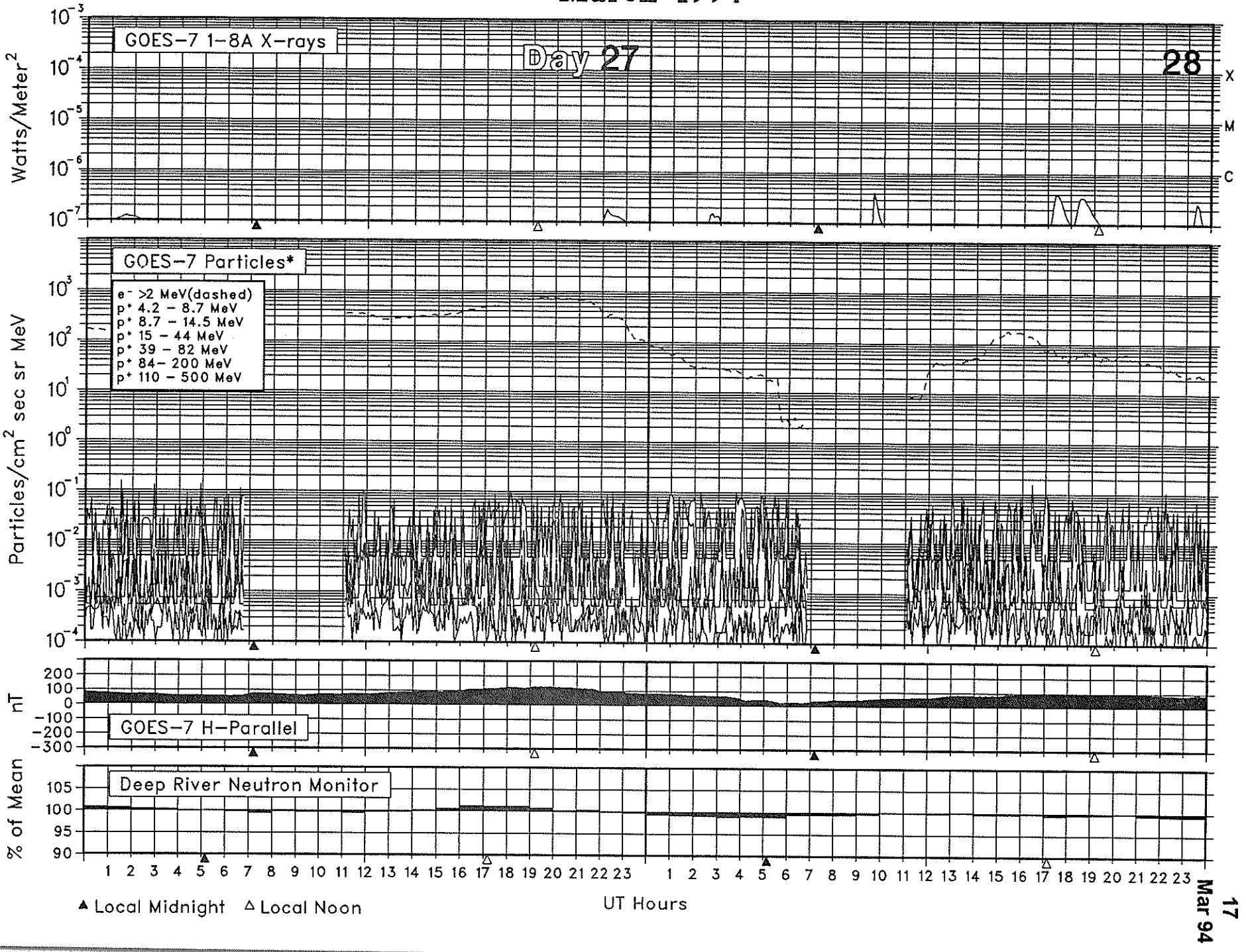
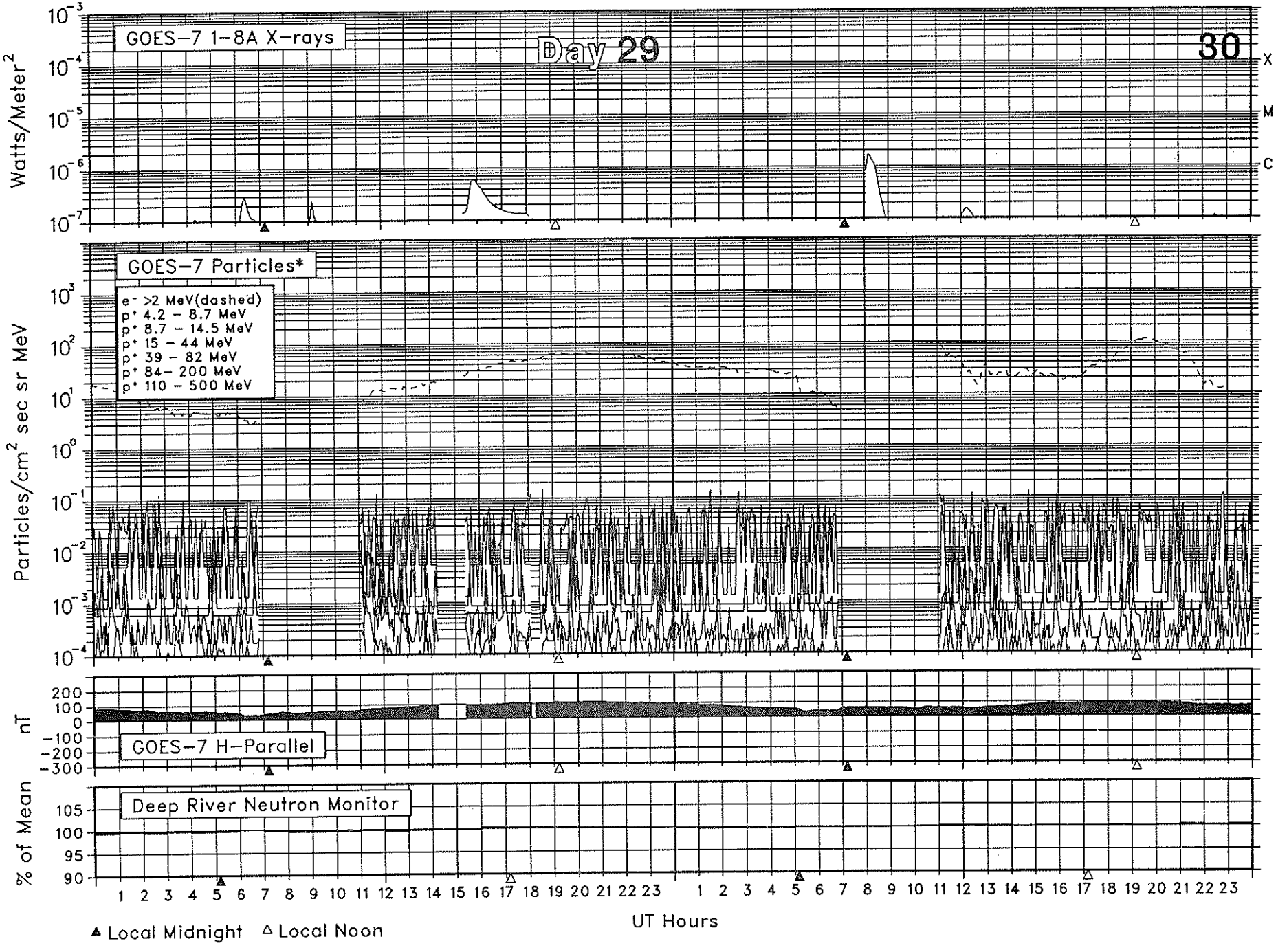
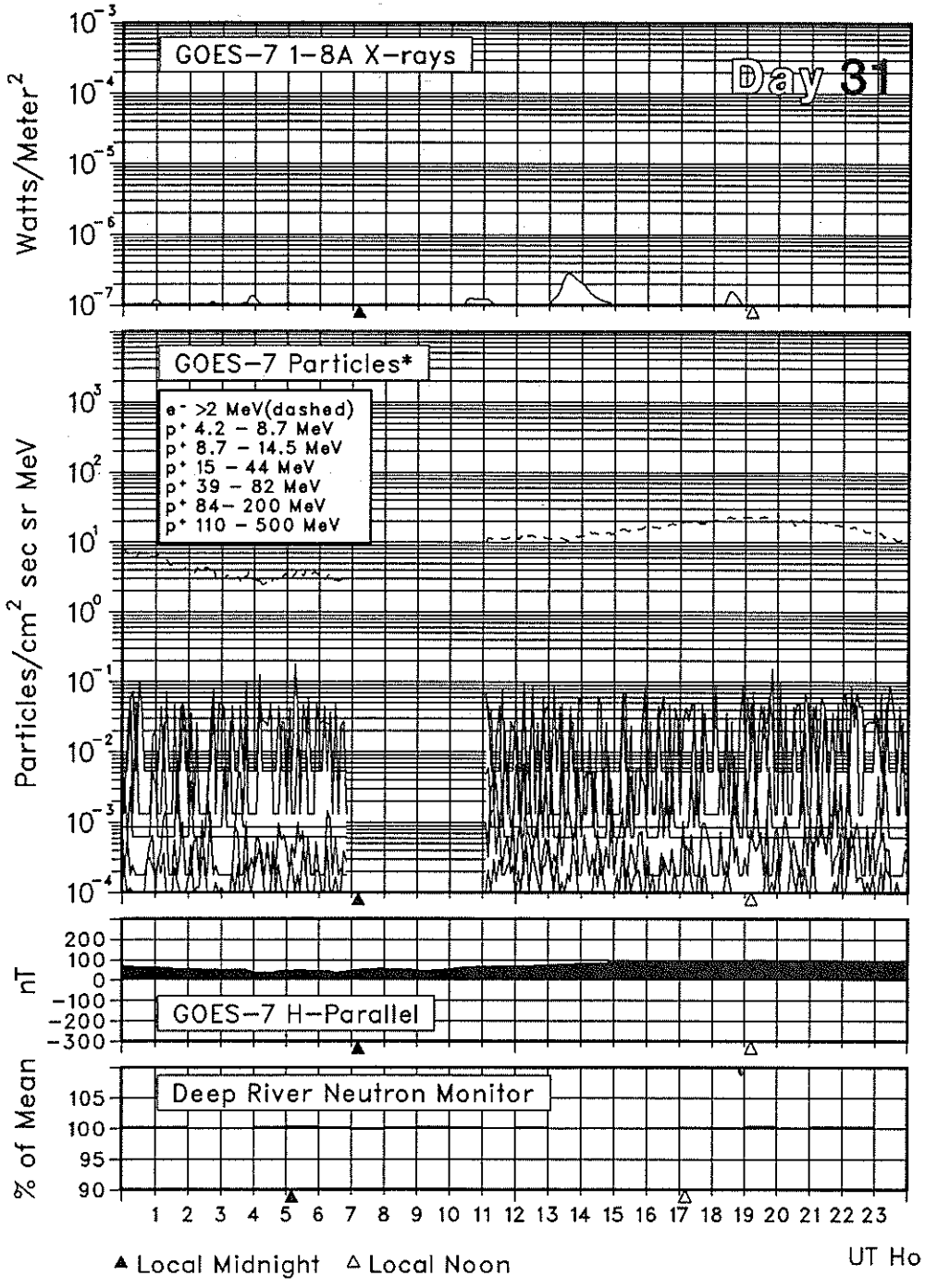


# SOLAR-TERRESTRIAL ENVIRONMENT
## March 1994

18 Mar 94



# SOLAR-TERRESTRIAL ENVIRONMENT
## March 1994




* Electron flux is divided by 10.
Electron units are Counts/cm^2 sec sr.
Protons are corrected for contamination.

# ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

## Summary of the Geoalert Messages MARCH 1994

| Julian Day | Date of Issue | Date of Obser-vation | Wolf No. | 10-cm Solar Flux | A-index | Location °Lat | Location °Long | Flares Total | Flares M | Flares X | Date of Forecast | Region Forecast [1] | Geoadvice[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 032 | 01 | 31 | 081 | 098 | 5 | S13 | W71 | 0 | 0 | 0 | 01 | Q | SOL: Quiet |
| | | | | | | N10 | W55 | 0 | 0 | 0 | 01 | Q | MAG: Quiet |
| | | | | | | S17 | W04 | 0 | 0 | 0 | 01 | Q | PROTON: Quiet |
| | | | | | | N13 | W07 | 0 | 0 | 0 | 01 | Q | |
| | | | | | | S13 | E41 | 0 | 0 | 0 | 01 | Q | |
| | | | | | | N04 | E53 | 0 | 0 | 0 | 01 | Q | |
| 033 | 02 | 01 | 055 | 094 | 6 | S14 | W85 | 0 | 0 | 0 | 02 | Q | SOL: Quiet |
| | | | | | | S17 | W18 | 0 | 0 | 0 | 02 | Q | MAG: Quiet |
| | | | | | | N11 | W23 | 0 | 0 | 0 | 02 | Q | PROTON: Quiet |
| | | | | | | N05 | E39 | 0 | 0 | 0 | 02 | Q | |
| 034 | 03 | 02 | 052 | 096 | 12 | S16 | W32 | 0 | 0 | 0 | 03 | Q | SOL: Quiet |
| | | | | | | N12 | W36 | 0 | 0 | 0 | 03 | Q | MAG: Quiet |
| | | | | | | N04 | E25 | 0 | 0 | 0 | 03 | Q | PROTON: Quiet |
| | | | | | | N18 | E63 | 0 | 0 | 0 | 03 | Q | |
| 035 | 04 | 03 | 062 | 098 | 7 | S16 | W47 | 0 | 0 | 0 | 04 | Q | SOL: Quiet |
| | | | | | | N12 | W48 | 1 | 0 | 0 | 04 | Q | MAG: Quiet |
| | | | | | | N04 | E13 | 0 | 0 | 0 | 04 | Q | PROTON: Quiet |
| | | | | | | N18 | E51 | 4 | 0 | 0 | 04 | E | |
| 036 | 05 | 04 | 075 | 095 | 8 | S17 | W55 | 1 | 0 | 0 | 05 | Q | SOL: Quiet |
| | | | | | | N13 | W63 | 0 | 0 | 0 | 05 | Q | MAG: Quiet |
| | | | | | | S12 | W10 | 0 | 0 | 0 | 05 | Q | PROTON: Quiet |
| | | | | | | N04 | W02 | 0 | 0 | 0 | 05 | Q | |
| | | | | | | N17 | E36 | 0 | 0 | 0 | 05 | Q | |
| 037 | 06 | 05 | 076 | 093 | 20 | N11 | W74 | 0 | 0 | 0 | 06 | Q | SOL: Quiet |
| | | | | | | S12 | W21 | 0 | 0 | 0 | 06 | Q | MAG: Active |
| | | | | | | N04 | W15 | 0 | 0 | 0 | 06 | Q | PROTON: Quiet |
| | | | | | | N19 | E23 | 0 | 0 | 0 | 06 | Q | |
| | | | | | | S07 | E41 | 0 | 0 | 0 | 06 | Q | |
| 038 | 07 | 06 | 071 | 095 | 46 | S11 | W35 | 3 | 0 | 0 | 07 | Q | SOL: Quiet |
| | | | | | | N04 | W28 | 0 | 0 | 0 | 07 | Q | MAG: Minor |
| | | | | | | N18 | E12 | 0 | 0 | 0 | 07 | Q | PROTON: Quiet |
| | | | | | | S08 | E30 | 0 | 0 | 0 | 07 | Q | |
| 039 | 08 | 07 | 072 | 096 | 49 | S11 | W28 | 2 | 0 | 0 | 08 | E | SOL: Quiet |
| | | | | | | N04 | W24 | 0 | 0 | 0 | 08 | Q | MAG: Minor |
| | | | | | | N18 | W08 | 0 | 0 | 0 | 08 | Q | PROTON: Quiet |
| | | | | | | S08 | W04 | 0 | 0 | 0 | 08 | Q | |
| 040 | 09 | 08 | 085 | 095 | 50 | S13 | W63 | 0 | 0 | 0 | 09 | Q | SOL: Eruptive |
| | | | | | | N03 | W56 | 0 | 0 | 0 | 09 | Q | MAG: Minor |
| | | | | | | N18 | W15 | 0 | 0 | 0 | 09 | Q | PROTON: Quiet |
| | | | | | | S07 | W02 | 0 | 0 | 0 | 09 | Q | |
| | | | | | | N08 | E49 | 6 | 0 | 0 | 09 | E | |
| 041 | 10 | 09 | 064 | 101 | 34 | S12 | W75 | 1 | 0 | 0 | 10 | E | SOL: Eruptive |
| | | | | | | N03 | W69 | 0 | 0 | 0 | 10 | Q | MAG: Active |
| | | | | | | N18 | W28 | 1 | 0 | 0 | 10 | Q | PROTON: Quiet |
| | | | | | | N08 | E35 | 3 | 0 | 0 | 10 | E | |
| 042 | 11 | 10 | 049 | 094 | 29 | S13 | W87 | 0 | 0 | 0 | 11 | E | SOL: Eruptive |
| | | | | | | N18 | W42 | 0 | 0 | 0 | 11 | Q | MAG: Active |
| | | | | | | N09 | E22 | 0 | 0 | 0 | 11 | E | PROTON: Quiet |

# ALERT PERIODS

## INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

### Summary of the Geoalert Messages — MARCH 1994

| Julian Day | Date of Issue | Date of Obser-vation | Wolf No. | 10-cm Solar Flux | A-index | Location °Lat °Long | Flares Total | Flares M | Flares X | Date of Forecast | Region Forecast [1] | Geoadvice[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 043 | 12 | 11 | 049 | 093 | 36 | N18 W56 | 1 | 0 | 0 | 12 | E | SOL: Eruptive |
| | | | | | | N09 E10 | 0 | 0 | 0 | 12 | Q | MAG: Minor |
| | | | | | | N05 E71 | 0 | 0 | 0 | 12 | Q | PROTON: Quiet |
| 044 | 13 | 12 | 053 | 098 | 29 | N18 W70 | 0 | 0 | 0 | 13 | Q | SOL: Eruptive |
| | | | | | | N08 W04 | 1 | 0 | 0 | 13 | E | MAG: Active |
| | | | | | | N05 E58 | 0 | 0 | 0 | 13 | Q | PROTON: Quiet |
| | | | | | | N07 E74 | 0 | 0 | 0 | 13 | Q | |
| 045 | 14 | 13 | 072 | 098 | 24 | N16 W83 | 0 | 0 | 0 | 14 | Q | SOL: Eruptive |
| | | | | | | N08 W17 | 0 | 0 | 0 | 14 | E | MAG: Active |
| | | | | | | N06 E44 | 0 | 0 | 0 | 14 | Q | PROTON: Quiet |
| | | | | | | N09 E60 | 0 | 0 | 0 | 14 | Q | |
| | | | | | | N11 E75 | 0 | 0 | 0 | 14 | Q | |
| 046 | 15 | 14 | 059 | 101 | 23 | N09 W29 | 0 | 0 | 0 | 15 | Q | SOL: Quiet |
| | | | | | | N05 E32 | 0 | 0 | 0 | 15 | Q | MAG: Active |
| | | | | | | N08 E48 | 0 | 0 | 0 | 15 | Q | PROTON: Quiet |
| | | | | | | N10 E65 | 0 | 0 | 0 | 15 | Q | |
| 047 | 16 | 15 | 059 | 104 | 19 | N08 W43 | 0 | 0 | 0 | 16 | Q | SOL: Eruptive |
| | | | | | | N06 E19 | 0 | 0 | 0 | 16 | Q | MAG: Active |
| | | | | | | N10 E37 | 2 | 0 | 0 | 16 | E | PROTON: Quiet |
| | | | | | | N10 E52 | 1 | 0 | 0 | 16 | E | |
| 048 | 17 | 16 | 071 | 105 | 14 | N08 W55 | 1 | 0 | 0 | 17 | Q | SOL: Eruptive |
| | | | | | | N08 E17 | 0 | 0 | 0 | 17 | Q | MAG: Active |
| | | | | | | N10 E24 | 1 | 0 | 0 | 17 | Q | PROTON: Quiet |
| | | | | | | N10 E38 | 0 | 0 | 0 | 17 | E | |
| | | | | | | N03 E28 | 0 | 0 | 0 | 17 | Q | |
| 049 | 18 | 17 | 067 | 106 | 8 | N06 W66 | 0 | 0 | 0 | 18 | Q | SOL: Eruptive |
| | | | | | | N10 E03 | 0 | 0 | 0 | 18 | Q | MAG: Active |
| | | | | | | N12 E12 | 1 | 0 | 0 | 18 | Q | PROTON: Quiet |
| | | | | | | N13 E26 | 0 | 0 | 0 | 18 | E | |
| | | | | | | N07 W49 | 0 | 0 | 0 | 18 | Q | |
| 050 | 19 | 18 | 077 | 106 | 5 | N10 W82 | 0 | 0 | 0 | 19 | Q | SOL: Eruptive |
| | | | | | | N08 W08 | 0 | 0 | 0 | 19 | Q | MAG: Quiet |
| | | | | | | N10 W00 | 0 | 0 | 0 | 19 | Q | PROTON: Quiet |
| | | | | | | N11 E14 | 2 | 0 | 0 | 19 | E | |
| | | | | | | N08 W65 | 0 | 0 | 0 | 19 | Q | |
| 051 | 20 | 19 | 054 | 108 | 16 | N09 W11 | 0 | 0 | 0 | 20 | Q | SOL: Eruptive |
| | | | | | | N11 W00 | 0 | 0 | 0 | 20 | E | MAG: Quiet |
| | | | | | | N08 W78 | 0 | 0 | 0 | 20 | Q | PROTON: Quiet |
| | | | | | | S14 E24 | 0 | 0 | 0 | 20 | Q | |
| 052 | 21 | 20 | 033 | 108 | 14 | N11 W14 | 2 | 1 | 0 | 21 | E | SOL: Eruptive |
| | | | | | | S14 E09 | 0 | 0 | 0 | 21 | Q | MAG: Quiet |
| | | | | | | N08 W78 | 0 | 0 | 0 | 21 | Q | PROTON: In Progress |
| 053 | 22 | 21 | 017 | 105 | 42 | N10 W28 | 0 | 0 | 0 | 22 | E | SOL: Eruptive |
| | | | | | | S14 E09 | 0 | 0 | 0 | 22 | Q | MAG: Magstorm |
| | | | | | | N08 W78 | 0 | 0 | 0 | 22 | Q | PROTON: In Progress |
| 054 | 23 | 22 | 068 | 107 | 59 | N10 W42 | 0 | 0 | 0 | 23 | E | SOL: Eruptive |
| | | | | | | S12 E41 | 0 | 0 | 0 | 23 | Q | MAG: Minor |
| | | | | | | N09 E50 | 0 | 0 | 0 | 23 | Q | PROTON: No Fcst |
| | | | | | | N20 W12 | 0 | 0 | 0 | 23 | Q | |

# ALERT PERIODS

## INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

### Summary of the Geoalert Messages — MARCH 1994

| Julian Day | Date of Issue | Date of Obser-vation | Wolf No. | 10-cm Solar Flux | A-index | Location °Lat | Location °Long | Flares Total | Flares M | Flares X | Date of Forecast | Region Forecast [1] | Geoadvice[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 055 | 24 | 23 | 047 | 107 | 7 | N11 | W55 | 0 | 0 | 0 | 24 | Q | SOL: Eruptive |
| | | | | | | S12 | E28 | 0 | 0 | 0 | 24 | Q | MAG: Active |
| | | | | | | N08 | E40 | 0 | 0 | 0 | 24 | Q | PROTON: Quiet |
| 056 | 25 | 24 | 058 | 105 | 4 | N10 | W68 | 0 | 0 | 0 | 25 | E | SOL: Eruptive |
| | | | | | | S11 | E17 | 0 | 0 | 0 | 25 | Q | MAG: Quiet |
| | | | | | | N08 | E27 | 0 | 0 | 0 | 25 | Q | PROTON: Quiet |
| | | | | | | S14 | E74 | 0 | 0 | 0 | 25 | Q | |
| 057 | 26 | 25 | 053 | 097 | 11 | N11 | W82 | 0 | 0 | 0 | 26 | E | SOL: Eruptive |
| | | | | | | S11 | E03 | 0 | 0 | 0 | 26 | Q | MAG: Quiet |
| | | | | | | S15 | E62 | 0 | 0 | 0 | 26 | Q | PROTON: Quiet |
| | | | | | | N02 | E25 | 0 | 0 | 0 | 26 | Q | |
| 058 | 27 | 26 | 063 | 094 | 3 | S11 | W13 | 1 | 0 | 0 | 27 | Q | SOL: Eruptive |
| | | | | | | S14 | E48 | 0 | 0 | 0 | 27 | Q | MAG: Quiet |
| | | | | | | N03 | E10 | 0 | 0 | 0 | 27 | Q | PROTON: Quiet |
| | | | | | | S13 | E75 | 0 | 0 | 0 | 27 | Q | |
| | | | | | | S14 | W05 | 0 | 0 | 0 | 27 | Q | |
| 059 | 28 | 27 | 069 | 095 | 6 | N11 | W73 | 0 | 0 | 0 | 28 | Q | SOL: Eruptive |
| | | | | | | S14 | E35 | 0 | 0 | 0 | 28 | Q | MAG: Quiet |
| | | | | | | N03 | W03 | 0 | 0 | 0 | 28 | Q | PROTON: Quiet |
| | | | | | | S12 | E66 | 1 | 0 | 0 | 28 | E | |
| | | | | | | S13 | W18 | 0 | 0 | 0 | 28 | Q | |

[1] **Region Forecast and Flare Geoadvice**

Q =Quiet (<50% probability of C-class flares)
E =Eruptive (C-class flares expected, probability >=50%)
A =Active (M-class flares expected, probability >=50%)
M =Major (X-class flares expected, probabiljty >=50%)
P =Proton (Proton flares exptected, probability >=50%)
Warning condition (activity levels expected to increase, but no numeric forecast given)
Nil (end of Alert period)
No forecast

**Magnetic Geoadvice**

Quiet
Active conditions expected (A>=20 or K=4)
Minor storm expected (A>=30 or K=5)
Major magstorm expected (A>=50 or K>=6)
Severe magstorm expected (A>=100 or K>=7)
Magstorm in progress (A>=30 or K>=4)
Warning condition (activity levels expected to increase, but no numeric forecast given)
Nil (end of Alert period)
No forecast

**Proton Geoadvice**

Quiet
Proton event expected (10 pfu at >10 MeV)
Major proton event expected (100 pfu at >100 MeV)
Proton event in progress (>10 MeV)
Warning condition (activity levels expected to increase, but no numeric forecast given)
Nil (end of Alert period)
No forecast

## STRATWARM ALERTS

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03/10/94 03:30:00
GEOALERT WWA069 STRATWARM ALERT/WED/STRATWARM EXISTS.
A LARGE WARM REGION EXISTS FROM CENTRAL AND NORTHEASTERN SIBERIA TO CANADA AND THE ADJACENT ARCTIC WITH A TEMPERATURE INCREASE ABOUT 30DGSC AT 10HPA OVER THE CANADIAN ARCTIC. TEMPERATURE GRADIENT REVERSED BETWEEN 60N AND THE POLE FROM 10HPA UPWARDS INTO THE UPPER STRATOSPHERE.

03/11/94 03:30:00
GEOALERT WWA070 STRATWARM ALERT/THU/STRATWARM EXISTS.
A LARGE WARM REGION FROM CENTRAL AND NORTHEASTERN SIBERIA TO CANADA AND THE ADJACENT ARCTIC CONTINUES. WARM AIR SPREADING NORTHEASTWARDS. TEMPERATURE GRADIENT REVERSED BETWEEN 60N AND THE POLE FROM 10HPA UPWARDS INTO THE UPPER STRATOSPHERE.

03/12/94 03:30:00
GEOALERT WWA071 STRATWARM ALERT/FRI/STRATWARM EXISTS.
WARMING CONTINUES OVER ASIA, ALASKA, CANADA AND THE ADJACENT ARCTIC REGION. TEMPERATURE GRADIENT REVERSED BETWEEN 60N AND THE POLE FROM 10 HPA UPWARDS INTO THE UPPER STRATOSPHERE.

03/13/94 03:30:00
GEOALERT WWA072 STRATWARM ALERT/SAT/STRATWARM EXISTS.
WARMING OVER SIBERIA, CANADA AND THE POLAR REGION CONTINUES, EXTENDING TOWARDS GREENLAND TODAY. TEMPERATURE GRADIENT REVERSED BETWEEN 60N AND THE POLE AT 10 HPA AND ABOVE.

STRATWARM ALERTS – continued

03/14/94 03:30:00
GEOALERT WWA073 STRATWARM ALERT/SUN/STRATWARM EXISTS.
THE WARMING OVER SIBERIA, THE POLAR REGION AND GREENLAND CONTINUES. TEMPERATURE GRADIENT REVERSED BETWEEN 60N AND THE POLE AT 10 HPA AND ABOVE.

03/15/94 03:30:00
GEOALERT WWA074 STRATWARM ALERT/MONDAY/STRATWARM EXISTS.
MINOR WARMING FROM CENTRAL AND NORTHEASTERN SIBERIA AND ALASKA ACROSS THE POLAR REGION TO THE LABRADOR SEA AND WESTERN GREENLAND CONTINUES. TEMPERATURE GRADIENT REVERSED BETWEEN 60N AND THE POLE AT 10HPA AND ABOVE.

03/16/94 03:30:00
GEOALERT WWA075 STRATWARM ALERT/TUESDAY/STRATWARM EXISTS.
MINOR WARMING OVER EASTERN SIBERIA, ALASKA AND THE CANADIAN ARCTIC CONTINUES. TEMPERATURE GRADIENT REVERSED BETWEEN 60N AND THE POLE AT 10HPA AND ABOVE.

03/17/94 03:30:00
GEOALERT WWA076 STRATWARM ALERT/WEDNESDAY/STRATWARM EXISTS.
MINOR WARMING OVER EASTERN SIBERIA, ALASKA AND THE CANADIAN ARCTIC CONTINUES. TEMPERATURE GRADIENT REVERSED BETWEEN 60N AND THE POLE IN THE MIDDLE
AND UPPER STRATOSPHERE FROM 30HPA UPWARDS.

03/19/94 03:30:00
GEOALERT WWA078 STRATWARM ALERT/FRIDAY/STRATWARM EXISTS.
MINOR WARMING OVER EASTERN SIBERIA,CANADIAN ARCTIC AND GREENLAND CONTINUES AND A WARMING OVER SOUTHERN EUROPE SPREADIND NORTHWARDS,TODAY. TEMPERATURE GRADIENT REVERSED BETWEEN 60N AND THE POLE AT 10 HPA AND ABOVE.

03/20/94 03:30:00
GEOALERT WWA079 STRATWARM ALERT/SAT/STRATWARM EXISTS.
MINOR WARMING OVER EASTERN SIBERIA, ALASKA, CANADA, CANADIAN ARCTIC, GREENLAND, AND SOUTHERN EUROPE. TEMPERATURE GRADIENT REVERSED BETWEEN 60N AND THE POLE AT
10HPA AND ABOVE.

03/21/94 03:30:00
GEOALERT WWA080 STRATWARM ALERT/SUN/STRATWARM EXISTS.
MINOR WARMING OVER SOUTHEASTERN EUROPE AND WESTERN SIBERIA, AND OVER EASTERN SIBERIA, ALASKA, AND CANADA WITH THE ADJACENT ARCTIC. TEMPERATURE GRADIENT REVERSED BETWEEN 60N AND THE POLE ABOVE 10HPA.

03/22/94 03:30:00
GEOALERT WWA081 STRATWARM ALERT/MON/STRATWARM EXISTS.
WARMING OVER ALASKA AND NORTHEASTERN SIBERIA WEAKENED TODAY, BUT THE WARM REGION FROM SOUTHERN EUROPE ACROSS SOUTHWESTERN SIBERIA TO MONGOLIA CONTINUES.

03/23/94 03:30:00
GEOALERT WWA082 STRATWARM ALERT/TUE/STRATWARM EXISTS.
A LARGE WARM REGION EXISTS FROM SOUTHERN TO EASTERN EUROPE AND SOUTHWESTERN SIBERIA, AND STRENGTHENING. WARM AIR SPREADING NORTH-AND NORTHEASTWARDS.

STRATWARM ALERTS – continued

03/24/94 03:30:00
GEOALERT WWA083 TRATWARM ALERT/WED/STRATWARM EXISTS.
A LARGE WARM REGION EXISTS FROM SOUTHERN TO EASTERN EUROPE AND SOUTHWESTERN SIBERIA AND IS STRENGTHENING.

03/25/94 03:30:00
GEOALERT WWA084 STRATWARM ALERT/THU/STRATWARM EXISTS.
A LARGE AND INTENSE WARMING EXISTS FROM CENTRAL AND SOUTHERN EUROPE TO CENTRAL AND NORTHERN SIBERIA. WARM AIR SPREADING NORTHEASTWARDS.

03/26/94 03:30:00
GEOALERT WWA085 STRATWARM ALERT/FRI/STRATWARM EXISTS.
A LARGE AND INTENSIFYING WARMING CONTINUES OVER EASTERN EUROPE AND SIBERIA,WARM AIR SPREADING NORTHEASTWARD. FINAL WARMING IN PROGRESS.

03/27/94 03:30:00
GEOALERT WWA086 STRATWARM ALERT/SAT/STRATWARM EXISTS.
A LARGE AND VERY INTENSE WARMING CONTINUES OVER NORTHEASTERN EUROPE,SIBERIA AND THE ADJACENT ARCTIC. WARM AIR SPREADING NORTHEASTWARDS,TEMPERATURE GRADIENT REVERSED BETWEEN 60N AND THE POLE AT 10HPA AND ABOVE. FINAL WARMING IN PROGRESS.

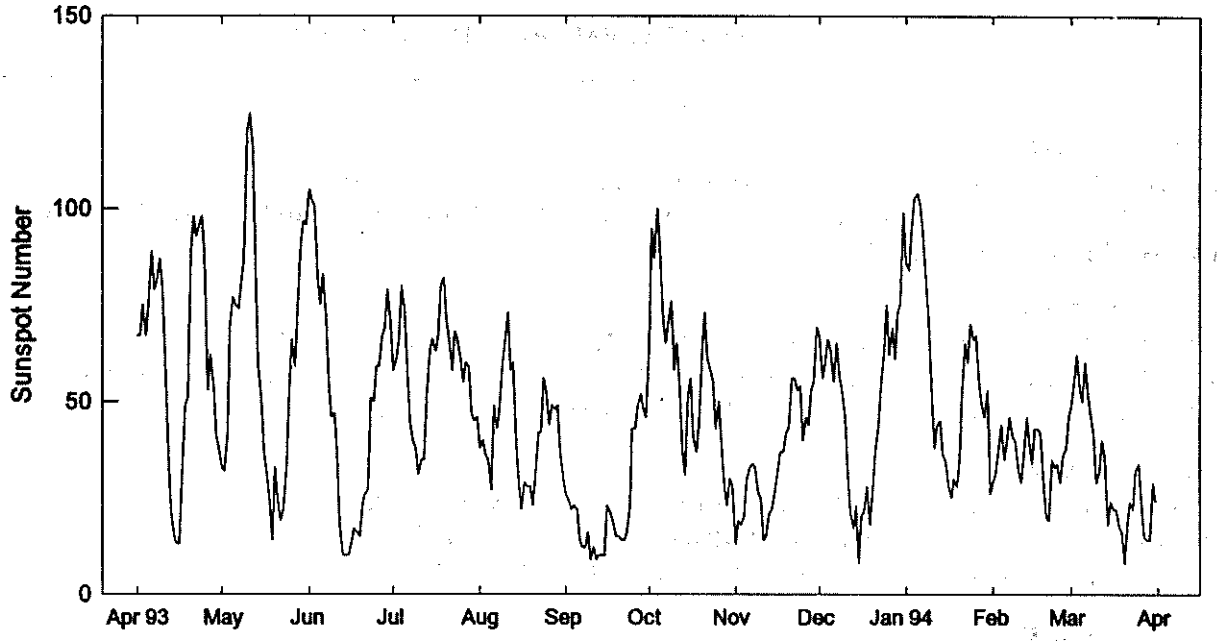
03/28/94 03:30:00
GEOALERT WWA087 STRATWARM ALERT/SUN/STRATWARM EXISTS.
THE VERY INTENSE WARMING OVER NORTHEASTERN EUROPE AND SIBERIA SPREADING INTO THE POLAR REGION AND THE COLDEST AIR DISPLACED TO SOUTHERN GREENLAND/BAFFIN ISLAND, TODAY. TEMPERATURE GRADIENT REVERSED BETWEEN 60N AND THE POLE AT 10HPA AND ABOVE. FINAL WARMING IN PROGRESS.

03/29/94 03:30:00
GEOALERT WWA088 STRATWARM ALERT/MON/STRATWARM EXISTS.
THE VERY INTENSE WARMING REACHED THE POLAR REGION AT 10HPA,TODAY. TEMPERATURE GRADIENT REVERSED BETWEEN 60N AND THE POLE IN THE MIDDLE AND UPPER STRATOSPHERE.
FINAL WARMING IN PROGRESS.

03/30/94 03:30:00
GEOALERT WWA089 STRATWARM ALERT/TUE/STRATWARM EXISTS.
THE VERY INTENSE WARMING COVERS THE POLAR REGION AT 10HPA. TEMPERATURE GRADIENT REVERSED BETWEEN 60N AND THE POLE IN THE MIDDLE AND UPPER STRATOSPHERE
FROM 30HPA UPWARDS. FINAL WARMING IN PROGRESS.

03/31/94 03:30:00
GEOALERT WWA090 STRATWARM ALERT/WED/STRATWARM EXISTS.
THE VERY INTENSE WARMING COVERS THE POLAR REGION AT 10HPA AND MEAN ZONAL WIND AT 60N WEAKENING. TEMPERATURE GRADIENT REVERSED BETWEEN 60N AND THE POLE IN THE MIDDLE AND UPPER STRATOSPHERE FROM 30HPA UPWARDS. FINAL WARMING IN PROGRESS.

# International Relative Sunspot Numbers
## Apr 1993 - Mar 1994

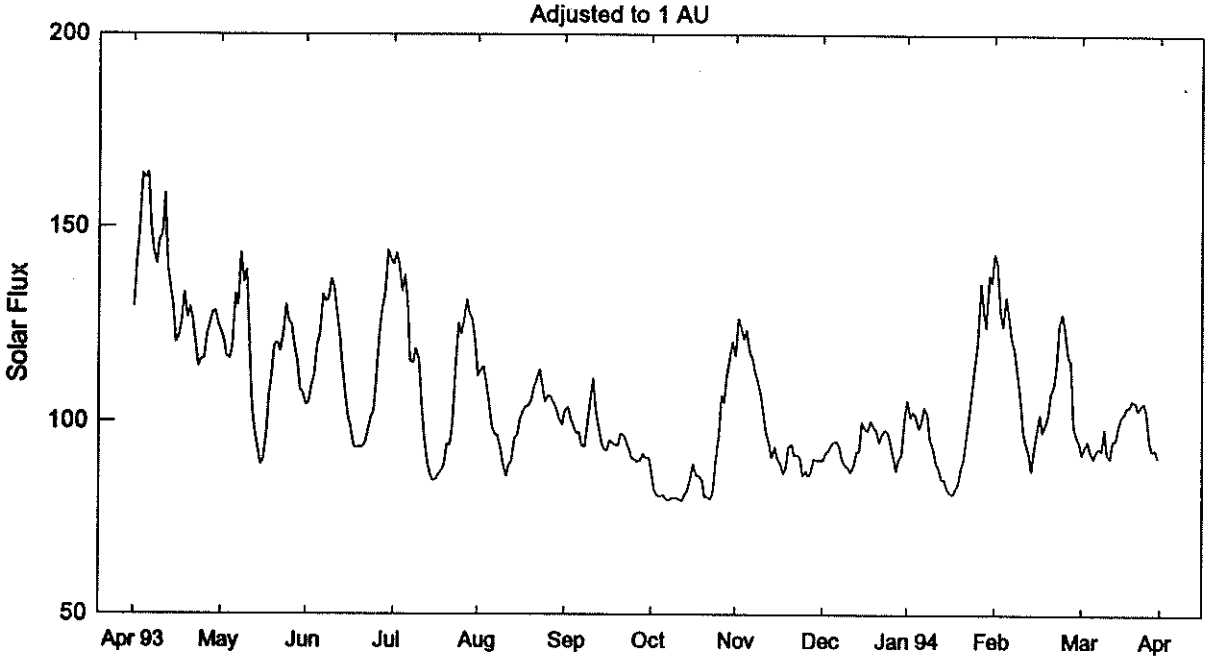



| Day | Apr 93 | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan 94* | Feb* | Mar* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 67 | 33 | 105 | 58 | 38 | 26 | 64 | 13 | 67 | 86 | 29 | 49 |
| 2 | 67 | 32 | 102 | 61 | 40 | 24 | 95 | 19 | 56 | 84 | 31 | 56 |
| 3 | 75 | 42 | 101 | 66 | 36 | 22 | 87 | 18 | 60 | 95 | 38 | 62 |
| 4 | 67 | 69 | 82 | 80 | 35 | 23 | 100 | 20 | 66 | 103 | 44 | 54 |
| 5 | 75 | 77 | 75 | 73 | 27 | 22 | 90 | 30 | 63 | 104 | 35 | 50 |
| 6 | 89 | 75 | 83 | 58 | 49 | 14 | 71 | 33 | 55 | 101 | 40 | 60 |
| 7 | 79 | 74 | 72 | 45 | 43 | 12 | 65 | 34 | 65 | 94 | 46 | 52 |
| 8 | 81 | 81 | 55 | 40 | 47 | 12 | 70 | 33 | 57 | 81 | 41 | 46 |
| 9 | 87 | 87 | 46 | 38 | 59 | 16 | 76 | 26 | 53 | 71 | 40 | 41 |
| 10 | 79 | 120 | 47 | 31 | 65 | 9 | 58 | 25 | 46 | 51 | 32 | 29 |
| 11 | 56 | 125 | 37 | 35 | 73 | 12 | 65 | 14 | 31 | 38 | 29 | 32 |
| 12 | 37 | 116 | 18 | 35 | 58 | 9 | 56 | 15 | 21 | 44 | 36 | 40 |
| 13 | 22 | 85 | 10 | 51 | 60 | 10 | 37 | 21 | 17 | 45 | 46 | 36 |
| 14 | 15 | 59 | 10 | 63 | 39 | 10 | 31 | 22 | 23 | 36 | 39 | 18 |
| 15 | 13 | 51 | 10 | 66 | 29 | 10 | 52 | 27 | 8 | 35 | 34 | 24 |
| 16 | 13 | 37 | 13 | 63 | 22 | 23 | 56 | 32 | 20 | 29 | 43 | 22 |
| 17 | 34 | 32 | 17 | 67 | 29 | 21 | 41 | 37 | 22 | 25 | 43 | 22 |
| 18 | 49 | 24 | 16 | 80 | 28 | 19 | 37 | 37 | 28 | 30 | 42 | 18 |
| 19 | 51 | 14 | 15 | 82 | 28 | 15 | 44 | 42 | 18 | 28 | 28 | 16 |
| 20 | 89 | 33 | 24 | 71 | 23 | 15 | 63 | 43 | 27 | 35 | 20 | 8 |
| 21 | 98 | 25 | 26 | 66 | 31 | 14 | 73 | 56 | 37 | 53 | 19 | 17 |
| 22 | 93 | 19 | 27 | 58 | 42 | 14 | 61 | 56 | 44 | 65 | 35 | 24 |
| 23 | 96 | 22 | 51 | 68 | 42 | 16 | 58 | 53 | 54 | 60 | 33 | 22 |
| 24 | 98 | 33 | 50 | 66 | 56 | 23 | 55 | 54 | 63 | 70 | 34 | 32 |
| 25 | 88 | 53 | 59 | 61 | 53 | 43 | 43 | 40 | 75 | 66 | 29 | 34 |
| 26 | 53 | 66 | 59 | 55 | 44 | 43 | 50 | 46 | 62 | 67 | 36 | 24 |
| 27 | 62 | 59 | 67 | 60 | 49 | 49 | 39 | 44 | 69 | 54 | 38 | 15 |
| 28 | 54 | 74 | 69 | 59 | 48 | 52 | 29 | 53 | 61 | 49 | 46 | 14 |
| 29 | 41 | 91 | 79 | 47 | 49 | 48 | 23 | 55 | 73 | 46 |  | 14 |
| 30 | 38 | 97 | 70 | 45 | 37 | 46 | 30 | 69 | 75 | 53 |  | 29 |
| 31 |  | 96 |  | 46 | 30 |  | 28 |  | 99 | 26 |  | 24 |
| Mean | 62.2 | 61.3 | 49.8 | 57.9 | 42.2 | 22.4 | 56.4 | 35.6 | 48.9 | 58.8 | 35.9 | 31.7 |

* = Provisional. The definitive yearly mean sunspot number equals 54.6 for 1993.

# Penticton 2800 MHz (10.7cm) Solar Flux
## Apr 1993 - Mar 1994

Adjusted to 1 AU




| Day | Apr 93 | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan 94 | Feb | Mar |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 123.5 | 104.2 | 140.4 | 111.8 | 102.8 | 87.1 | 117.1 | 90.0 | 105.6 | 143.4 | 91.7 | 92.4 |
| 2 | 120.7 | 104.7 | 143.4 | 113.6 | 103.7 | 82.6 | 126.9 | 91.8 | 101.3 | 141.4 | 93.5 | 96.3 |
| 3 | 117.0 | 108.9 | 140.4 | 114.2 | 100.8 | 80.9 | 124.8 | 92.4 | 102.6 | 128.7 | 95.1 | 99.2 |
| 4 | 116.4 | 112.4 | 133.7 | 110.1 | 98.9 | 80.5 | 121.5 | 94.1 | 101.6 | 124.6 | 92.7 | 96.3 |
| 5 | 118.9 | 120.0 | 137.7 | 103.9 | 97.0 | 81.0 | 123.7 | 94.8 | 98.3 | 132.4 | 90.6 | 94.2 |
| 6 | 133.1 | 122.2 | 131.3 | 98.4 | 97.1 | 80.2 | 118.0 | 94.9 | 99.9 | 127.7 | 92.2 | 94.1 |
| 7 | 130.0 | 133.0 | 115.7 | 96.5 | 93.8 | 79.6 | 116.6 | 93.5 | 103.8 | 122.1 | 93.3 | 90.0 |
| 8 | 143.5 | 131.2 | 115.2 | 96.4 | 93.4 | 80.2 | 113.1 | 90.2 | 101.9 | 118.9 | 92.6 | 89.9 |
| 9 | 136.0 | 131.5 | 118.9 | 93.2 | 99.1 | 80.1 | 110.1 | 88.7 | 95.4 | 113.1 | 98.3 | 88.7 |
| 10 | 139.2 | 136.8 | 116.0 | 89.0 | 104.5 | 80.1 | 107.1 | 88.2 | 93.2 | 106.5 | 91.8 | 86.8 |
| 11 | 119.4 | 134.7 | 104.9 | 85.8 | 111.2 | 79.8 | 102.3 | 87.0 | 89.7 | 97.8 | 90.7 | 87.0 |
| 12 | 103.7 | 129.0 | 96.2 | 88.7 | 103.2 | 79.5 | 97.3 | 88.9 | 88.1 | 94.6 | 95.1 | 91.7 |
| 13 | 97.7 | 122.4 | 89.4 | 89.5 | 99.2 | 81.1 | 94.5 | 92.2 | 85.1 | 91.9 | 95.4 | 89.1 |
| 14 | 92.8 | 114.6 | 86.4 | 95.7 | 94.6 | 82.6 | 90.8 | 92.3 | 85.1 | 87.3 | 98.9 | 86.2 |
| 15 | 88.8 | 106.7 | 84.6 | 96.3 | 92.8 | 85.6 | 93.5 | 99.9 | 82.8 | 92.6 | 101.3 | 86.5 |
| 16 | 90.0 | 101.1 | 85.0 | 100.3 | 92.4 | 89.0 | 90.3 | 98.2 | 81.9 | 97.0 | 102.3 | 85.3 |
| 17 | 96.5 | 98.4 | 86.1 | 102.6 | 95.1 | 85.9 | 89.4 | 97.7 | 81.1 | 102.0 | 103.9 | 84.3 |
| 18 | 106.6 | 93.5 | 87.4 | 103.7 | 94.3 | 86.0 | 86.7 | 100.2 | 82.4 | 97.5 | 103.9 | 85.9 |
| 19 | 111.9 | 93.1 | 88.8 | 104.1 | 93.9 | 85.0 | 88.1 | 98.7 | 84.2 | 99.5 | 105.6 | 88.3 |
| 20 | 119.9 | 93.4 | 94.1 | 105.6 | 93.8 | 80.3 | 93.5 | 98.0 | 88.1 | 101.6 | 105.2 | 87.9 |
| 21 | 120.5 | 93.3 | 94.0 | 108.9 | 97.0 | 80.6 | 94.2 | 94.8 | 89.9 | 107.3 | 103.1 | 90.0 |
| 22 | 118.4 | 94.1 | 99.8 | 111.2 | 96.2 | 79.8 | 91.3 | 96.8 | 96.6 | 109.5 | 104.4 | 90.5 |
| 23 | 122.9 | 97.3 | 113.1 | 113.3 | 94.8 | 82.0+ | 91.4 | 97.9 | 101.6 | 114.6 | 105.1 | 91.2 |
| 24 | 130.3 | 100.9 | 125.4 | 109.8 | 92.5 | 90.0+ | 90.6 | 97.5 | 107.5 | 125.1 | 102.9 | 92.1 |
| 25 | 126.2 | 102.4 | 122.6 | 105.1 | 90.6 | 96.5 | 86.0 | 94.7 | 115.2 | 128.1 | 94.8 | 90.4 |
| 26 | 125.0 | 110.4 | 126.0 | 106.8 | 90.2 | 106.8 | 87.4 | 90.8 | 120.5 | 123.9 | 92.6 | 88.1 |
| 27 | 119.6 | 122.7 | 131.7 | 106.4 | 89.4 | 104.9 | 86.0 | 87.3 | 135.8 | 116.8 | 93.0 | 88.0 |
| 28 | 115.2 | 129.2 | 127.8 | 104.6 | 90.2 | 111.7 | 87.3 | 90.7 | 129.2 | 115.7 | 90.8 | 87.3 |
| 29 | 108.1 | 132.5 | 126.7 | 103.5 | 91.7 | 116.8 | 90.5 | 91.2 | 124.4 | 98.9 | | 85.8 |
| 30 | 107.4 | 144.1 | 120.3 | 100.8 | 90.7 | 120.9 | 90.0 | 100.8 | 138.0 | 96.1 | | 86.1 |
| 31 | | 142.1 | | 99.1 | 90.6 | | 90.1 | | 136.2 | 94.7 | | 84.9 |
| Mean | 116.7 | 114.9 | 112.8 | 102.2 | 96.0 | 87.9 | 99.7 | 93.8 | 101.5 | 111.3 | 97.2 | 89.5 |

+ = suspect values due to software problems.

# DAILY SOLAR INDICES

March 1994

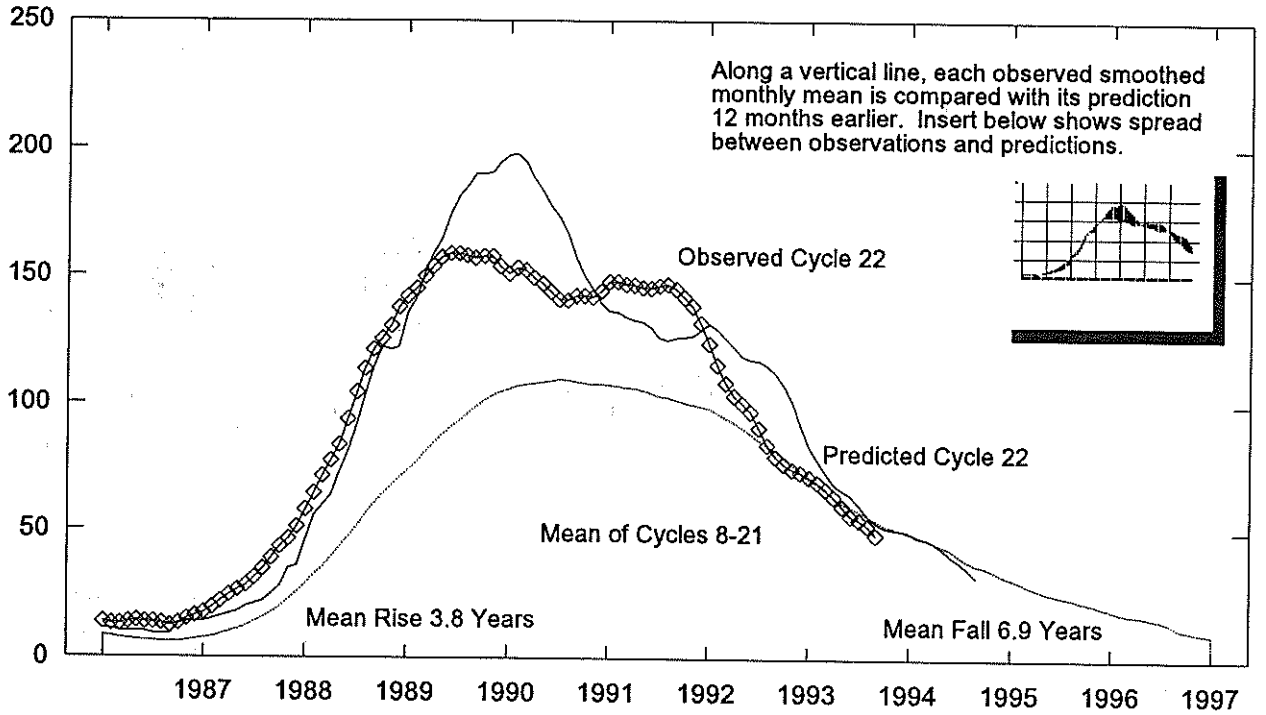
| Day | Day of Year | Bartels Cycle Day | Sunspot Numbers Int | Amer | Obs Flux Penticton (2800) | Solar Flux Adjusted to 1 Astronomical Unit — LEAR (15400) | LEAR (8800) | LEAR (4995) | Pentic (2800) | LEAR (2695) | LEAR (1415) | LEAR (610) | LEAR (410) | LEAR (245) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 60 | 8 | 49 | 49 | 94.1 | 533 | 238 | 137 | 92.4 | 86 | 62 | -- | -- | -- |
| 2 | 61 | 9 | 56 | 59 | 98.0 | 529 | 250 | 140 | 96.3 | 86 | 62 | -- | -- | 9 |
| 3 | 62 | 10 | 62 | 76 | 100.9 | -- | -- | -- | 99.2 | -- | -- | -- | -- | -- |
| 4 | 63 | 11 | 54 | 58 | 97.9 | 550 | 257 | 147 | 96.3 | 96 | 65 | 27 | 16 | 9 |
| 5 | 64 | 12 | 50 | 59 | 95.7 | 543 | 257 | 143 | 94.2 | 94 | 64 | 28 | 16 | 9 |
| 6 | 65 | 13 | 60 | 71 | 95.5 | 548 | 231 | 137 | 94.1 | 89 | 60 | -- | -- | 10 |
| 7 | 66 | 14 | 52 | 58 | 91.3 | 553 | 208 | 129 | 90.0 | 86 | 59 | -- | -- | 10 |
| 8 | 67 | 15 | 46 | 48 | 91.3 | 530 | 255 | 136 | 89.9 | 83 | 58 | 51 | 29 | 14 |
| 9 | 68 | 16 | 41 | 44 | 89.9 | 559 | 251 | 137 | 88.7 | 86 | 57 | 50 | 29 | 14 |
| 10 | 69 | 17 | 29 | 36 | 88.0 | 541 | 251 | 136 | 86.8 | 84 | 56 | 50 | 31 | 15 |
| 11 | 70 | 18 | 32 | 40 | 88.1 | 559 | 244 | 133 | 87.0 | 84 | 54 | 49 | 29 | 13 |
| 12 | 71 | 19 | 40 | 48 | 92.8 | 571 | 241 | 136 | 91.7 | 85 | 55 | 49 | 29 | 13 |
| 13 | 72 | 20 | 36 | 42 | 90.1 | 539 | 247 | 138 | 89.1 | 86 | 56 | 49 | 29 | 13 |
| 14 | 73 | 21 | 18 | 22 | 87.2 | 554 | -- | 134 | 86.2 | 84 | 56 | 47 | 28 | 12 |
| 15 | 74 | 22 | 24 | 26 | 87.4 | 555 | -- | 134 | 86.5 | 83 | 57 | 49 | 30 | -- |
| 16 | 75 | 23 | 22 | 26 | 86.2 | 544 | 244 | 132 | 85.3 | 82 | 57 | 51 | 29 | 13 |
| 17 | 76 | 24 | 22 | 24 | 85.1 | 561 | 235 | 129 | 84.3 | 82 | 57 | 52 | 31 | 15 |
| 18 | 77 | 25 | 18 | 19 | 86.7 | 527 | 253 | 134 | 85.9 | 84 | 60 | 54 | 30 | 14 |
| 19 | 78 | 26 | 16 | 10 | 89.1 | 566 | 253 | 135 | 88.3 | 84 | 59 | 55 | 31 | 13 |
| 20 | 79 | 27 | 8 | 11 | 88.6 | 566 | -- | 136 | 87.9 | 85 | 60 | 55 | 31 | 13 |
| 21 | 80 | 1 | 17 | 19 | 90.7 | 522 | 235 | 132 | 90.0 | 84 | 59 | 55 | 32 | 14 |
| 22 | 81 | 2 | 24 | 29 | 91.1 | 506 | -- | 138 | 90.5 | 87 | 59 | 55 | 33 | 14 |
| 23 | 82 | 3 | 22 | 25 | 91.8 | 510 | -- | 138 | 91.2 | 87 | 59 | 57 | 33 | 14 |
| 24 | 83 | 4 | 32 | 34 | 92.7 | 557 | 256 | 141 | 92.1 | 88 | 62 | 59 | 34 | 15 |
| 25 | 84 | 5 | 34 | 44 | 90.9 | 556 | 212 | 133 | 90.4 | 91 | 63 | 56 | 33 | 15 |
| 26 | 85 | 6 | 24 | 28 | 88.5 | 509 | 248 | 135 | 88.1 | 86 | 60 | 56 | 32 | 14 |
| 27 | 86 | 7 | 15 | 22 | 88.4 | 544 | 257 | 135 | 88.0 | 85 | 59 | 56 | 32 | 13 |
| 28 | 87 | 8 | 14 | 19 | 87.6 | 518 | 252 | 134 | 87.3 | 84 | 59 | 57 | 31 | 14 |
| 29 | 88 | 9 | 14 | 19 | 86.1 | 534 | 251 | 134 | 85.8 | 84 | 58 | 54 | 31 | 13 |
| 30 | 89 | 10 | 29 | 31 | 86.3 | 514 | 250 | 132 | 86.1 | 82 | 65 | 56 | 32 | 13 |
| 31 | 90 | 11 | 24 | 35 | 85.0 | 502 | 251 | 134 | 84.9 | 80 | 57 | 55 | 31 | 14 |
| MEAN | | | 31.7 | 36.5 | 90.4 | 540 | 245 | 135 | 89.5 | 85 | 59 | 51 | 29 | 12 |

The International numbers shown above are preliminary values; the American numbers are final.

The observed and the adjusted Penticton fluxes tabulated here are the "Series C" daily values reported by the Dominion Radio Astrophysical Observatory, Penticton, British Columbia, Canada. Numbers in parentheses in the column headings denote frequencies in MHz.

Equipment problems produced any gaps in the Air Weather Service's Learmonth (LEAR) observations.

## Cycle 22 Smoothed Sunspot Numbers: Observed and Predicted




Smoothed Sunspot Numbers (Observed and Predicted) for Parts of Solar Cycles 21 and 22

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Avg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1987 | 18 | 20 | 22 | 24 | 26 | 28 | 31 | 35 | 39 | 44 | 47 | 51 | 32 |
| 1988 | 58 | 65 | 71 | 78 | 84 | 94 | 104 | 114 | 121 | 125 | 130 | 138 | 99 |
| 1989 | 142 | 145 | 150 | 154 | 157 | 158 | 158 | 158 | 157 | 157 | 158 | 154 | 154 |
| 1990 | 151 | 153 | 152 | 149 | 147 | 144 | 141 | 140 | 142 | 142 | 142 | 144 | 146 |
| 1991 | 148 | 148 | 147 | 146 | 146 | 145 | 146 | 147 | 145 | 142 | 138 | 132 | 144 |
| 1992 | 124 | 115 | 108 | 103 | 100 | 97 | 91 | 84 | 80 | 76 | 74 | 73 | 94 |
| 1993 | 71 | 69 | 67 | 64 | 60 | 56 | 55 | 52 | 49 | 47 | 46 | 44 | 57 |
| ( ) | | | | | | | | | | (3) | (6) | (8) | (6) |
| 1994 | 43 | 41 | 40 | 39 | 38 | 37 | 35 | 34 | 32 | 31 | 30 | 29 | 36 |
| ( ) | (10) | (11) | (12) | (13) | (15) | (15) | (17) | (18) | (20) | (20) | (21) | (22) | (16) |
| 1995 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 21 | 20 | 19 | 18 | 23 |
| ( ) | (22) | (22) | (22) | (22) | (22) | (21) | (21) | (21) | (21) | (20) | (19) | (18) | (21) |

Solar Cycle 22 — Min, Max, and Predictions

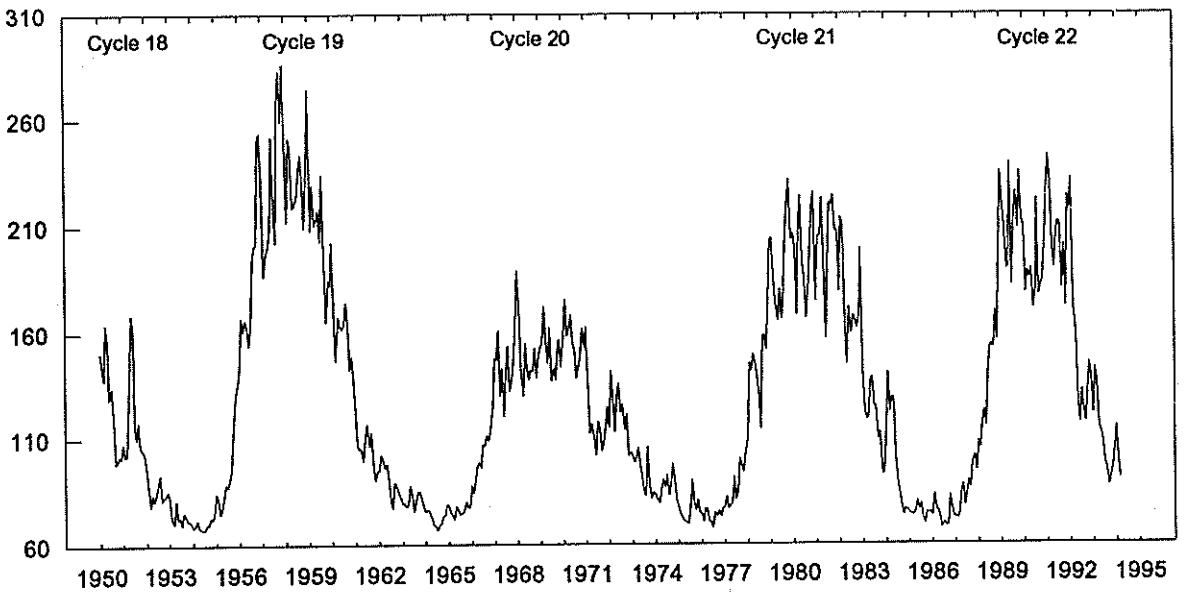
September 1986 marks the minimum of Solar Cycle 21 and the onset of Cycle 22, which in turn, reached a maximum in July 1989.

**Observed and Predicted Numbers.** For the end of Cycle 21, and the rise and decline of Cycle 22, the table above lists observed smoothed sunspot numbers up to the one that includes the most recent monthly mean. We based these smoothed values on final monthly means through Dec 1993 and on provisional numbers thereafter. Table entries with numbers in parentheses below them denote predictions by the McNish-Lincoln method. (See page 9 in the Jul 1987 supplement to *Solar-Geophysical Data*.) Adding the number in parentheses to the predicted value generates the upper limit of the 90% confidence interval. Subtracting the number from the predicted value generates the lower limit. Consider, for example, the Sep 1994 prediction. There exists a 90% chance that in Sep 1994, the actual smoothed number will fall somewhere between 12 and 52.

**Points to Ponder.** The McNish-Lincoln prediction method generates useful estimates of smoothed, monthly mean sunspot numbers for no more than 12 months ahead. Beyond 12 months, the predictions regress toward the mean of all 14 cycles of observations used in the computation. Moreover, the method remains very sensitive to the date defining the onset of the current cycle, that is, to the date of the most recent sunspot minimum. The new cycle predictions tabulated above are based on the minimum value of 12.3 that occurred in Sep 1986.

30
Mar 94

# Monthly Mean 2800 MHz Solar Flux (Observed)
## Jan 1950 - Mar 1994




| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1950 | 150.7 | 143.3 | 137.8 | 164.3 | 157.1 | 128.7 | 134.1 | 120.9 | 98.6 | 99.9 | 101.9 | 101.1 | 128.2 |
| 1951 | 107.9 | 101.9 | 102.5 | 127.1 | 168.6 | 161.7 | 116.3 | 109.8 | 117.8 | 106.0 | 104.4 | 102.4 | 118.9 |
| 1952 | 95.4 | 86.2 | 78.5 | 84.0 | 80.9 | 84.8 | 88.8 | 93.3 | 81.5 | 82.8 | 83.4 | 85.7 | 85.4 |
| 1953 | 83.2 | 72.8 | 70.4 | 81.0 | 72.5 | 73.0 | 69.8 | 75.5 | 74.3 | 71.9 | 71.4 | 70.8 | 73.9 |
| 1954 | 68.7 | 69.2 | 71.9 | 68.7 | 68.0 | 67.3 | 67.7 | 69.9 | 70.1 | 73.2 | 72.6 | 75.5 | 70.2 |
| 1955 | 84.3 | 82.0 | 74.8 | 77.3 | 82.8 | 88.8 | 87.3 | 90.7 | 91.1 | 111.8 | 130.0 | 134.6 | 95.0 |
| 1956 | 141.2 | 167.2 | 160.6 | 165.9 | 163.4 | 154.0 | 162.8 | 193.8 | 200.9 | 201.6 | 250.4 | 253.7 | 184.6 |
| 1957 | 231.2 | 186.7 | 197.8 | 200.0 | 208.5 | 252.1 | 218.0 | 202.3 | 267.1 | 283.1 | 259.2 | 286.5 | 232.7 |
| 1958 | 251.5 | 212.2 | 251.5 | 245.9 | 218.6 | 220.5 | 224.1 | 237.0 | 243.5 | 228.0 | 209.2 | 238.2 | 231.7 |
| 1959 | 274.5 | 207.9 | 229.2 | 210.6 | 212.7 | 217.5 | 203.0 | 234.2 | 194.3 | 165.1 | 184.8 | 182.2 | 209.7 |
| 1960 | 202.6 | 170.9 | 146.8 | 167.6 | 162.7 | 161.9 | 163.9 | 174.4 | 164.5 | 142.3 | 148.9 | 138.1 | 162.0 |
| 1961 | 122.0 | 106.4 | 104.8 | 105.0 | 99.3 | 109.9 | 116.5 | 106.2 | 112.7 | 96.7 | 90.3 | 94.8 | 105.4 |
| 1962 | 94.9 | 102.2 | 100.3 | 96.2 | 97.9 | 91.0 | 80.7 | 77.3 | 89.5 | 87.8 | 84.9 | 82.0 | 90.4 |
| 1963 | 79.5 | 79.7 | 77.8 | 79.5 | 87.8 | 83.5 | 75.9 | 80.9 | 85.1 | 85.1 | 81.7 | 78.4 | 81.2 |
| 1964 | 75.4 | 76.8 | 75.9 | 72.6 | 69.5 | 69.0 | 67.0 | 69.3 | 70.2 | 73.4 | 73.7 | 78.8 | 72.6 |
| 1965 | 78.6 | 75.2 | 74.1 | 72.0 | 78.2 | 77.0 | 74.3 | 74.8 | 76.6 | 80.2 | 77.7 | 77.8 | 76.4 |
| 1966 | 87.9 | 84.2 | 90.3 | 97.2 | 98.5 | 96.3 | 106.7 | 106.6 | 110.9 | 108.6 | 113.3 | 124.6 | 102.1 |
| 1967 | 147.7 | 147.0 | 160.6 | 129.9 | 143.0 | 120.2 | 140.3 | 153.7 | 132.1 | 136.1 | 145.3 | 163.0 | 143.2 |
| 1968 | 189.1 | 173.2 | 142.6 | 129.5 | 154.9 | 142.3 | 137.2 | 142.2 | 141.0 | 152.5 | 138.5 | 148.4 | 149.3 |
| 1969 | 152.7 | 155.2 | 172.3 | 155.5 | 145.4 | 162.2 | 136.6 | 143.0 | 137.3 | 154.0 | 156.7 | 143.6 | 151.2 |
| 1970 | 158.3 | 175.4 | 158.4 | 162.0 | 168.4 | 154.9 | 152.0 | 138.2 | 143.2 | 148.3 | 162.0 | 152.8 | 156.2 |
| 1971 | 162.6 | 137.8 | 111.9 | 116.7 | 109.9 | 101.7 | 117.4 | 114.1 | 104.0 | 107.2 | 114.0 | 124.5 | 118.5 |
| 1972 | 114.8 | 141.8 | 128.5 | 112.9 | 129.6 | 135.4 | 122.0 | 125.7 | 113.6 | 121.1 | 101.6 | 102.9 | 120.8 |
| 1973 | 102.2 | 98.7 | 100.4 | 105.0 | 97.0 | 91.2 | 84.5 | 82.9 | 105.6 | 87.7 | 81.5 | 84.2 | 93.4 |
| 1974 | 83.1 | 80.9 | 79.2 | 86.1 | 90.6 | 86.3 | 92.5 | 83.0 | 87.8 | 97.6 | 90.3 | 81.1 | 86.5 |
| 1975 | 77.5 | 74.2 | 72.4 | 70.7 | 70.1 | 69.7 | 77.2 | 90.4 | 79.6 | 75.7 | 80.8 | 74.6 | 76.1 |
| 1976 | 74.7 | 70.5 | 76.7 | 76.3 | 70.6 | 70.6 | 67.5 | 74.8 | 73.1 | 75.9 | 72.9 | 76.7 | 73.4 |
| 1977 | 77.4 | 82.3 | 76.6 | 77.6 | 79.6 | 91.5 | 81.1 | 84.3 | 99.9 | 96.9 | 93.7 | 102.1 | 86.9 |
| 1978 | 109.6 | 145.4 | 141.8 | 149.4 | 146.5 | 142.2 | 131.1 | 114.0 | 157.9 | 158.2 | 151.5 | 175.5 | 143.6 |
| 1979 | 203.0 | 204.1 | 185.8 | 173.8 | 165.2 | 180.3 | 165.9 | 172.7 | 200.2 | 217.9 | 231.7 | 203.5 | 192.0 |
| 1980 | 206.2 | 200.0 | 168.1 | 207.9 | 224.0 | 193.2 | 184.8 | 166.2 | 183.9 | 204.2 | 218.1 | 225.8 | 198.5 |
| 1981 | 174.6 | 204.5 | 205.3 | 223.2 | 194.6 | 156.9 | 191.9 | 220.6 | 219.5 | 224.3 | 207.8 | 207.8 | 202.6 |
| 1982 | 179.0 | 214.2 | 210.5 | 161.8 | 144.7 | 171.9 | 159.6 | 167.9 | 165.3 | 161.9 | 167.4 | 199.4 | 175.3 |
| 1983 | 142.3 | 122.6 | 118.6 | 118.9 | 137.1 | 138.6 | 125.0 | 124.4 | 109.0 | 112.4 | 92.5 | 93.4 | 119.6 |
| 1984 | 116.1 | 140.6 | 122.0 | 128.7 | 128.3 | 100.3 | 89.3 | 83.7 | 78.1 | 73.5 | 76.3 | 75.9 | 101.1 |
| 1985 | 74.5 | 73.7 | 73.3 | 75.1 | 80.2 | 76.1 | 78.7 | 71.5 | 69.5 | 74.7 | 74.2 | 74.8 | 74.7 |
| 1986 | 73.2 | 83.6 | 77.0 | 75.1 | 72.6 | 67.6 | 70.2 | 68.4 | 68.7 | 83.0 | 77.1 | 72.6 | 74.1 |
| 1987 | 72.5 | 71.5 | 74.0 | 84.9 | 87.8 | 77.9 | 84.2 | 90.0 | 86.1 | 98.1 | 101.2 | 94.4 | 85.3 |
| 1988 | 108.0 | 105.0 | 114.9 | 122.7 | 115.2 | 139.4 | 152.7 | 154.2 | 152.5 | 169.8 | 156.2 | 199.8 | 141.0 |
| 1989 | 235.4 | 222.4 | 205.1 | 189.6 | 190.1 | 239.6 | 181.9 | 217.1 | 225.9 | 208.7 | 235.1 | 213.0 | 213.7 |
| 1990 | 210.1 | 178.3 | 188.8 | 185.3 | 189.7 | 170.9 | 180.7 | 222.6 | 177.4 | 182.0 | 184.3 | 204.9 | 189.6 |
| 1991 | 229.4 | 243.0 | 230.0 | 198.8 | 190.3 | 206.8 | 212.0 | 210.3 | 180.6 | 201.3 | 172.0 | 223.9 | 208.1 |
| 1992 | 217.6 | 232.1 | 171.3 | 158.5 | 125.4 | 116.7 | 132.2 | 122.1 | 116.8 | 130.8 | 145.2 | 139.1 | 150.7 |
| 1993 | 121.0 | 142.6 | 136.4 | 115.9 | 112.3 | 109.3 | 99.0 | 93.7 | 87.0 | 100.3 | 95.9 | 104.8 | 109.7 |
| 1994 | 115.0 | 99.6 | 90.4 | | | | | | | | | | 101.7 |

# Hα S O L A R F L A R E S

## MARCH 1994

| Sta | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/ USAF Region | CMP Mo | CMP Day | Dur (Min) | Imp Opt | Imp Xray | Imp See | Obs Type | Area Measurement Time (UT) | Area Measurement Apparent (10-6 Disk) | Area Measurement Corr (Sq Deg) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GOES | 01 | 0139 | 0143 | 0145 | | | | | | 6 | | B 1.7 | | | | | | |
| GOES | | 0200 | 0204 | 0207 | | | | | | 7 | | B 2.8 | | | | | | |
| GOES | | 0755 | 0758 | 0802 | | | | | | 7 | | B 2.6 | | | | | | |
| GOES | | 1439 | 1454 | 1510 | | | | | | 31 | | B 2.0 | | | | | | |
| GOES | | 1559 | 1605 | 1610 | | | | | | 11 | | B 1.7 | | | | | | |
| GOES | | 1757 | 1801 | 1805 | | | | | | 8 | | B 1.3 | | | | | | |
| HOLL | | 1951 | 1954 | 2004 | S13 | E41 | 7680 | 03 | 4.9 | 13 | SF | B 9.9 | 3 | E | | 36 | | F |
| HOLL | | 2220 | 2226 | 2253 | S12 | E40 | 7680 | 03 | 4.9 | 33 | 1F | C 3.6 | 3 | E | | 113 | | F |
| GOES | 02 | 0312 | 0315 | 0318 | | | | | | 6 | | B 1.6 | | | | | | |
| LEAR | | 0359 | 0359 | 0405 | S12 | E36 | 7680 | 03 | 4.9 | 6 | SF | B 4.5 | 3 | E | | 11 | | |
| GOES | | 0706 | 0710 | 0714 | | | | | | 8 | | B 1.6 | | | | | | |
| RAMY | | 1605 | 1609 | 1616 | S19 | W23 | 7682 | 02 | 28.9 | 11 | SF | B 3.7 | 3 | E | | 14 | | F |
| RAMY | | 1647 | 1648 | 1705 | S19 | W26 | 7682 | 02 | 28.7 | 18 | SF | B 3.8 | 3 | E | | 17 | | F |
| RAMY | | 2102E | 2104 | 2108D | S19 | W26 | 7682 | 02 | 28.9 | 6D | SF | | 3 | E | | 13 | | |
| HOLL | | 2205 | 2211 | 2214 | S17 | W27 | 7682 | 02 | 28.9 | 9 | SF | B 4.5 | 2 | E | | 16 | | |
| LEAR | | 2306 | 2306 | 2317 | S19 | W26 | 7682 | 03 | 1.0 | 11 | SF | C 1.7 | 3 | E | | 46 | | F |
| LEAR | 03 | 0208 | 0209 | 0225 | S20 | W28 | 7682 | 02 | 28.9 | 17 | SF | C 6.2 | 3 | E | | 69 | | FE |
| LEAR | | 0337 | 0338 | 0346 | S19 | W29 | 7682 | 02 | 28.9 | 9 | SF | C 1.3 | 3 | E | | 34 | | F |
| GOES | | 0723 | 0728 | 0733 | | | | | | 10 | | B 2.6 | | | | | | |
| GOES | | 0817 | 0821 | 0823 | | | | | | 6 | | B 3.9 | | | | | | |
| GOES | | 0850 | 0854 | 0856 | | | | | | 6 | | B 3.3 | | | | | | |
| GOES | | 0904 | 0911 | 0915 | | | | | | 11 | | B 2.7 | | | | | | |
| GOES | | 0915 | 0924 | 0942 | | | | | | 27 | | B 5.1 | | | | | | |
| RAMY | | 1136 | 1233 | 1252 | S19 | W34 | 7682 | 02 | 28.9 | 76 | SF | C 3.2 | 3 | E | | 63 | | F |
| GOES | | 1200 | 1204 | 1206 | | | | | | 6 | | B 2.3 | | | | | | |
| GOES | | 1241 | 1243 | 1245 | | | | | | 4 | | C 1.2 | | | | | | |
| RAMY | | 1307 | 1309 | 1313 | S19 | W36 | 7682 | 02 | 28.8 | 6 | SF | C 6.4 | 3 | E | | 57 | | E |
| GOES | | 1359 | 1416 | 1424 | | | | | | 25 | | B 8.7 | | | | | | |
| GOES | | 1502 | 1506 | 1508 | | | | | | 6 | | B 5.9 | | | | | | |
| GOES | | 1610 | 1615 | 1619 | | | | | | 9 | | C 1.5 | | | | | | |
| RAMY | | 1749 | 1749 | 1757 | S13 | E17 | 7680 | 03 | 5.0 | 8 | SF | | 3 | E | | 27 | | F |
| RAMY | | 1800 | 1801 | 1806 | S19 | W38 | 7682 | 02 | 28.8 | 6 | SF | | 3 | E | | 17 | | F |
| RAMY | | 1809 | 1824 | 1828 | S19 | W37 | 7682 | 02 | 28.9 | 19 | SF | C 1.6 | 3 | E | | 21 | | F |
| GOES | | 1905 | 1910 | 1917 | | | | | | 12 | | C 1.0 | | | | | | |
| GOES | | 2012 | 2016 | 2019 | | | | | | 7 | | C 1.2 | | | | | | |
| HOLL | | 2102 | 2106 | 2123 | S18 | W42 | 7682 | 02 | 28.7 | 21 | SF | C 1.2 | 3 | E | | 23 | | H |
| GOES | | 2147 | 2155 | 2157 | | | | | | 10 | | B 9.1 | | | | | | |
| GOES | | 2214 | 2219 | 2221 | | | | | | 7 | | C 1.1 | | | | | | |
| HOLL | | 2257 | 2306 | 2310 | S18 | W41 | 7682 | 02 | 28.8 | 13 | SF | | 3 | E | | 14 | | |
| LEAR | | 2258 | 2258 | 2306 | S17 | W39 | 7682 | 03 | 1.0 | 8 | SF | | 3 | E | | 36 | | |
| LEAR | | 2307 | 2307 | 2311 | S19 | W42 | 7682 | 02 | 28.7 | 4 | SF | | 3 | E | | 14 | | |
| HOLL | | 2318 | 2318 | 2326 | S17 | W44 | 7682 | 02 | 28.6 | 8 | SF | | 3 | E | | 47 | | H |
| LEAR | | 2318 | 2321 | 2337 | S17 | W42 | 7682 | 02 | 28.8 | 19 | SF | C 1.2 | 3 | E | | 17 | | |
| GOES | 04 | 0135 | 0148 | 0201 | | | | | | 26 | | C 1.5 | | | | | | |
| LEAR | | 0139 | 0208 | 0221 | S18 | W41 | 7682 | 02 | 28.9 | 42 | SF | C 1.8 | 3 | E | | 38 | | F |
| LEAR | | 0238 | 0238 | 0247 | S18 | W42 | 7682 | 02 | 28.9 | 9 | SF | C 1.3 | 3 | E | | 12 | | |
| LEAR | | 0301 | 0315U | 0423 | S18 | W42 | 7682 | 02 | 28.9 | 82 | 1F | C 1.6 | 3 | E | | 116 | | F |
| GOES | | 0313 | 0321 | 0324 | | | | | | 11 | | C 3.6 | | | | | | |
| GOES | | 0343 | 0346 | 0348 | | | | | | 5 | | B 9.7 | | | | | | |
| GOES | | 0358 | 0406 | 0419 | | | | | | 21 | | B 9.3 | | | | | | |
| LEAR | | 0425 | 0427 | 0446 | S18 | W45 | 7682 | 02 | 28.7 | 21 | SF | C 1.1 | 3 | E | | 33 | | |
| LEAR | | 0504 | 0504 | 0507 | S12 | E11 | 7680 | 03 | 5.0 | 3 | SF | | 3 | E | | 18 | | F |
| GOES | | 0516 | 0519 | 0521 | | | | | | 5 | | B 8.0 | | | | | | |
| GOES | | 0540 | 0543 | 0545 | | | | | | 5 | | B 6.4 | | | | | | |
| LEAR | | 0609 | 0611 | 0617 | S18 | W47 | 7682 | 02 | 28.7 | 8 | SF | C 1.1 | 3 | E | | 14 | | |
| LEAR | | 0644 | 0649 | 0712 | S18 | W46 | 7682 | 02 | 28.8 | 28 | 1F | C 5.8 | 3 | E | | 102 | | F |
| GOES | | 0738 | 0742 | 0745 | | | | | | 7 | | B 8.0 | | | | | | |
| GOES | | 0749 | 0800 | 0803 | | | | | | 14 | | C 1.3 | | | | | | |
| GOES | | 0829 | 0834 | 0839 | | | | | | 10 | | B 9.8 | | | | | | |
| GOES | | 0904 | 0907 | 0909 | | | | | | 5 | | B 7.7 | | | | | | |
| GOES | | 0914 | 0924 | 0948 | | | | | | 34 | | C 3.6 | | | | | | |
| SVTO | | 1053E | 1128U | 1146D | S19 | W47 | 7682 | 02 | 28.9 | 53D | SF | C 2.3 | 2 | E | | 52 | | FH |
| RAMY | | 1218 | 1249 | 1259 | S18 | W50 | 7682 | 02 | 28.7 | 41 | SF | C 1.2 | 3 | E | | 24 | | F |
| RAMY | | 1417 | 1418 | 1424 | S19 | W51 | 7682 | 02 | 28.7 | 7 | SF | B 9.1 | 3 | E | | 20 | | |
| SVTO | | 1419E | 1419U | 1430D | S19 | W51 | 7682 | 02 | 28.7 | 11D | SF | | 1 | E | | 10 | | |

# Hα SOLAR FLARES

## MARCH 1994

| Sta | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/ USAF Region | CMP Mo | CMP Day | Dur (Min) | Imp Opt | Imp Xray | Imp See | Obs Type | Area Measurement Time (UT) | Area Measurement Apparent (10-6 Disk) | Area Measurement Corr (Sq Deg) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GOES | 04 | 1502 | 1507 | 1509 | | | | | | 7 | | B 6.4 | | | | | | |
| GOES | | 1616 | 1620 | 1622 | | | | | | 6 | | B 4.4 | | | | | | |
| RAMY | | 1626 | 1627 | 1631 | S19 | W52 | 7682 | 02 | 28.7 | 5 | SF | C 1.1 | 3 | E | | 19 | | |
| RAMY | | 1635 | 1636 | 1646 | S19 | W53 | 7682 | 02 | 28.6 | 11 | SF | B 6.1 | 3 | E | | 27 | | F |
| GOES | | 1717 | 1723 | 1732 | | | | | | 15 | | B 4.7 | | | | | | |
| GOES | | 1748 | 1752 | 1754 | | | | | | 6 | | B 4.0 | | | | | | |
| GOES | | 1816 | 1819 | 1821 | | | | | | 5 | | B 2.5 | | | | | | |
| HOLL | | 1842E | 1843U | 1846 | S18 | W52 | 7682 | 02 | 28.8 | 4D | SF | | 2 | E | | 14 | | |
| GOES | | 1853 | 1856 | 1858 | | | | | | 5 | | B 5.0 | | | | | | |
| HOLL | | 1902 | 1903 | 1906 | S17 | W55 | 7682 | 02 | 28.6 | 4 | SF | | 3 | E | | 25 | | |
| RAMY | | 1902 | 1904 | 1906 | S19 | W56 | 7682 | 02 | 28.5 | 4 | SF | C 1.3 | 3 | E | | 19 | | |
| RAMY | | 2003 | 2003 | 2006 | S19 | W55 | 7682 | 02 | 28.6 | 3 | SF | | 3 | E | | 11 | | |
| GOES | | 2043 | 2046 | 2048 | | | | | | 5 | | B 9.5 | | | | | | |
| HOLL | | 2047 | 2053 | 2059 | S17 | W55 | 7682 | 02 | 28.7 | 12 | SF | C 1.7 | 3 | E | | 23 | | |
| HOLL | | 2118 | 2121 | 2132 | S18 | W54 | 7682 | 02 | 28.8 | 14 | SF | B 6.2 | 3 | E | | 36 | | |
| HOLL | | 2241 | 2243 | 2245 | S18 | W57 | 7682 | 02 | 28.6 | 4 | SF | | 3 | E | | 20 | | |
| GOES | | 2251 | 2255 | 2257 | | | | | | 6 | | B 5.9 | | | | | | |
| GOES | | 2333 | 2343 | 2348 | | | | | | 15 | | B 4.8 | | | | | | |
| GOES | 05 | 0001 | 0003 | 0006 | | | | | | 5 | | B 4.3 | | | | | | |
| GOES | | 0348 | 0352 | 0354 | | | | | | 6 | | B 2.5 | | | | | | |
| SVTO | | 1218 | 1218 | 1226 | S17 | W66 | 7682 | 02 | 28.5 | 8 | SF | B 3.7 | 3 | E | | 19 | | |
| SVTO | | 1351 | 1351 | 1358 | S13 | W08 | 7680 | 03 | 5.0 | 7 | SF | B 1.6 | 3 | E | | 12 | | |
| GOES | | 1848 | 1851 | 1853 | | | | | | 5 | | B 2.7 | | | | | | |
| HOLL | | 2229 | 2230 | 2235 | S11 | W14 | 7680 | 03 | 4.9 | 6 | SF | | 3 | E | | 17 | | |
| GOES | | 2301 | 2304 | 2306 | | | | | | 5 | | B 2.4 | | | | | | |
| GOES | 06 | 0626 | 0630 | 0633 | | | | | | 7 | | B 2.0 | | | | | | |
| SVTO | | 0639 | 0640 | 0650 | N09 | W36 | | 03 | 3.6 | 11 | SF | B 3.9 | 2 | E | | 29 | | |
| SVTO | | 0653 | 0656 | 0705 | N17 | E26 | | 03 | 8.3 | 12 | SF | B 3.6 | 2 | E | | 37 | | |
| LEAR | | 0815 | 0817 | 0823 | N17 | E25 | | 03 | 8.2 | 8 | SF | B 8.3 | 3 | E | | 13 | | |
| SVTO | | 0815 | 0817 | 0824 | N17 | E26 | | 03 | 8.3 | 9 | SF | | 3 | E | | 16 | | H |
| GOES | | 1025 | 1030 | 1034 | | | | | | 9 | | B 4.4 | | | | | | |
| GOES | | 1135 | 1144 | 1149 | | | | | | 14 | | B 2.3 | | | | | | |
| SVTO | | 1233 | 1233 | 1246 | N17 | E23 | | 03 | 8.3 | 13 | SF | C 2.3 | 3 | E | | 18 | | |
| GOES | | 1513 | 1519 | 1531 | | | | | | 18 | | B 3.8 | | | | | | |
| SVTO | | 1552 | 1553 | 1604 | S09 | E14 | 7685 | 03 | 7.7 | 12 | SF | | 3 | E | | 11 | | |
| RAMY | | 1553 | 1605 | 1622 | S09 | E15 | 7685 | 03 | 7.8 | 29 | SF | B 5.7 | 4 | E | | 26 | | F |
| HOLL | | 1554 | 1606 | 1613 | S09 | E14 | 7685 | 03 | 7.7 | 19 | SF | | 3 | E | | 21 | | |
| SVTO | | 1603 | 1603 | 1609 | S11 | W23 | 7680 | 03 | 4.9 | 6 | SF | | 3 | E | | 16 | | |
| HOLL | | 1603 | 1603 | 1615 | S12 | W23 | 7680 | 03 | 4.9 | 12 | SF | | 3 | E | | 32 | | |
| RAMY | | 1603 | 1603 | 1618 | S12 | W23 | 7680 | 03 | 4.9 | 15 | SF | | 4 | E | | 36 | | F |
| RAMY | | 1628 | 1629 | 1638 | N17 | E21 | | 03 | 8.3 | 10 | SF | B 3.2 | 4 | E | | 20 | | |
| RAMY | | 1711 | 1714 | 1722 | S09 | E13 | 7685 | 03 | 7.7 | 11 | SF | | 3 | E | | 20 | | F |
| RAMY | | 1752 | 1752 | 1801 | N18 | E21 | 7687 | 03 | 8.3 | 9 | SF | B 2.9 | 4 | E | | 11 | | |
| RAMY | | 1805 | 1817 | 1834 | S09 | E13 | 7685 | 03 | 7.7 | 29 | SF | | 4 | E | | 18 | | F |
| HOLL | | 1814 | 1819 | 1829 | S09 | E14 | 7685 | 03 | 7.8 | 15 | SF | | 3 | E | | 24 | | |
| HOLL | | 1937 | 1940 | 1948 | S09 | E12 | 7685 | 03 | 7.7 | 11 | SF | B 6.1 | 3 | E | | 14 | | |
| GOES | | 2208 | 2213 | 2219 | | | | | | 11 | | B 2.2 | | | | | | |
| GOES | | 2312 | 2316 | 2319 | | | | | | 7 | | B 2.0 | | | | | | |
| GOES | 07 | 0315 | 0321 | 0326 | | | | | | 11 | | B 2.2 | | | | | | |
| RAMY | | 1938 | 1938 | 1944 | S11 | W39 | 7680 | 03 | 4.9 | 6 | SF | | 3 | E | | 11 | | F |
| GOES | | 2127 | 2138 | 2148 | | | | | | 21 | | B 3.2 | | | | | | |
| GOES | 08 | 0236 | 0240 | 0243 | | | | | | 7 | | B 2.0 | | | | | | |
| GOES | | 1211 | 1328 | 1410 | | | | | | 119 | | B 3.5 | | | | | | |
| GOES | | 1901 | 1904 | 1908 | | | | | | 7 | | B 1.4 | | | | | | |
| GOES | | 2251 | 2254 | 2257 | | | | | | 6 | | B 1.7 | | | | | | |
| GOES | 09 | 0116 | 0121 | 0130 | | | | | | 14 | | B 3.7 | | | | | | |
| GOES | | 0459 | 0504 | 0508 | | | | | | 9 | | B 2.6 | | | | | | |
| GOES | | 0659 | 0702 | 0704 | | | | | | 5 | | B 1.2 | | | | | | |
| GOES | | 0825 | 0828 | 0831 | | | | | | 6 | | B 1.9 | | | | | | |
| SVTO | | 0856 | 0857 | 0906 | N08 | W80 | 7686 | 03 | 3.4 | 10 | SF | | 3 | E | | 19 | | |
| GOES | | 1018 | 1021 | 1025 | | | | | | 7 | | B 1.6 | | | | | | |
| GOES | | 1813 | 1822 | 1837 | | | | | | 24 | | B 3.7 | | | | | | |
| GOES | | 1851 | 1901 | 1908 | | | | | | 17 | | B 5.2 | | | | | | |

# Hα S O L A R F L A R E S

## MARCH 1994

| Sta | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/ USAF Region | CMP Mo | CMP Day | Dur (Min) | Imp Opt | Xray | See | Obs Type | Area Measurement Time (UT) | Area Measurement Apparent (10-6 Disk) | Area Measurement Corr (Sq Deg) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GOES | 09 | 2009 | 2014 | 2019 | | | | | | 10 | | B 2.9 | | | | | | |
| GOES | | 2038 | 2046 | 2103 | | | | | | 25 | | B 1.9 | | | | | | |
| GOES | | 2133 | 2140 | 2152 | | | | | | 19 | | B 7.7 | | | | | | |
| GOES | 10 | 0007 | 0012 | 0019 | | | | | | 12 | | B 4.0 | | | | | | |
| GOES | | 0025 | 0028 | 0032 | | | | | | 7 | | B 4.3 | | | | | | |
| GOES | | 0749 | 0757 | 0805 | | | | | | 16 | | B 6.4 | | | | | | |
| GOES | | 0847 | 0909 | 0917 | | | | | | 30 | | B 7.0 | | | | | | |
| GOES | | 2234 | 2243 | 2257 | | | | | | 23 | | B 2.6 | | | | | | |
| GOES | 11 | 0036 | 0048 | 0103 | | | | | | 27 | | B 3.8 | | | | | | |
| GOES | | 0424 | 0428 | 0441 | | | | | | 17 | | B 2.4 | | | | | | |
| GOES | | 0606 | 0612 | 0618 | | | | | | 12 | | B 2.1 | | | | | | |
| GOES | | 1003 | 1007 | 1013 | | | | | | 10 | | B 1.2 | | | | | | |
| GOES | | 1930 | 1933 | 1936 | | | | | | 6 | | B 1.2 | | | | | | |
| GOES | 12 | 0009 | 0013 | 0015 | | | | | | 6 | | B 2.0 | | | | | | |
| GOES | | 0603 | 0609 | 0611 | | | | | | 8 | | B 2.7 | | | | | | |
| GOES | | 0736 | 0743 | 0747 | | | | | | 11 | | C 1.1 | | | | | | |
| GOES | | 1000 | 1004 | 1009 | | | | | | 9 | | B 2.9 | | | | | | |
| RAMY | | 1256 | 1300 | 1310 | N17 | E53 | 7688 | 03 | 16.6 | 14 | SF | B 3.0 | 3 | E | | 28 | | |
| GOES | | 1726 | 1734 | 1744 | | | | | | 18 | | B 3.2 | | | | | | |
| GOES | | 1914 | 1934 | 1944 | | | | | | 30 | | B 3.0 | | | | | | |
| GOES | | 2044 | 2050 | 2100 | | | | | | 16 | | B 5.4 | | | | | | |
| GOES | | 2336 | 2341 | 2347 | | | | | | 11 | | B 3.1 | | | | | | |
| GOES | 13 | 0247 | 0250 | 0252 | | | | | | 5 | | B 2.9 | | | | | | |
| GOES | | 0304 | 0308 | 0311 | | | | | | 7 | | B 2.3 | | | | | | |
| GOES | | 0348 | 0352 | 0357 | | | | | | 9 | | B 2.9 | | | | | | |
| SVTO | | 1107 | 1112 | 1124 | S14 | W62 | 7690 | 03 | 8.8 | 17 | SF | B 4.8 | 3 | E | | 33 | | |
| RAMY | | 1108E | 1108U | 1124 | S14 | W62 | 7690 | 03 | 8.8 | 16D | SF | | 3 | E | | 39 | | F |
| SVTO | | 1322 | 1322 | 1335 | N16 | E39 | 7688 | 03 | 16.5 | 13 | SF | | 2 | E | | 17 | | |
| GOES | 14 | 0200 | 0207 | 0220 | | | | | | 20 | | B 1.4 | | | | | | |
| GOES | 15 | 0106 | 0131 | 0146 | | | | | | 40 | | B 1.2 | | | | | | |
| GOES | | 0341 | 0410 | 0432 | | | | | | 51 | | B 2.2 | | | | | | |
| GOES | | 1125 | 1132 | 1136 | | | | | | 11 | | B 4.0 | | | | | | |
| GOES | | 1305 | 1309 | 1313 | | | | | | 8 | | B 1.5 | | | | | | |
| SVTO | | 1451 | 1452 | 1459 | N16 | E07 | 7688 | 03 | 16.1 | 8 | SF | | 2 | E | | 15 | | F |
| SVTO | 16 | 0722 | 0722 | 0729 | N16 | E01 | 7688 | 03 | 16.4 | 7 | SF | | 3 | E | | 21 | | |
| GOES | | 1555 | 1605 | 1615 | | | | | | 20 | | B 1.6 | | | | | | |
| GOES | 17 | 0459 | 0501 | 0512 | | | | | | 13 | | B 2.3 | | | | | | |
| GOES | | 0508 | 0511 | 0513 | | | | | | 5 | | B 1.0 | | | | | | |
| GOES | 18 | 0235 | 0320 | 0539 | | | | | | 184 | | C 2.7 | | | | | | |
| GOES | 20 | 1039 | 1138 | 1315 | | | | | | 156 | | B 1.3 | | | | | | |
| SVTO | 21 | 1056 | 1114 | 1126 | N07 | W36 | | 03 | 18.7 | 30 | SF | | 3 | E | | 25 | | F |
| SVTO | | 1130 | 1130 | 1134 | N07 | W36 | | 03 | 18.8 | 4 | SF | | 3 | E | | 18 | | F |
| SVTO | | 1151 | 1153 | 1155 | N19 | W66 | 7688 | 03 | 16.4 | 4 | SF | | 2 | E | | 76 | | F |
| SVTO | | 1551 | 1553 | 1555 | N19 | W66 | 7688 | 03 | 16.6 | 4 | SF | | 2 | E | | 76 | | F |
| HOLL | | 1615 | 1621 | 1628 | N21 | W68 | 7688 | 03 | 16.5 | 13 | SF | B 8.2 | 3 | E | | 17 | | |
| SVTO | | 1618 | 1618 | 1621 | N19 | W66 | 7688 | 03 | 16.6 | 3 | SF | | 2 | E | | 27 | | F |
| HOLL | | 1752 | 1753 | 1758 | N10 | W39 | 7693 | 03 | 18.8 | 6 | SF | B 3.1 | 3 | E | | 12 | | |
| RAMY | | 1910 | 1914 | 1931 | N08 | W40 | 7693 | 03 | 18.8 | 21 | SF | B 3.6 | 4 | E | | 35 | | |
| HOLL | | 1913 | 1915 | 1920 | N09 | W40 | 7693 | 03 | 18.8 | 7 | SF | | 3 | E | | 31 | | |
| HOLL | | 2149 | 2152 | 2159 | N09 | W41 | 7693 | 03 | 18.8 | 10 | SF | B 3.2 | 3 | E | | 22 | | |
| GOES | 22 | 0620 | 0643 | 0700 | | | | | | 40 | | B 3.0 | | | | | | |
| GOES | | 1617 | 1624 | 1634 | | | | | | 17 | | B 1.7 | | | | | | |
| GOES | | 1658 | 1709 | 1721 | | | | | | 23 | | B 2.2 | | | | | | |
| GOES | 23 | 0023 | 0028 | 0033 | | | | | | 10 | | B 2.7 | | | | | | |
| GOES | | 0246 | 0253 | 0304 | | | | | | 18 | | B 2.0 | | | | | | |

# Hα SOLAR FLARES

## MARCH 1994

| Sta | Day | Start (UT) | Max (UT) | End (UT) | Lat | CMD | NOAA/ USAF Region | CMP Mo | CMP Day | Dur (Min) | Imp Opt | Xray | See | Obs Type | Area Measurement Time (UT) | Area Measurement Apparent (10-6 Disk) | Area Measurement Corr (Sq Deg) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GOES | 23 | 0353 | 0357 | 0401 | | | | | | 8 | | B 2.0 | | | | | | |
| SVTO | | 1119 | 1126 | 1136 | N18 | W24 | 7692 | 03 | 21.6 | 17 | SF | | 3 | E | | 14 | | F |
| RAMY | | 1154 | 1157 | 1209 | N18 | W23 | 7692 | 03 | 21.7 | 15 | SF | B 1.9 | 4 | E | | 10 | | F |
| SVTO | | 1155 | 1156 | 1206 | N16 | W25 | 7692 | 03 | 21.6 | 11 | SF | | 3 | E | | 13 | | F |
| RAMY | | 1216 | 1219 | 1227 | N18 | W23 | 7692 | 03 | 21.7 | 11 | SF | B 2.6 | 4 | E | | 14 | | F |
| SVTO | | 1217 | 1219 | 1223 | N18 | W24 | 7692 | 03 | 21.7 | 6 | SF | | 3 | E | | 11 | | F |
| RAMY | | 1305 | 1305 | 1311 | N08 | W64 | 7693 | 03 | 18.7 | 6 | SF | B 1.9 | 4 | E | | 10 | | |
| GOES | | 1603 | 1607 | 1611 | | | | | | 8 | | B 2.0 | | | | | | |
| GOES | | 1952 | 2038 | 2119 | | | | | | 87 | | B 3.9 | | | | | | |
| GOES | 24 | 0258 | 0301 | 0307 | | | | | | 9 | | B 1.8 | | | | | | |
| GOES | | 0337 | 0343 | 0351 | | | | | | 14 | | B 2.4 | | | | | | |
| GOES | | 1151 | 1155 | 1203 | | | | | | 12 | | B 2.4 | | | | | | |
| GOES | | 1412 | 1416 | 1421 | | | | | | 9 | | B 2.6 | | | | | | |
| GOES | | 1650 | 1700 | 1721 | | | | | | 31 | | B 5.6 | | | | | | |
| GOES | | 2200 | 2220 | 2233 | | | | | | 33 | | C 3.6 | | | | | | |
| GOES | 25 | 0809 | 0821 | 0903 | | | | | | 54 | | B 1.4 | | | | | | |
| GOES | 26 | 1448 | 1503 | 1526 | | | | | | 38 | | B 3.8 | | | | | | |
| GOES | | 1701 | 1720 | 1737 | | | | | | 36 | | B 1.4 | | | | | | |
| GOES | 27 | 2206 | 2210 | 2217 | | | | | | 11 | | B 1.9 | | | | | | |
| GOES | 28 | 0234 | 0239 | 0244 | | | | | | 10 | | B 1.7 | | | | | | |
| LEAR | | 0936 | 0937 | 0943 | S17 | E13 | 7695 | 03 | 29.4 | 7 | SF | B 6.2 | 3 | E | | 42 | | F |
| SVTO | | 0936 | 0938 | 0944 | S19 | E13 | 7695 | 03 | 29.4 | 8 | SF | | 3 | E | | 45 | | F |
| HOLL | | 1725E | 1732 | 1740 | S15 | E25 | | 03 | 30.6 | 15D | SF | B 3.9 | 3 | E | | 31 | | H |
| RAMY | | 1738E | 1741U | 1755 | S16 | E24 | | 03 | 30.5 | 17D | SF | | 3 | E | | 31 | | F |
| RAMY | | 1818 | 1825 | 1907 | N09 | E23 | | 03 | 30.5 | 49 | SF | B 3.4 | 3 | E | | 40 | | F |
| GOES | | 2318 | 2326 | 2335 | | | | | | 17 | | B 2.6 | | | | | | |
| SVTO | 29 | 0627 | 0629 | 0633 | N10 | E19 | | 03 | 30.7 | 6 | SF | B 3.1 | 3 | E | | 30 | | |
| LEAR | | 0909 | 0911 | 0913 | S18 | W40 | 7696 | 03 | 26.3 | 4 | SF | B 2.8 | 3 | E | | 20 | | F |
| SVTO | | 1540 | 1544U | 1621D | N07 | E12 | 7697 | 03 | 30.5 | 41D | SF | | 3 | E | | 74 | | F |
| RAMY | | 1543 | 1548 | 1644 | N10 | E13 | 7697 | 03 | 30.6 | 61 | SF | B 6.1 | 3 | E | | 32 | | UF |
| LEAR | 30 | 0805 | 0807 | 0846 | N10 | E04 | 7697 | 03 | 30.6 | 41 | 1F | C 1.9 | 3 | E | | 102 | | F |
| GOES | | 1157 | 1213 | 1223 | | | | | | 26 | | B 1.5 | | | | | | |
| RAMY | | 1737 | 1749 | 1758 | S17 | W59 | 7696 | 03 | 26.2 | 21 | SF | | 3 | E | | 16 | | |
| GOES | | 2226 | 2230 | 2236 | | | | | | 10 | | B 1.1 | | | | | | |
| GOES | 31 | 0054 | 0058 | 0102 | | | | | | 8 | | B 1.4 | | | | | | |
| GOES | | 0351 | 0354 | 0359 | | | | | | 8 | | B 1.5 | | | | | | |
| GOES | | 1322 | 1335 | 1354 | | | | | | 32 | | B 2.8 | | | | | | |

"Remarks"

A = Eruptive prominence whose base is less than 90 degrees from central meridian.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No visible spots in the neighborhood.
H = Flare accompanied by high-speed dark filament.
I = Active region very extended.
J = Distinct variations of plage intensity before or after the flare.
K = Several intensity maxima.
L = Existing filaments show signs of sudden activity.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the H and K lines of Ca II.
P = Flare shows Helium D3 in emission.
Q = Flare shows Balmer continuum in emission.
R = Marked asymmetry in H-alpha line suggests ejection of high-velocity material.
S = Brightness follows disappearance of filament in same position.
T = Region active all day.
U = Two bright branches, parallel or converging.
V = Occurrence of an explosive phase; important, expansion within roughly 1 minute that often includes a significant intensity increase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide H-alpha line.
Y = System of loop-type prominences.
Z = Major sunspot umbra covered by flare.

Observation Type: C=Cinematographic, E=Electronic, P=Photographic, V=Visual

# S O L A R  R A D I O  E M I S S I O N
## Selected Fixed Frequency Events

MARCH 1994

| Day | Freq | Sta | Type | Start (UT) | Time of Maximum (UT) | Duration (Min) | Flux Density Peak (10 -22 W/m 2 Hz) | Flux Density Mean (10 -22 W/m 2 Hz) | Int | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2800 | PENT | 22 GRF | 2215.8 | 2222.5 | 63.0 | 7.4 | 3.0 | | |
| | 2800 | PENT | 3 S | 2223.3 | 2226.3 | 6.1 | 22.6 | 6.0 | | |
| 04 | 2800 | PENT | 4 S/F | 1902.3 | 1903.3 | 1.9 | 9.6 | 3.0 | | |
| 13 | 2800 | PENT | ?* INT | 2112.0 | 2114.5 | 8.3 | 5500.0 | | | |

Reports are received routinely from the following observatories:
LEAR = Learmonth  PALE = Palehua  SGMR = Sagamore Hill  SVTO = San Vito
PENT = Penticton

Explanation of Type Code:

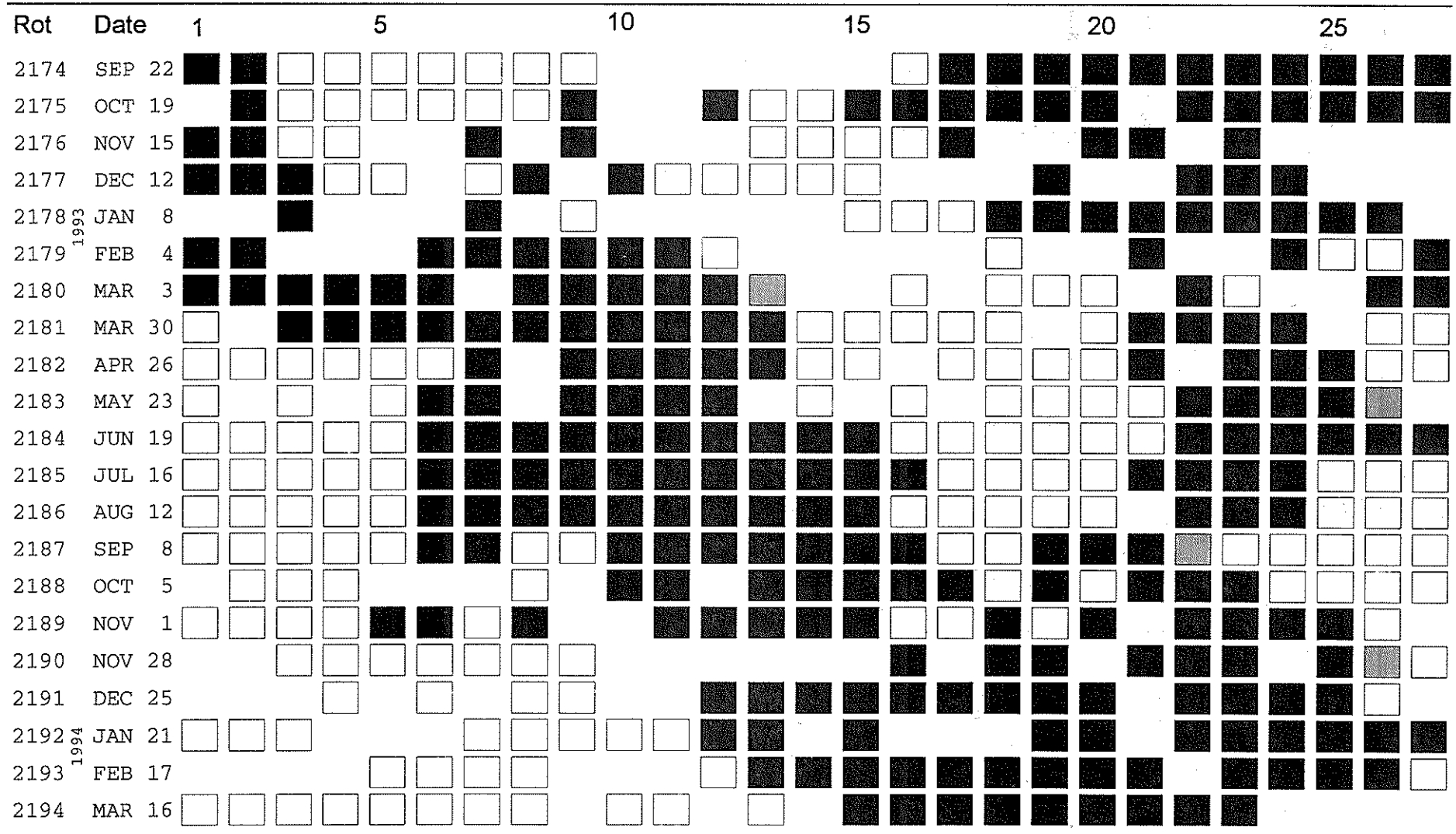
| | | | | |
|---|---|---|---|---|
| 1 Simple 1 | 7 Minor + | 24 Rise | 30 Post Burst Increase A | 43 Onset of Noise Storm |
| 2 Simple 1F | 8 Spike | 25 Rise A | 31 Post Burst Decrease | 44 Noise Storm in Progress |
| 3 Simple 2 | 20 Simple 3 | 26 Fall | 33 Absorption | 45 Complex |
| 4 Simple 2F | 21 Simple 3A | 27 Rise and Fall | 40 Fluctuation | 46 Complex F |
| 5 Simple | 22 Simple 3F | 28 Precusor | 41 Group of Bursts | 47 Great Burst |
| 6 Minor | 23 Simple 3AF | 29 Post Burst Increase | 42 Series of Bursts | 48 Major |

| | | | |
|---|---|---|---|
| 1A Simple 1A | 4A Simple 2AF | 24PF Post Rise F | 27F Rise and Fall F |
| 3A Simple 2A | 40 Rise Only | 16A Fall A | 27AF Rise and Fall AF |
| 21A Simple 3A GRF | 40F Rise Only F | 260 Fall Only | 31A Post Burst Decrease A |
| 2A Simple 1AF | 4P Post Rise | 26F Fall F | 32A Absorption A |

RSTN Site Information: Beginning in April 1986, the RSTN sites LEAR, PALE, SGMR, and SVTO fixed frequency solar radio data are periodically adjusted to several world standard stations. These world standard stations include: Kislovodsk, USSR 15,500 MHz; Penticton, Canada 2800 MHz; Hiraiso, Japan 500 and 200 MHz; and Toyokawa, Japan 9400, 3750, 2000 and 1000 MHz.

?* = No confirmation of this event from another observatory. It appeared on both our telescopes, so we believe it to be external interference, possibly from an air or space craft.

# STANFORD MEAN SOLAR MAGNETIC FIELD

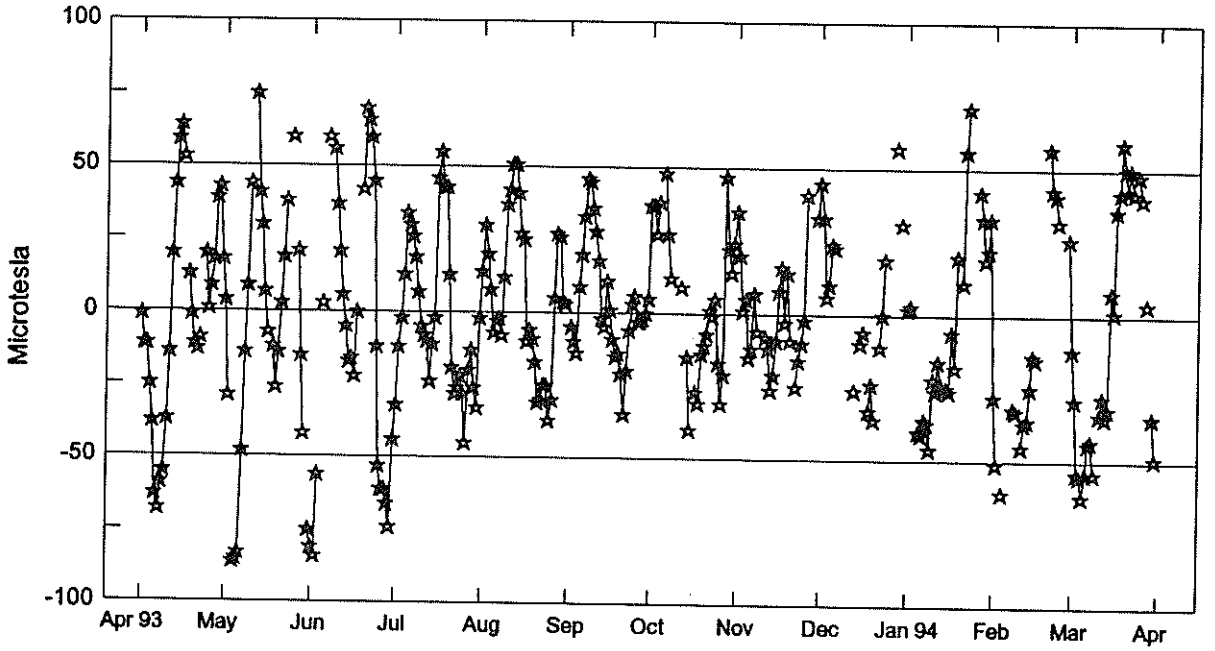



Mean Solar Magnetic Field Polarity: = field > 2 microT; = -2 microT ≤ field ≤ 2 microT

= field < -2 microT; No box = no data available

Observations are taken at 2000 UT. Rotation numbers given are the Bartels series, but the dates are not; these dates are five days earlier, to mark times of occurrence of phenomena on the Sun that affect the Earth during the given Bartels Rotation.

# Stanford Mean Solar Magnetic Field (Microtesla)
## "Sun-As-A-Star"




| Day | Apr 93 | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan 94 | Feb | Mar |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | -1 | 4 | -81 | -32 | 14 | --- | 37 | 35 | 45 | 2 | -28 | -12 |
| 2 | -11 | -29 | -84 | -12 | 30 | -5 | 37 | 20 | 33 | 3 | -51 | -29 |
| 3 | -11 | --- | -56 | -2 | 20 | -10 | 27 | 1 | 6 | --- | --- | -54 |
| 4 | -25 | -86 | --- | 13 | 8 | -14 | 38 | 5 | 10 | --- | -61 | -55 |
| 5 | -38 | -85 | 3 | 34 | -7 | 9 | --- | -15 | 24 | -40 | --- | -62 |
| 6 | -63 | -83 | --- | 30 | -3 | 20 | 48 | -12 | 23 | -41 | --- | -54 |
| 7 | -68 | -48 | 60 | 26 | -2 | 33 | 27 | 7 | --- | -36 | --- | -44 |
| 8 | -59 | -14 | --- | 19 | -8 | 46 | 12 | -6 | --- | -37 | -32 | -43 |
| 9 | -55 | 9 | 56 | 7 | 12 | 45 | --- | --- | --- | -46 | -33 | -54 |
| 10 | -37 | 44 | 37 | -5 | 37 | 36 | --- | --- | --- | -22 | --- | --- |
| 11 | -14 | --- | 21 | -8 | 42 | 28 | --- | -8 | --- | -26 | -45 | -34 |
| 12 | 20 | 75 | 6 | -10 | 51 | 18 | 9 | -12 | --- | -16 | -37 | -28 |
| 13 | 44 | 41 | -5 | -24 | 51 | -2 | --- | -26 | -26 | -24 | -36 | -35 |
| 14 | 59 | 30 | -17 | -11 | 41 | -5 | -15 | -21 | --- | --- | -25 | -32 |
| 15 | 64 | 7 | -16 | -2 | 27 | 11 | -40 | -9 | -10 | -25 | -14 | 8 |
| 16 | 53 | -7 | -22 | 46 | 25 | 1 | --- | 8 | -6 | -26 | -15 | 1 |
| 17 | --- | --- | 0 | 55 | -10 | -9 | -27 | 16 | --- | -6 | --- | 36 |
| 18 | 13 | -12 | --- | 43 | -6 | -15 | -31 | -3 | -33 | -18 | --- | 42 |
| 19 | -1 | -26 | 42 | 43 | -9 | -14 | -14 | 14 | -24 | 20 | --- | 59 |
| 20 | -11 | -14 | 70 | 13 | -17 | -21 | -11 | -9 | -36 | --- | --- | 50 |
| 21 | -13 | 3 | 66 | -19 | -31 | -35 | -7 | --- | --- | 11 | 57 | 43 |
| 22 | -9 | 19 | 60 | -28 | -30 | -20 | 1 | -25 | -11 | 56 | 43 | 50 |
| 23 | --- | 38 | 45 | -26 | -25 | -6 | -1 | -16 | 0 | 71 | 41 | 42 |
| 24 | 20 | --- | -12 | -22 | -25 | 3 | 5 | -10 | 19 | --- | 32 | --- |
| 25 | 1 | 60 | -53 | -28 | -37 | 6 | -17 | -2 | --- | --- | --- | 48 |
| 26 | 9 | --- | -61 | -45 | -30 | -3 | -31 | 41 | --- | --- | --- | 40 |
| 27 | 18 | 21 | -61 | -20 | 5 | -3 | -21 | --- | --- | 42 | --- | --- |
| 28 | 39 | -15 | -66 | -13 | 27 | -2 | 47 | --- | 57 | 33 | 26 | 4 |
| 29 | 43 | -42 | -74 | -26 | 26 | 0 | 22 | --- | --- | 19 | | --- |
| 30 | 18 | --- | -44 | -33 | 4 | 5 | 14 | 33 | 31 | 22 | | -35 |
| 31 | | -75 | | -2 | 3 | | 24 | | --- | 33 | | -49 |

Note: --- Indicates no data available for the day.

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Prompt Reports

Number 596 Part I

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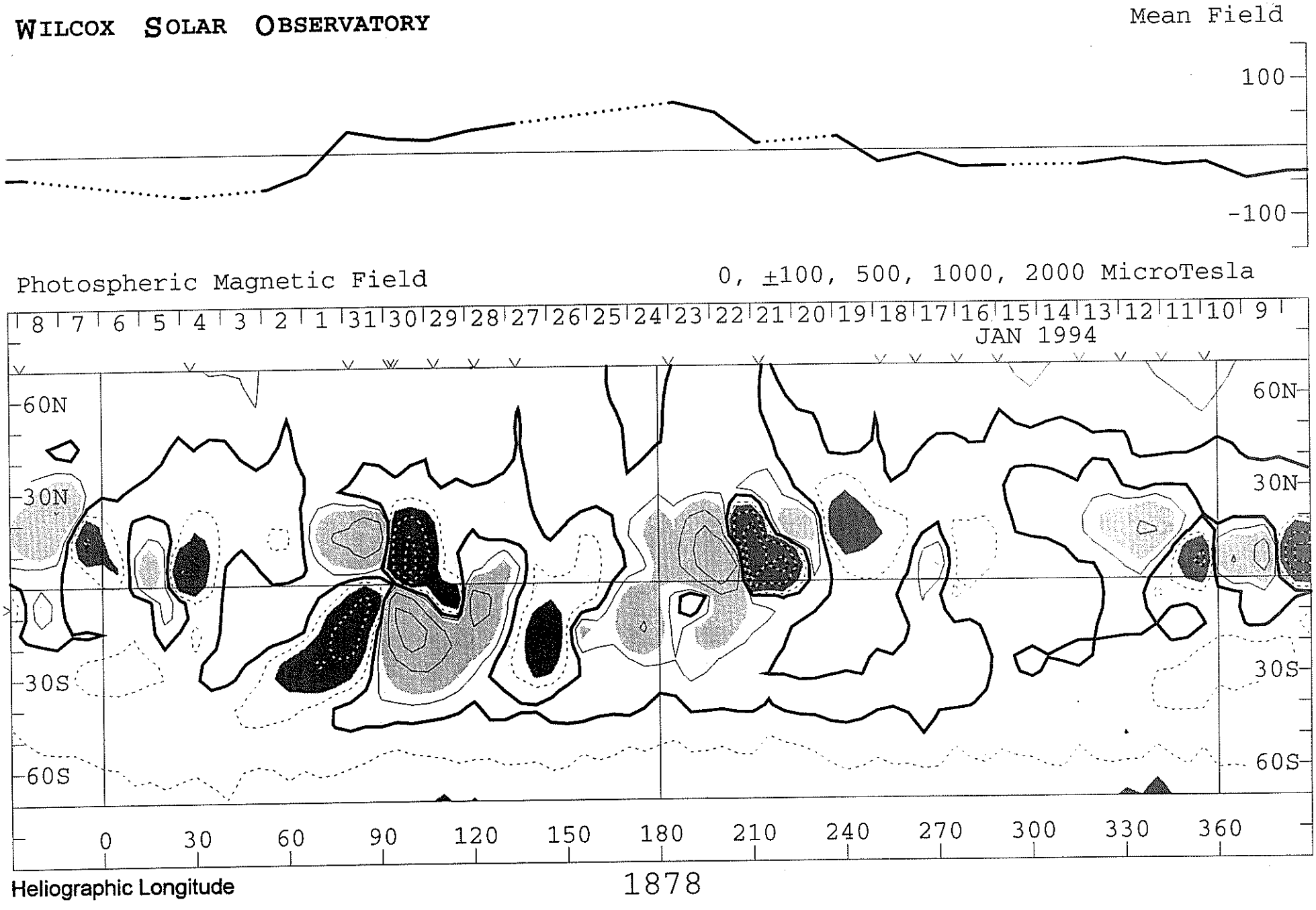
# SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1878

(10 January to 6 February 1994)

WILCOX SOLAR OBSERVATORY



# SOLAR MAGNETIC FIELD SYNOPTIC CHART

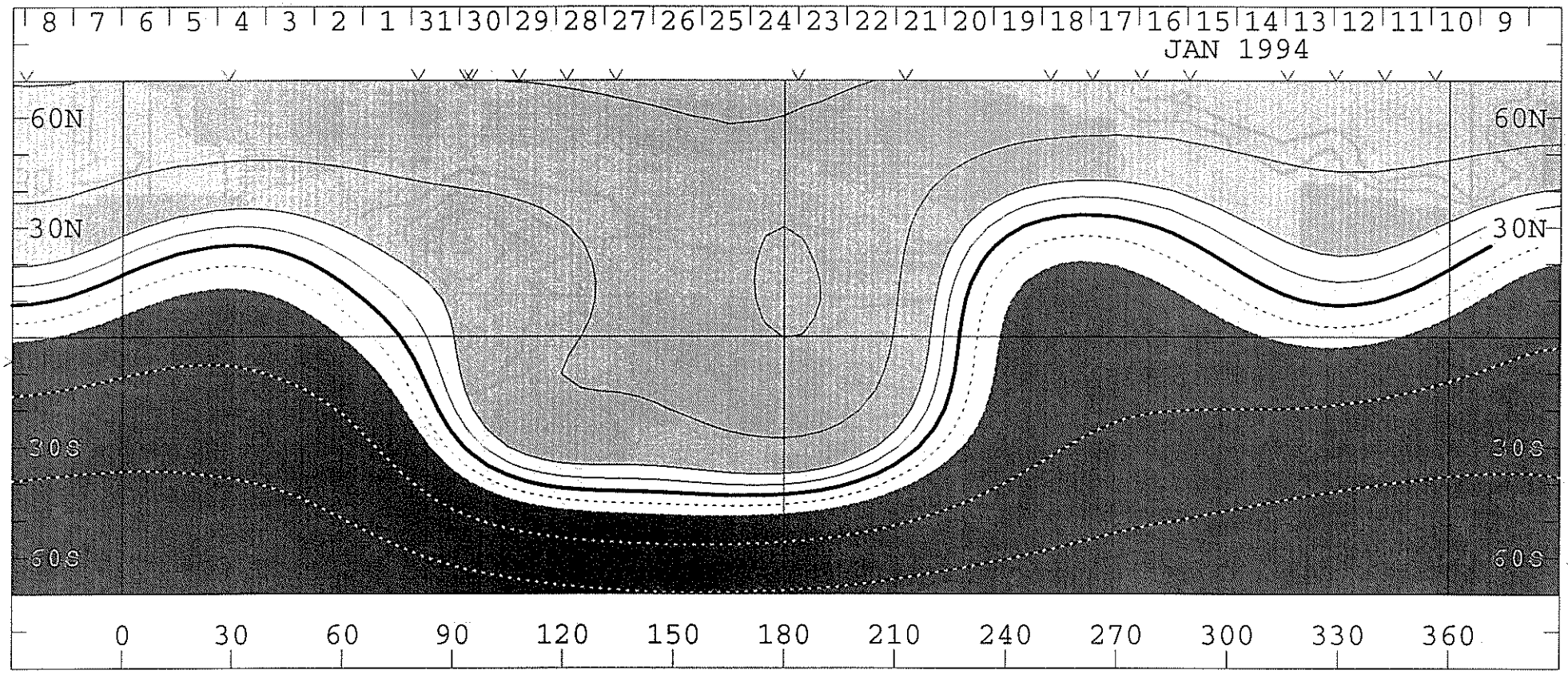
## SOURCE SURFACE FIELD

CARRINGTON ROTATION NUMBER 1878

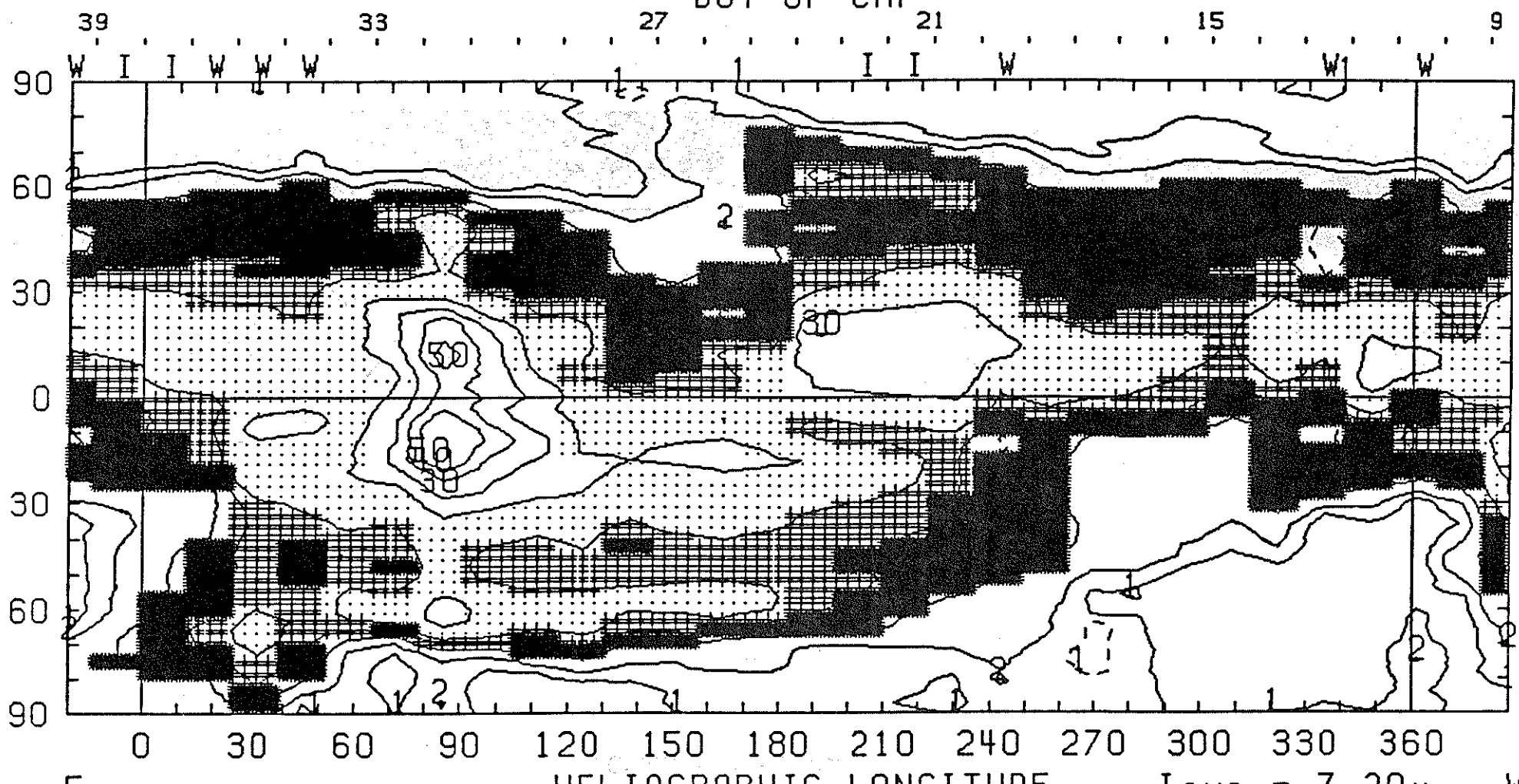
(10 January to 6 February 1994)

**Wilcox Solar Observatory**

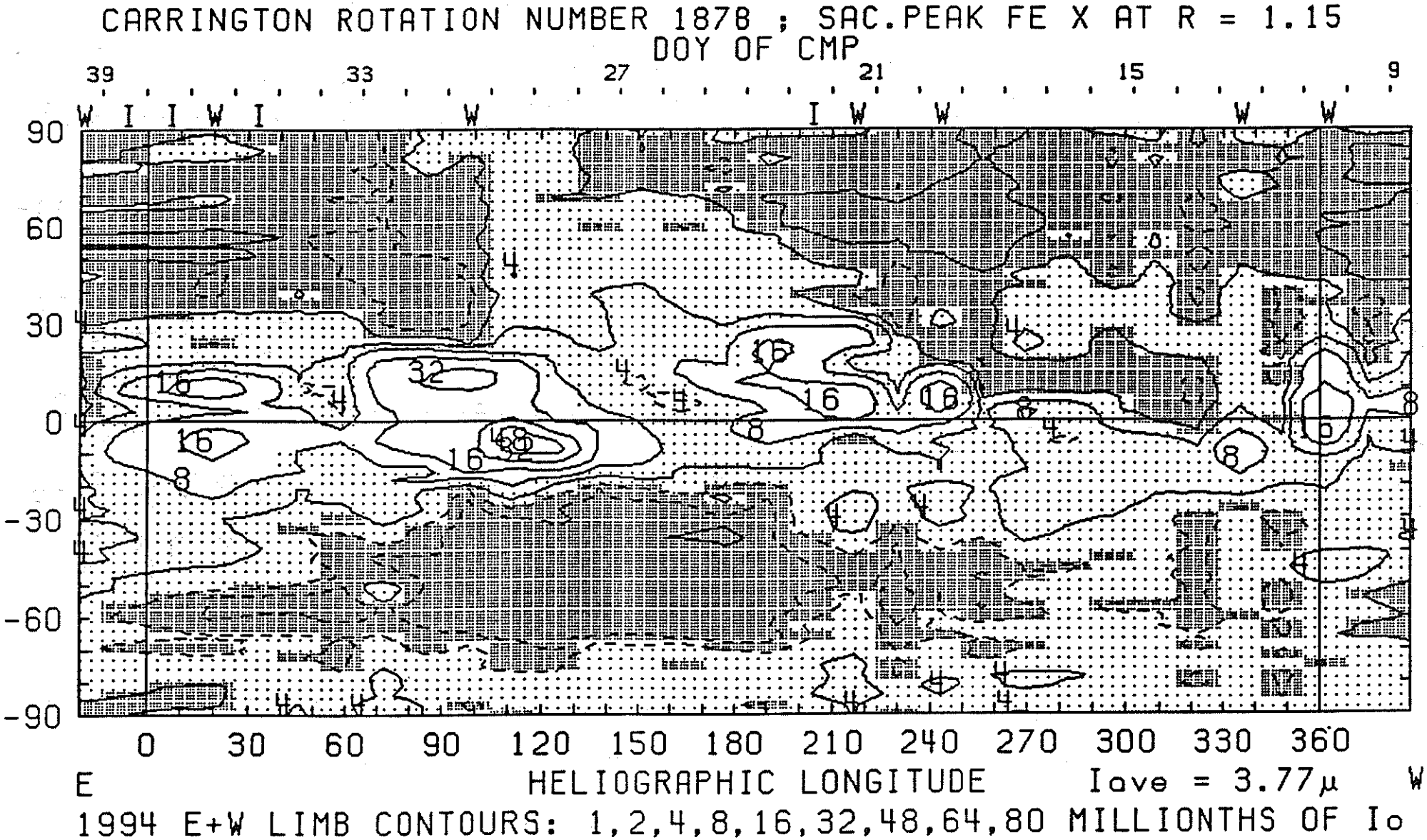
0, ±1, 2, 5, 10, 20 microTesla

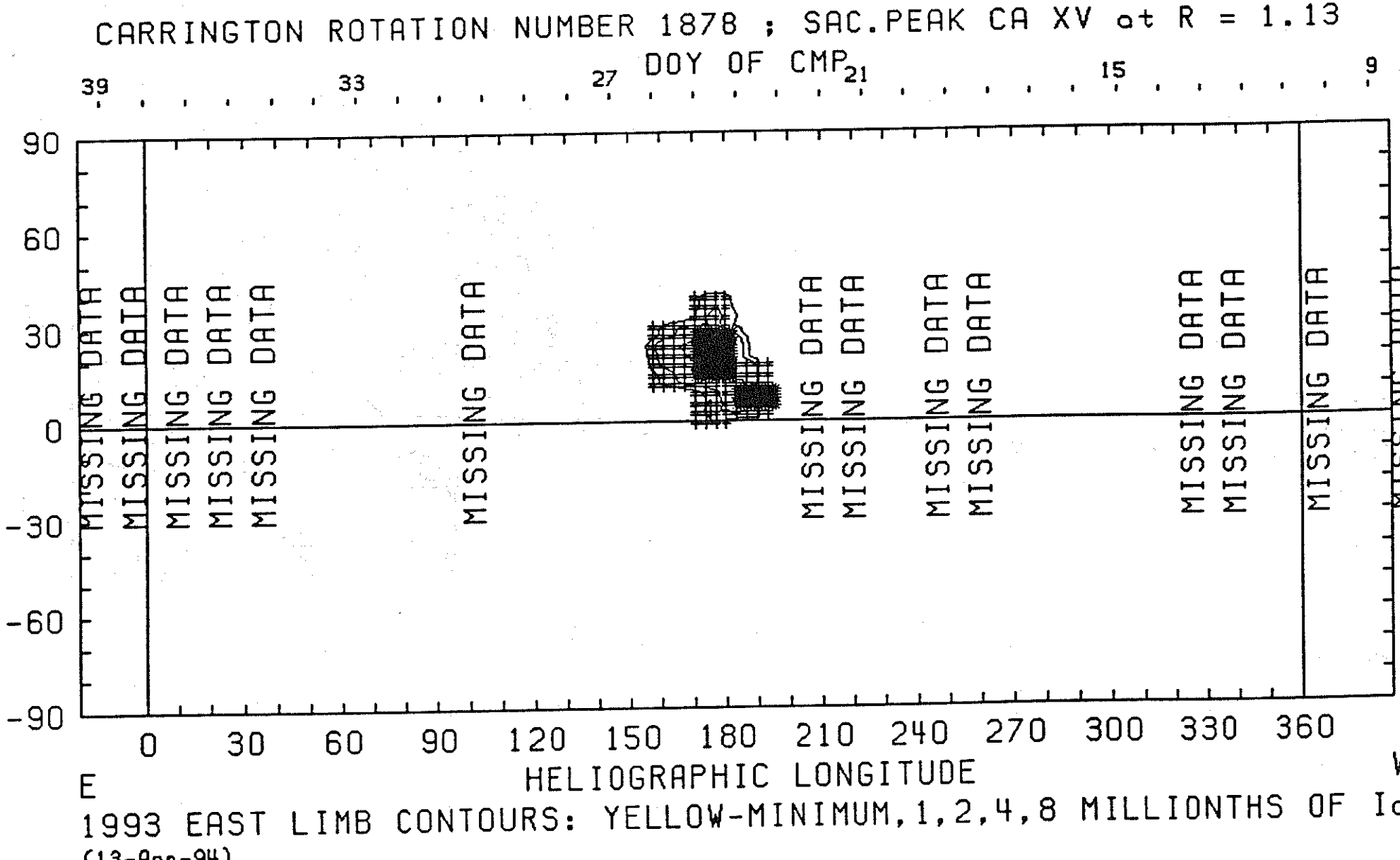


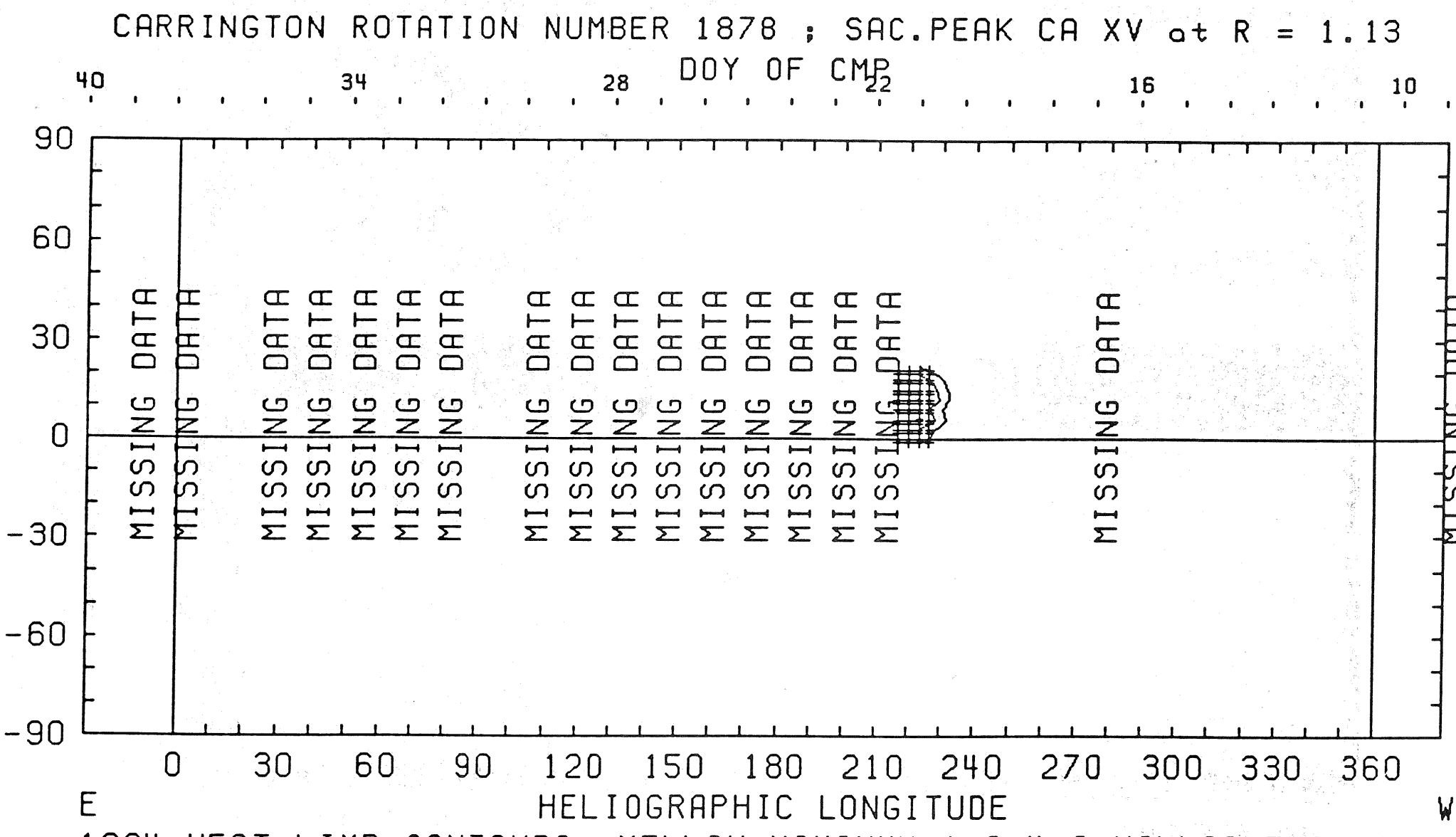
CARRINGTON ROTATION NUMBER 1878 ; SAC.PEAK FE XIV AT R = 1.15




1994 E+W LIMB CONTOURS: 1,2,4,7,10,20,30,40,50 MILLIONTHS OF Io
(13-Apr-94) CORONAL HOLES ARE SHOWN AS WHITE SURROUNDED BY BLACK


CARRINGTON ROTATION NUMBER 1878 ; SAC.PEAK FE X AT R = 1.15
DOY OF CMP
39
33
27
21
15
9
W I I W I
W
I W
W
W
W
90
60
30
0
-30
-60
-90
0 30 60 90 120 150 180 210 240 270 300 330 360
E
HELIOGRAPHIC LONGITUDE
Iave = 3.77μ
W
1994 E+W LIMB CONTOURS: 1,2,4,8,16,32,48,64,80 MILLIONTHS OF Io
(13-Apr-94)


CARRINGTON ROTATION NUMBER 1878 ; SAC.PEAK CA XV at R = 1.13
DOY OF CMP21
39
33
27
21
15
9
90
60
30
0
-30
-60
-90
MISSING DATA
0
30
60
90
120
150
180
210
240
270
300
330
360
E
HELIOGRAPHIC LONGITUDE
W
1993 EAST LIMB CONTOURS: YELLOW-MINIMUM,1,2,4,8 MILLIONTHS OF Io
(13-Apr-94)


CARRINGTON ROTATION NUMBER 1878 ; SAC.PEAK CA XV at R = 1.13
DOY OF CMP
40
34
28
22
16
10
90
60
30
0
-30
-60
-90
MISSING DATA
0
30
60
90
120
150
180
210
240
270
300
330
360
E
HELIOGRAPHIC LONGITUDE
W
1994 WEST LIMB CONTOURS: YELLOW-MINIMUM, 1, 2, 4, 8 MILLIONTHS OF Io
(13-Apr-94)

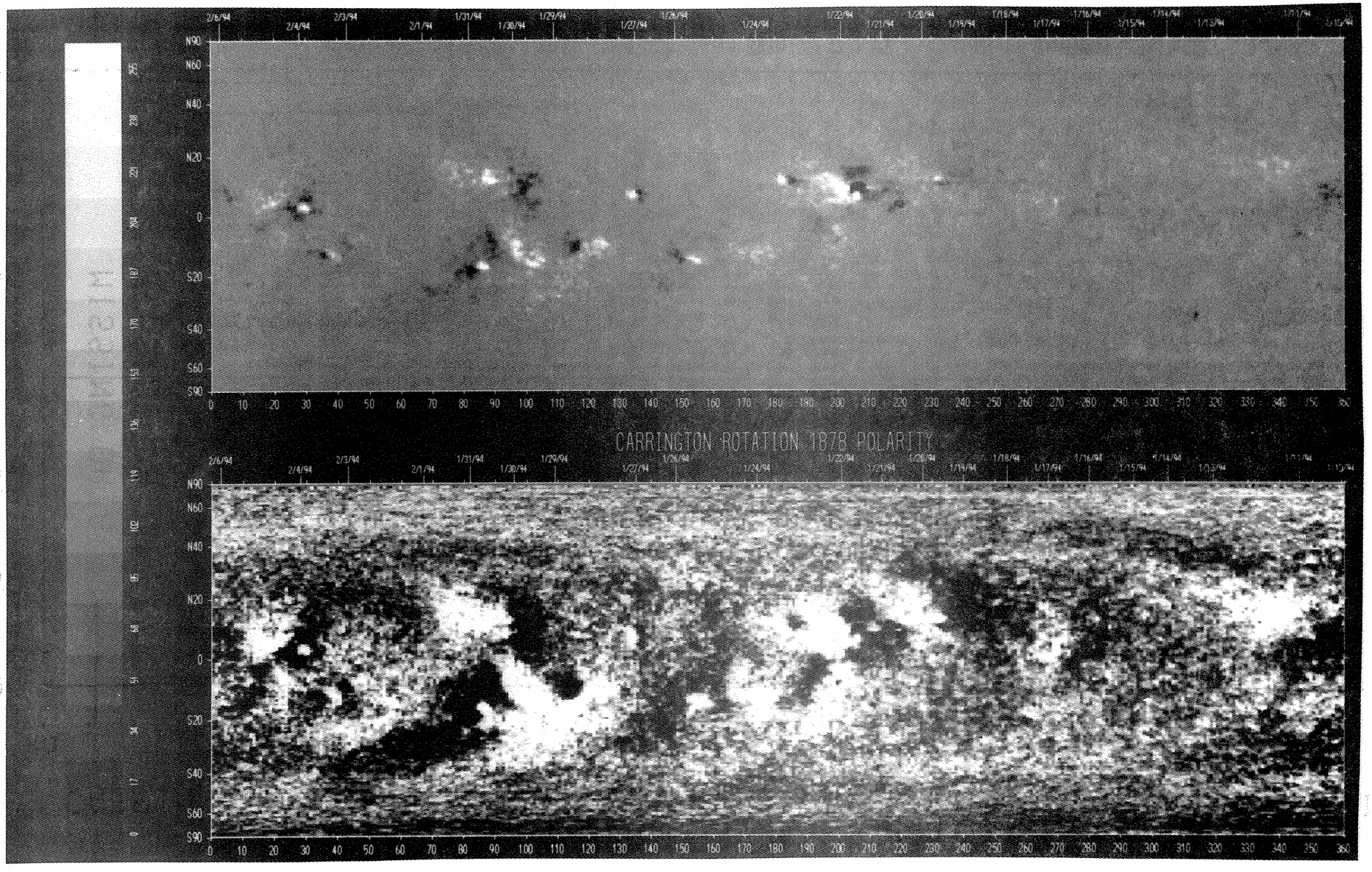
# SOLAR MAGNETIC FIELD SYNOPTIC CHART

## CARRINGTON ROTATION NUMBER 1878

(10 January to 6 February 1994)

National Solar Observatory/Kitt Peak

Dates of Observation



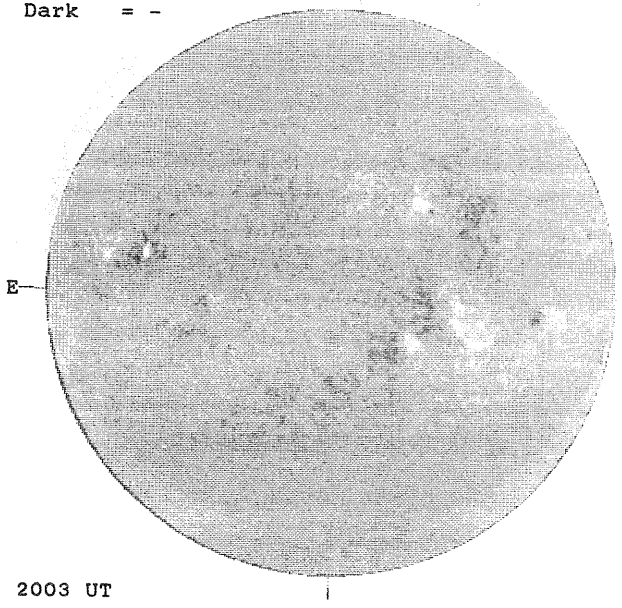

Heliographic Longitude

FEBRUARY 1, 1994 ( P=-12.10, $B_o$ =-6.02, $L_o$ = 78.39 )

KITT PEAK MAGNETOGRAM

N **5507A**

Bright = +
Dark = -



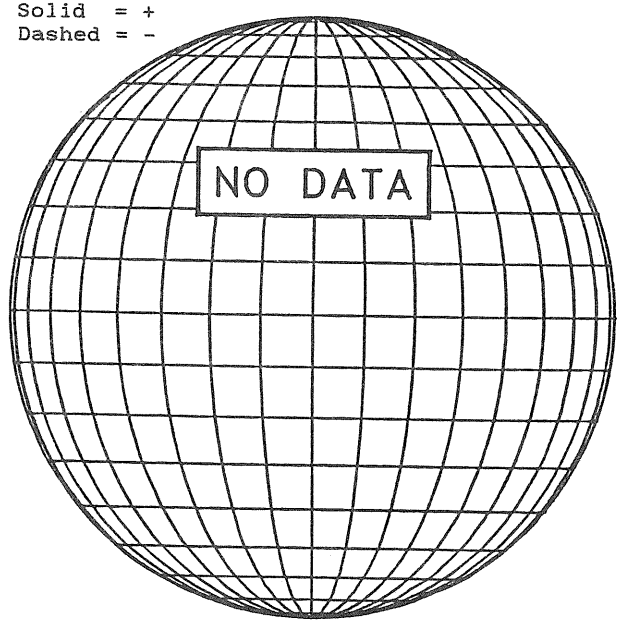
E

2003 UT

STANFORD MAGNETOGRAM

N

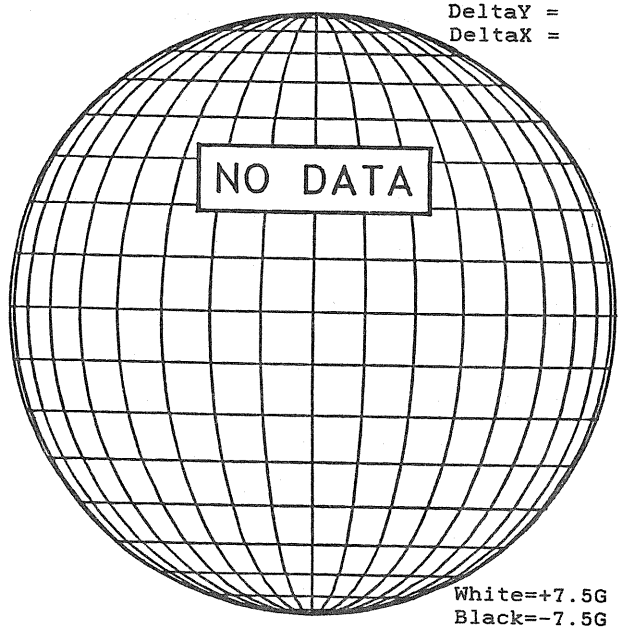
Solid = +
Dashed = -




MT. WILSON MAGNETOGRAM

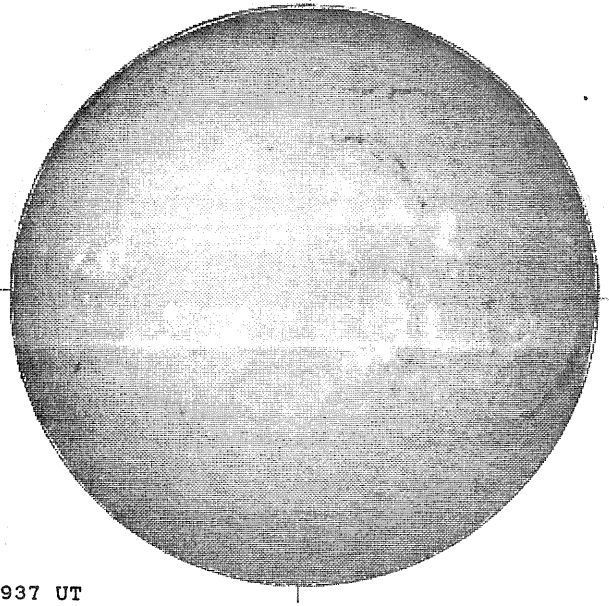
N

DeltaY =
DeltaX =




White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

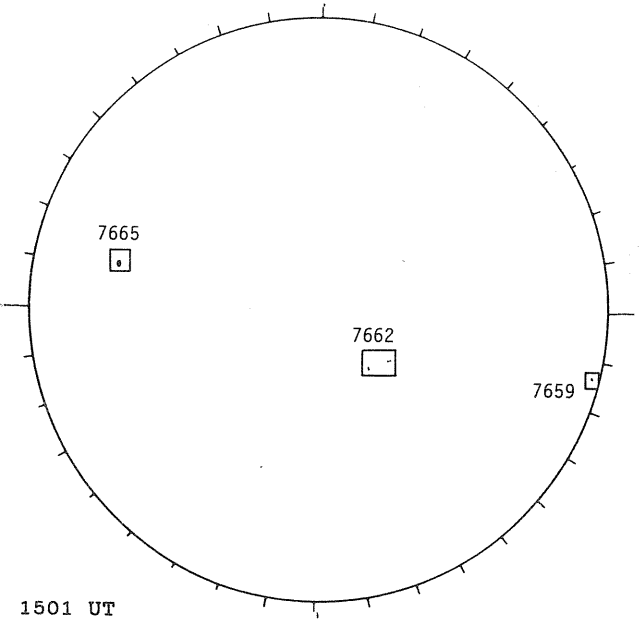


E

1937 UT

S

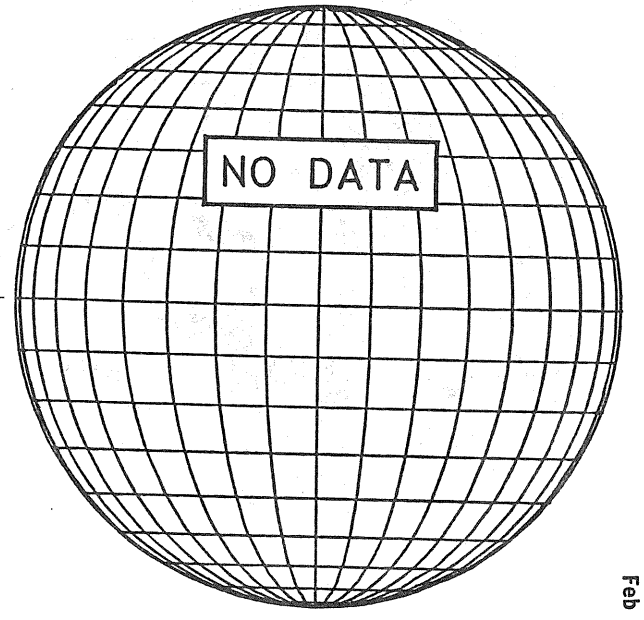
BOULDER SUNSPOT




1501 UT
1556 UT BOUL Prom

S

SACRAMENTO PEAK CORONA (1.15 Radii)




S

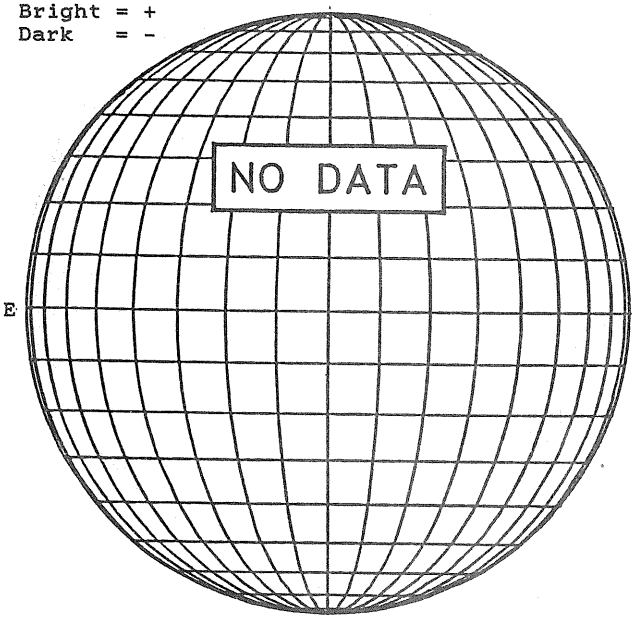
47
Feb 94

FEBRUARY 2, 1994 ( P=-12.50, $B_o$ =-6.09, $L_o$ = 65.23 )

KITT PEAK MAGNETOGRAM

N **5507A**

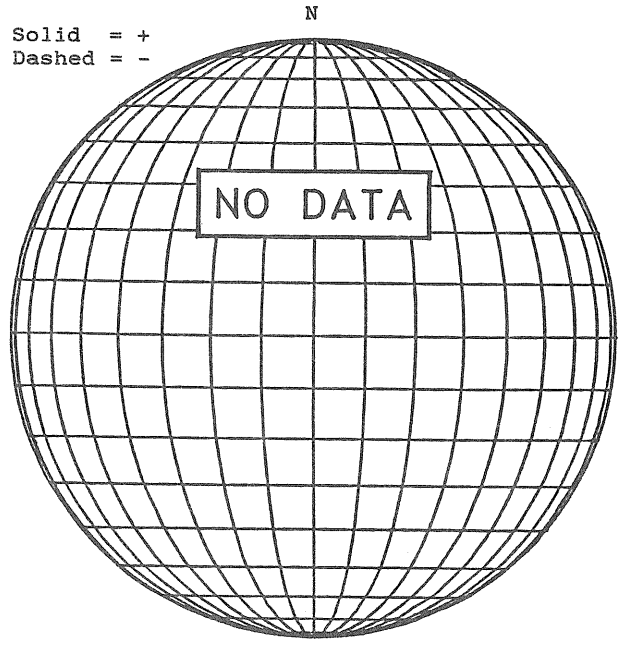
Bright = +
Dark = -




STANFORD MAGNETOGRAM

N

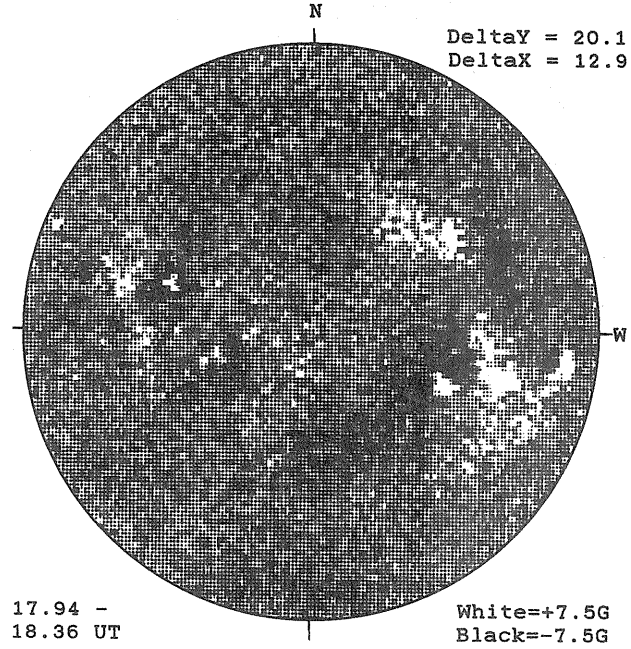
Solid = +
Dashed = -




MT. WILSON MAGNETOGRAM

N

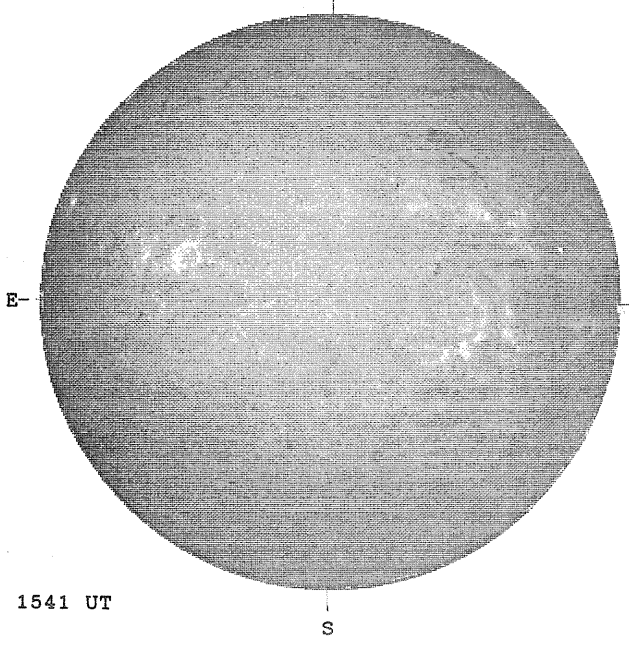
DeltaY = 20.1
DeltaX = 12.9




17.94 -
18.36 UT

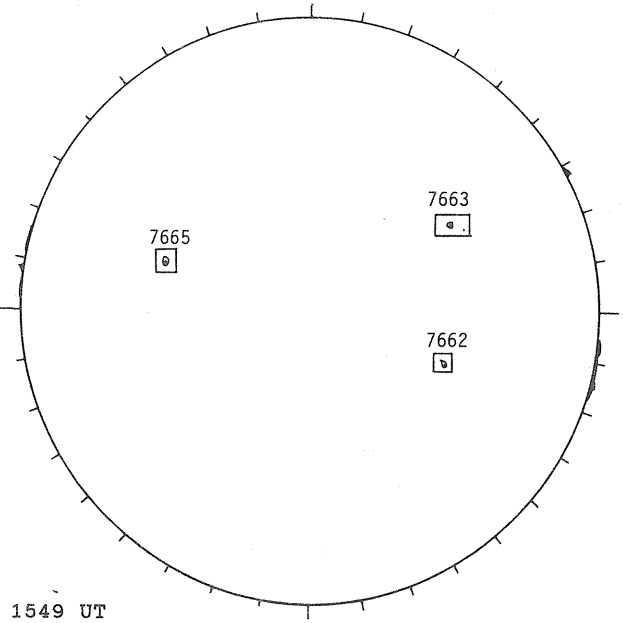
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



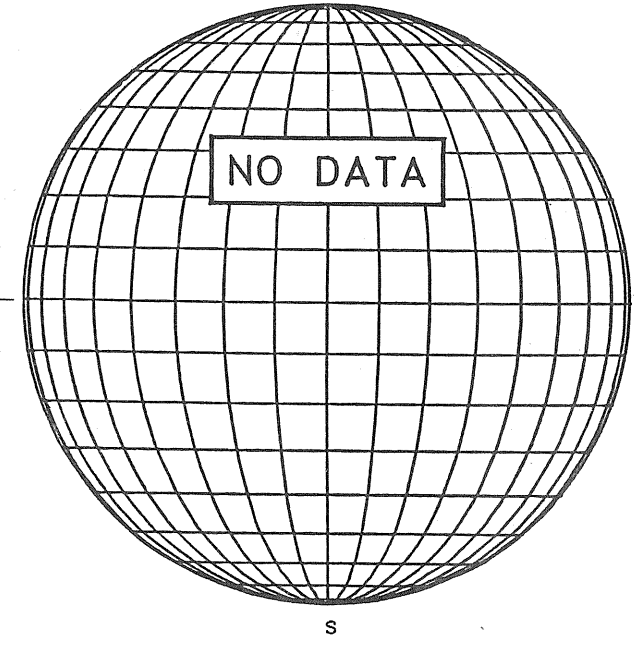

1541 UT

BOULDER SUNSPOT




1549 UT
1600 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

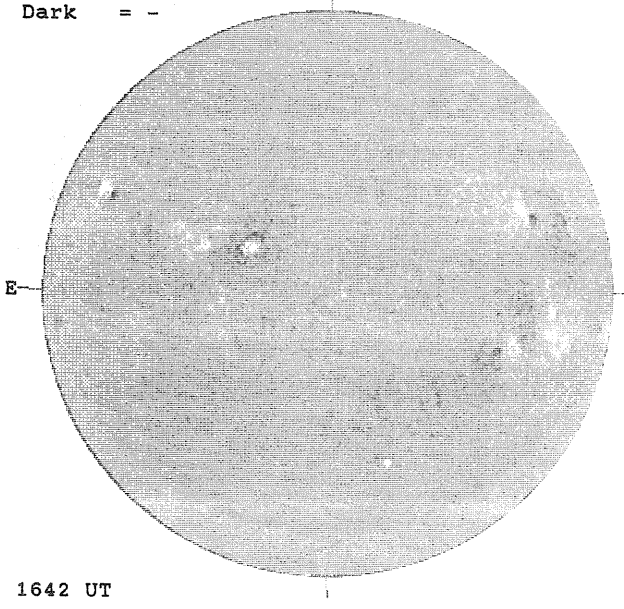


FEBRUARY 3, 1994 ( P=-12.91, $B_o$ =-6.16, $L_o$ = 52.06 )

KITT PEAK MAGNETOGRAM

N **5507A**

Bright = +
Dark = -

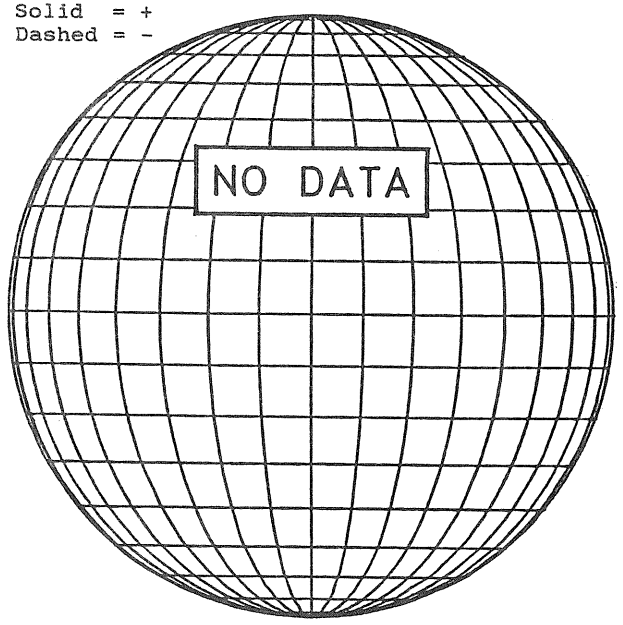



1642 UT

STANFORD MAGNETOGRAM

N

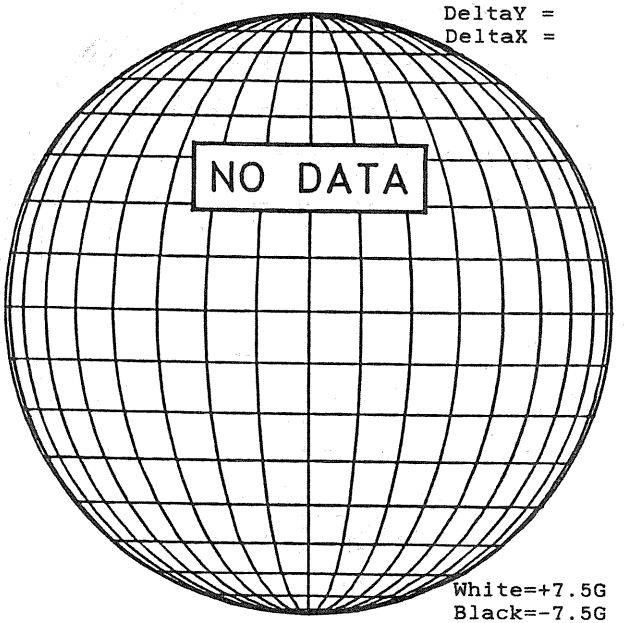
Solid = +
Dashed = -




MT. WILSON MAGNETOGRAM

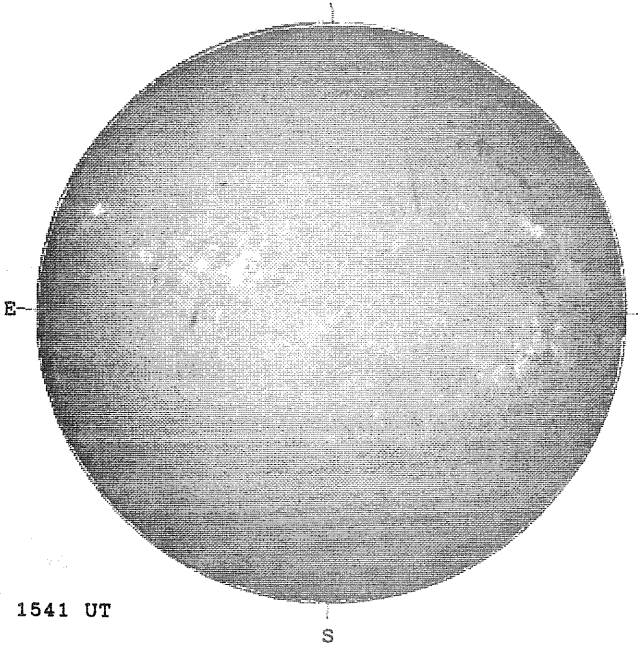
N

DeltaY =
DeltaX =



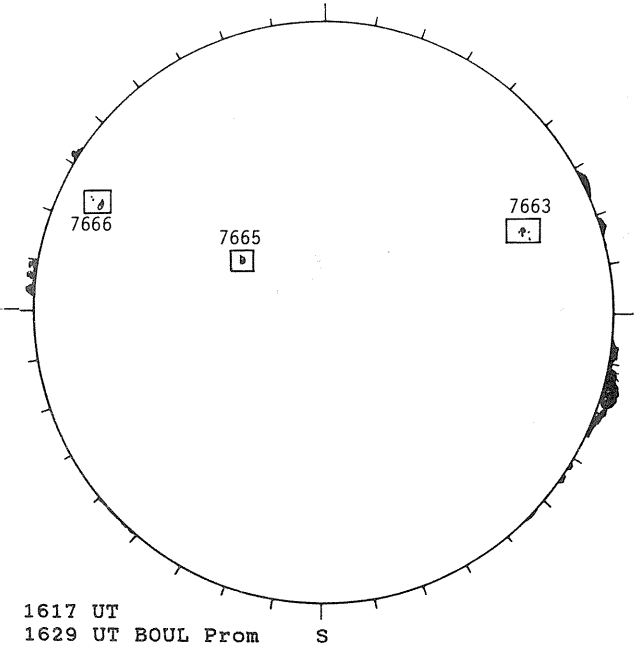

White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



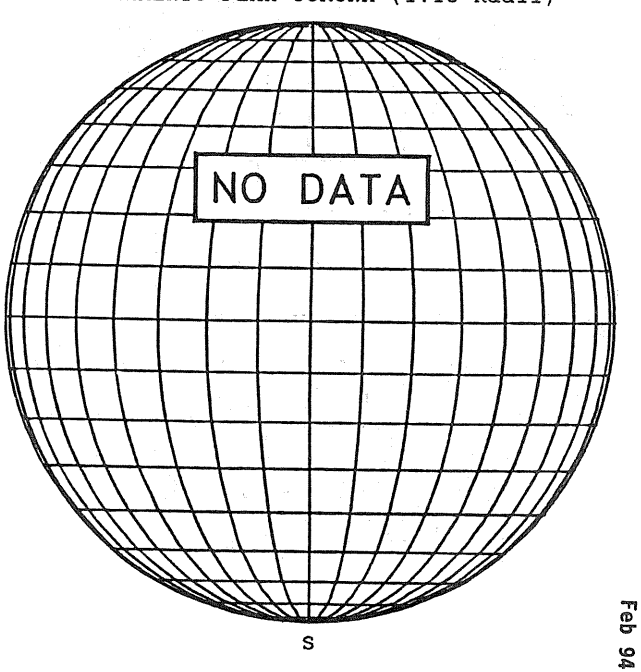

1541 UT

BOULDER SUNSPOT




1617 UT
1629 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

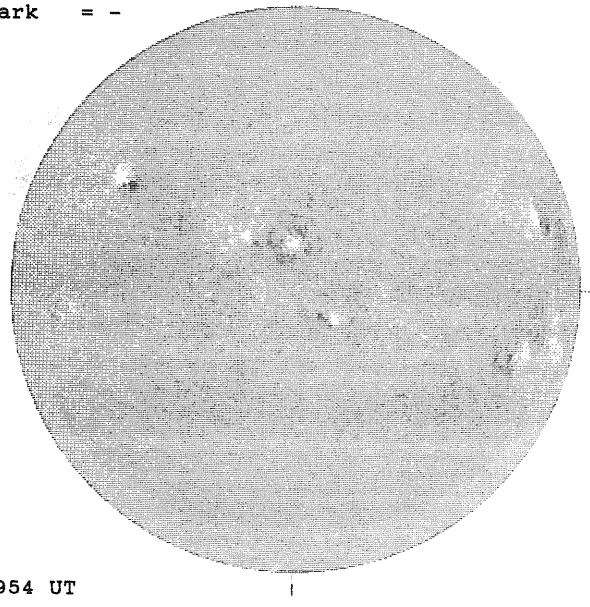


FEBRUARY 4, 1994 ( P=-13.30, $B_o$ =-6.23, $L_o$ = 38.89 )

KITT PEAK MAGNETOGRAM

N **5507A**

Bright = +
Dark = -




1954 UT

STANFORD MAGNETOGRAM

N

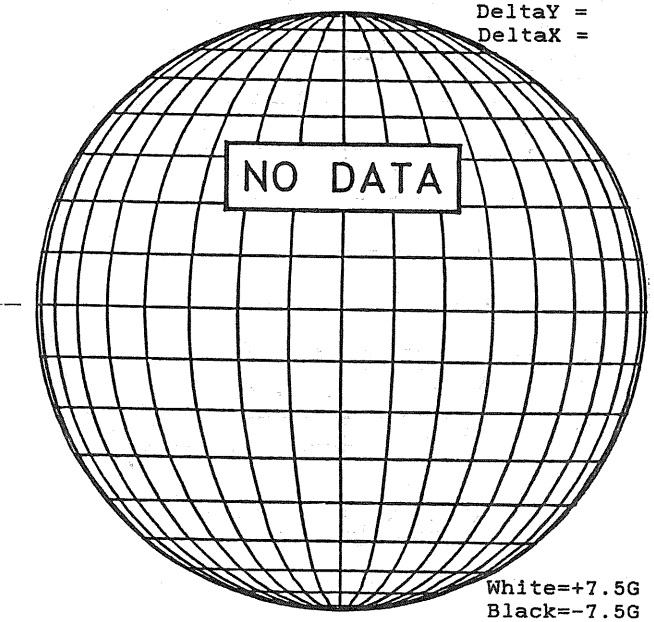
Solid = +
Dashed = -

1808 UT

MT. WILSON MAGNETOGRAM

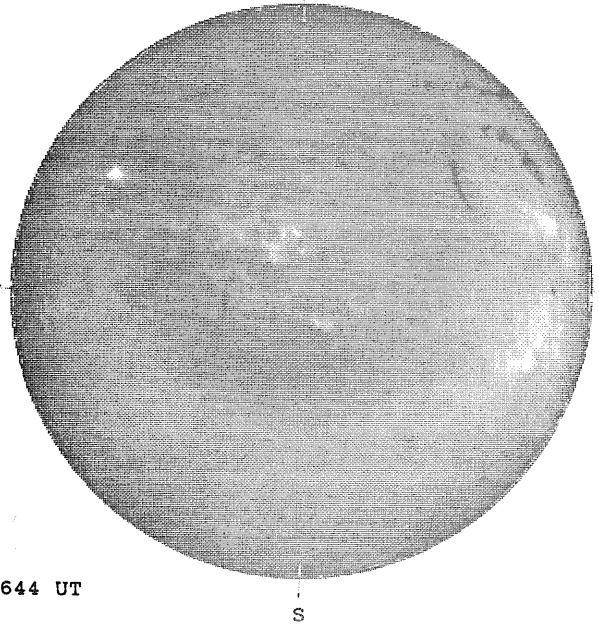
N

DeltaY =
DeltaX =



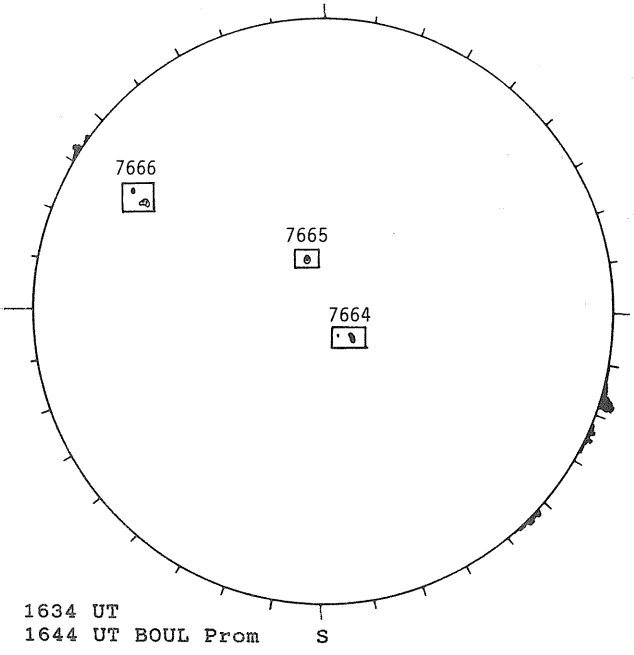

White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



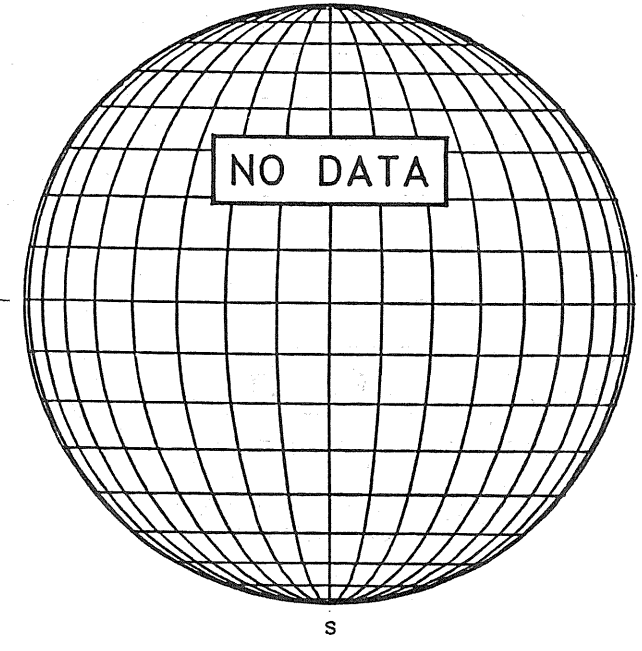

1644 UT

BOULDER SUNSPOT




1634 UT
1644 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

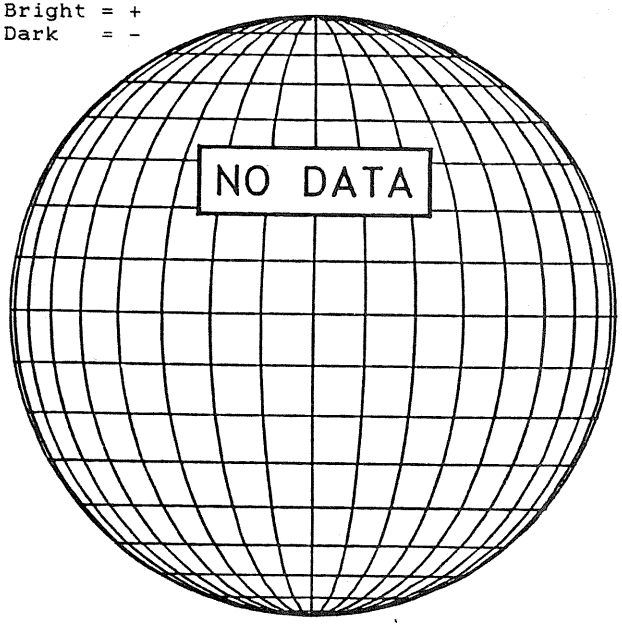


FEBRUARY 5, 1994 ( P=-13.70, $B_O$ =-6.29, $L_O$ = 25.73 )

KITT PEAK MAGNETOGRAM

N **5507A**

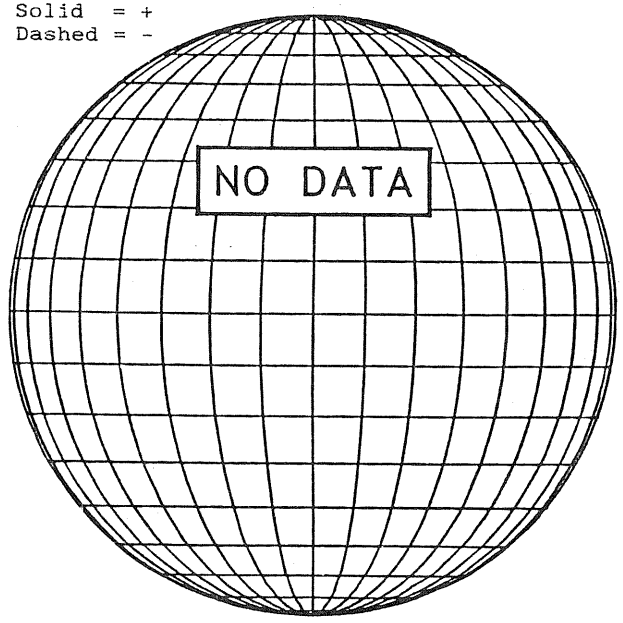
Bright = +
Dark = -




STANFORD MAGNETOGRAM

N

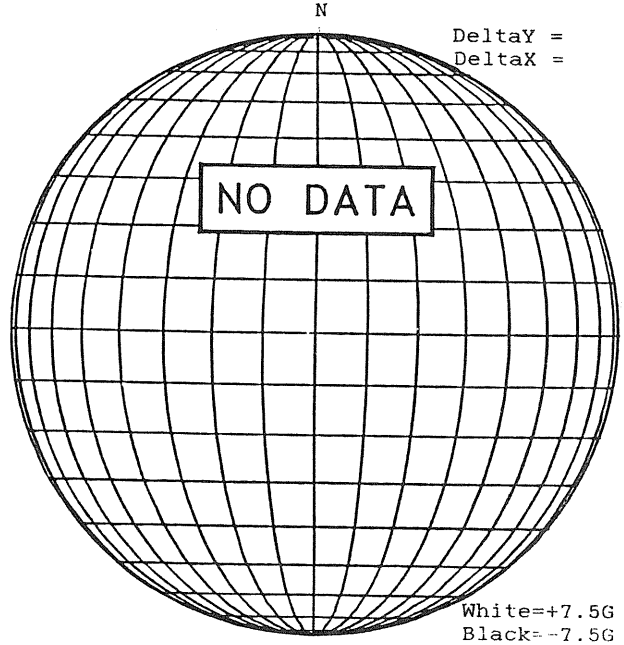
Solid = +
Dashed = -




MT. WILSON MAGNETOGRAM

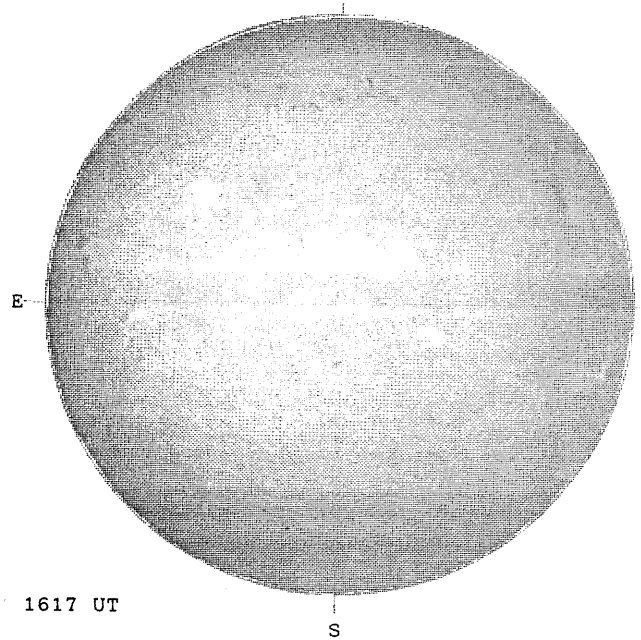
N

DeltaY =
DeltaX =



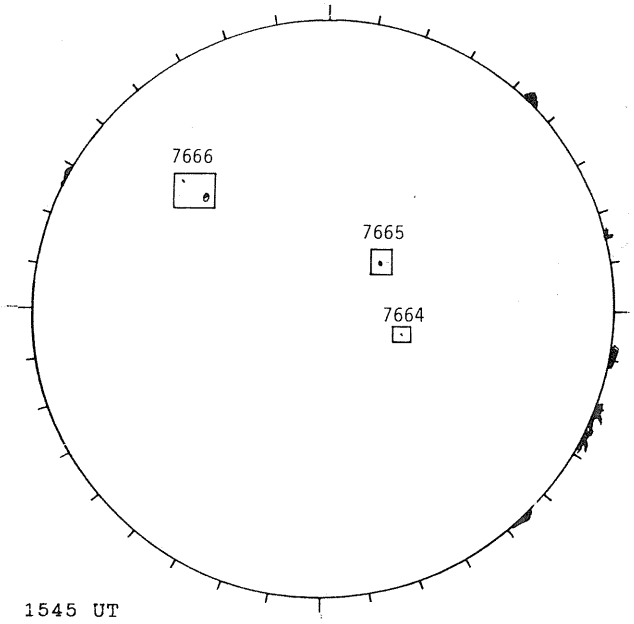

White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



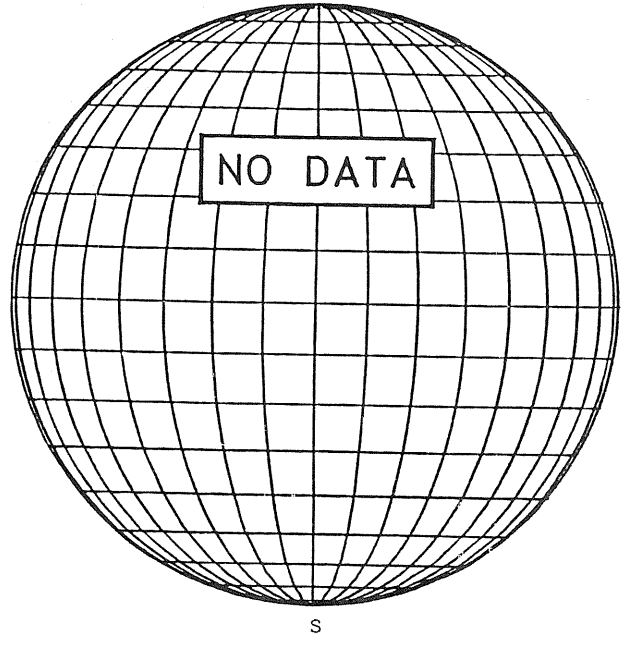

1617 UT

BOULDER SUNSPOT




1545 UT
0713 UT LOMN Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

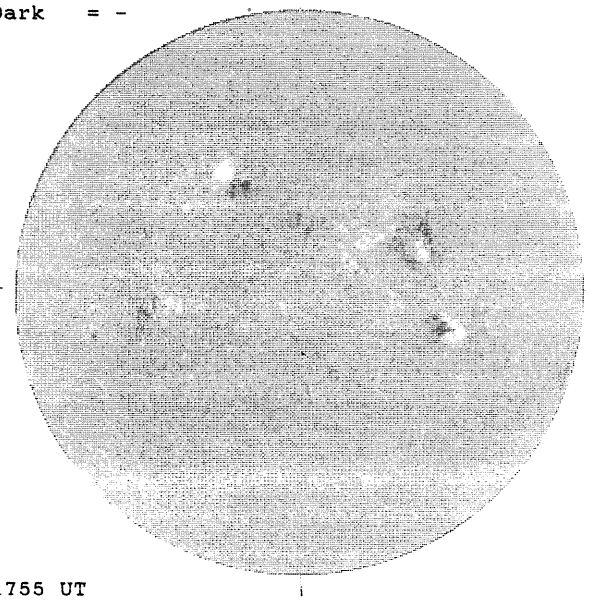


FEBRUARY 6, 1994 ( P=-14.08, $B_o$ =-6.36, $L_o$ = 12.56 )

KITT PEAK MAGNETOGRAM

N **5507A**

Bright = +
Dark = -



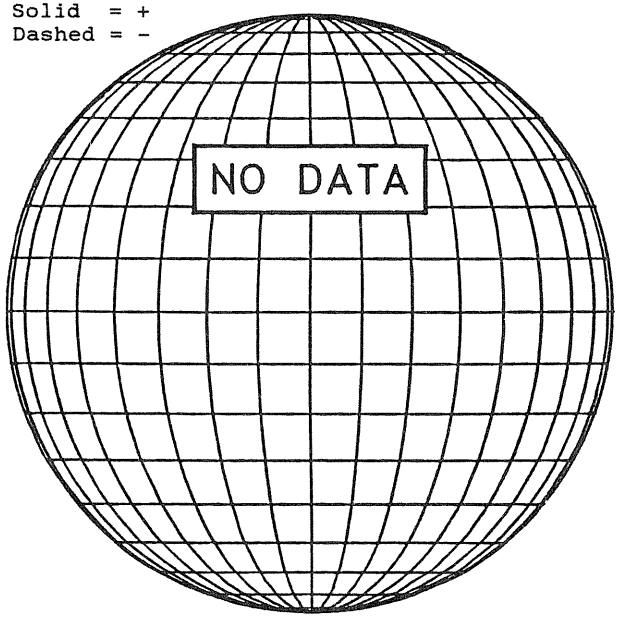
E

1755 UT

STANFORD MAGNETOGRAM

N

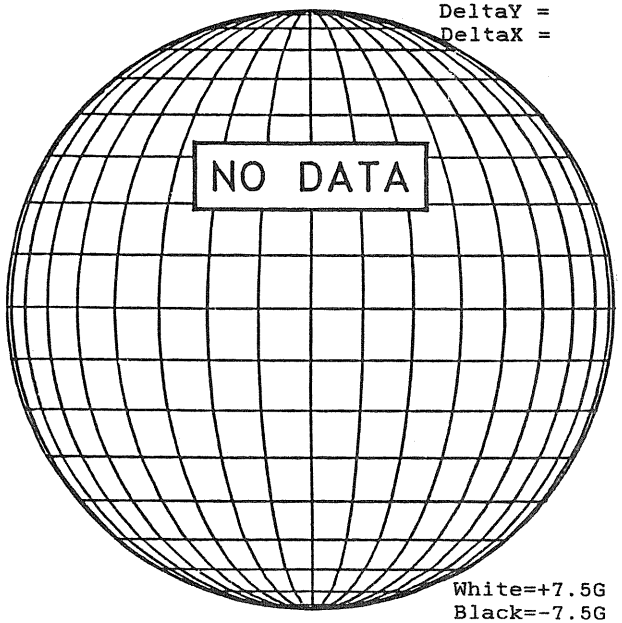
Solid = +
Dashed = -




MT. WILSON MAGNETOGRAM

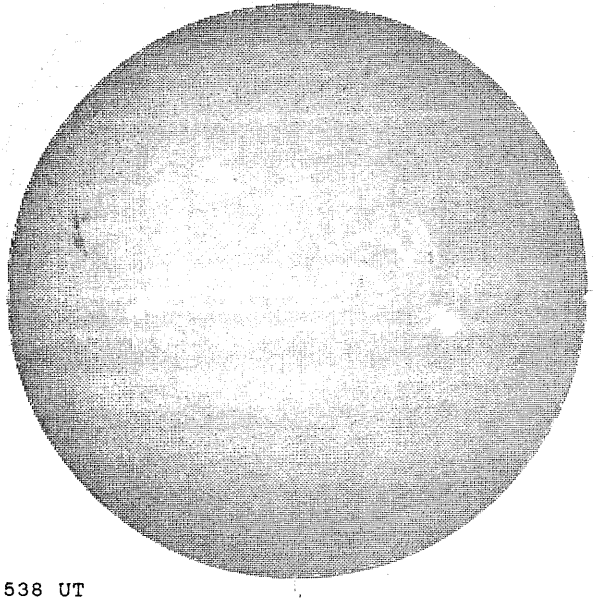
N

DeltaY =
DeltaX =




White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

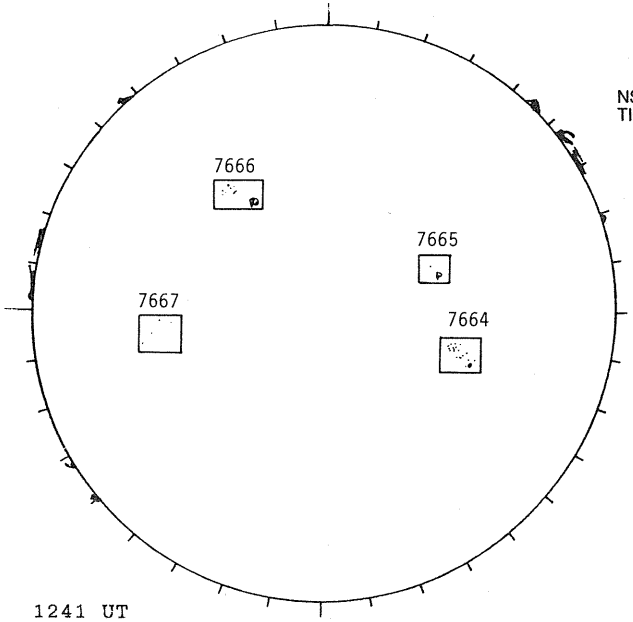


E

1538 UT

S

RAMEY SUNSPOT

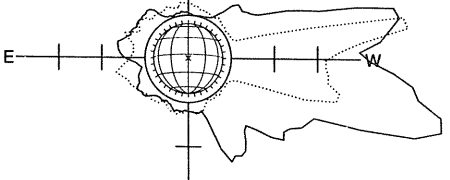



1241 UT
0653 UT LOMN Prom

S

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS

N



E W

S

02/06/94
(DOY 37)

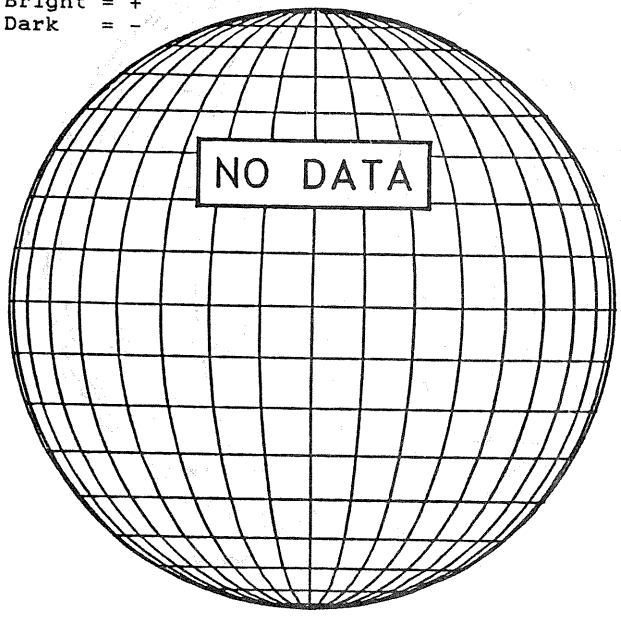
FE XIV 15:36 UT 1.15 $R_\odot$
FE X 16:23 UT 1.15 $R_\odot$
xxxxx CA XV 16:12 UT 1.13 $R_\odot$
NO CA XV ACTIVITY TODAY

ICC

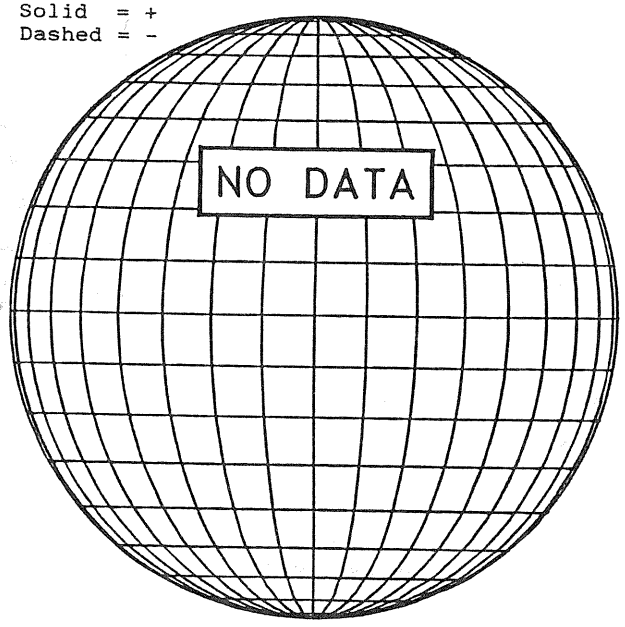
S

FEBRUARY 7, 1994 ( P=-14.47 $B_o$ =-6.42, $L_o$ = 359.40 )

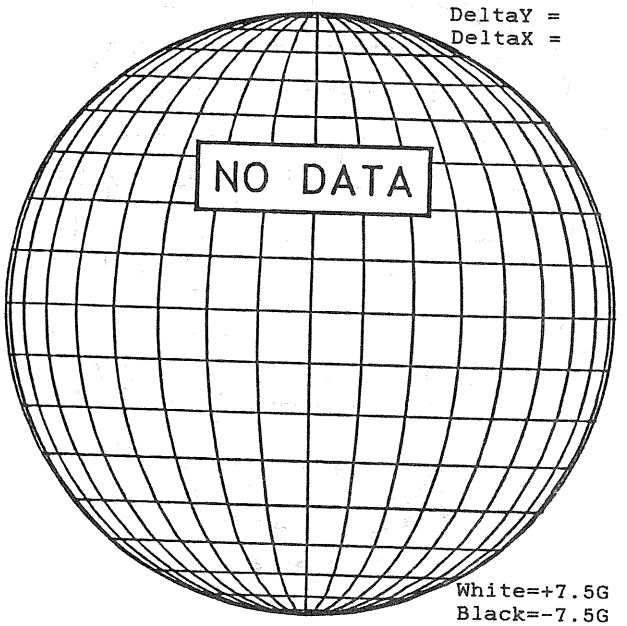
KITT PEAK MAGNETOGRAM
N **5507A**
Bright = +
Dark = -




STANFORD MAGNETOGRAM
N
Solid = +
Dashed = -

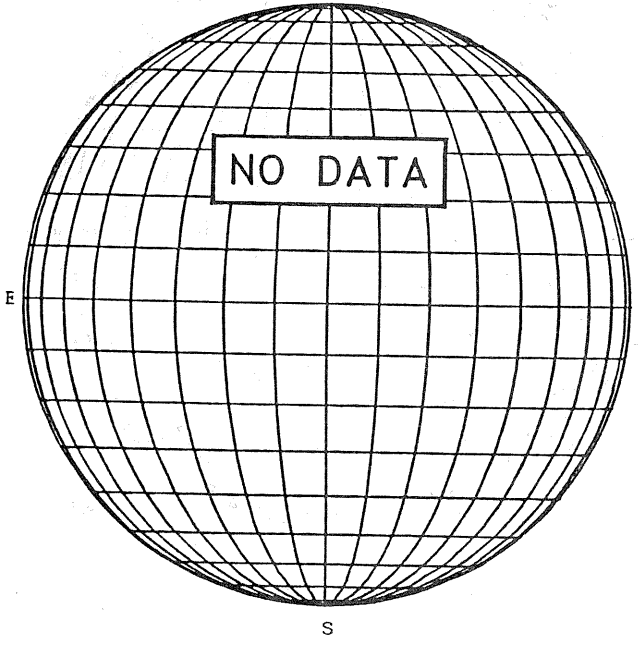



MT. WILSON MAGNETOGRAM
N
DeltaY =
DeltaX =

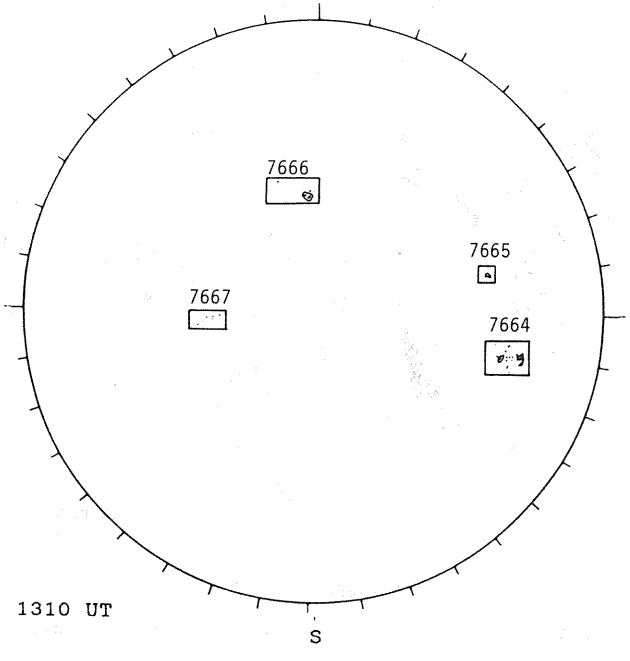



White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

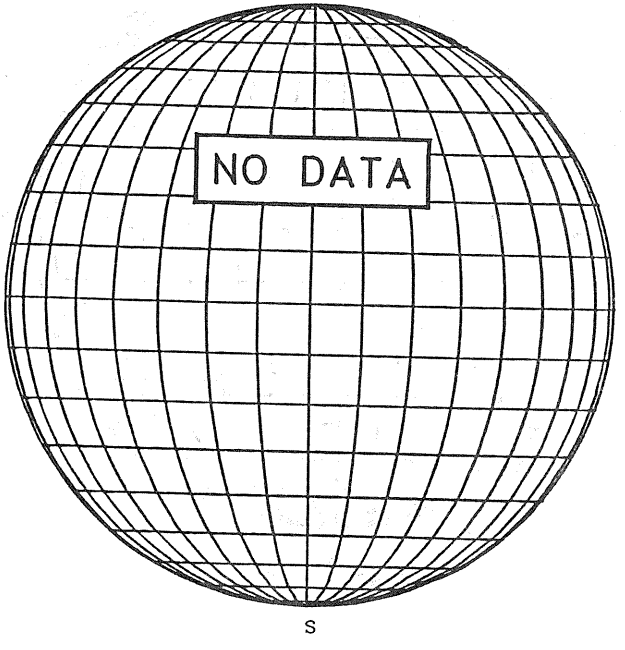



RAMEY SUNSPOT




1310 UT

SACRAMENTO PEAK CORONA (1.15 Radii)



FEBRUARY 8, 1994 ( P=-14.84, $B_o$ =-6.48, $L_o$ = 346.23 )

KITT PEAK MAGNETOGRAM
N **5507A**
Bright = +
Dark = -
E
NO DATA

STANFORD MAGNETOGRAM
N
Solid = +
Dashed = -
2304 UT

MT. WILSON MAGNETOGRAM
N
DeltaY =
DeltaX =
NO DATA
White=+7.5G
Black=-7.5G

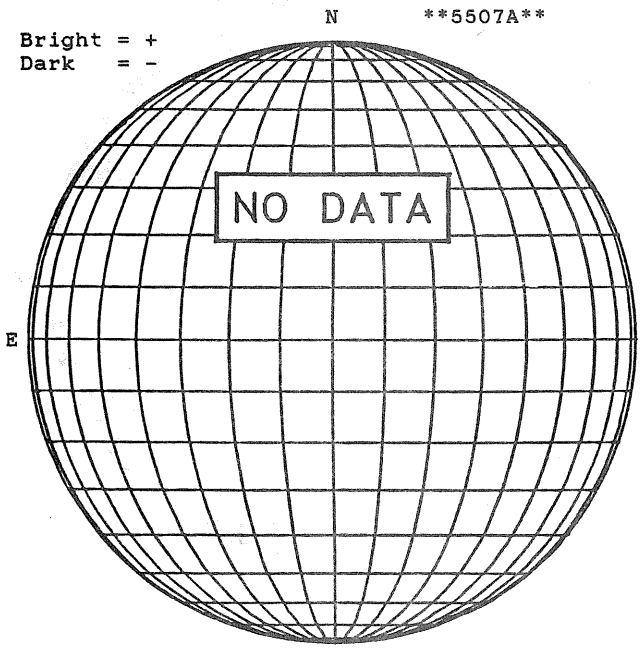
SACRAMENTO PEAK H-ALPHA
E
NO DATA
S

RAMEY SUNSPOT
7666
7668
7665
7664
1325 UT
S

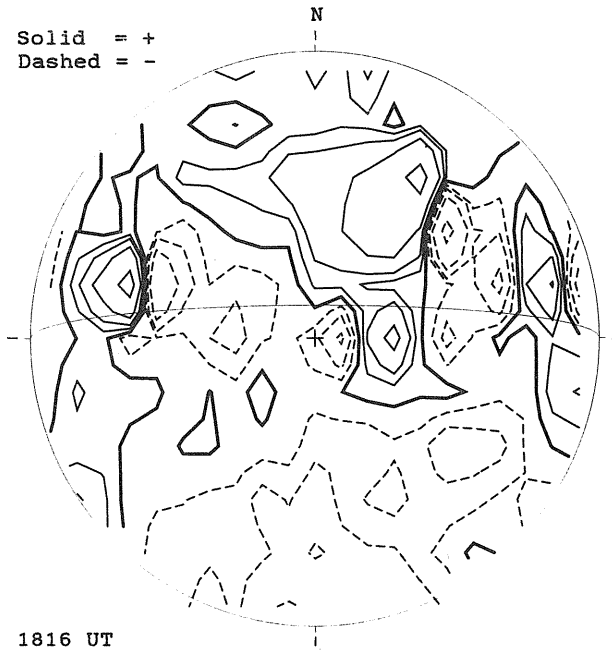
SACRAMENTO PEAK CORONA (1.15 Radii)
NO DATA

FEBRUARY 9, 1994 ( P=-15.22 $B_o$ =-6.53, $L_o$ = 333.06 )

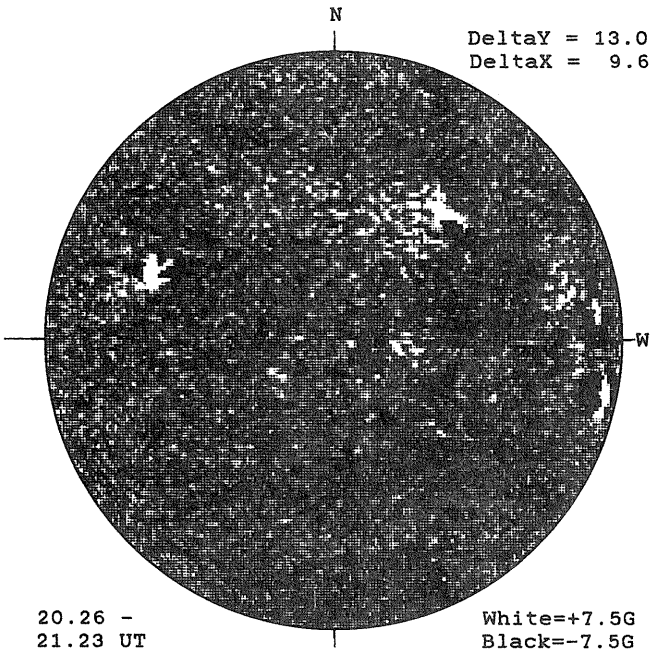
KITT PEAK MAGNETOGRAM



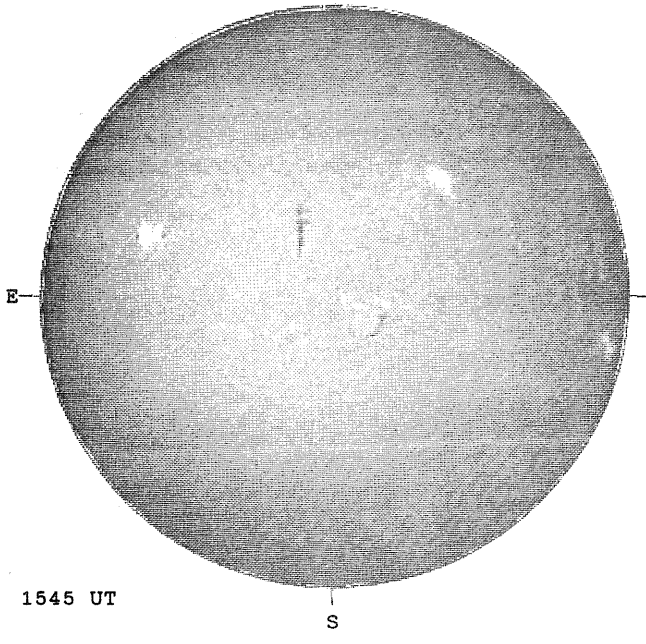

STANFORD MAGNETOGRAM



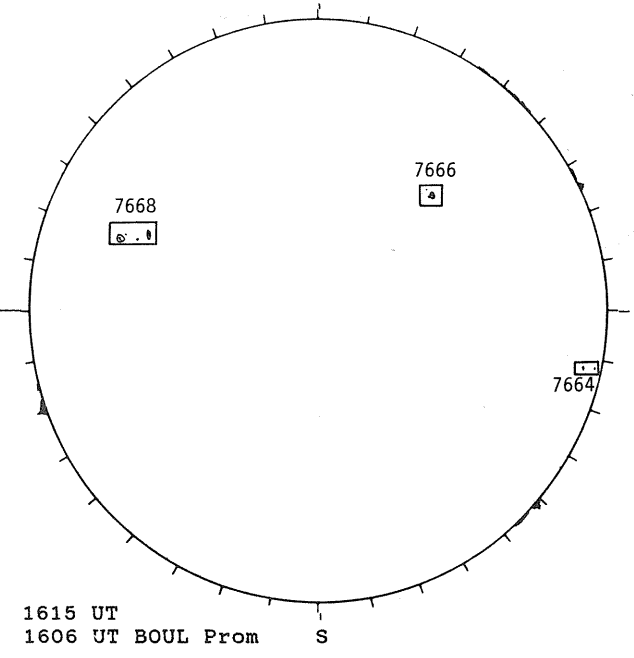

MT. WILSON MAGNETOGRAM



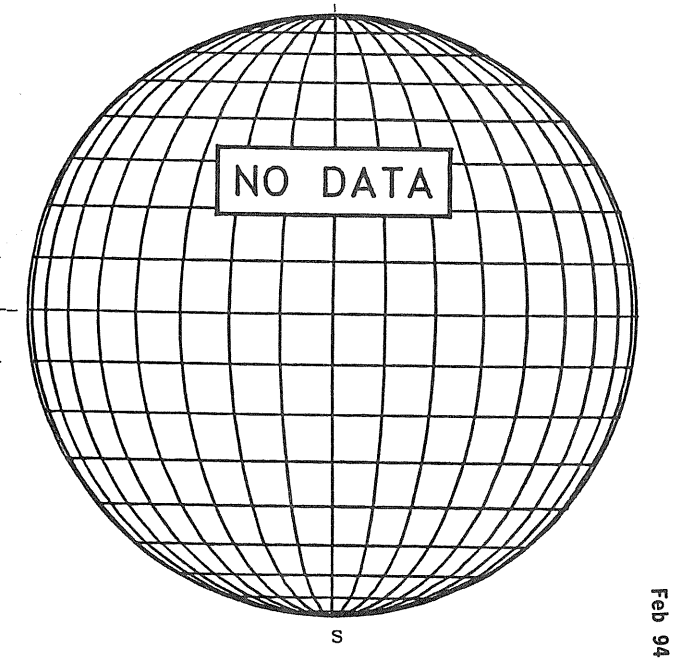

SACRAMENTO PEAK H-ALPHA




BOULDER SUNSPOT




SACRAMENTO PEAK CORONA (1.15 Radii)



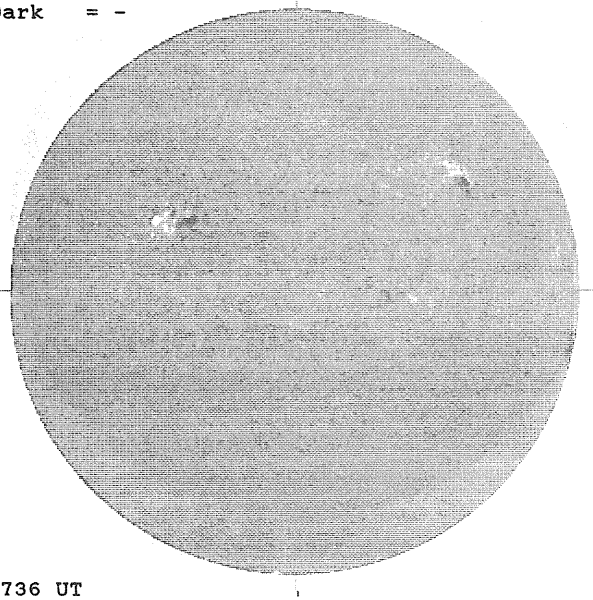
FEBRUARY 10, 1994 ( P=-15.58, $B_o$ =-6.59, $L_o$ = 319.90 )

KITT PEAK MAGNETOGRAM

N **5507A**

Bright = +
Dark = -

E



1736 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

NO DATA

MT. WILSON MAGNETOGRAM

N

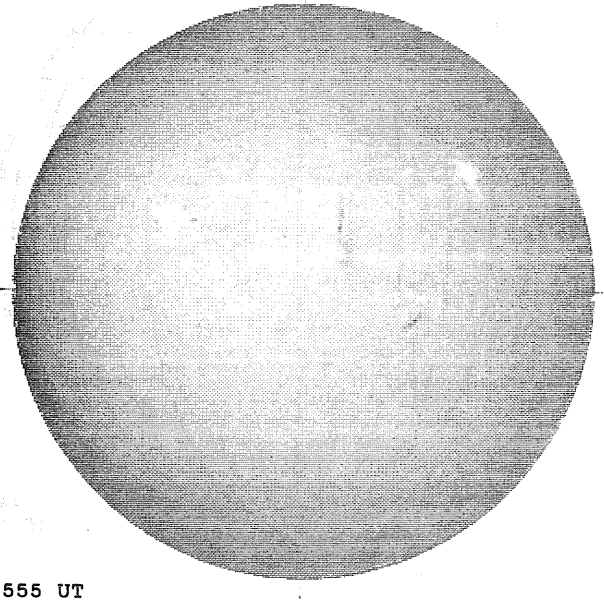
DeltaY =
DeltaX =

NO DATA

White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

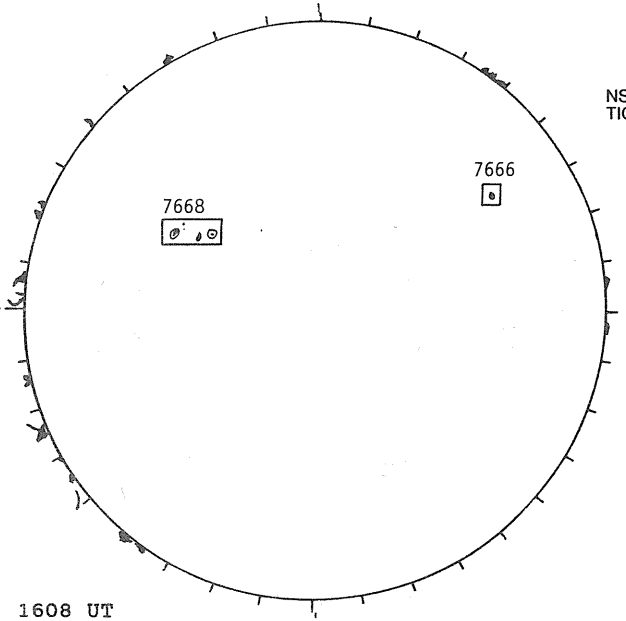
E



S

1555 UT

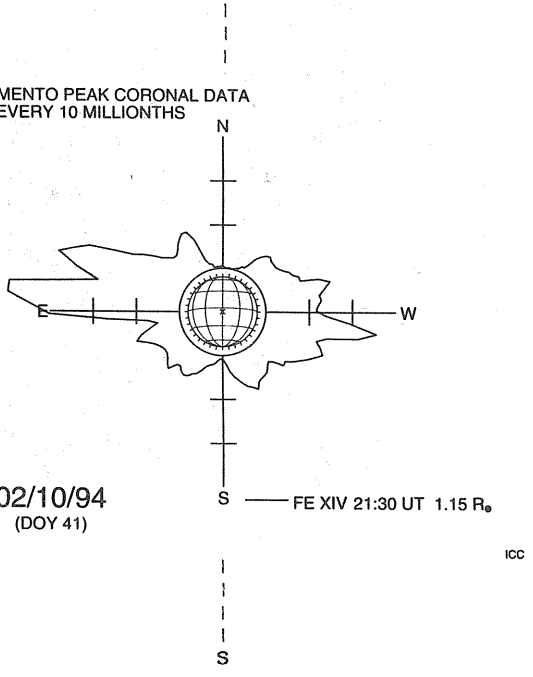
BOULDER SUNSPOT




S

1608 UT
1224 UT LOMN Prom

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS



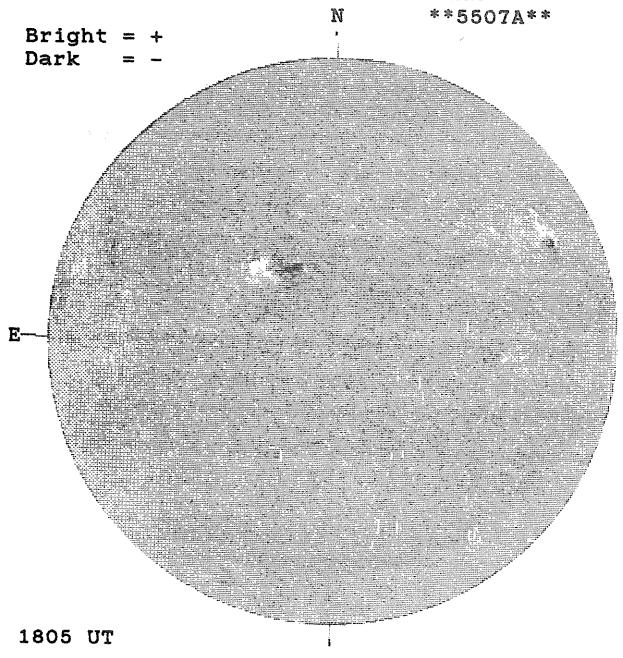

02/10/94
(DOY 41)

FE XIV 21:30 UT 1.15 $R_\odot$

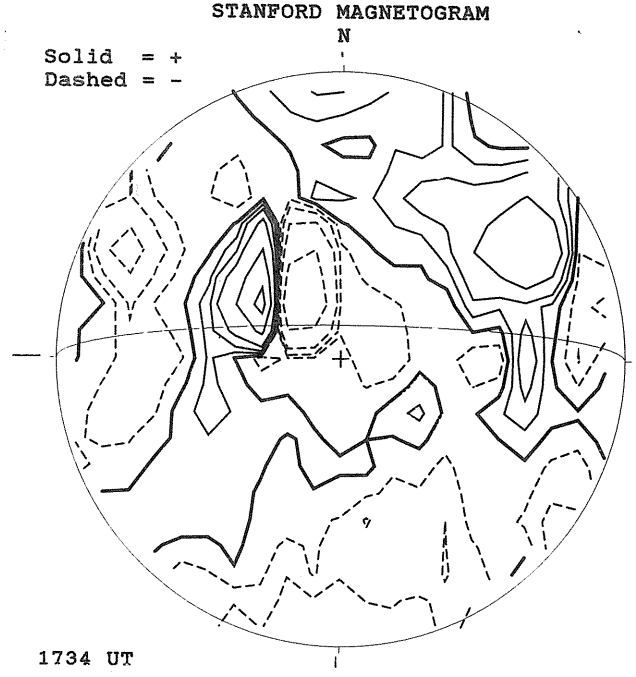
ICC

FEBRUARY 11, 1994 ( P=-15.95, $B_o$ =-6.64, $L_o$ = 306.73 )

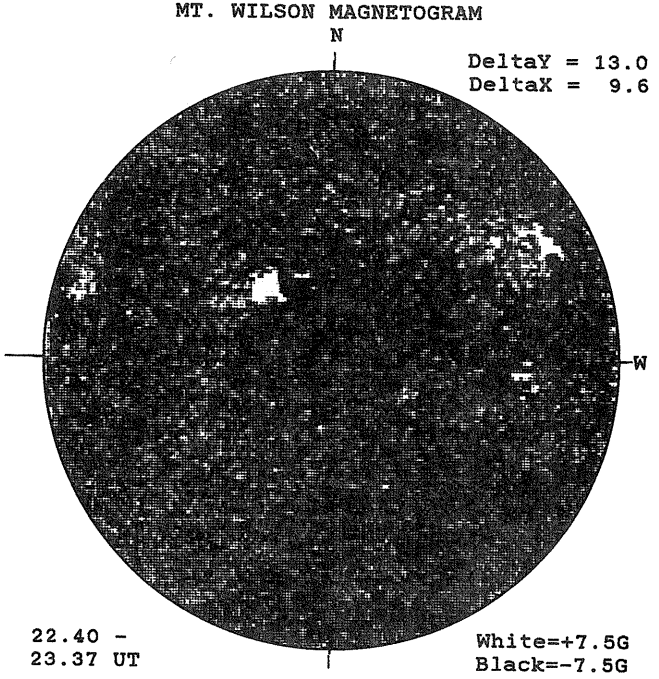
KITT PEAK MAGNETOGRAM



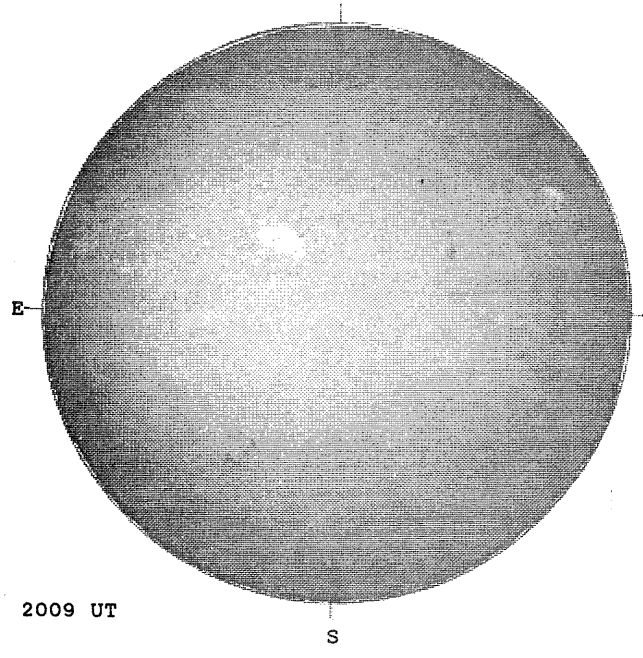

STANFORD MAGNETOGRAM



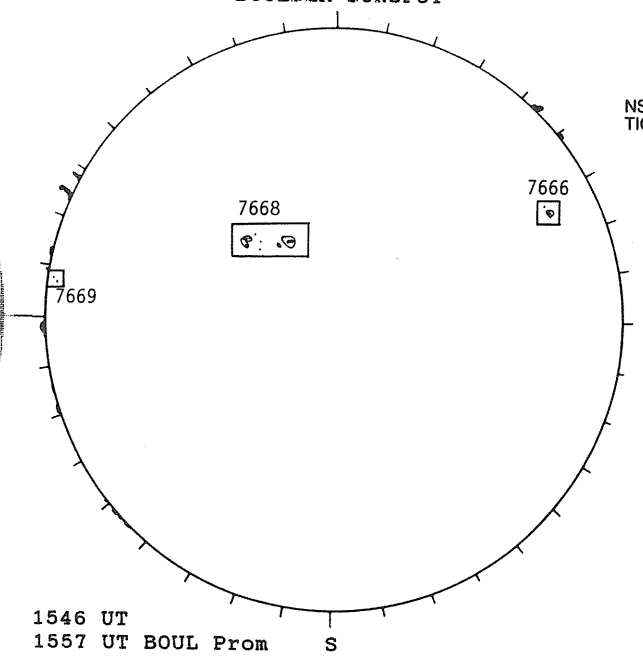

MT. WILSON MAGNETOGRAM

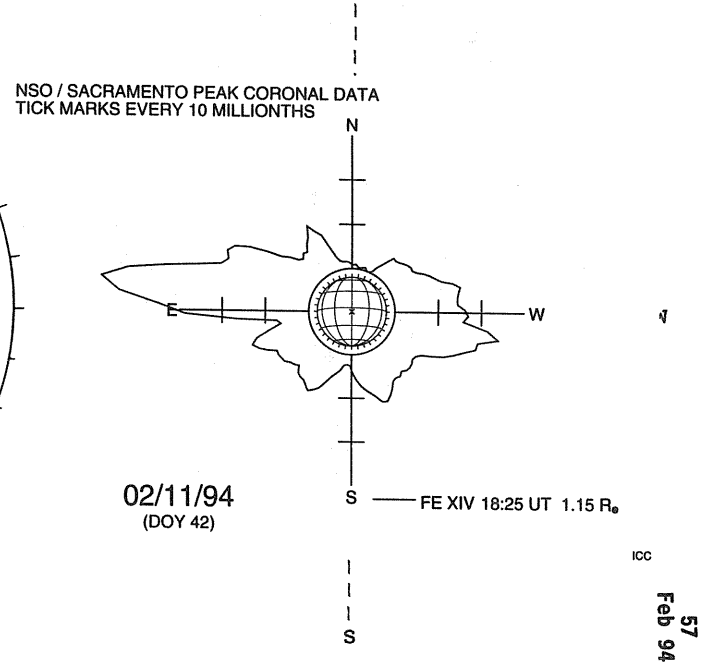



SACRAMENTO PEAK H-ALPHA




BOULDER SUNSPOT



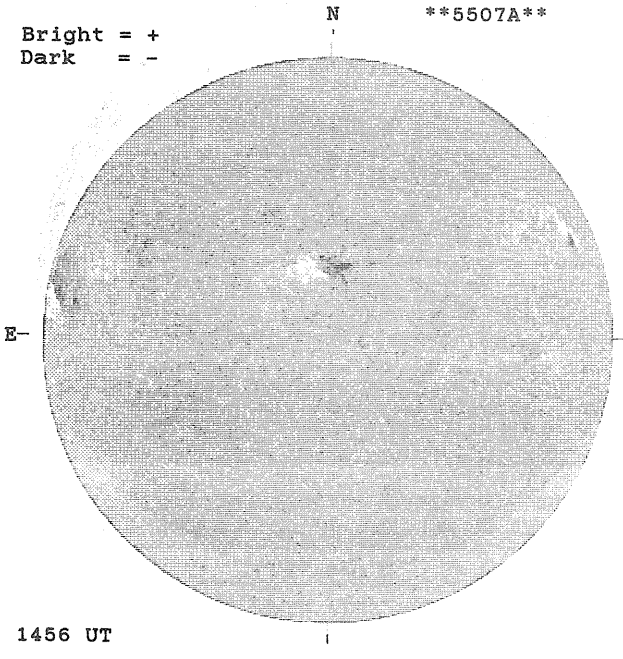




ICC

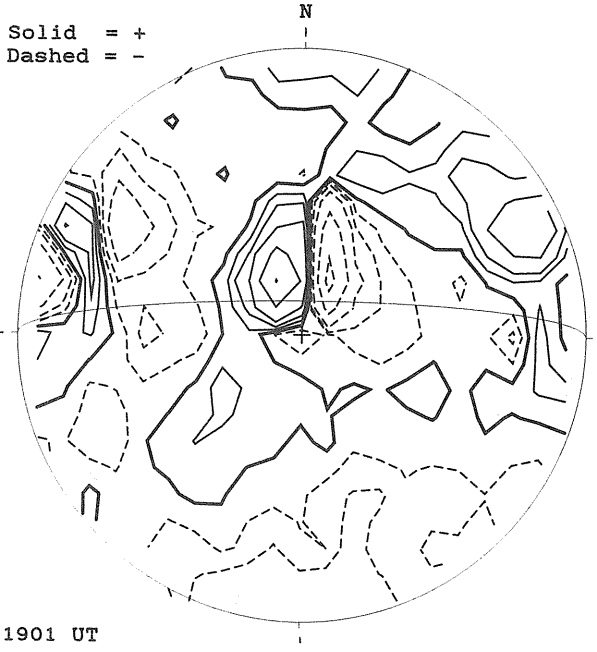
57
Feb 94

FEBRUARY 12, 1994 ( P=-16.30, $B_o$ =-6.69, $L_o$ = 293.56 )

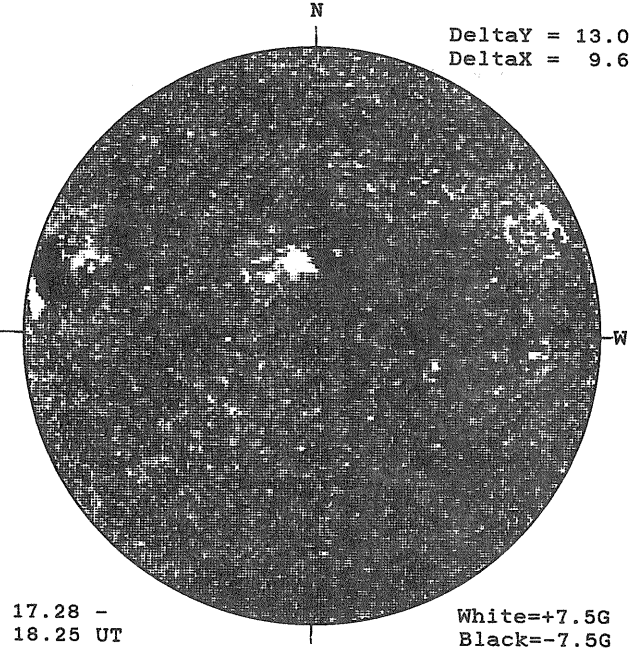
KITT PEAK MAGNETOGRAM



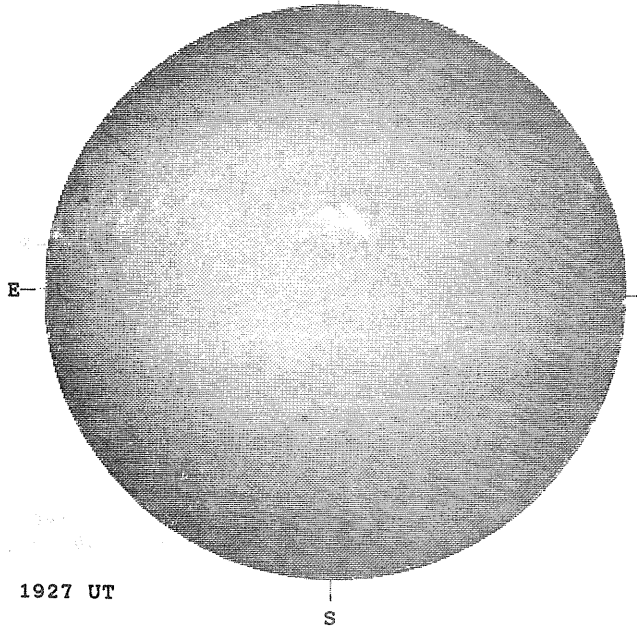

STANFORD MAGNETOGRAM



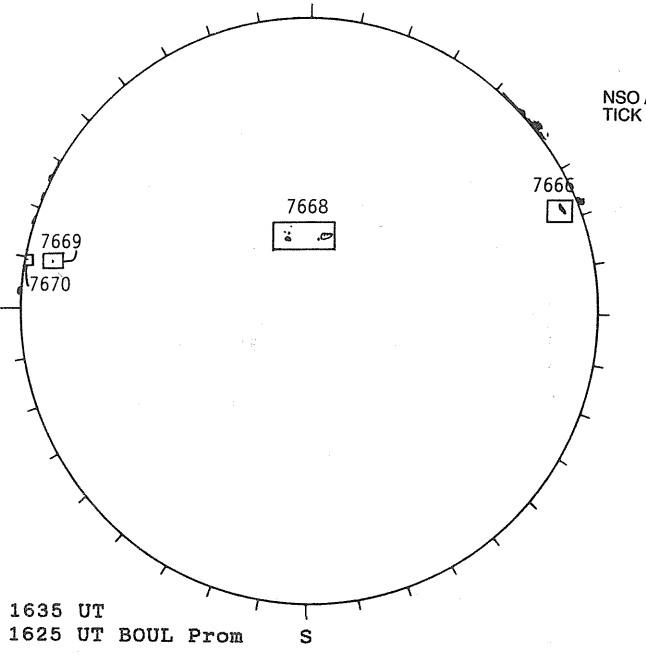

MT. WILSON MAGNETOGRAM

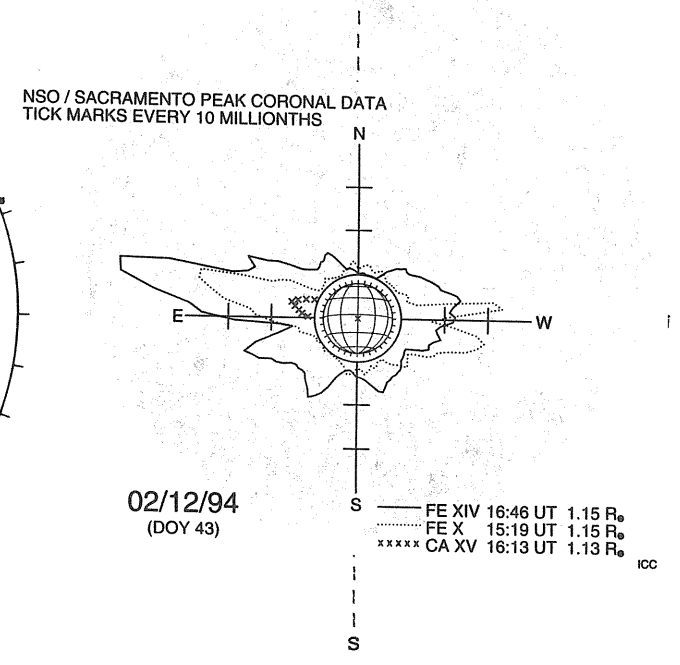



SACRAMENTO PEAK H-ALPHA




BOULDER SUNSPOT



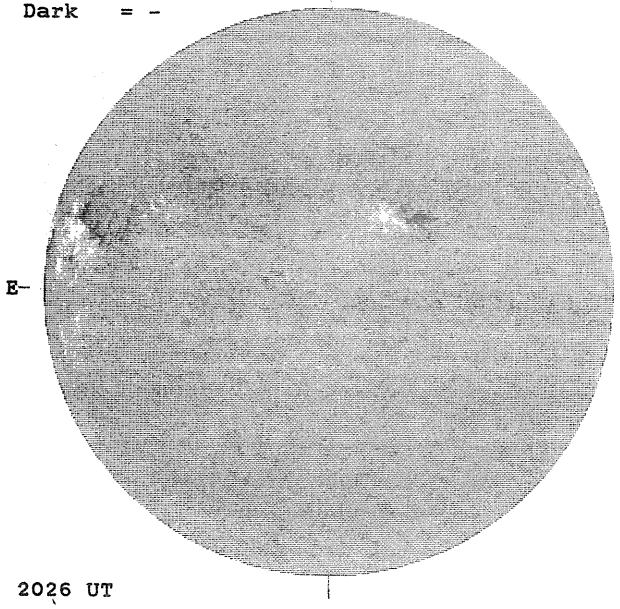



FEBRUARY 13, 1994 ( P=-16.65, $B_o$ =-6.74, $L_o$ = 280.39 )

KITT PEAK MAGNETOGRAM

N **5507A**

Bright = +
Dark = -

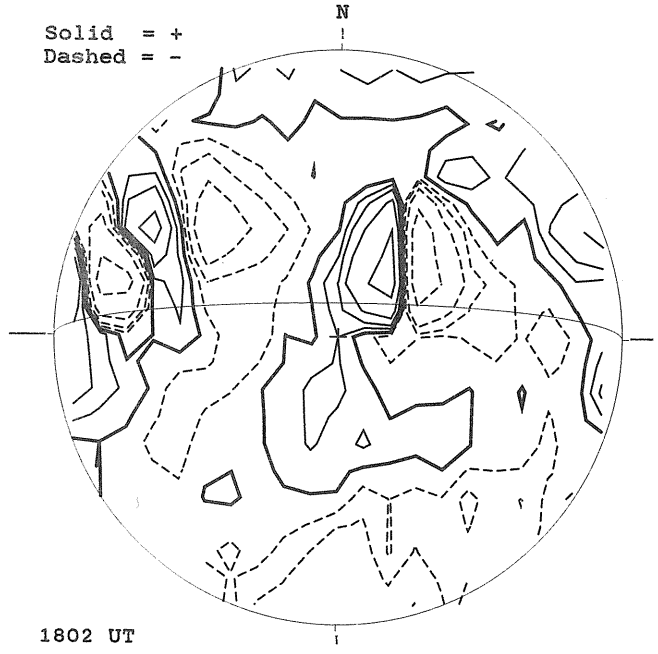



2026 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

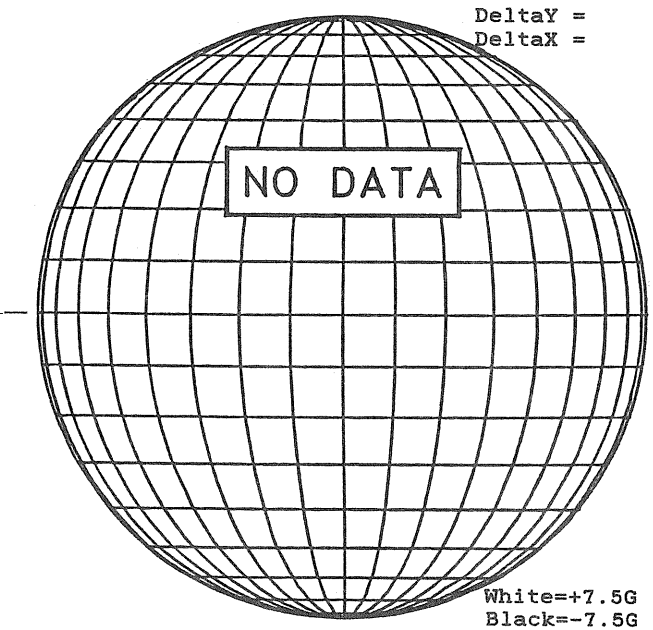


1802 UT

MT. WILSON MAGNETOGRAM

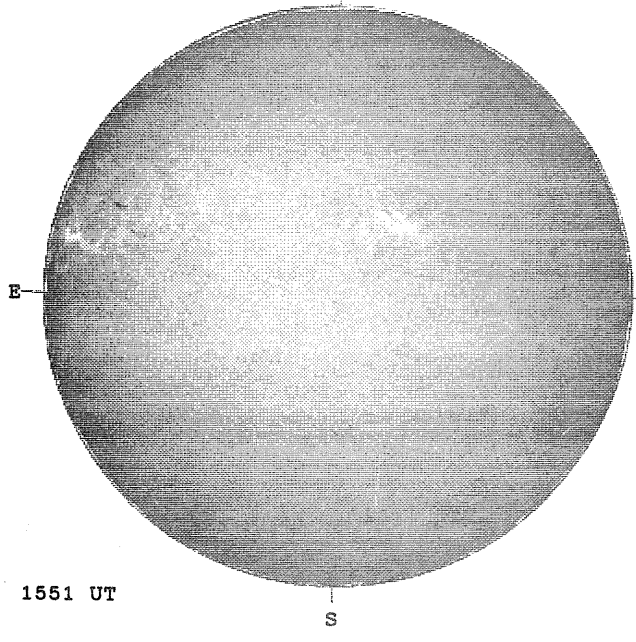
N

DeltaY =
DeltaX =




White=+7.5G
Black=-7.5G

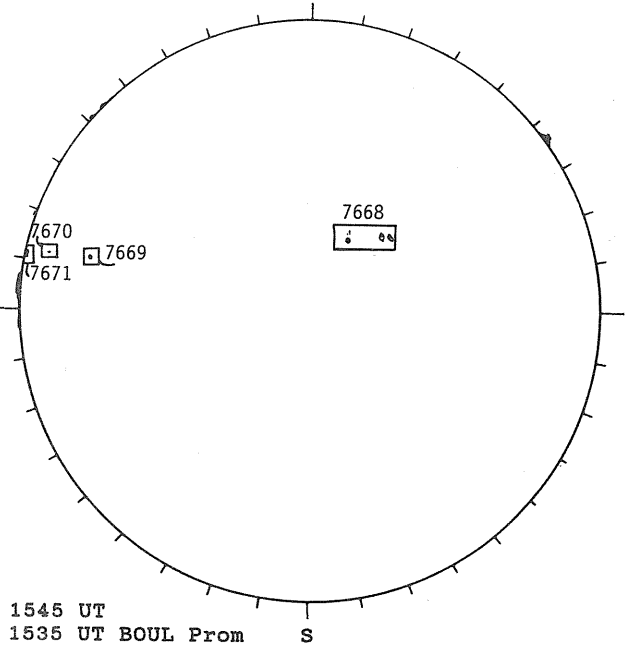
SACRAMENTO PEAK H-ALPHA




1551 UT

S

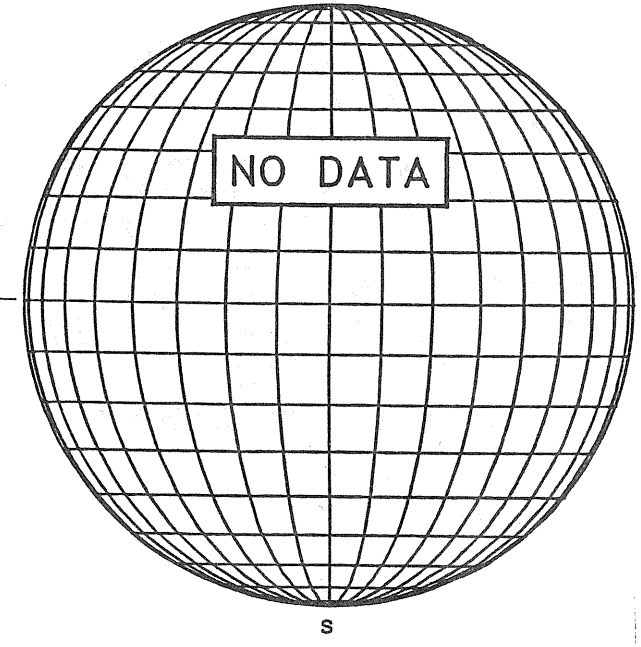
BOULDER SUNSPOT




1545 UT
1535 UT BOUL Prom

S

SACRAMENTO PEAK CORONA (1.15 Radii)



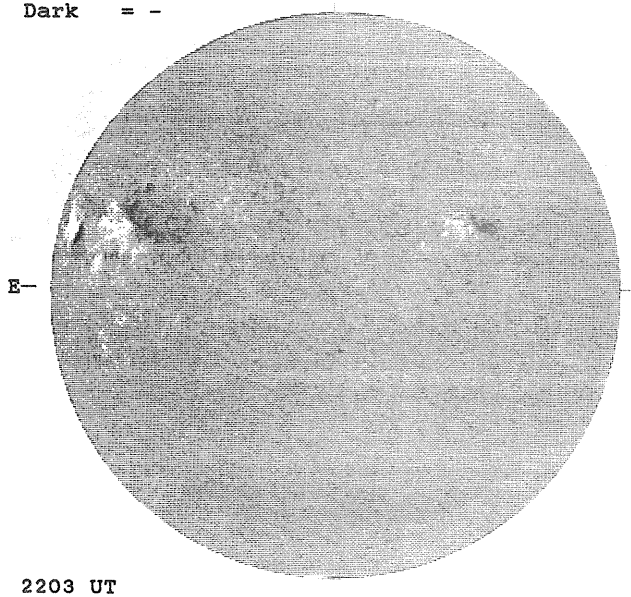

S

FEBRUARY 14, 1994 ( P=-17.00, $B_o$ =-6.78, $L_o$ = 267.23 )

KITT PEAK MAGNETOGRAM

N **5507A**

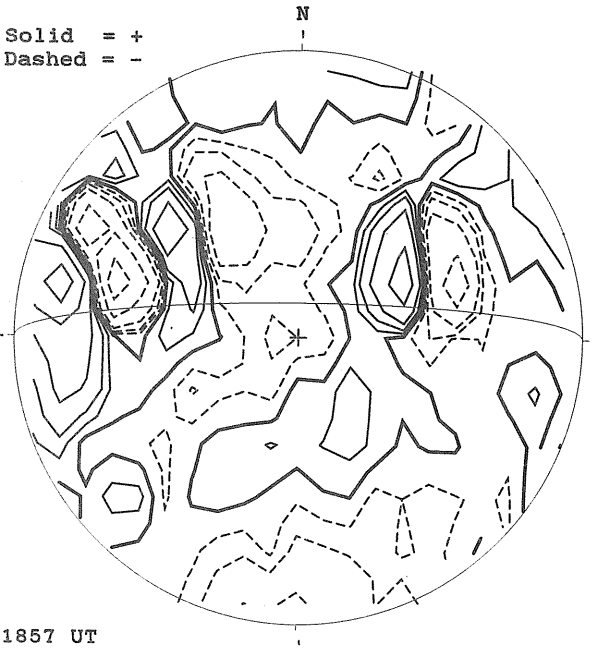
Bright = +
Dark = -




2203 UT

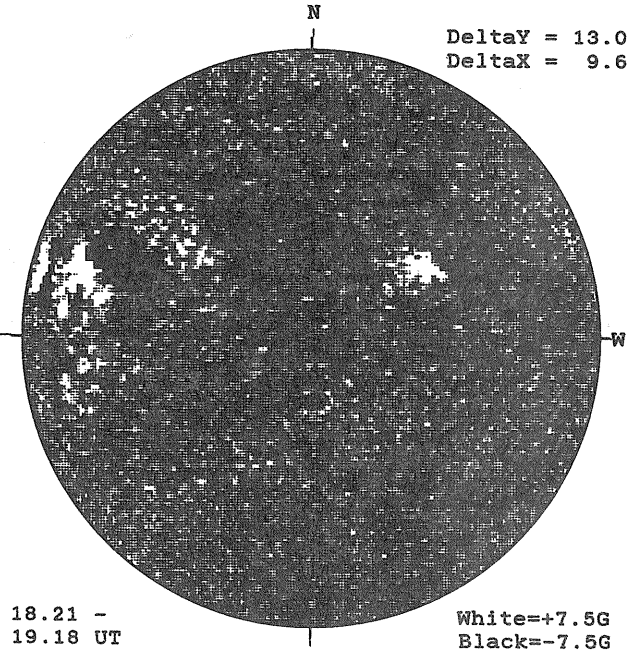
STANFORD MAGNETOGRAM

Solid = +
Dashed = -




1857 UT

MT. WILSON MAGNETOGRAM

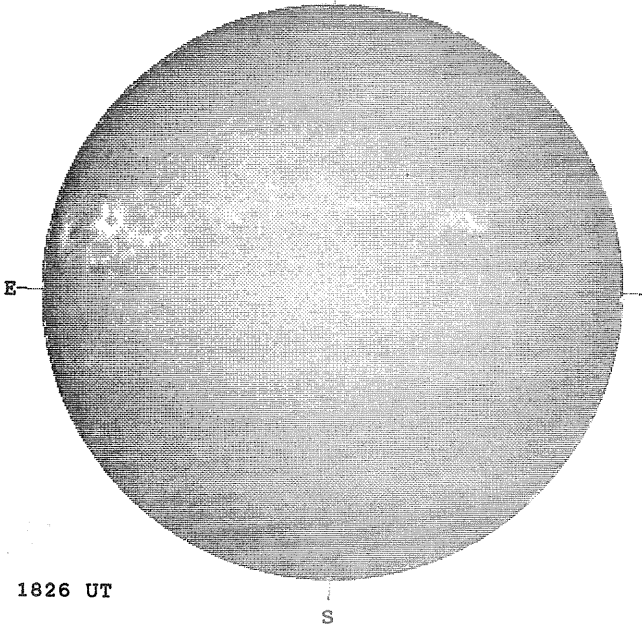



DeltaY = 13.0
DeltaX = 9.6

18.21 -
19.18 UT

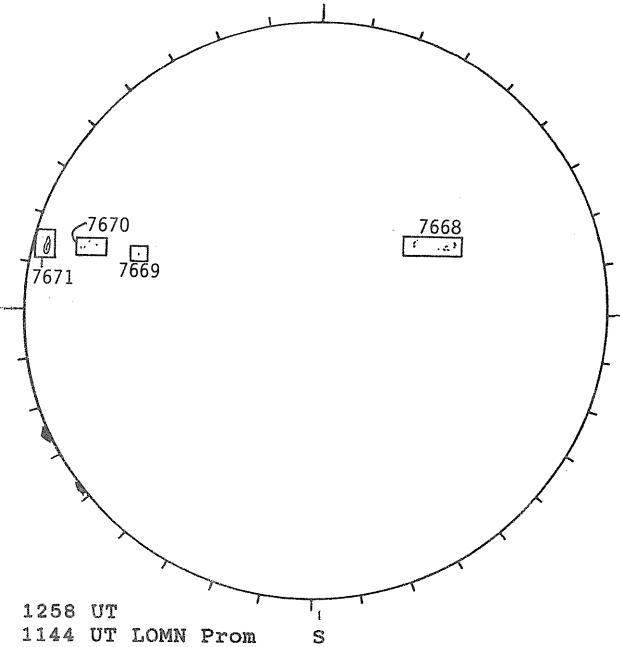
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



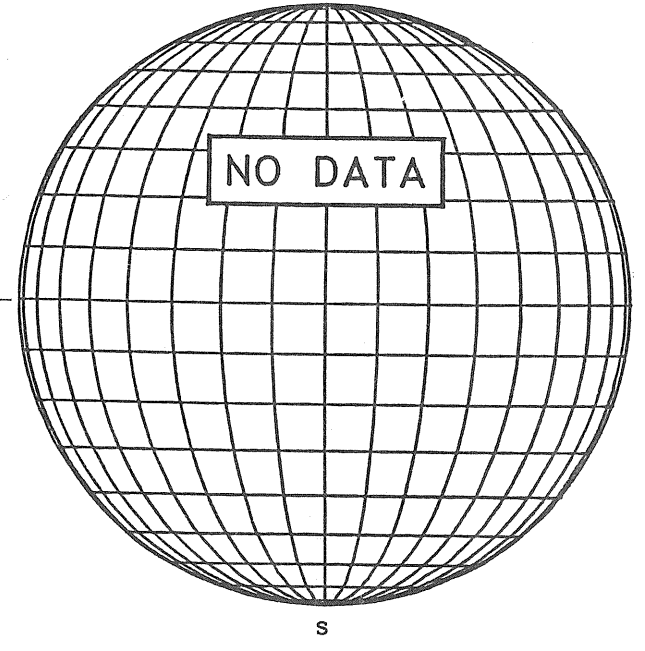

1826 UT

RAMEY SUNSPOT



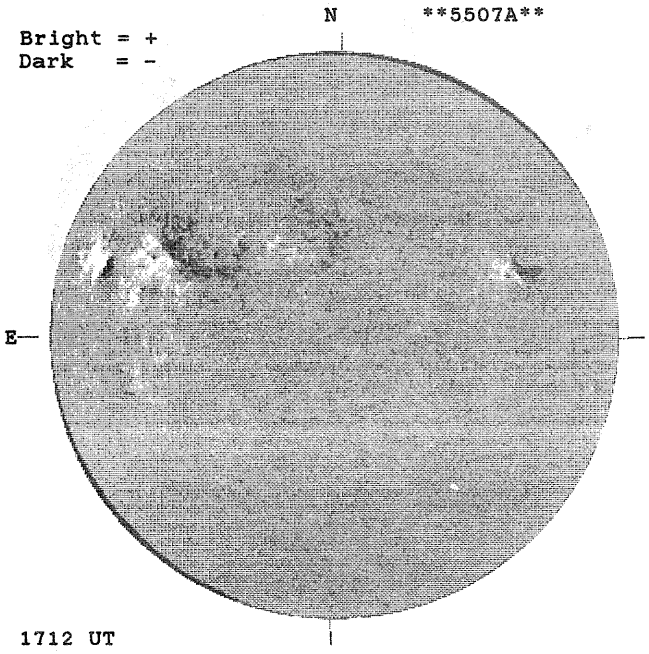

1258 UT
1144 UT LOMN Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

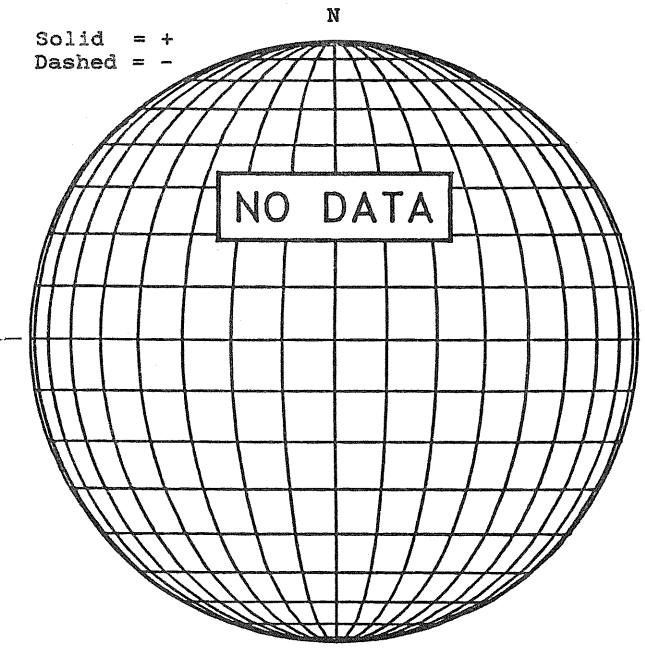


FEBRUARY 15, 1994 ( P=-17.34, $B_o$ =-6.83 $L_o$ = 254.06 )

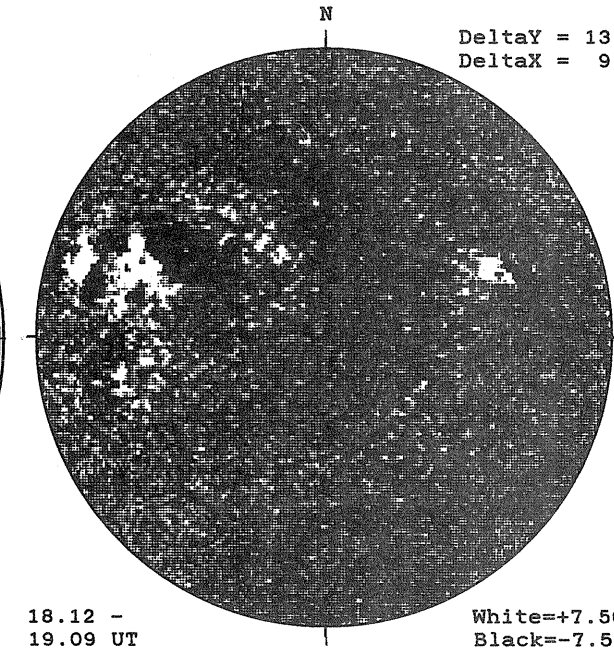
KITT PEAK MAGNETOGRAM



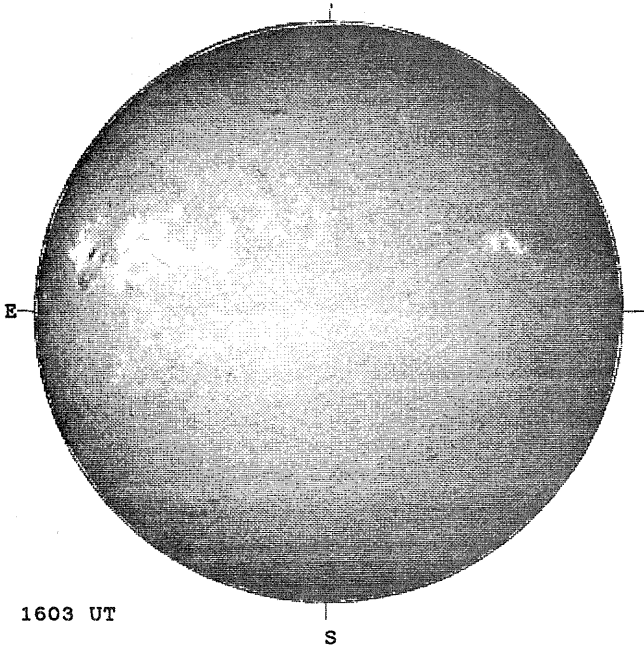

STANFORD MAGNETOGRAM



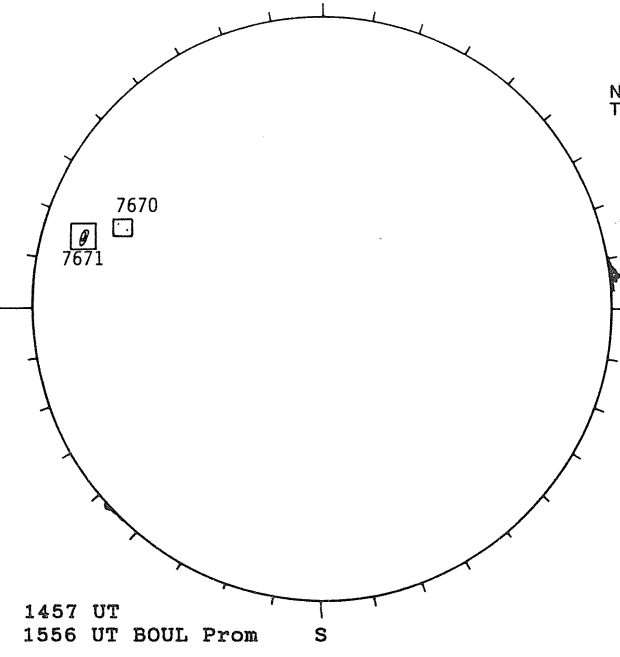

MT. WILSON MAGNETOGRAM



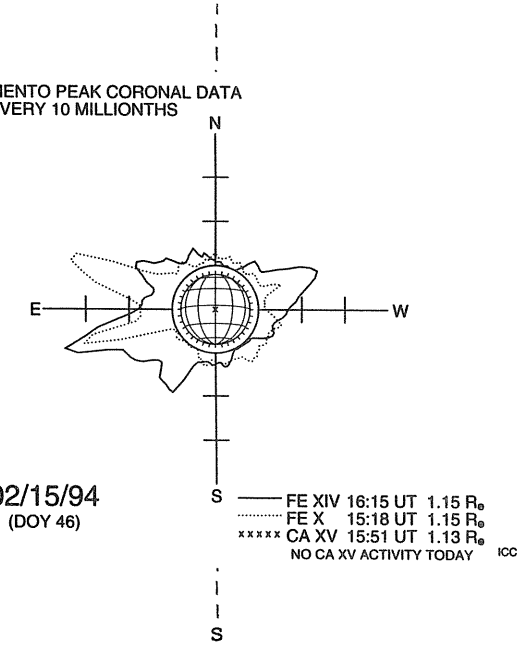

SACRAMENTO PEAK H-ALPHA




BOULDER SUNSPOT




NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS

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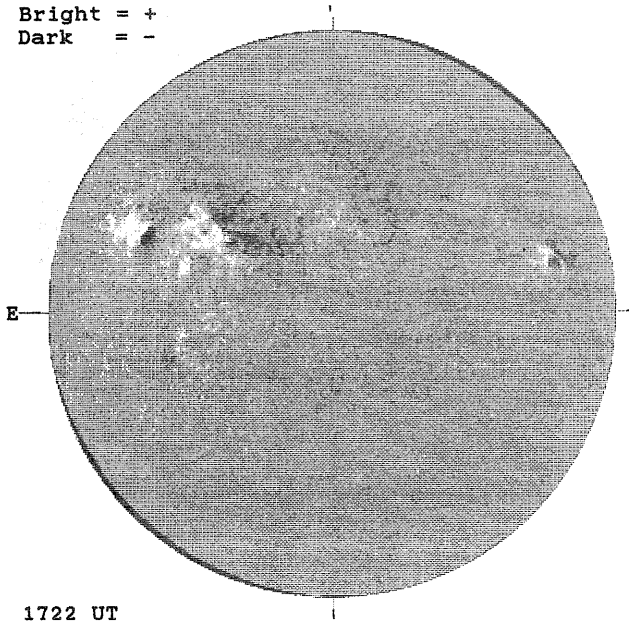
Feb 94

FEBRUARY 16, 1994 ( P=-17.67, $B_o$ =-6.87, $L_o$ = 240.89 )

KITT PEAK MAGNETOGRAM

N **5507A**

Bright = +
Dark = -

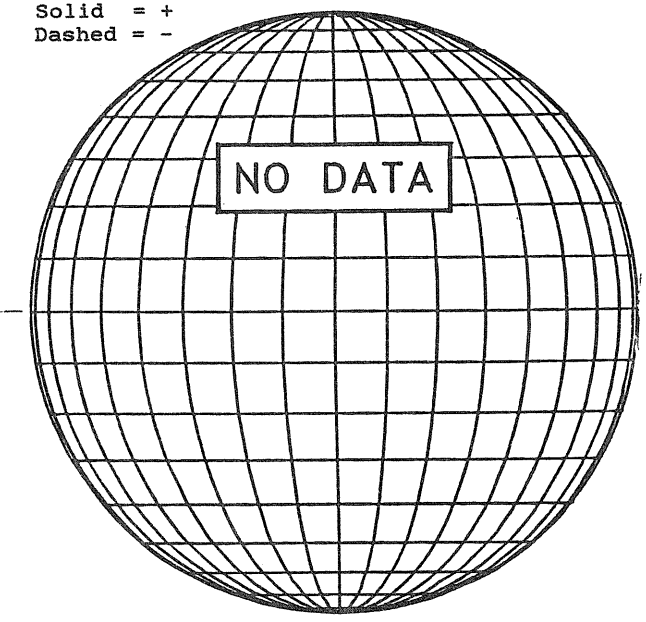



1722 UT

STANFORD MAGNETOGRAM

N

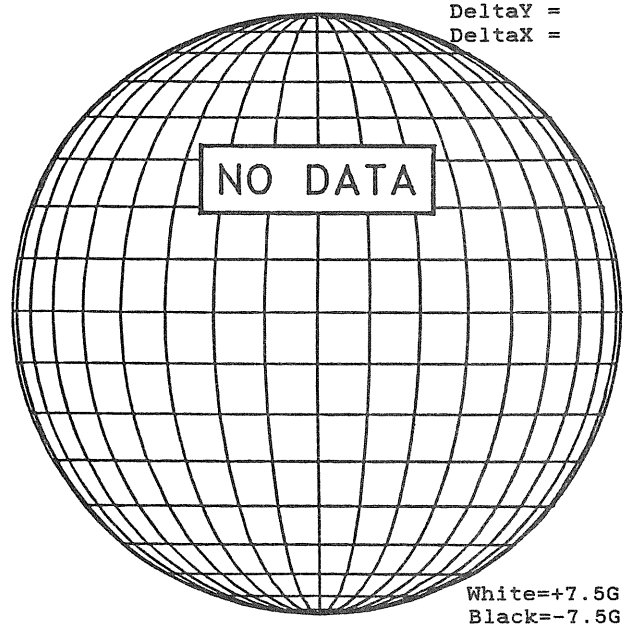
Solid = +
Dashed = -




MT. WILSON MAGNETOGRAM

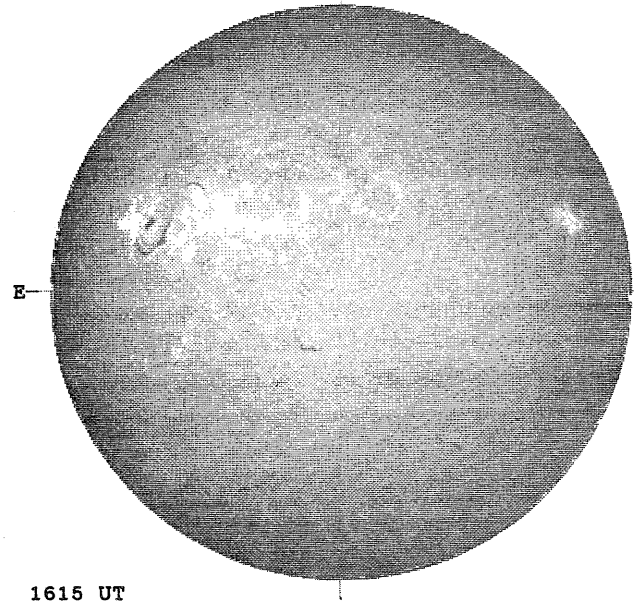
N

DeltaY =
DeltaX =



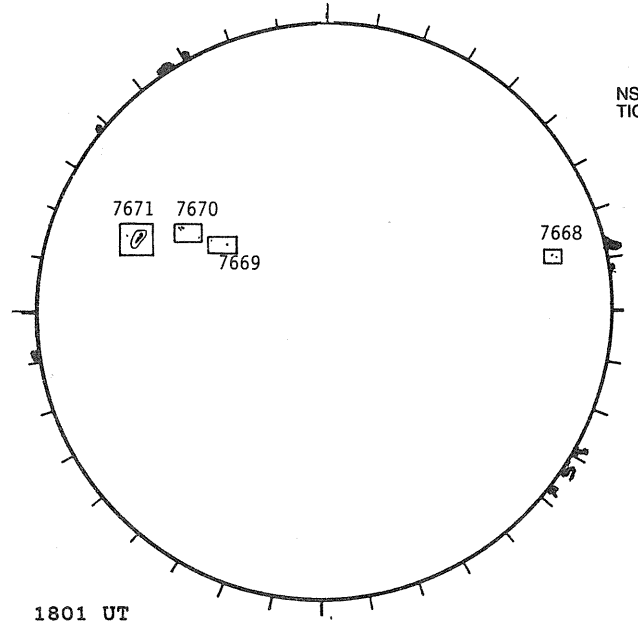

White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



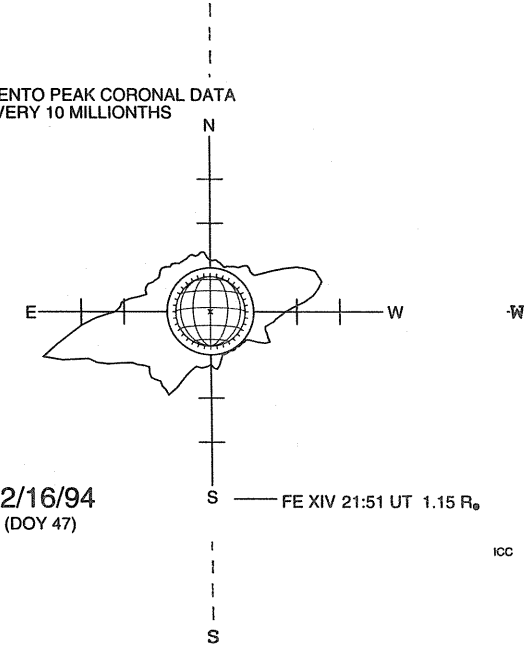

1615 UT

BOULDER SUNSPOT




1801 UT
1339 UT VALA Prom

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS



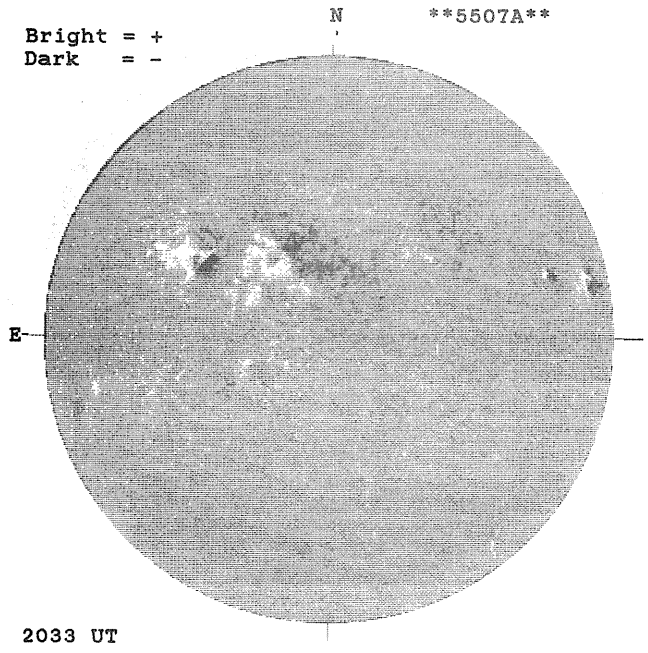

02/16/94
(DOY 47)

FE XIV 21:51 UT 1.15 $R_\odot$

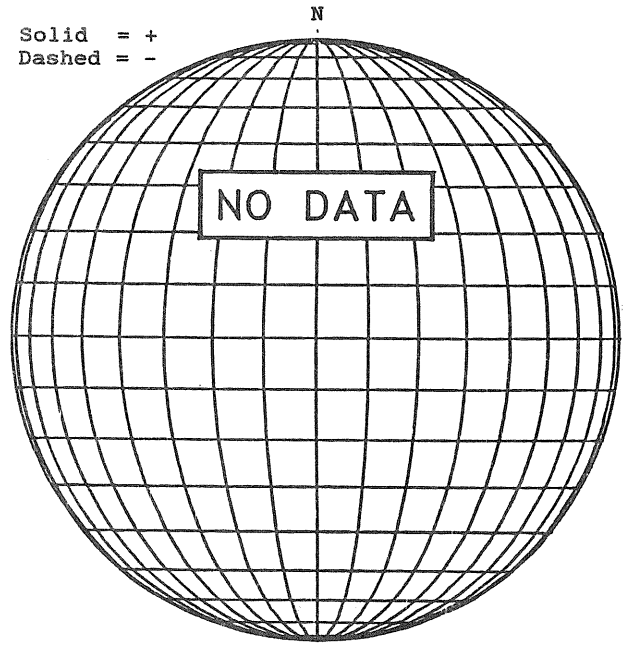
ICC

FEBRUARY 17, 1994 ( P=-18.00, $B_O$ =-6.91, $L_O$ = 227.72 )

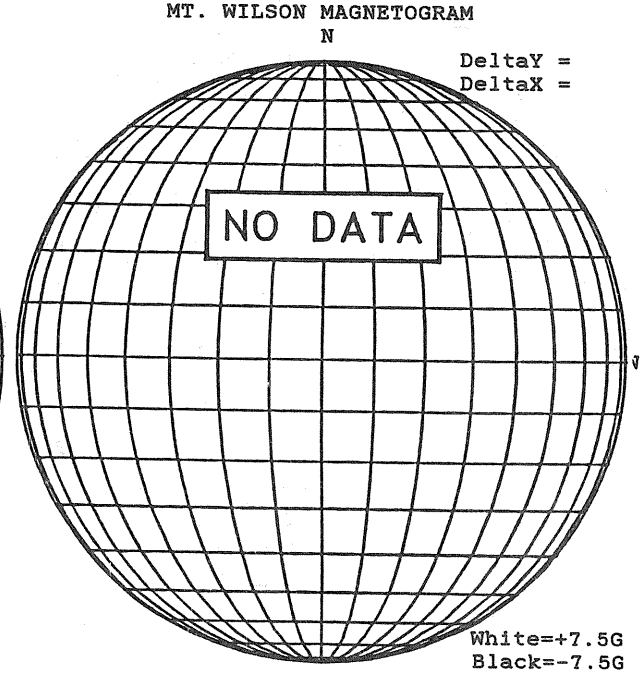
KITT PEAK MAGNETOGRAM



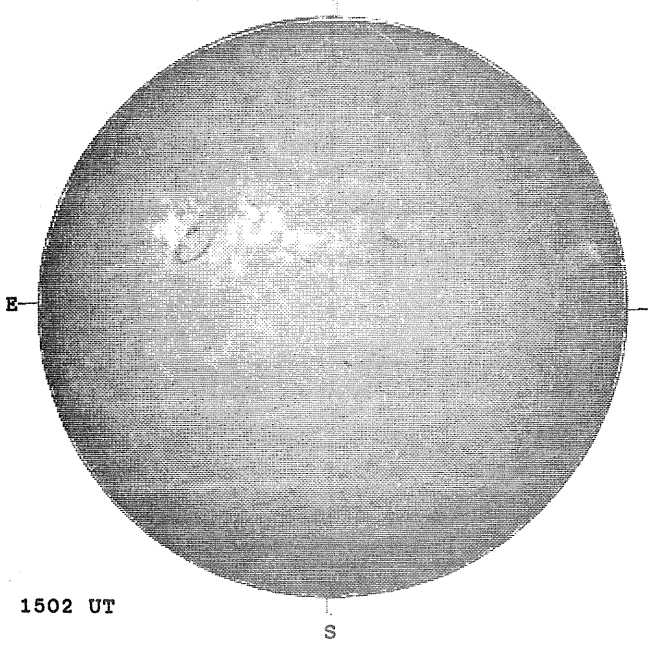

STANFORD MAGNETOGRAM



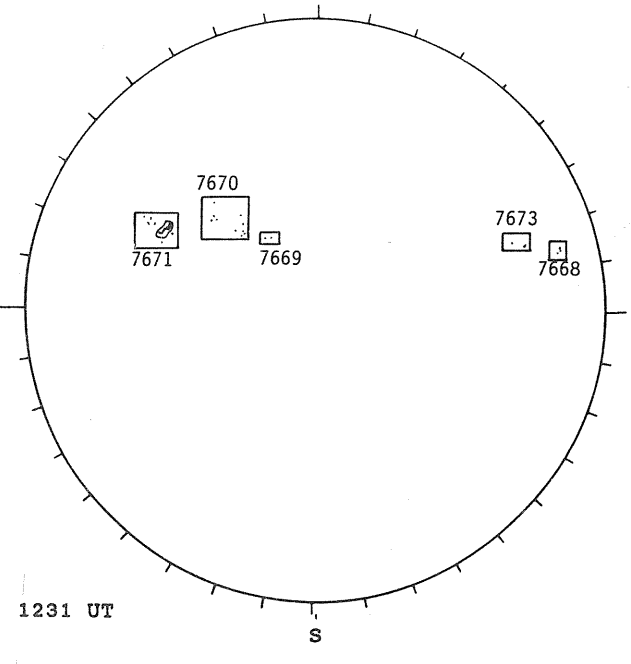

MT. WILSON MAGNETOGRAM



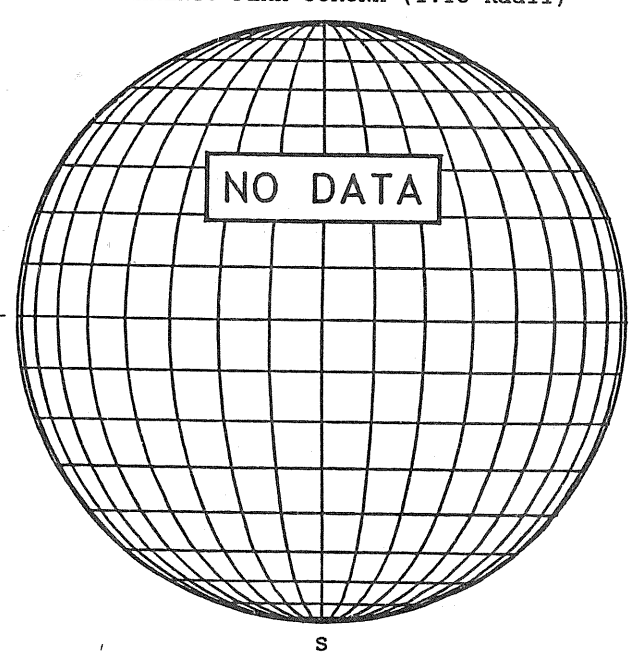

SACRAMENTO PEAK H-ALPHA




RAMEY SUNSPOT




SACRAMENTO PEAK CORONA (1.15 Radii)



FEBRUARY 18, 1994 ( P=-18.33, Bo =-6.95, Lo = 214.55 )

KITT PEAK MAGNETOGRAM
N **5507A**
Bright = +
Dark = -
E
NO DATA

STANFORD MAGNETOGRAM
N
Solid = +
Dashed = -
NO DATA

MT. WILSON MAGNETOGRAM
N
DeltaY =
DeltaX =
NO DATA
White=+7.5G
Black=-7.5G

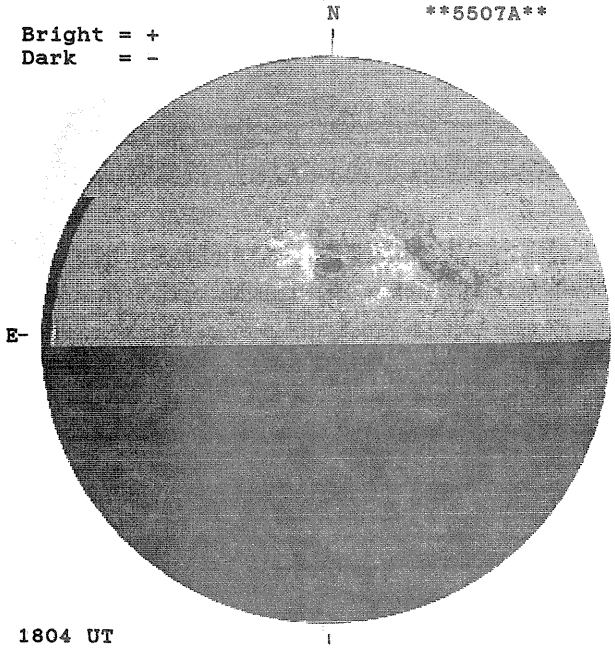
SACRAMENTO PEAK H-ALPHA
E
2030 UT
S

BOULDER SUNSPOT
7671
7668
7673
1533 UT
1541 UT BOUL Prom
S

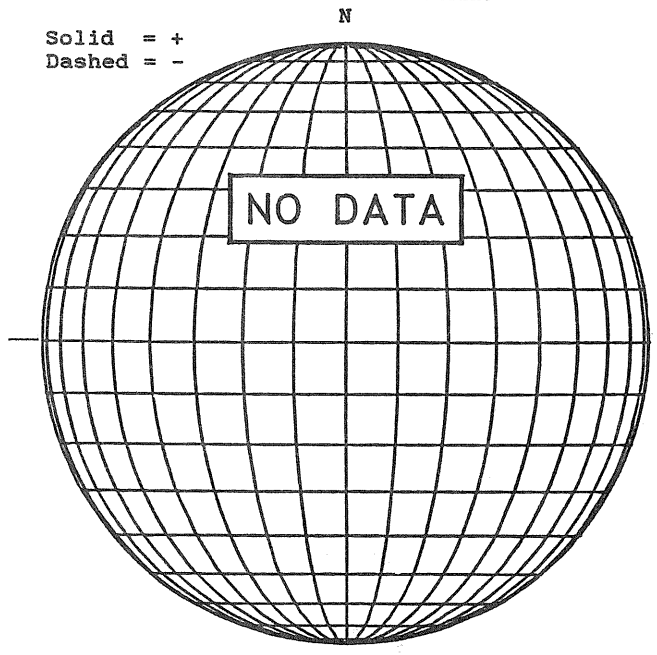
SACRAMENTO PEAK CORONA (1.15 Radii)
NO DATA
S

FEBRUARY 19, 1994 ( P=-18.64, $B_o$ =-6.98, $L_o$ = 201.39 )

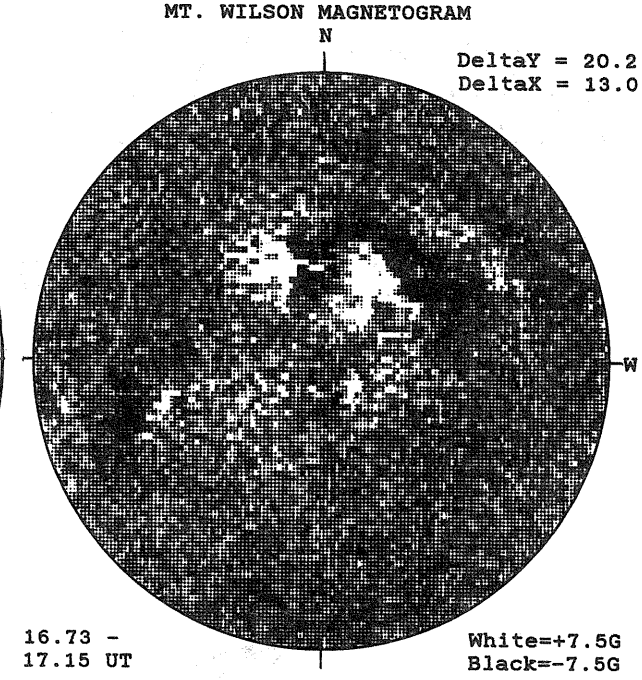
KITT PEAK MAGNETOGRAM



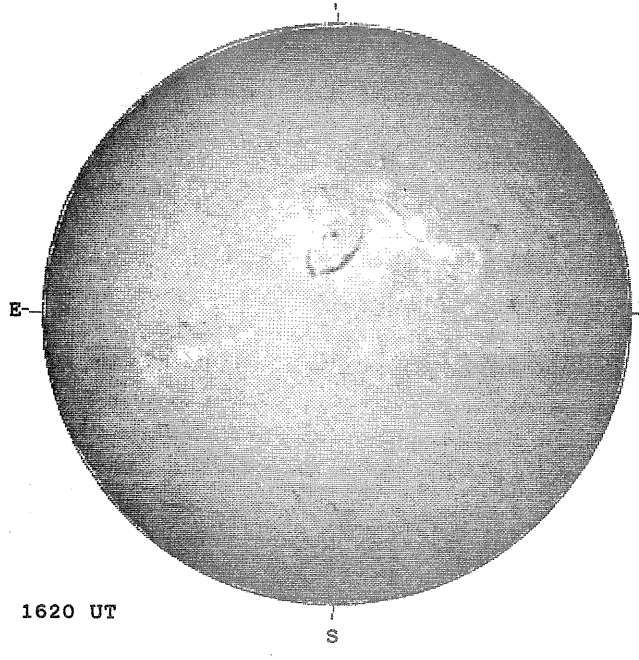

STANFORD MAGNETOGRAM



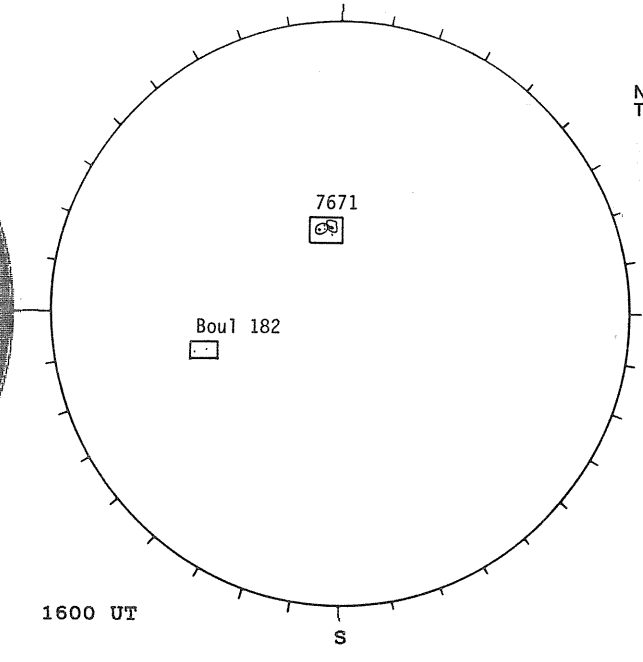

MT. WILSON MAGNETOGRAM

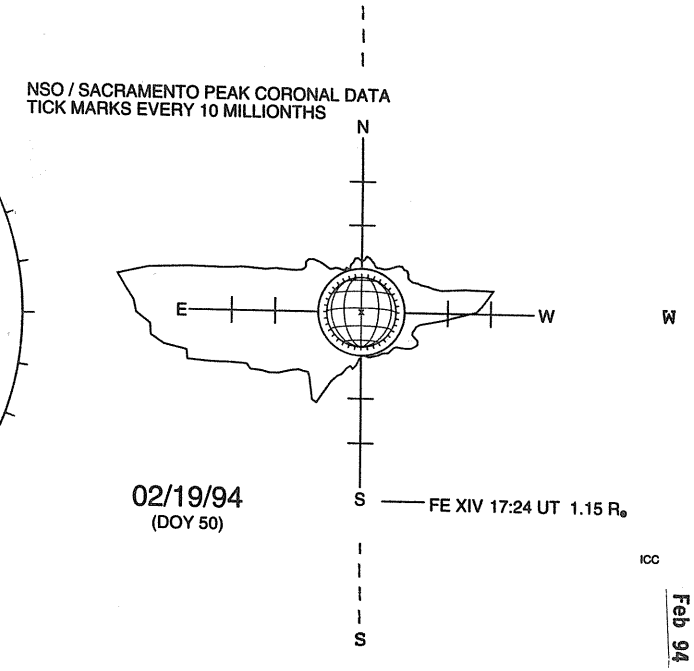



SACRAMENTO PEAK H-ALPHA




BOULDER SUNSPOT




ICC

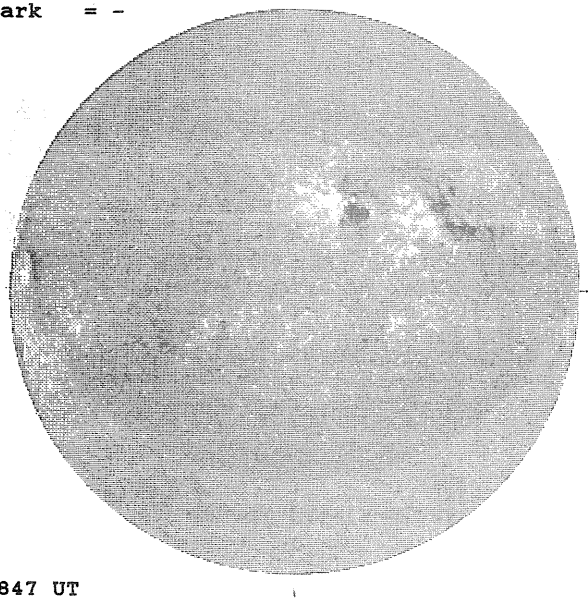
65
Feb 94

FEBRUARY 20, 1994 ( P=-18.96, $B_o$ =-7.02, $L_o$ = 188.22 )

KITT PEAK MAGNETOGRAM

N **5507A**

Bright = +
Dark = -



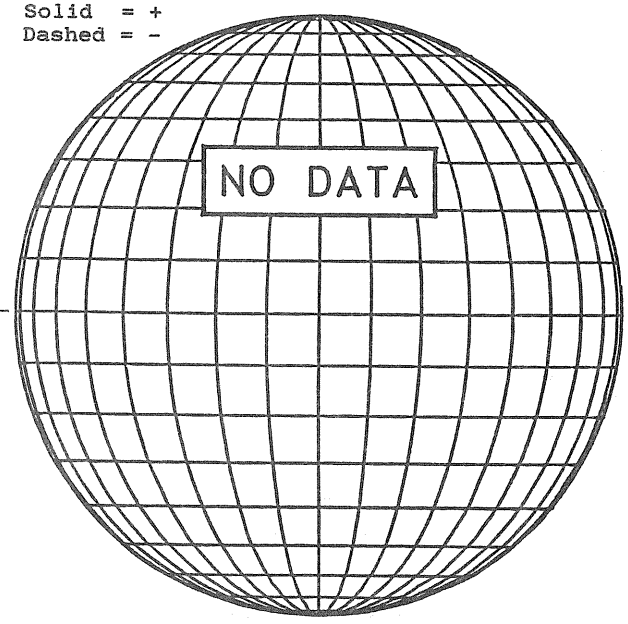
E

1847 UT

STANFORD MAGNETOGRAM

N

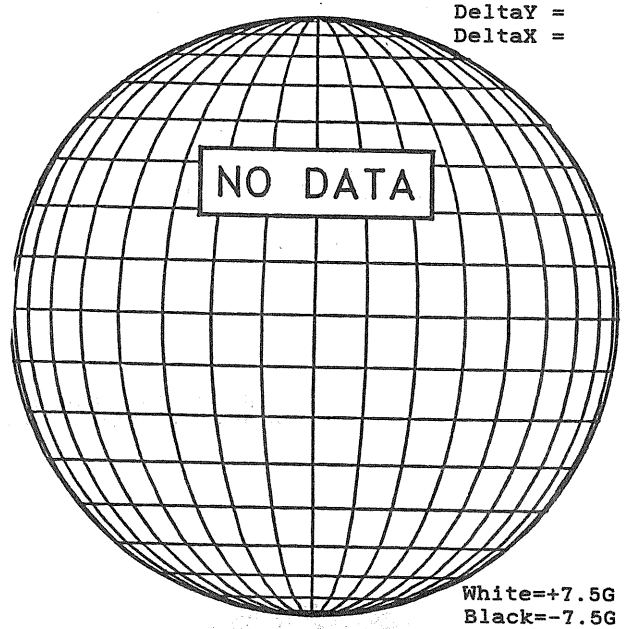
Solid = +
Dashed = -




MT. WILSON MAGNETOGRAM

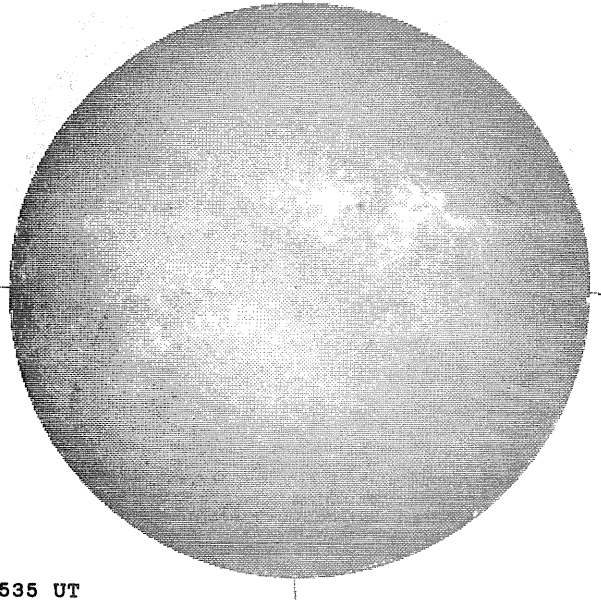
N

DeltaY =
DeltaX =




White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

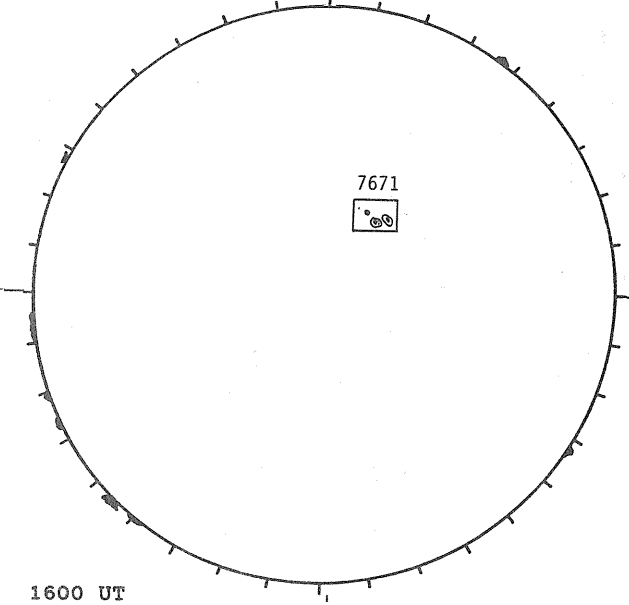


E

1535 UT

S

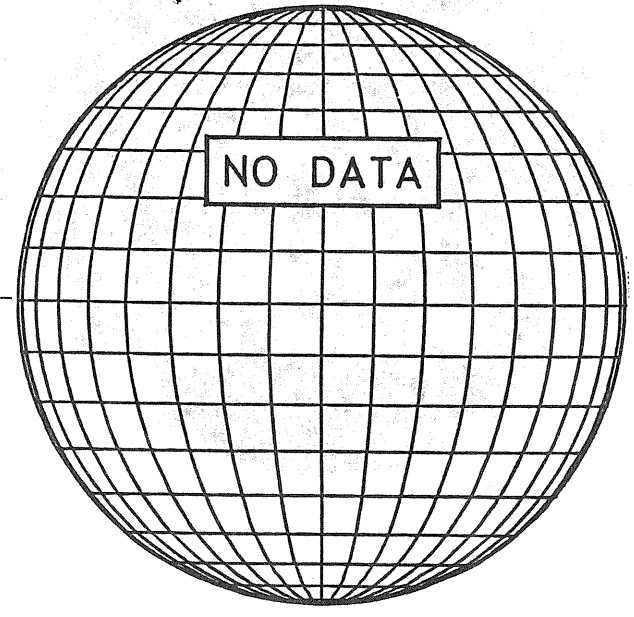
BOULDER SUNSPOT




1600 UT
1345 UT LOMN Prom

S

SACRAMENTO PEAK CORONA (1.15 Radii)

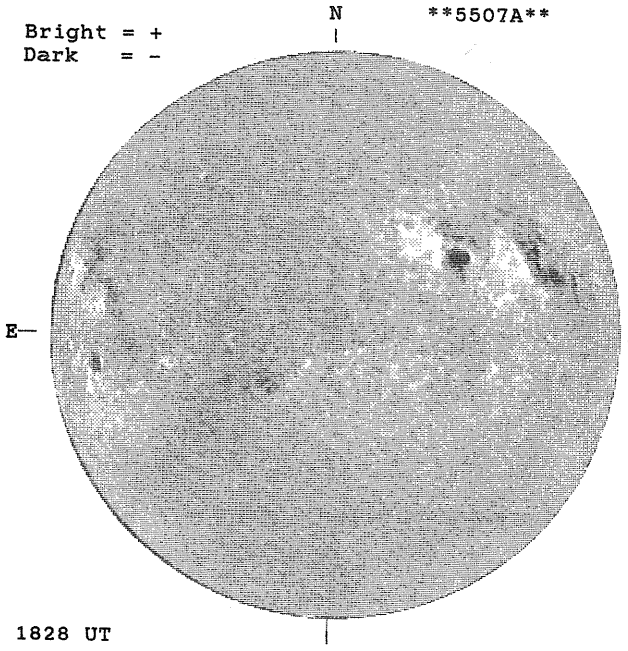



S

FEBRUARY 21, 1994 ( P=-19.26, $B_o$ =-7.05 $L_o$ = 175.05 )

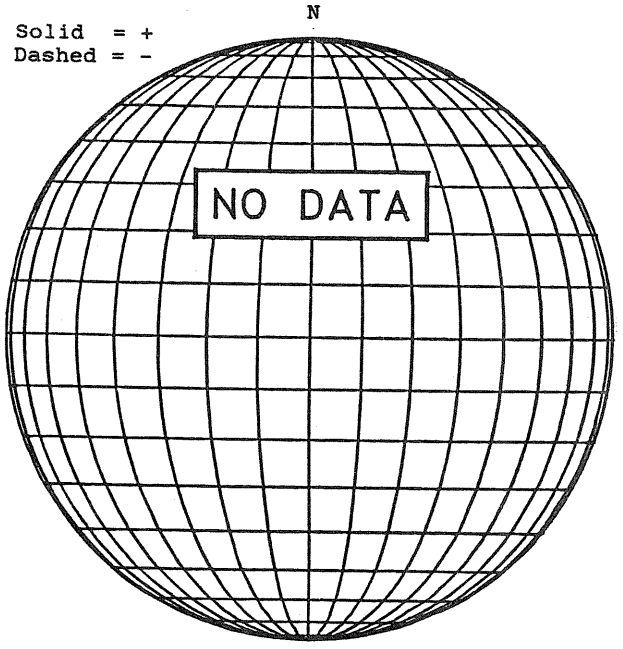
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



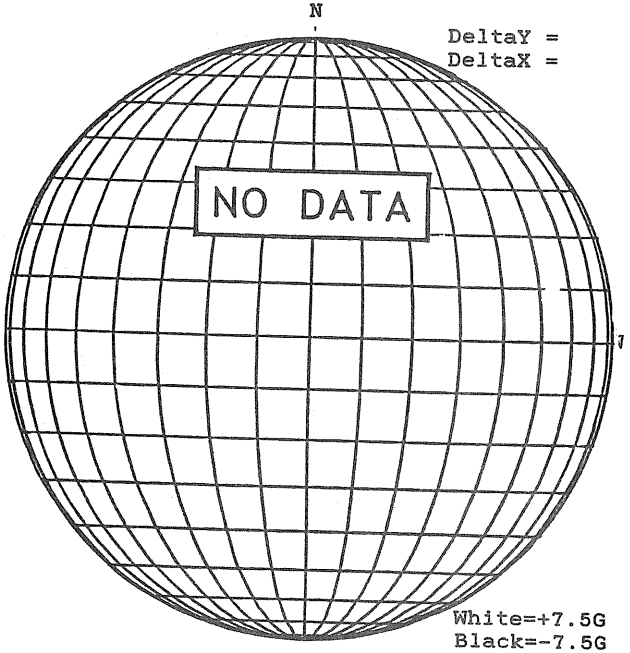

STANFORD MAGNETOGRAM

Solid = +
Dashed = -

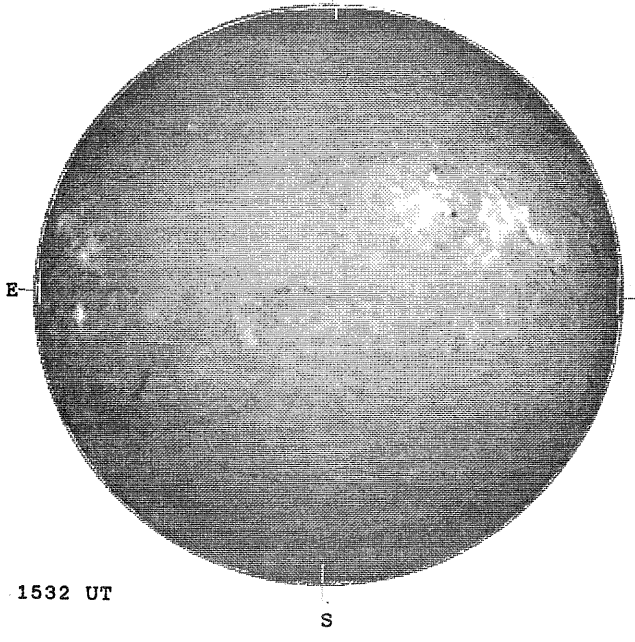



MT. WILSON MAGNETOGRAM

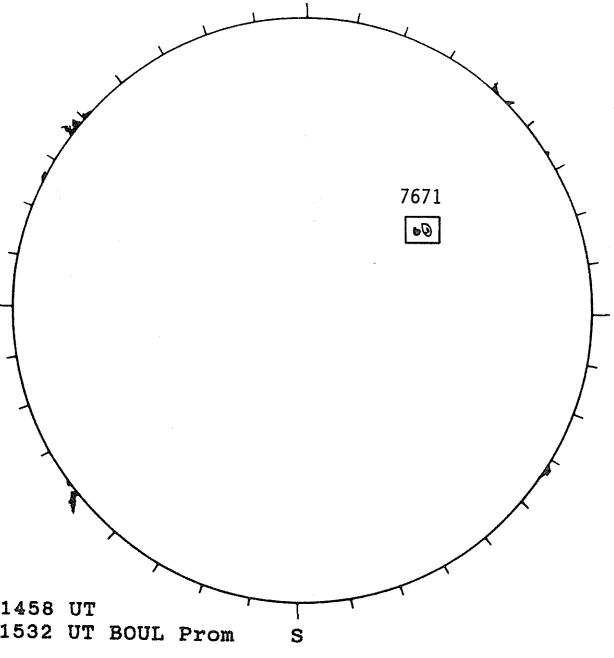
DeltaY =
DeltaX =



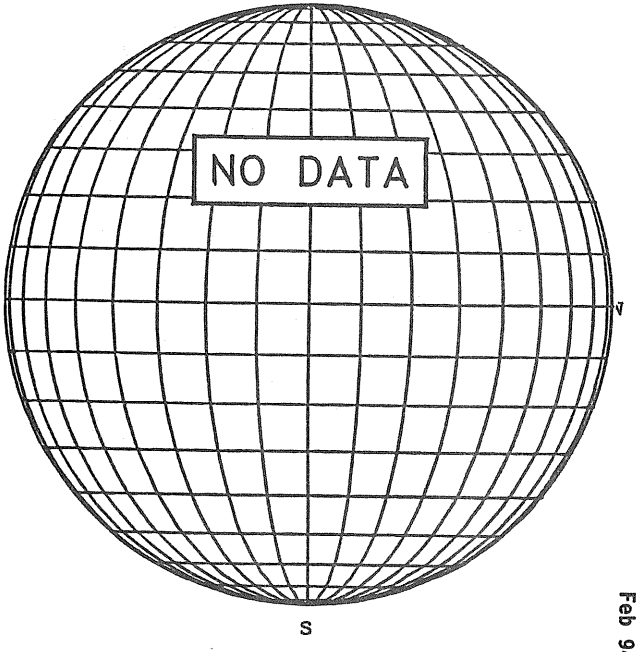

BOULDER H-ALPHA




BOULDER SUNSPOT



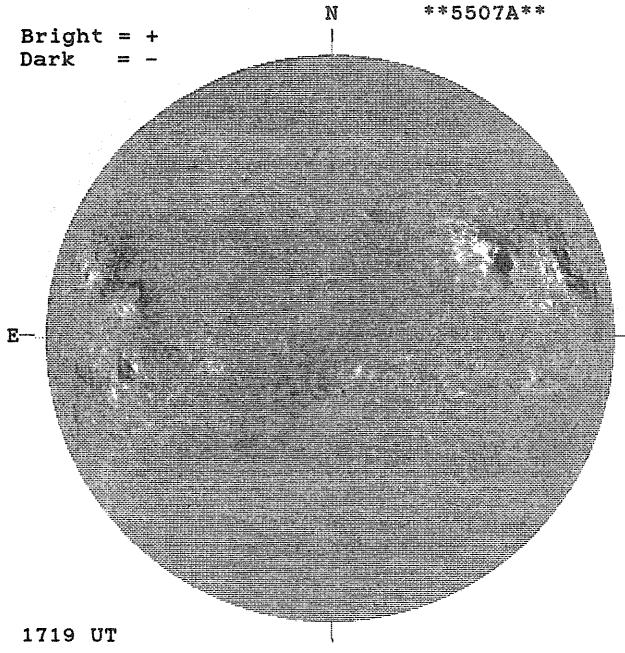

SACRAMENTO PEAK CORONA (1.15 Radii)



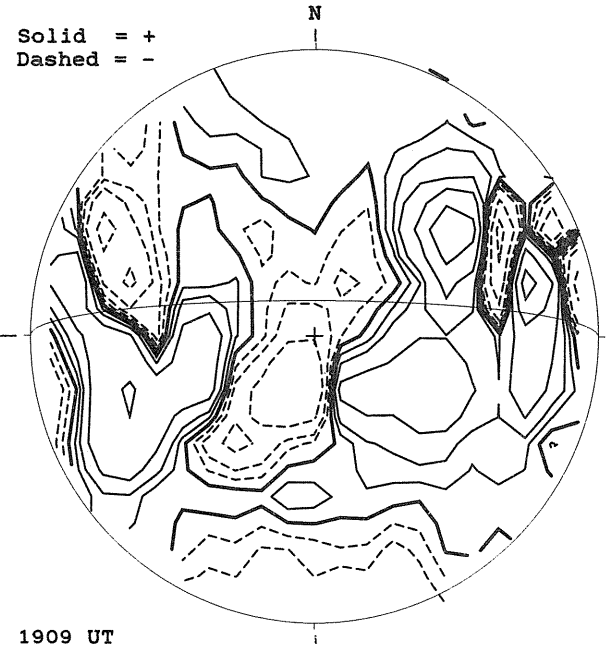

67
Feb 94

FEBRUARY 22, 1994 ( P=-19.56, $B_o$ =-7.08, $L_o$ = 161.88 )

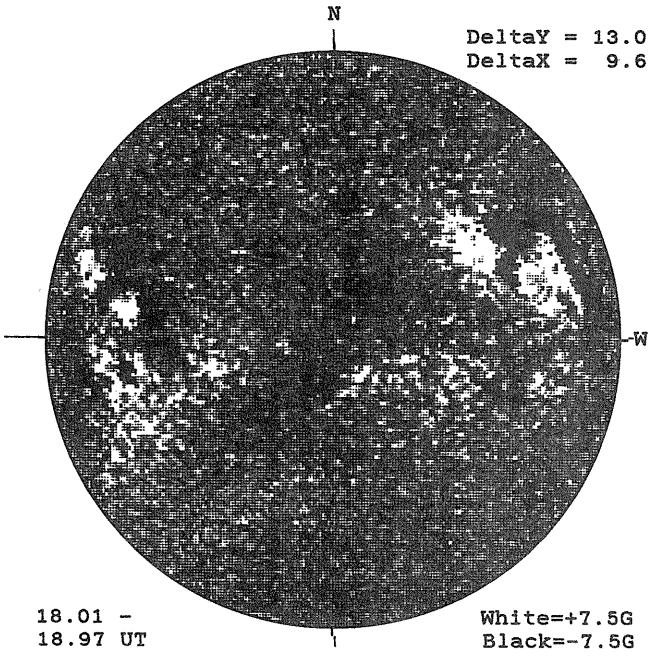
KITT PEAK MAGNETOGRAM



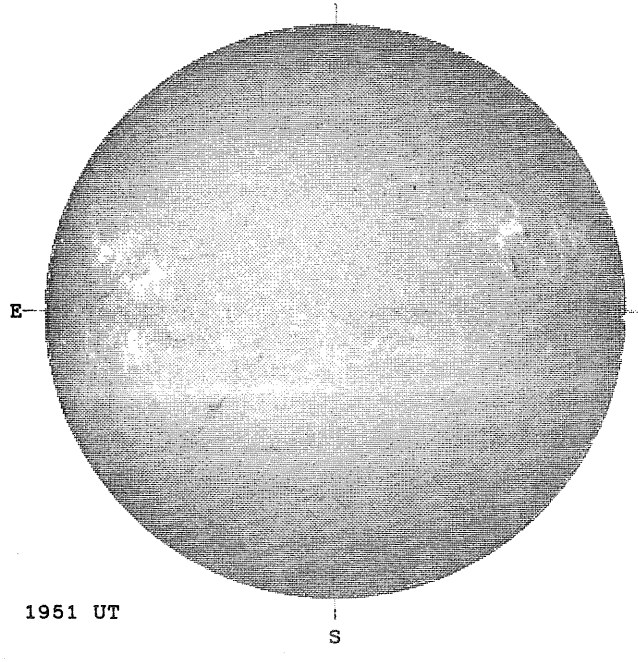

STANFORD MAGNETOGRAM



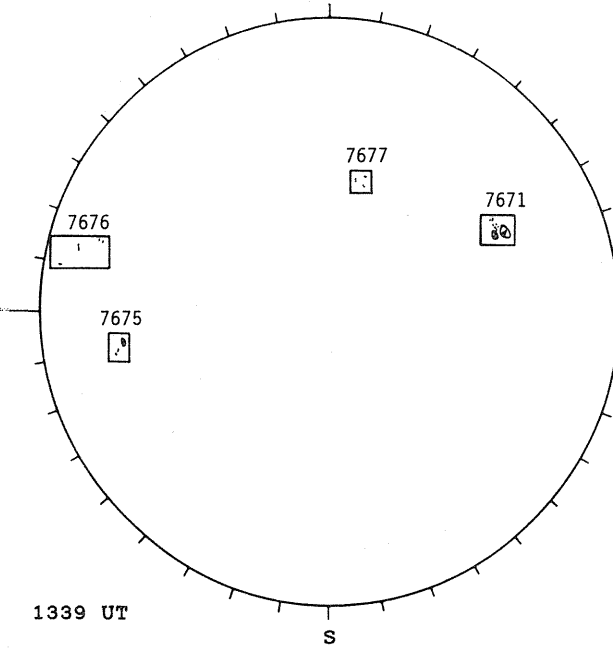

MT. WILSON MAGNETOGRAM



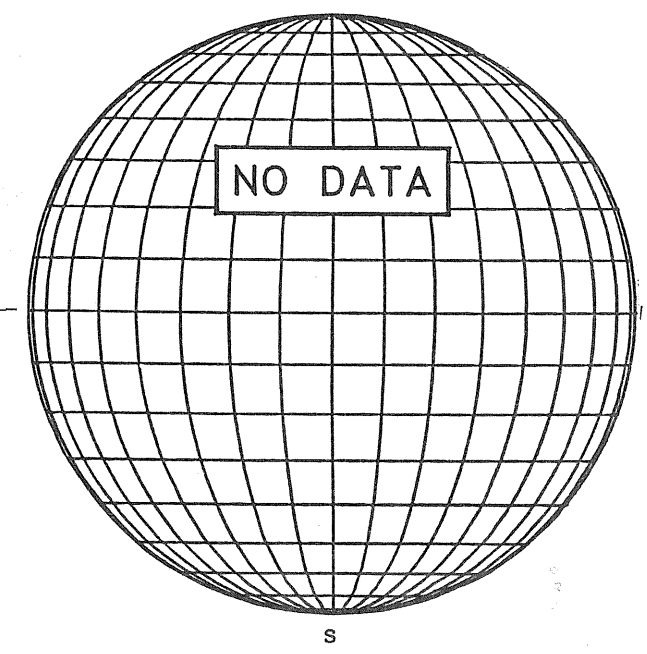

SACRAMENTO PEAK H-ALPHA




RAMEY SUNSPOT

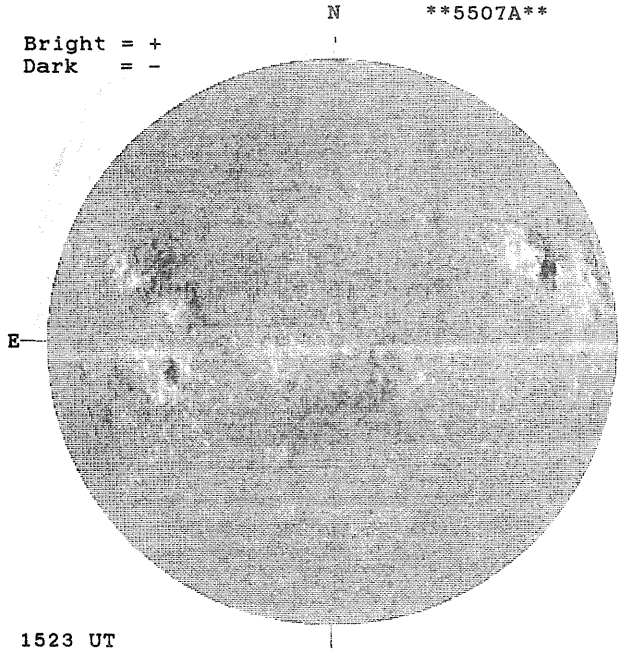



SACRAMENTO PEAK CORONA (1.15 Radii)

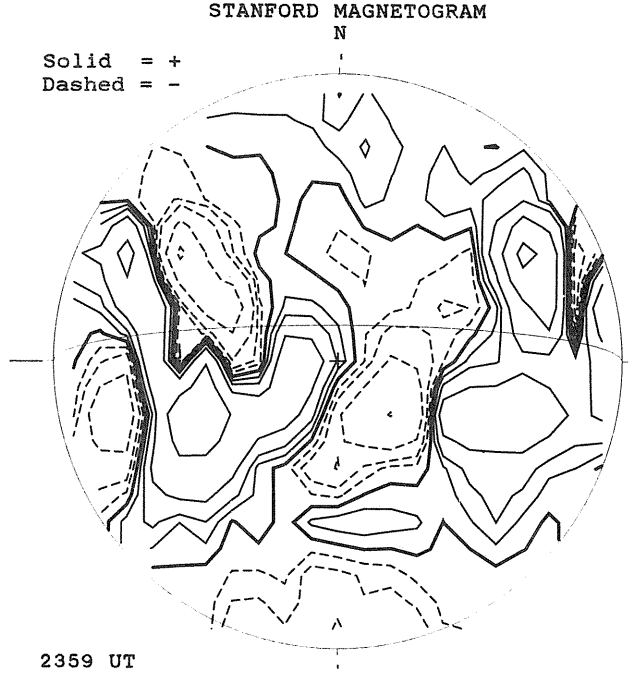


FEBRUARY 23, 1994 ( P=-19.85, $B_o$ =-7.10, $L_o$ = 148.71 )

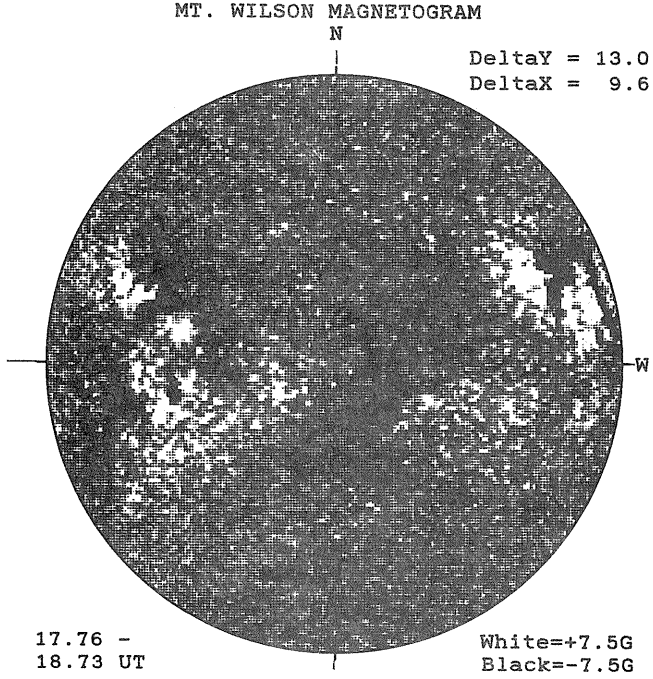
KITT PEAK MAGNETOGRAM



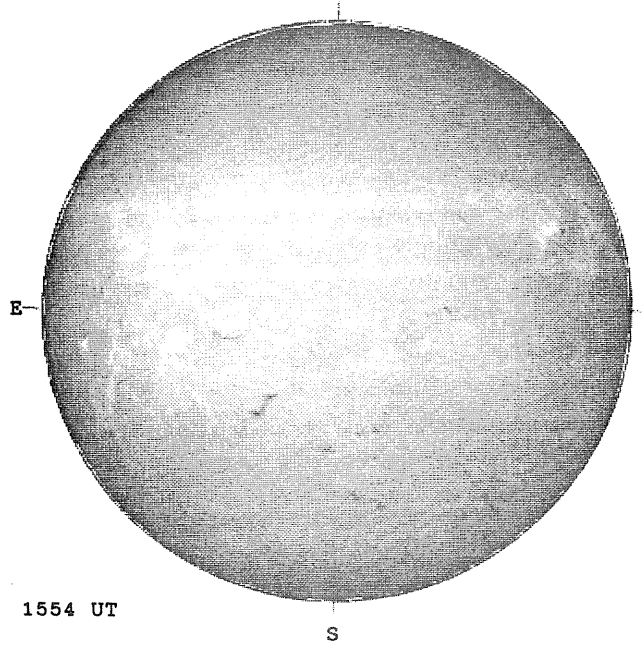

STANFORD MAGNETOGRAM



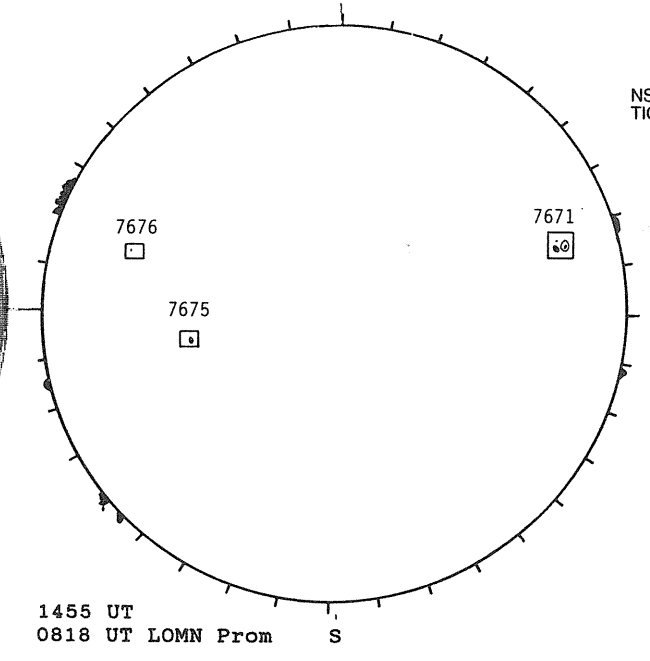

MT. WILSON MAGNETOGRAM



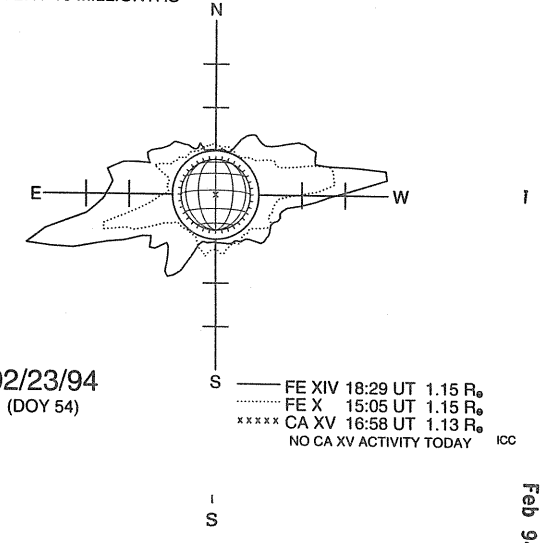

SACRAMENTO PEAK H-ALPHA




BOULDER SUNSPOT




NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS

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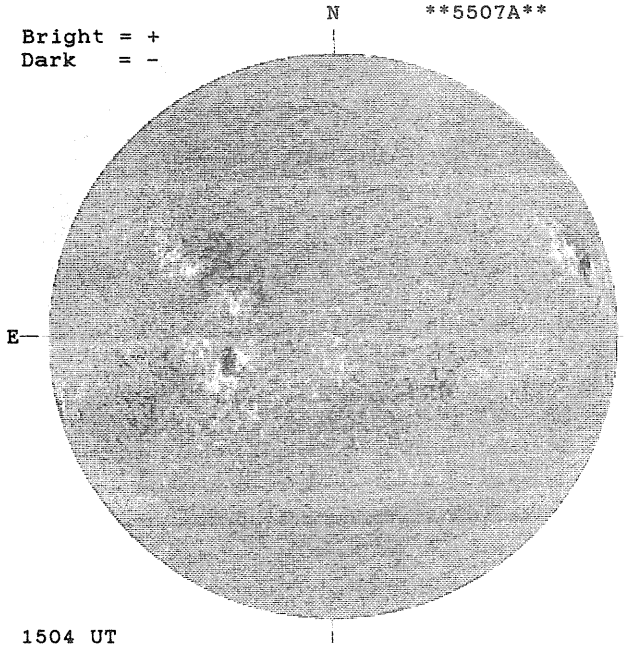
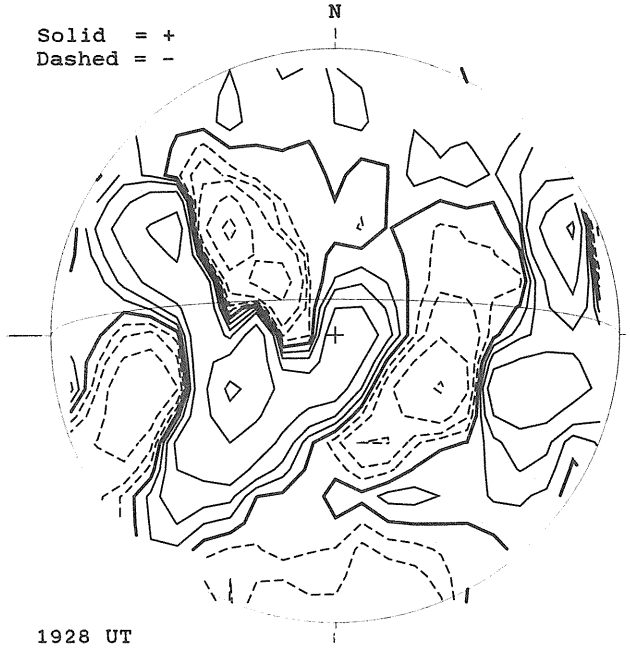
Feb 94

FEBRUARY 24, 1994 ( P=-20.14 $B_o$ =-7.13, $L_o$ = 135.54 )

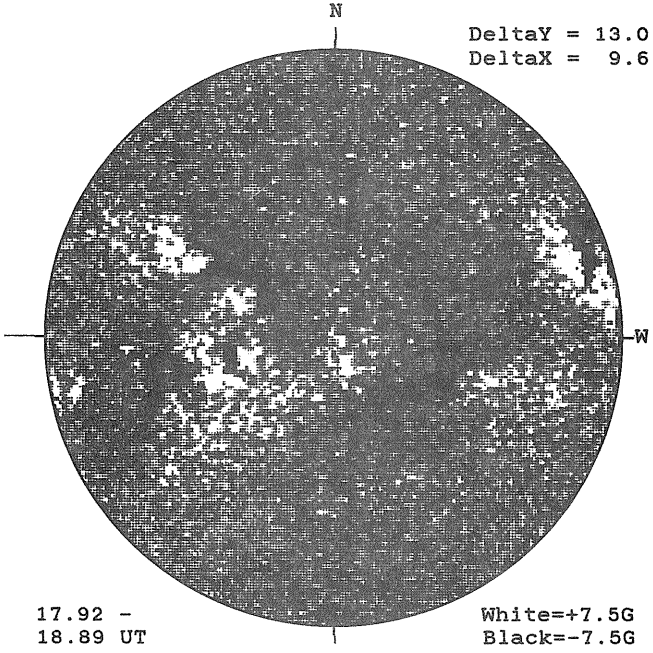
KITT PEAK MAGNETOGRAM



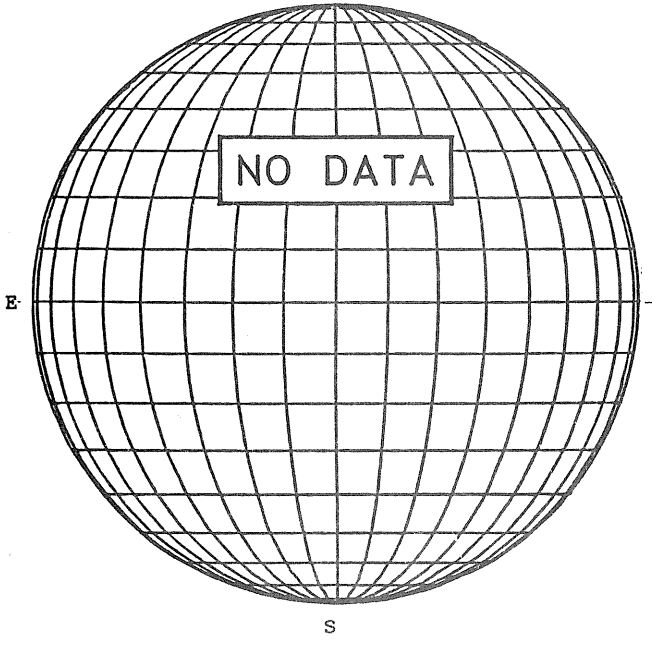

STANFORD MAGNETOGRAM



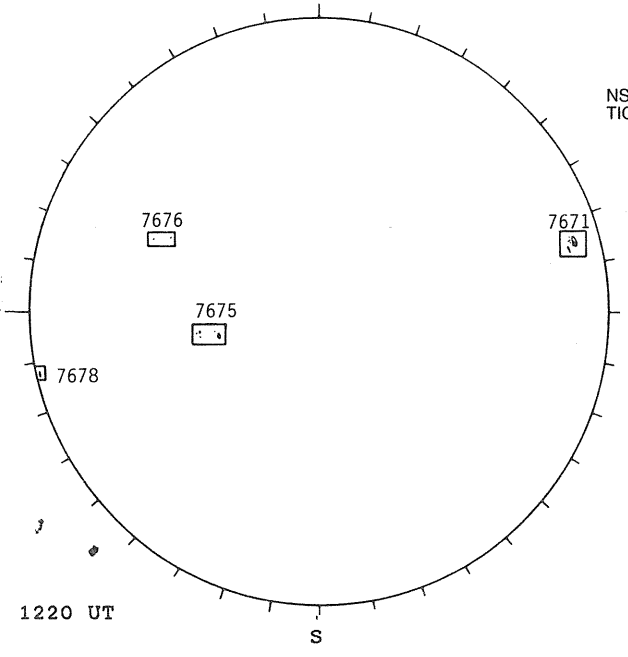

MT. WILSON MAGNETOGRAM



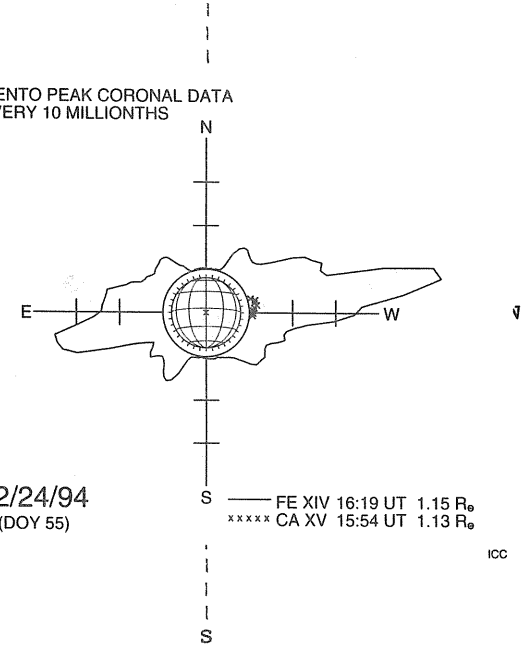

SACRAMENTO PEAK H-ALPHA




RAMEY SUNSPOT




NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS



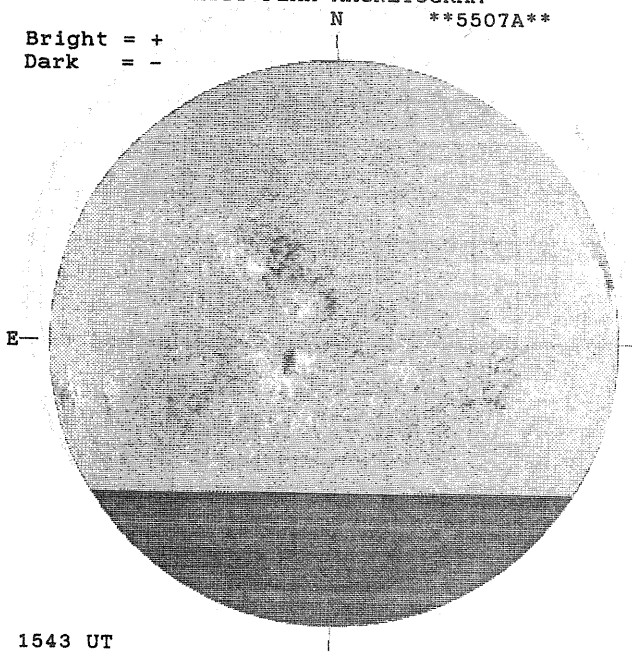

02/24/94
(DOY 55)

FE XIV 16:19 UT 1.15 $R_e$
xxxxx CA XV 15:54 UT 1.13 $R_e$

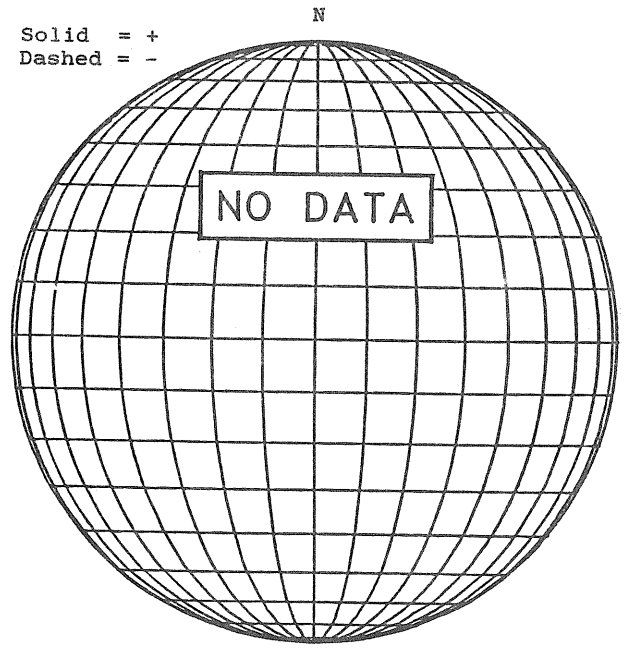
ICC

FEBRUARY 25, 1994 ( P=-20.42 $B_o$ =-7.15, $L_o$ = 122.36 )

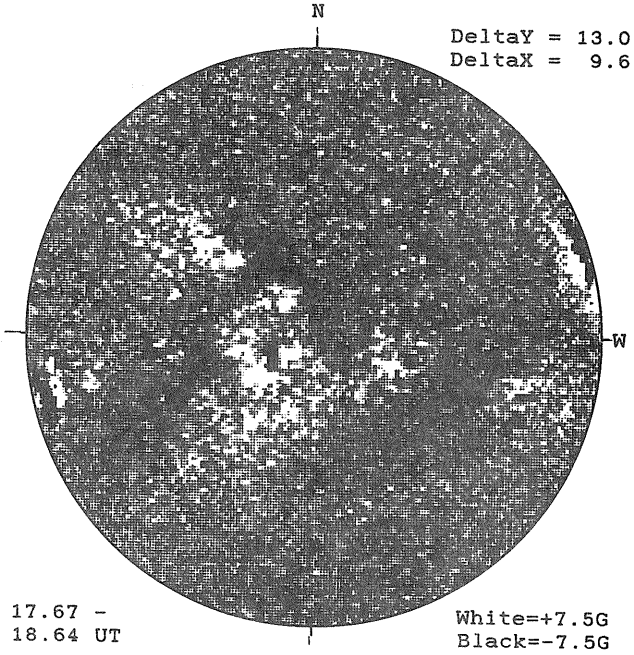
KITT PEAK MAGNETOGRAM



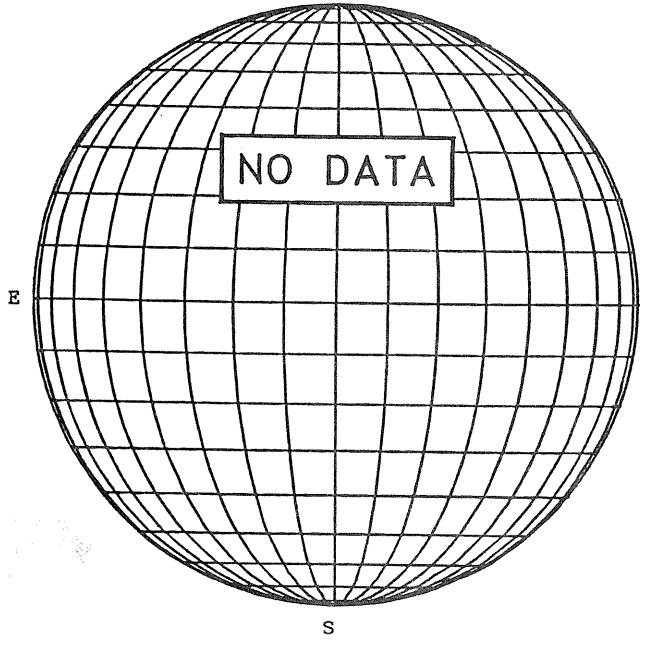

STANFORD MAGNETOGRAM



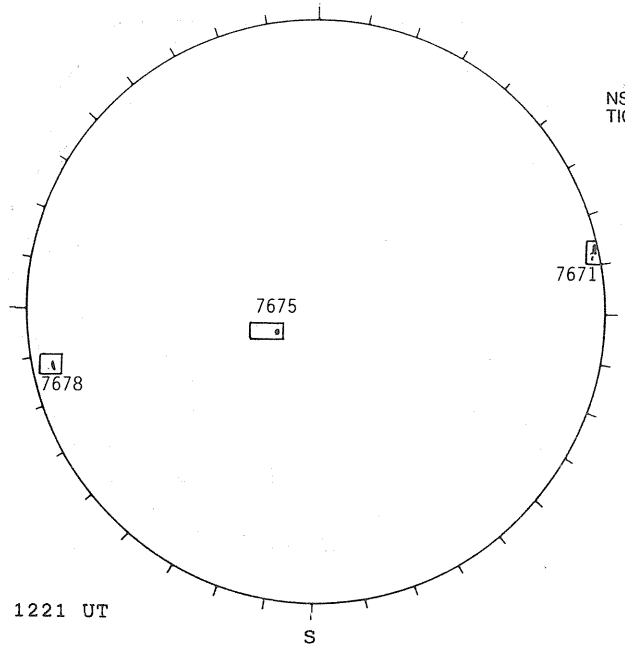

MT. WILSON MAGNETOGRAM



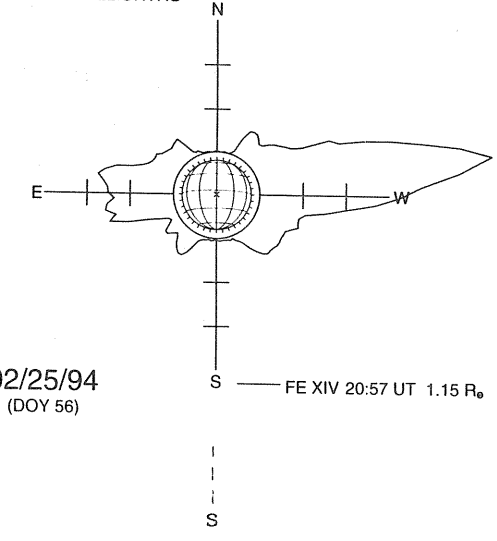

BOULDER H-ALPHA




RAMEY SUNSPOT




NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS




02/25/94
(DOY 56)

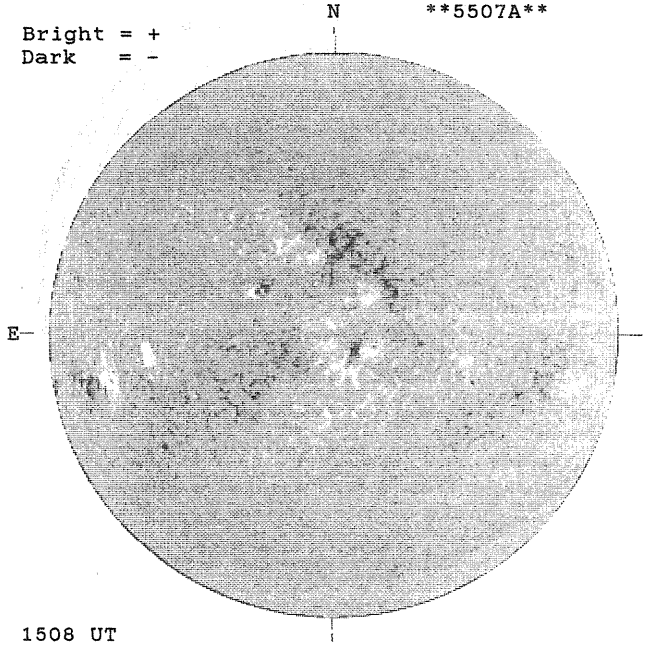
FE XIV 20:57 UT 1.15 $R_\odot$

ICC

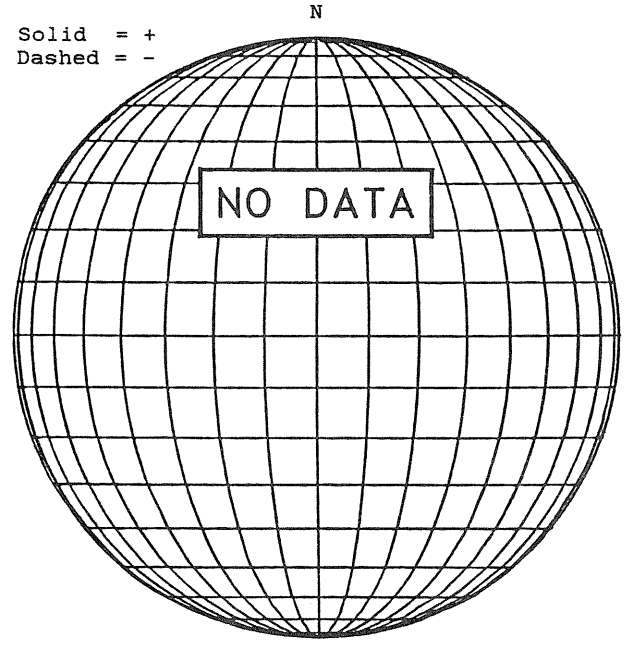
71
Feb 94

FEBRUARY 26, 1994 ( P=-20.70, $B_o$ =-7.17, $L_o$ = 109.19 )

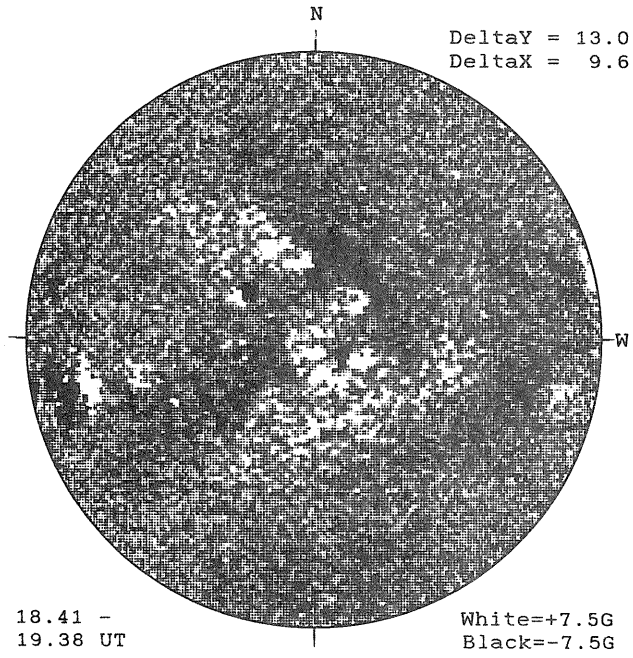
KITT PEAK MAGNETOGRAM



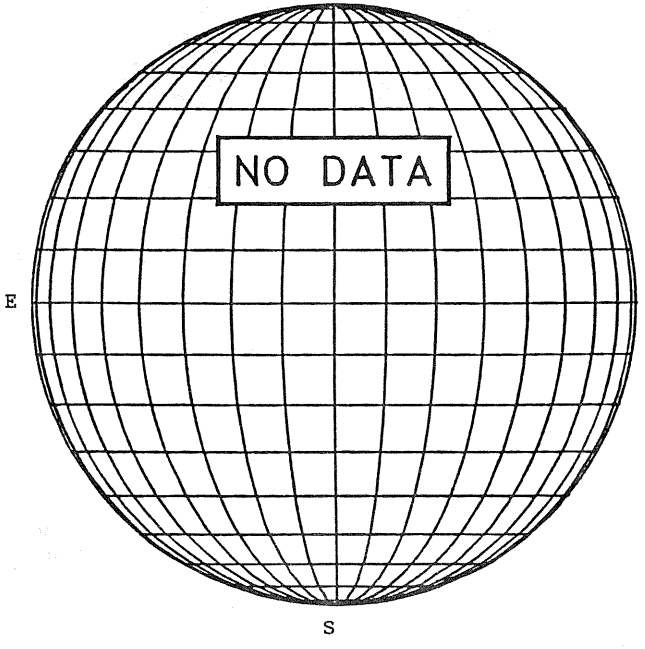

STANFORD MAGNETOGRAM



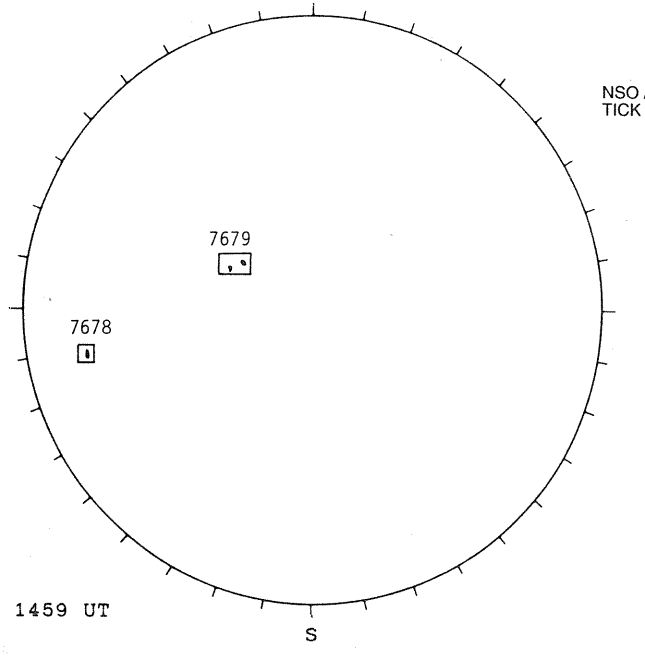

MT. WILSON MAGNETOGRAM



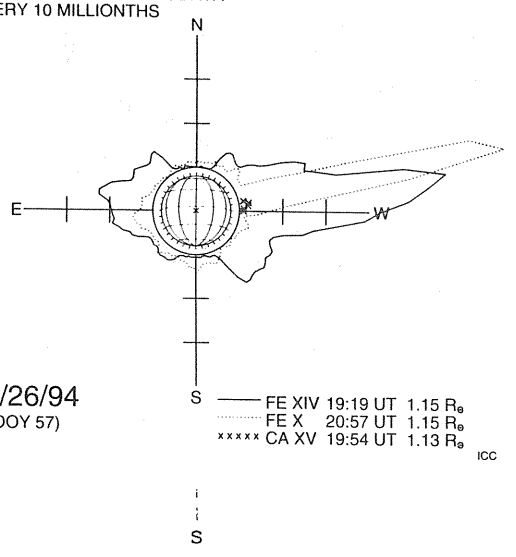

SACRAMENTO PEAK H-ALPHA




BOULDER SUNSPOT




NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS



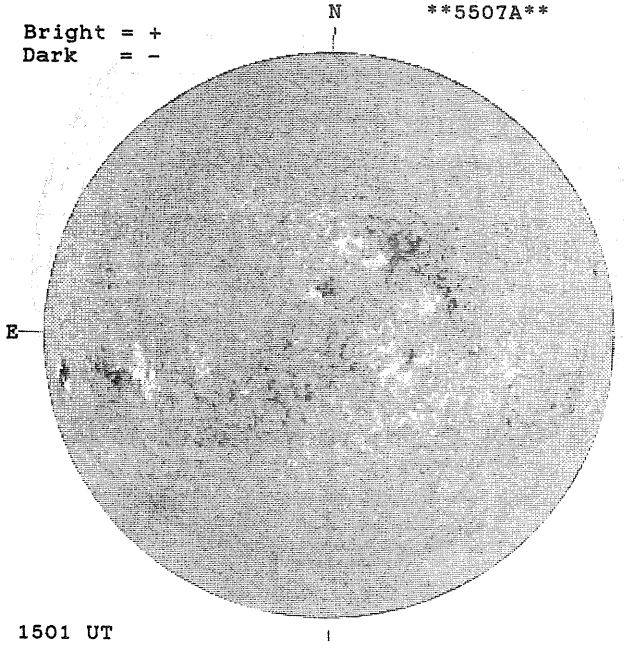

02/26/94
(DOY 57)

FE XIV 19:19 UT 1.15 $R_e$
FE X 20:57 UT 1.15 $R_e$
CA XV 19:54 UT 1.13 $R_e$

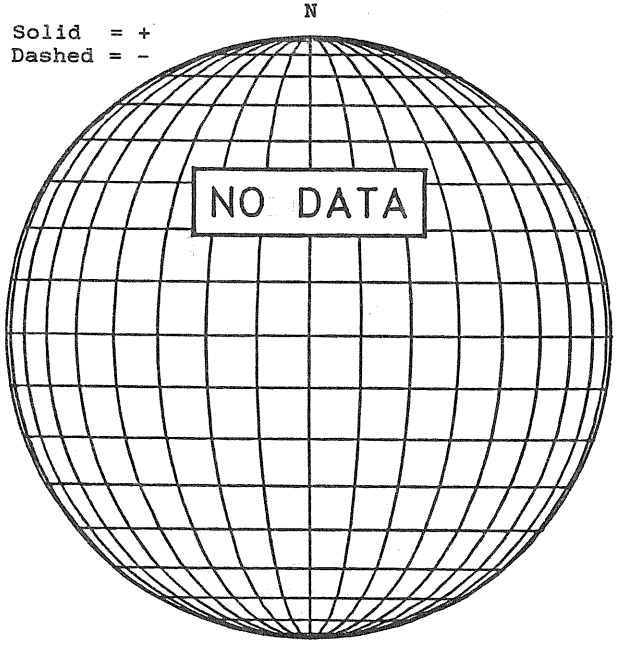
ICC

FEBRUARY 27, 1994 ( P=-20.97, $B_o$ =-7.19, $L_o$ = 96.02 )

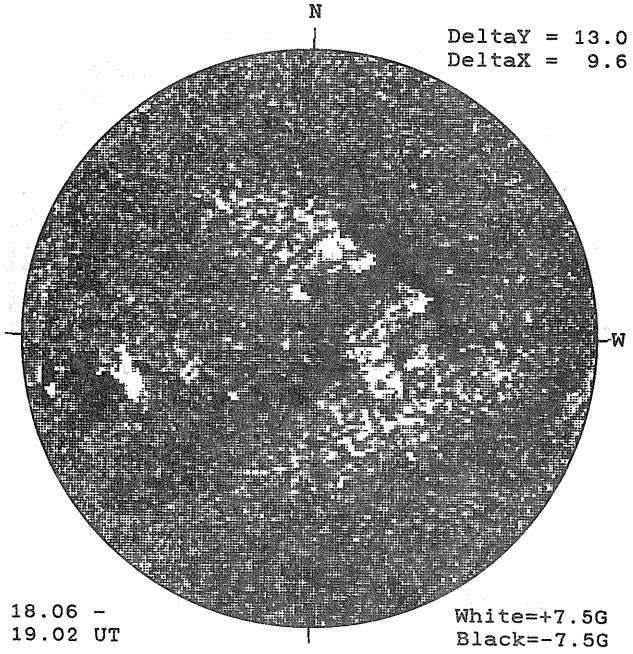
KITT PEAK MAGNETOGRAM



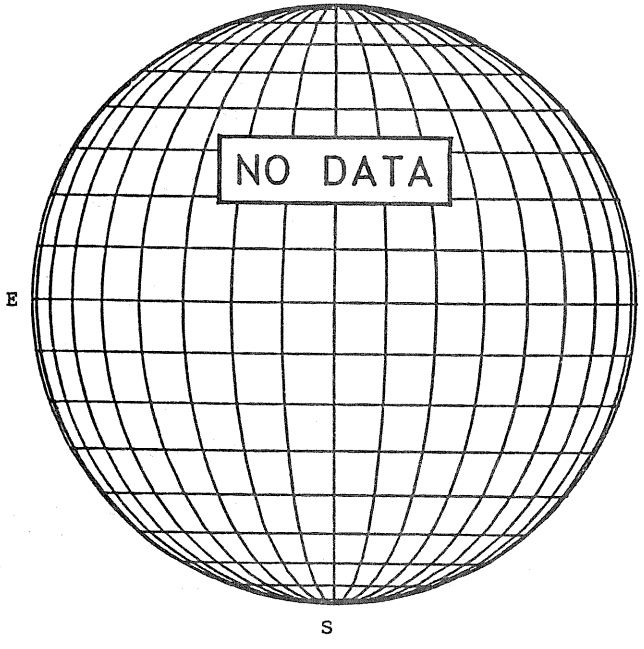

STANFORD MAGNETOGRAM



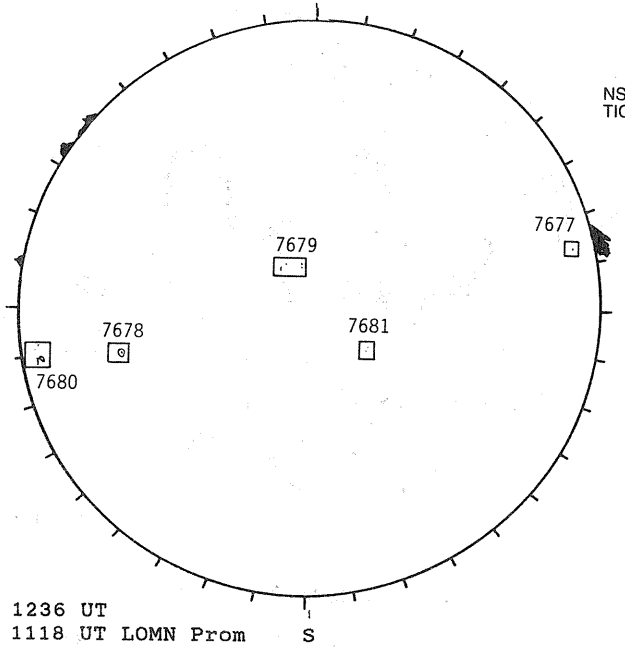

MT. WILSON MAGNETOGRAM



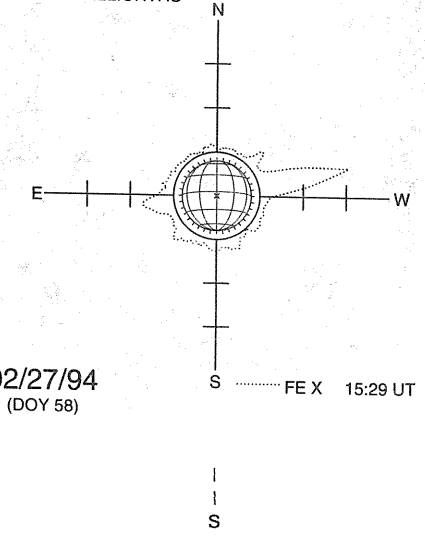

BOULDER H-ALPHA




RAMEY SUNSPOT




NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS




02/27/94
(DOY 58)

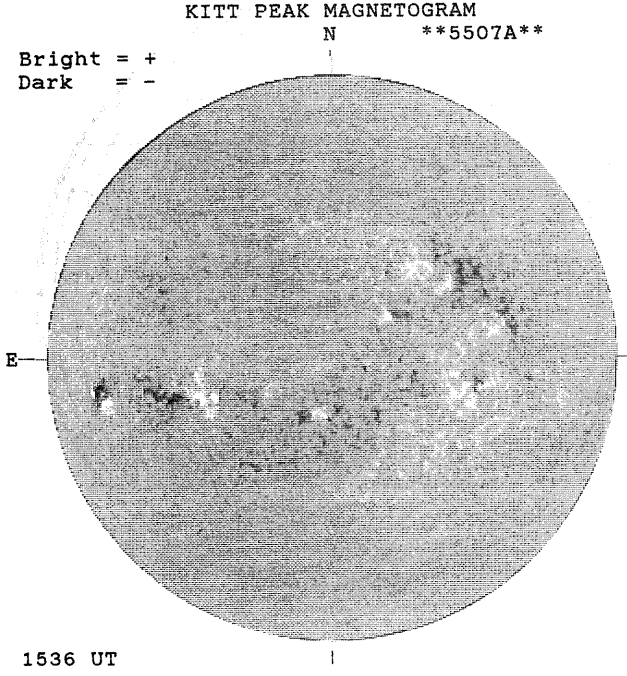
FE X 15:29 UT 1.15 $R_s$

ICC

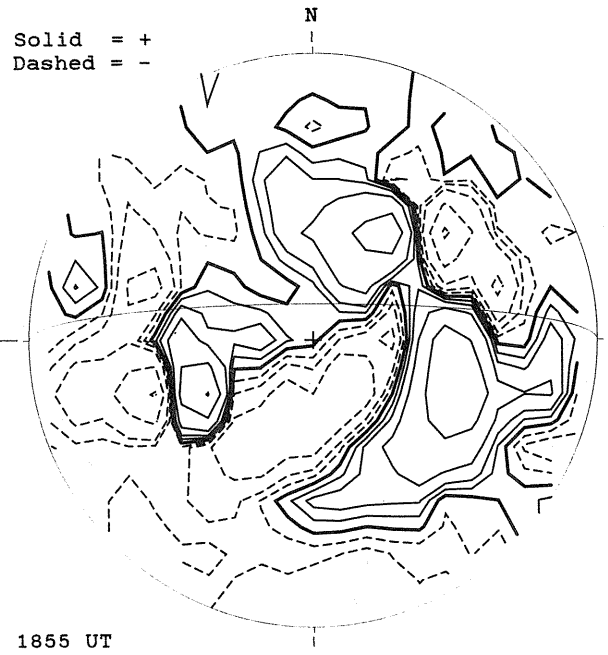
73
Feb 94

FEBRUARY 28, 1994 ( P=-21.23 $B_o$ =-7.20, $L_o$ = 82.85 )

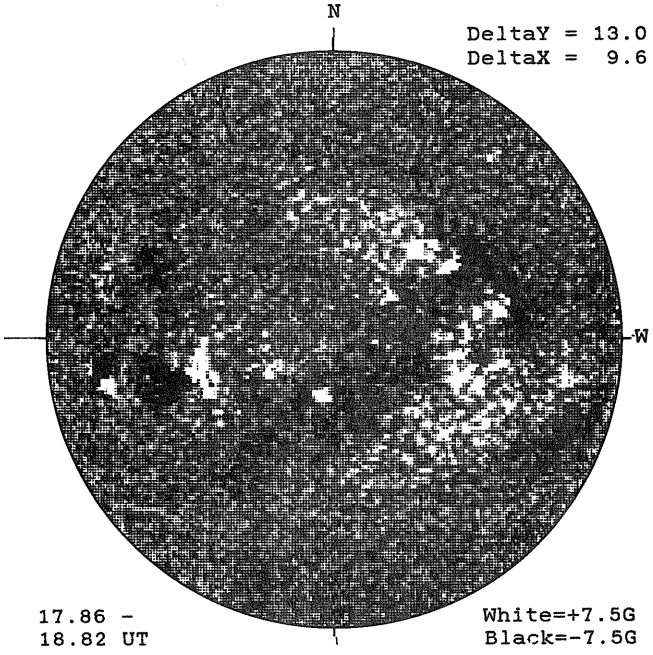
KITT PEAK MAGNETOGRAM



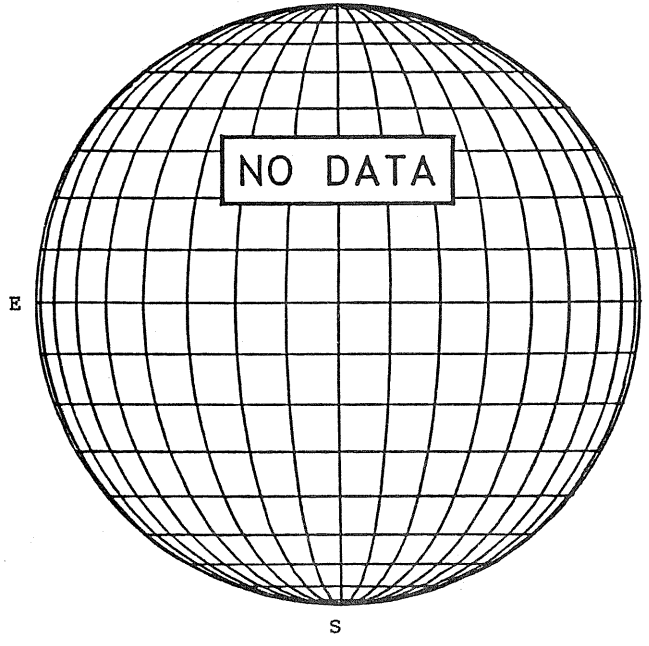

STANFORD MAGNETOGRAM



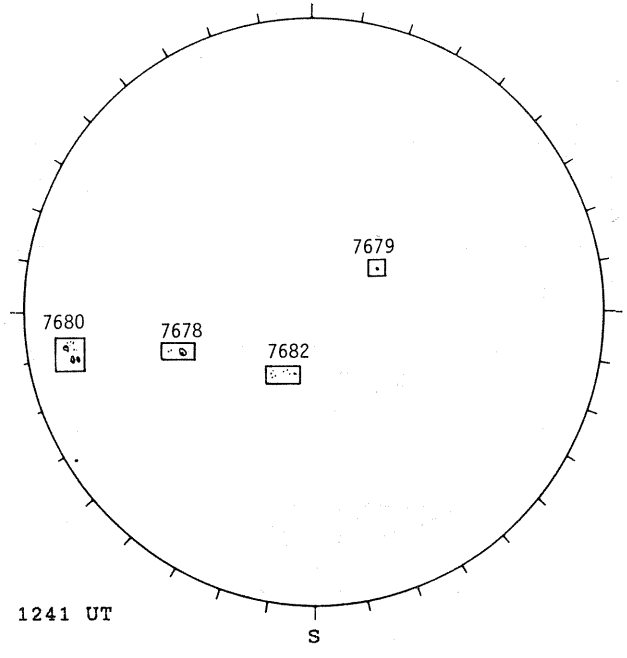

MT. WILSON MAGNETOGRAM



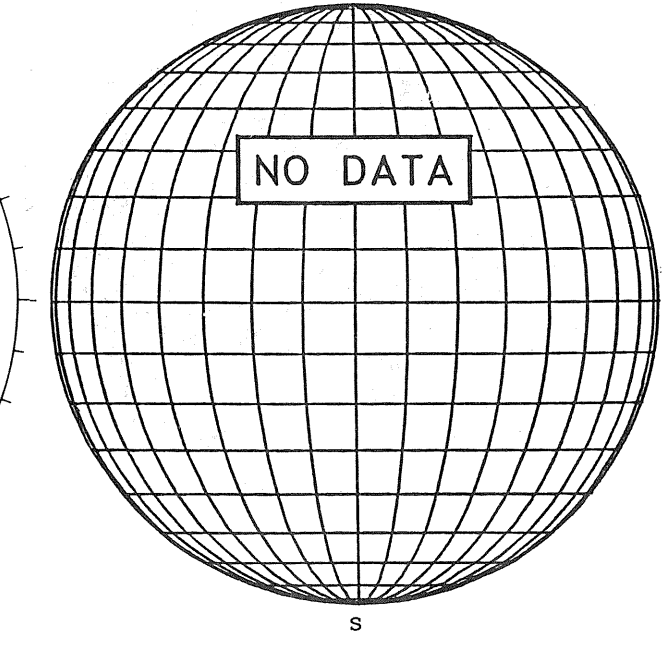

BOULDER H-ALPHA




RAMEY SUNSPOT




SACRAMENTO PEAK CORONA (1.15 Radii)



# DAILY SOFT X-RAY IMAGES FROM YOHKOH

The YOHKOH ("sunbeam") mission is a Japanese program designed to answer many questions in solar flare and coronal physics that have been raised by the highly successful Hinotori and SMM missions. It includes the United States and the United Kingdom as participating partners. The Japanese Institute for Space and Astronautical Sciences (ISAS) provided overall program management, the launch vehicle, the spacecraft, and two science instruments -- a Hard X-ray Telescope, one of the primary mission instruments, and a Wide Band Spectrometer. The other primary instrument, a Soft X-ray Telescope, was prepared by the Lockheed Palo Alto Research Laboratory, under NASA support, in collaboration with the National Astronomical Observatory of Japan and the University of Tokyo. The U.K., in collaboration with the E. O. Hulburt Center for Space Research, provided a Bragg Crystal Spectrometer. The NASA Deep Space Network cooperates in tracking Yohkoh.

The Soft X-ray Telescope (SXT) uses low-scatter grazing incidence optics to form direct images on a CCD detector. It employs a Nariai-Werner design which differs from the more commonly used Wolter Type 1 in that both mirror segments have been made hyperbolic in order to gain better off-axis performance at the expense of a slight loss of on-axis resolution. The optical system includes an entrance aperture filter, the X-ray mirror, a filter wheel assembly, a rotating shutter, and the CCD camera. A detailed description of the SXT has been published in Tsuneta, et al., **Solar Physics, Vol. 136**, pp. 37-67, 1991.

ISAS bears full responsibility for YOHKOH operations. U.S. and U.K. investigators in residence at ISAS participate in mission operations and scientific analyses. With the approval of Professor Y. Ogawara, Yohkoh Program Manager, and the YOHKOH Science Committee, the Lockheed Palo Alto Research Laboratory is kindly providing daily digital SXT images for publication in SGD. The digital images are 512x512 (5" pixels) or 256x256 (10" pixels) in size. They combine two exposures differing by a factor of 35 in duration and are printed with a logarithmic intensity scale to cope with the great range in intensity of the X-ray corona. The brightest features are typically more than 100,000 times brighter than the faintest. The mean wavelength of the pictures is about 20 angstroms. We display these images of the solar corona in soft X-rays in both positive and negative forms. They are printed on a dye sublimation printer at NGDC.

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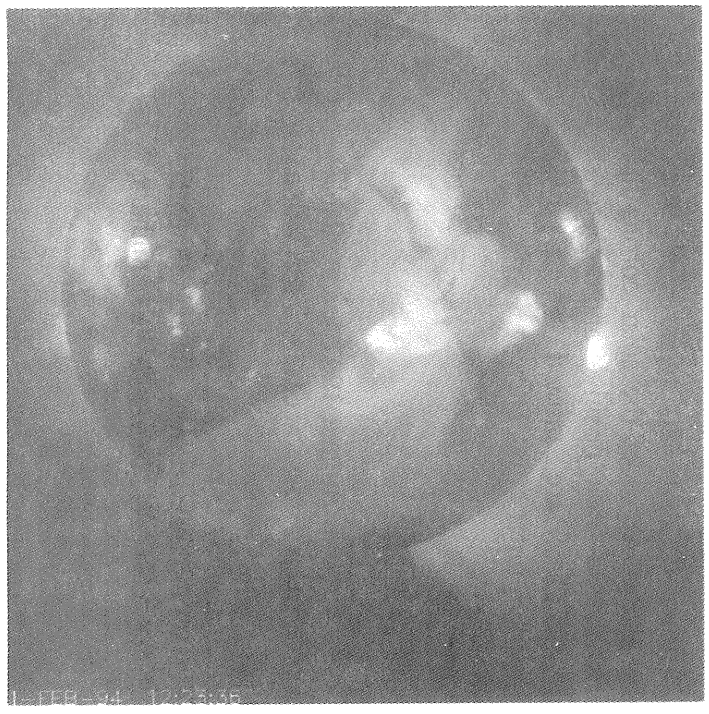
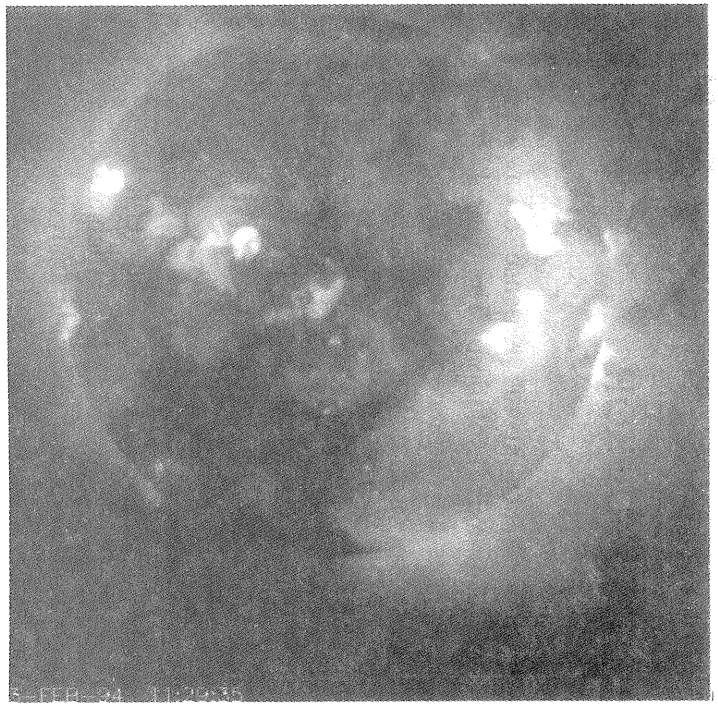
**Editor's Note**: YOHKOH SXT images for September 1991 through August 1992 are available through the NASA SolarDAC. Contact Joe Gurman for access information [gurman@uvsp.gsfc.nasa.gov, jgurman@solar, or uvsp::gurman. Telephone: (301)286-4767]. The YOHKOH team continues to invite collaborations in their analysis and are willing to assist those who wish to utilize the data in order to ensure the correct interpretation of the experimental results. Contact S. Tsuneta, ISAS, Yohkoh Operation Center, 3-1-1 Yoshinodai, Sagamihara, 229 Japan [tsuneta@sxt2.mtk.ioa.s.u-tokyo.ac.jp].

# YOHKOH SOFT X-RAY TELESCOPE IMAGES

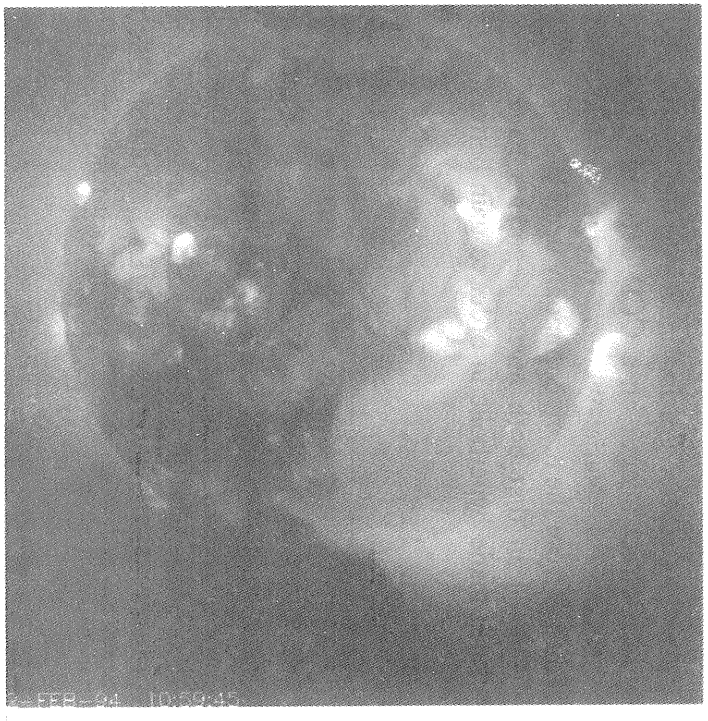
## February 1994



Day 1
12:23:36 UT



Day 3
11:29:35 UT



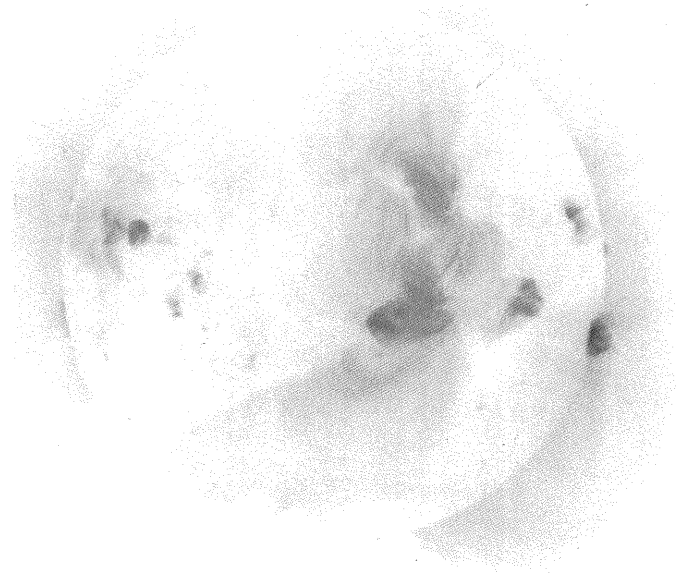
Day 2
10:59:45 UT

Day 4
11:51:59 UT

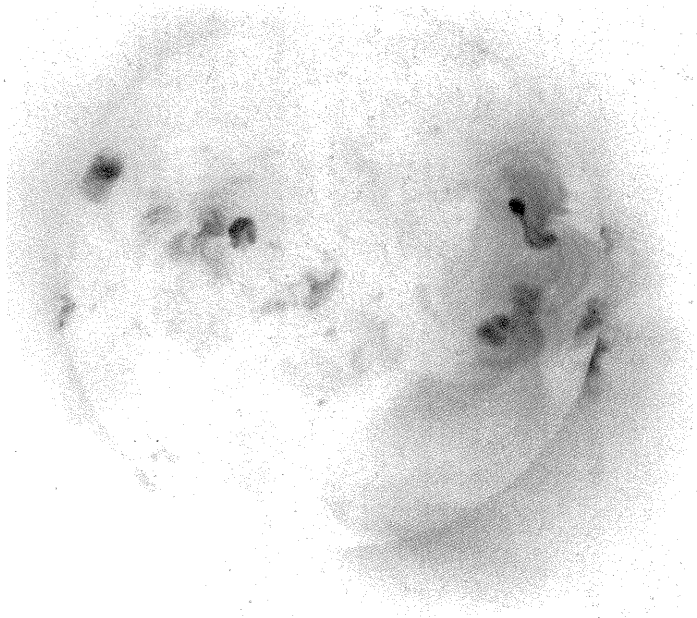
# YOHKOH SOFT X-RAY TELESCOPE IMAGES

## February 1994

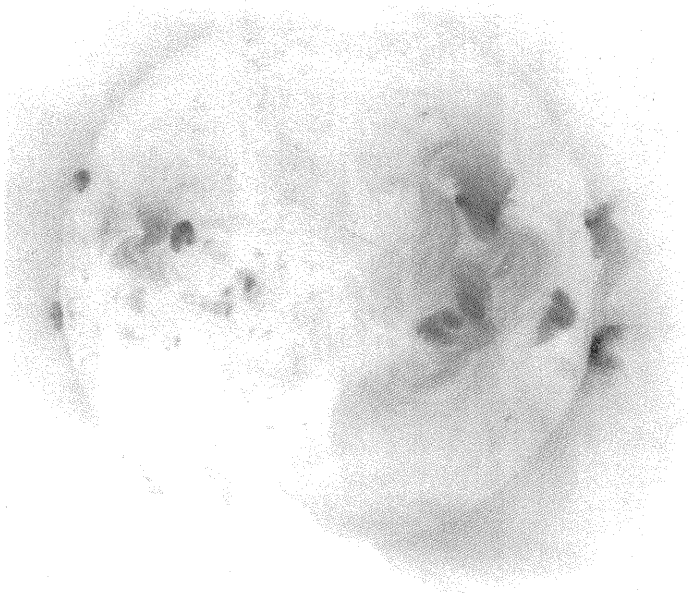
Day 1
12:23:36 UT



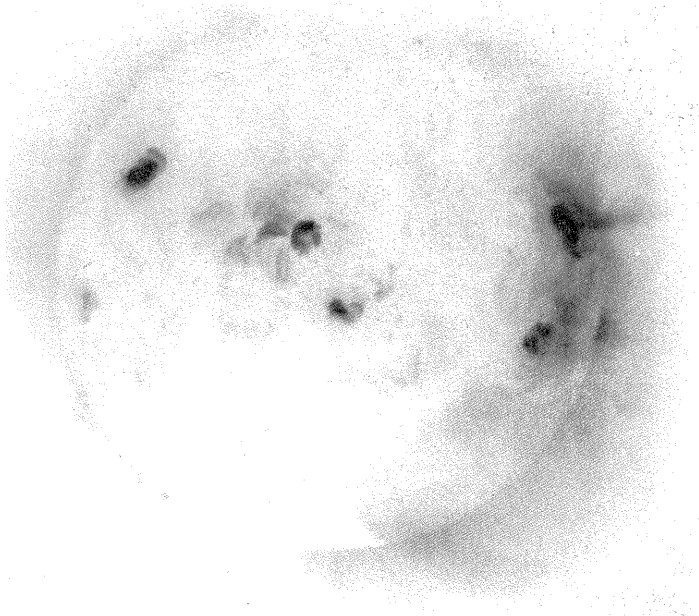

Day 3
11:29:35 UT




Day 2
10:59:45 UT




Day 4
11:51:59 UT

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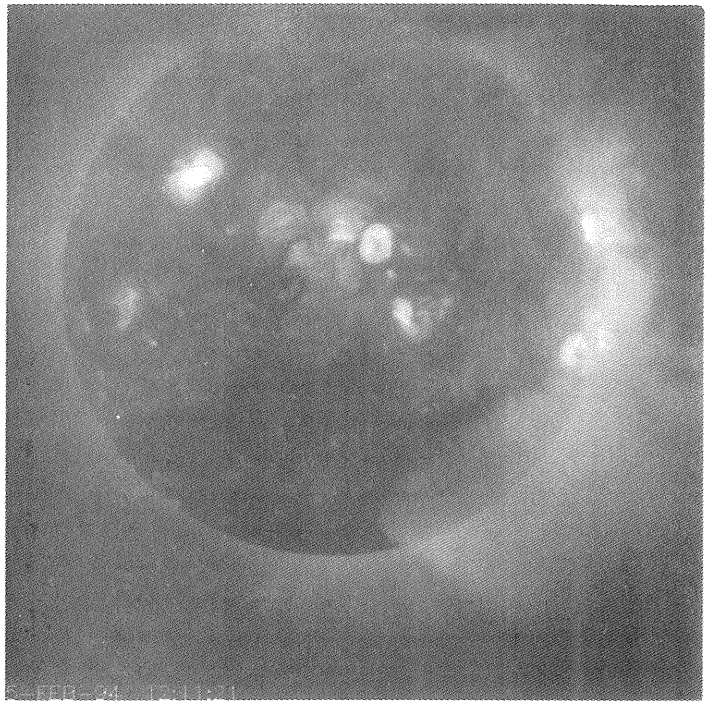
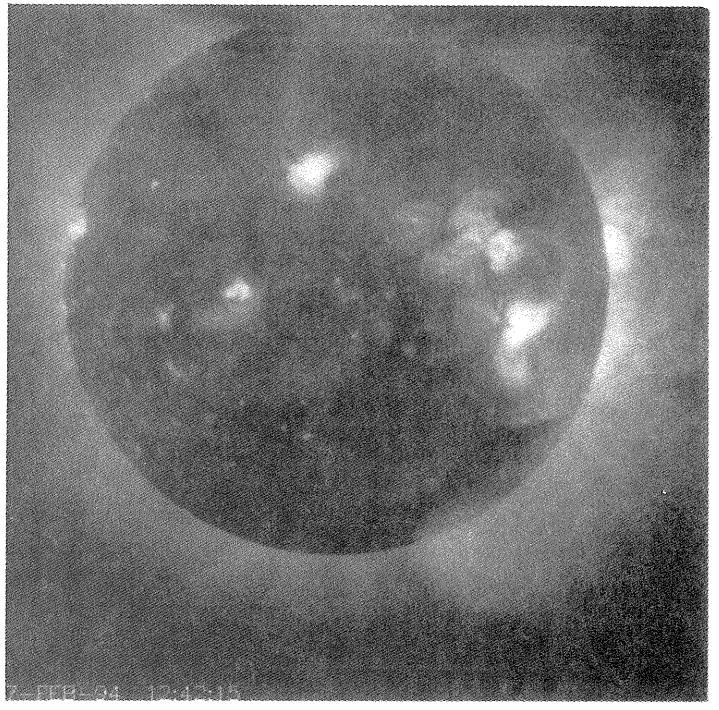
Feb 94

# YOHKOH SOFT X-RAY TELESCOPE IMAGES

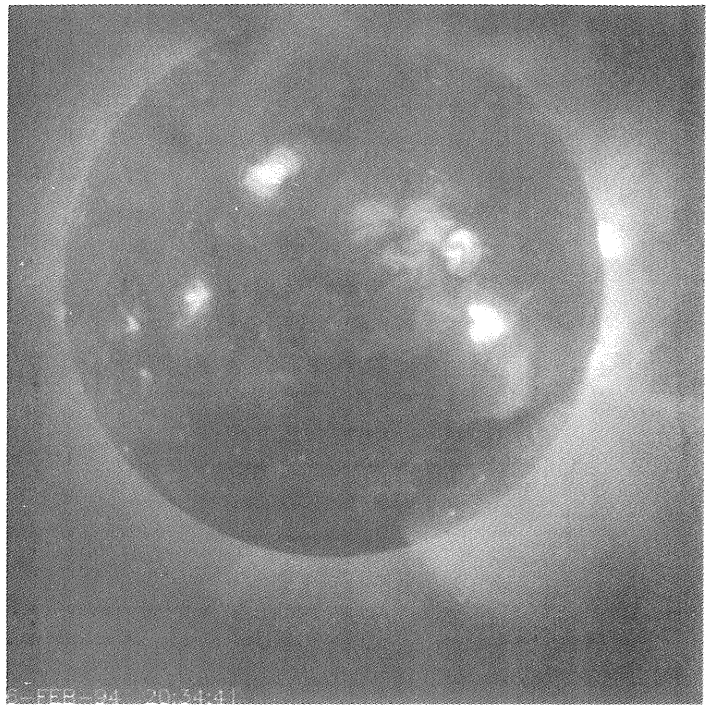
## February 1994



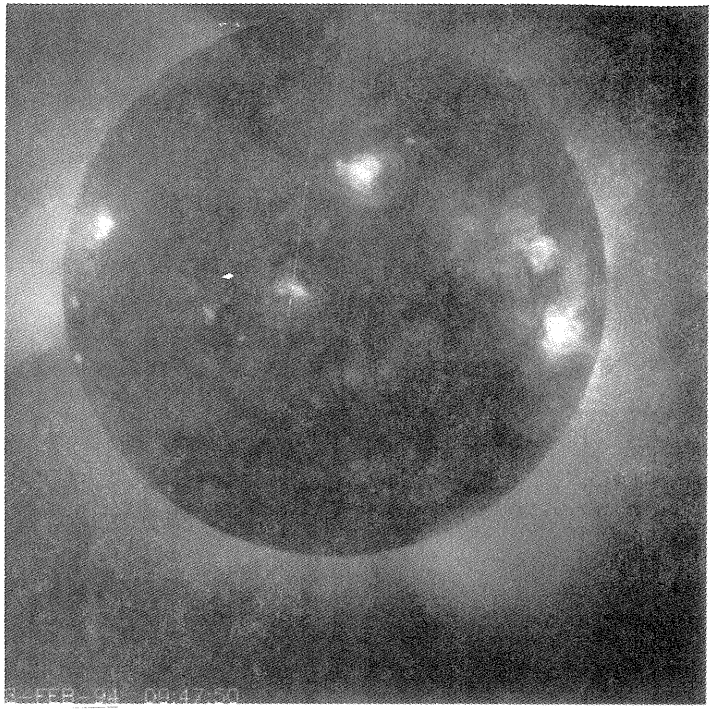
Day 5
12:11:21 UT



Day 7
12:42:15 UT



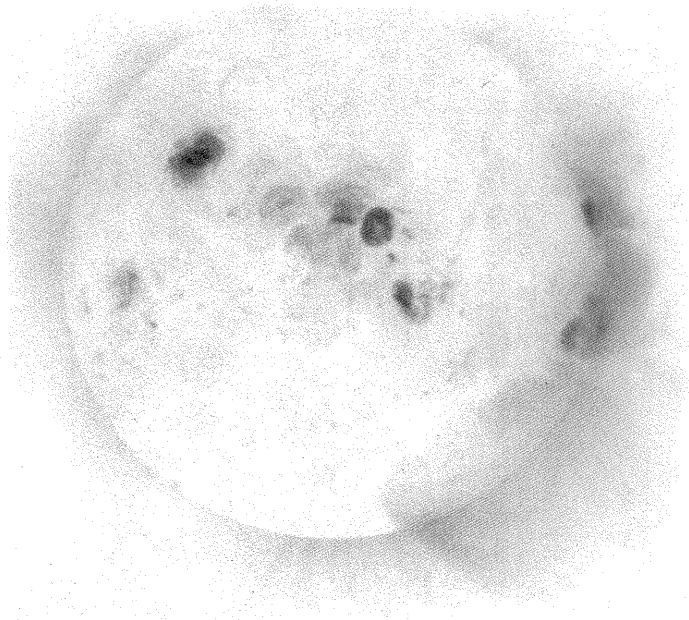
Day 6
20:34:41 UT



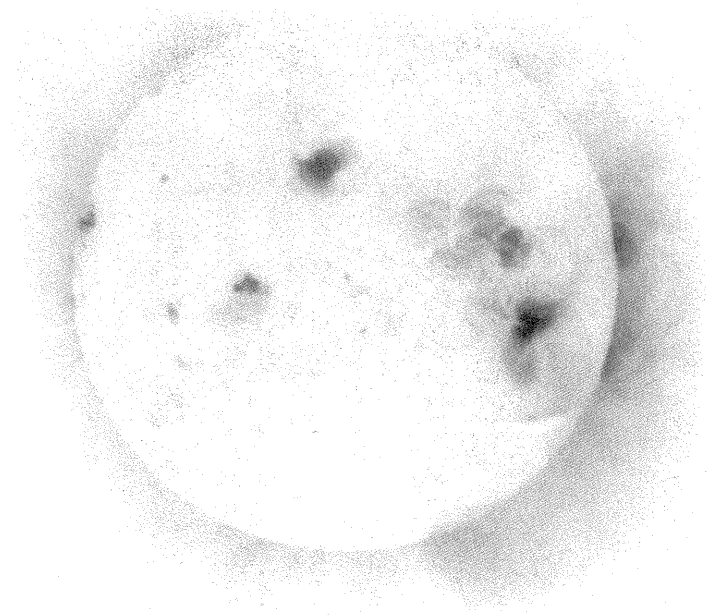
Day 8
09:47:50 UT

# YOHKOH SOFT X-RAY TELESCOPE IMAGES

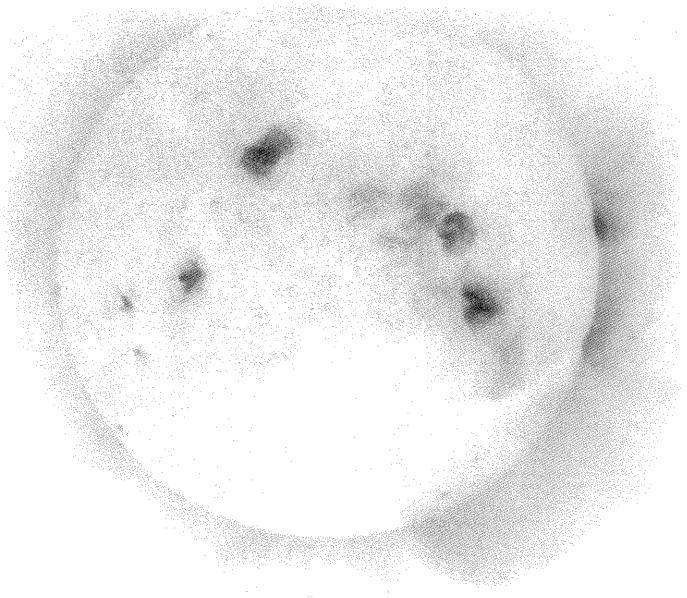
## February 1994



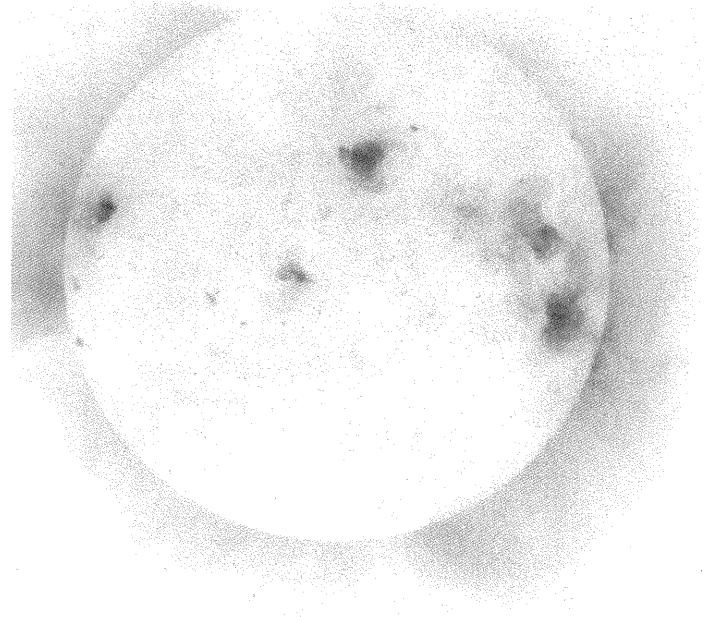

Day 5
12:11:21 UT




Day 7
12:42:15 UT



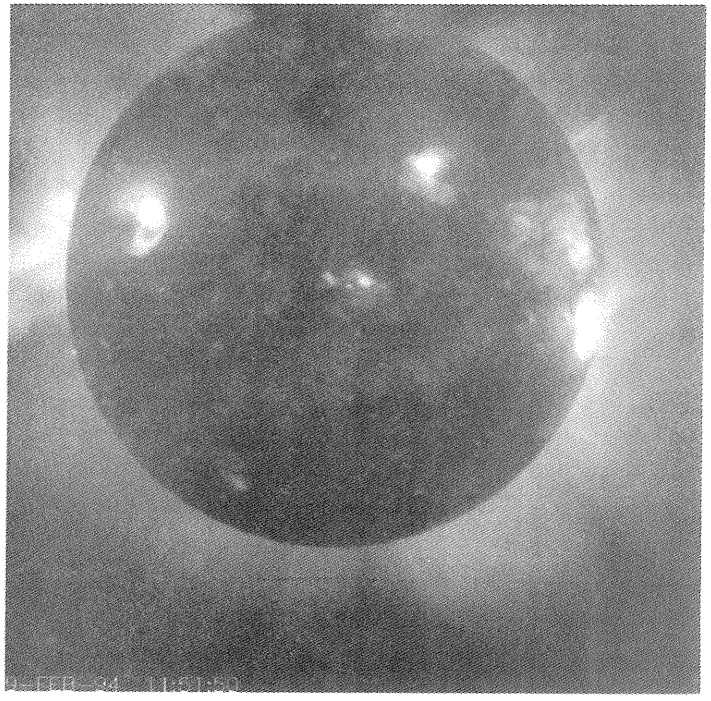

Day 6
20:34:41 UT



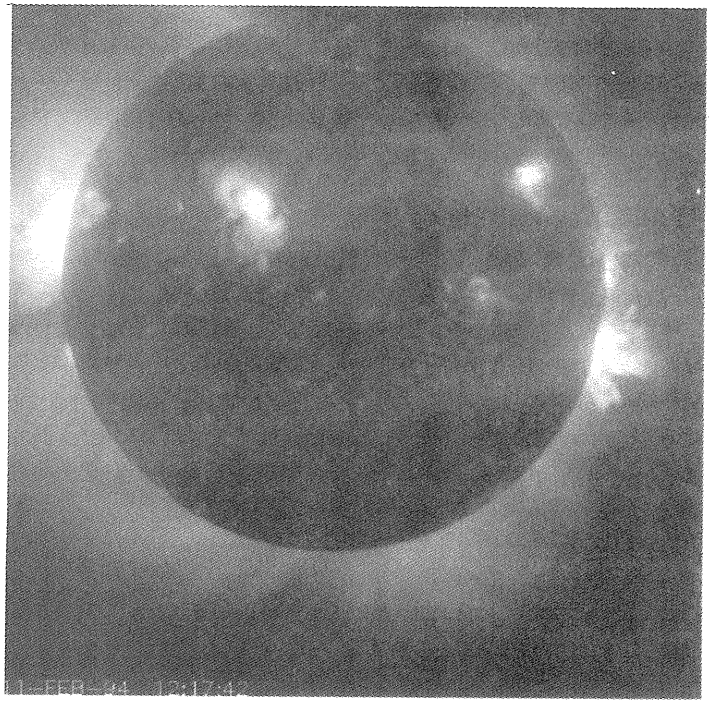

Day 8
09:47:50 UT

# YOHKOH SOFT X-RAY TELESCOPE IMAGES

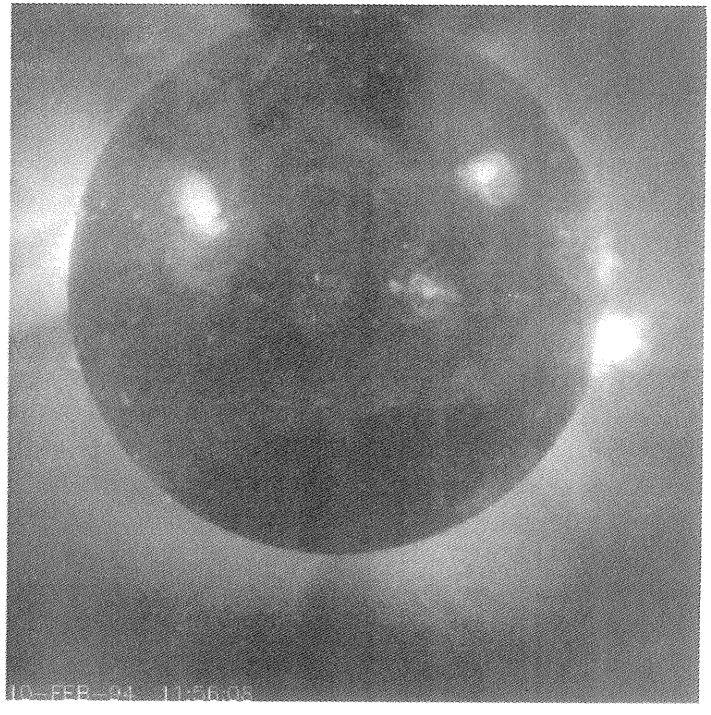
## February 1994



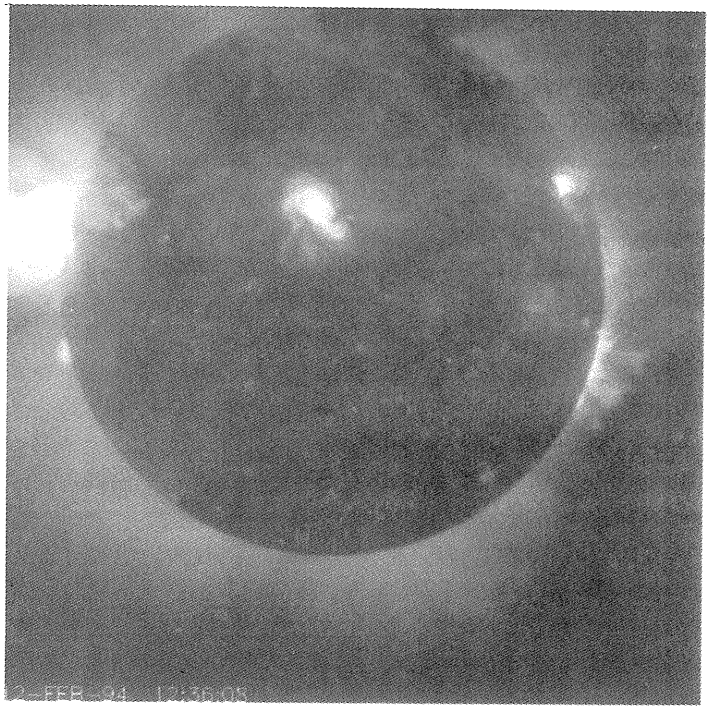
Day 9
11:51:50 UT



Day 11
12:17:42 UT



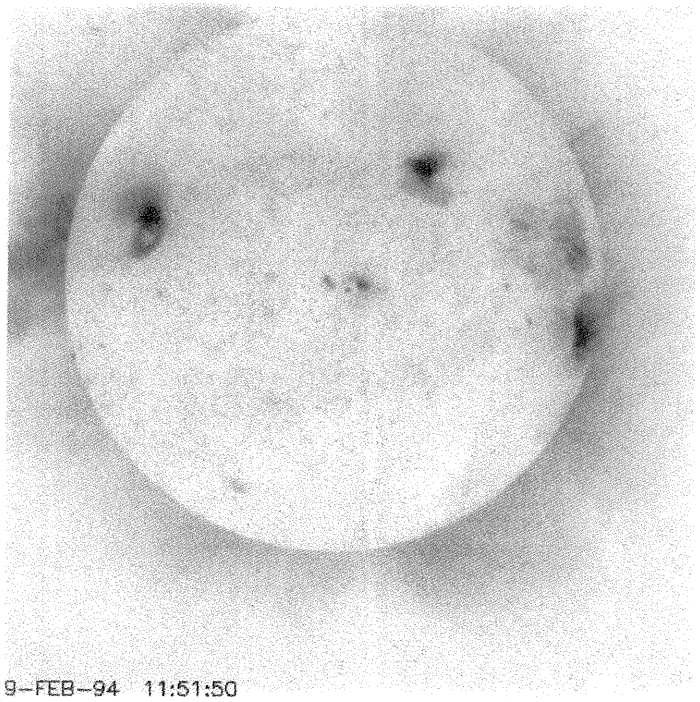
Day 10
11:56:08 UT



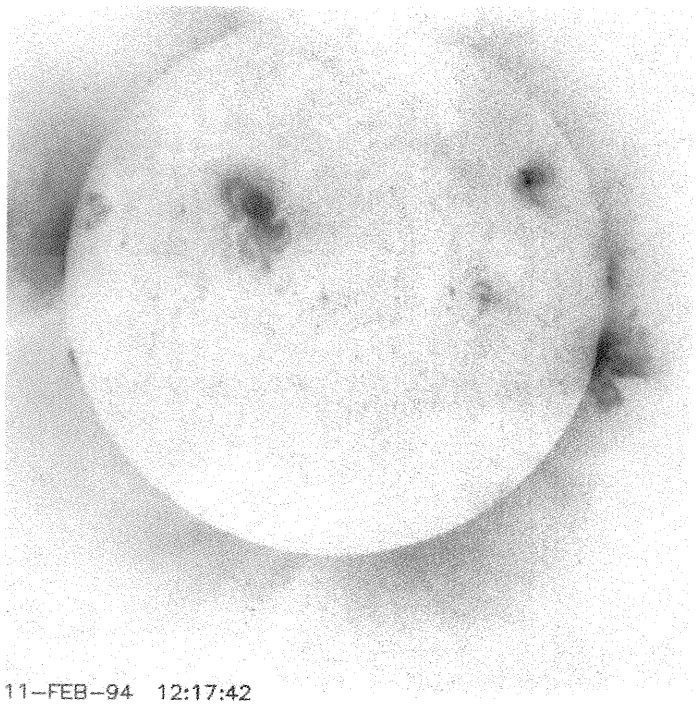
Day 12
12:36:08 UT

# YOHKOH SOFT X-RAY TELESCOPE IMAGES

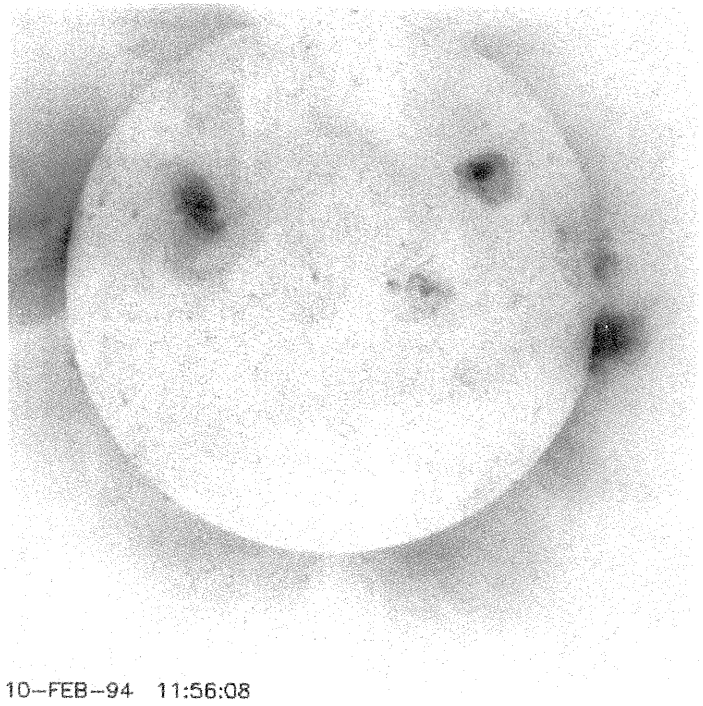
## February 1994



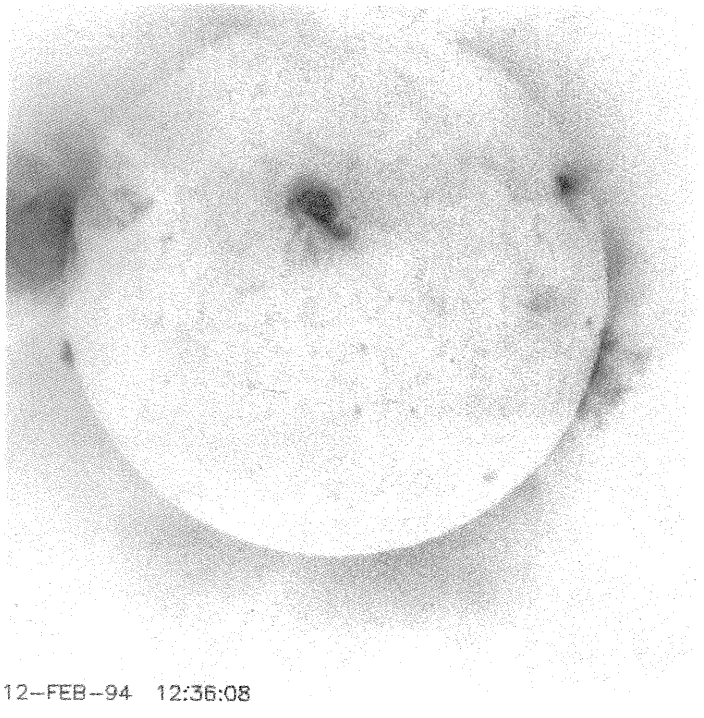

**Day 9**
**11:51:50 UT**




**Day 11**
**12:17:42 UT**



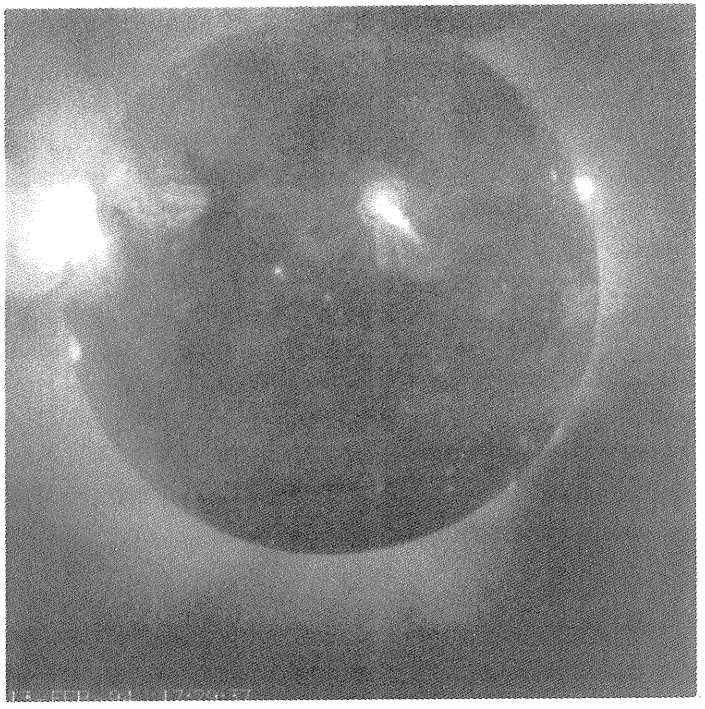

**Day 10**
**11:56:08 UT**



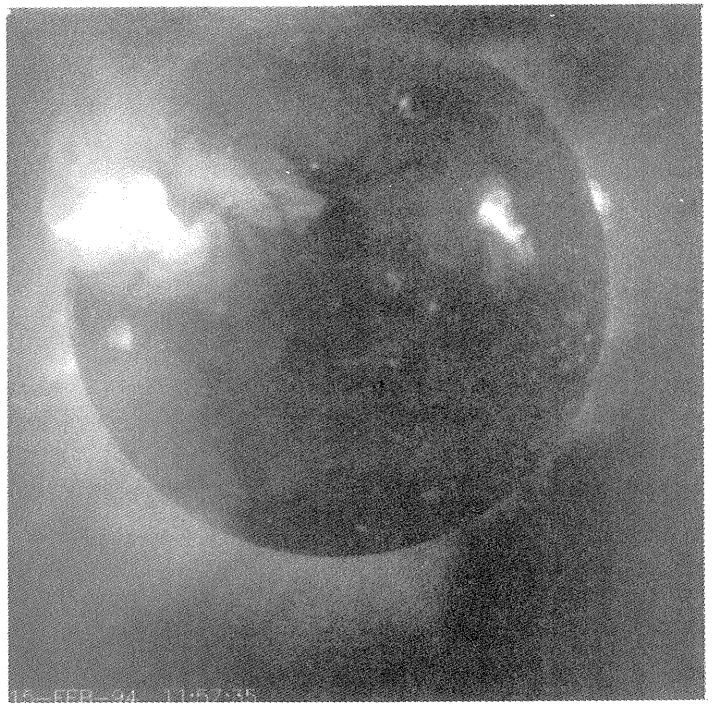

**Day 12**
**12:36:08 UT**

# YOHKOH SOFT X-RAY TELESCOPE IMAGES

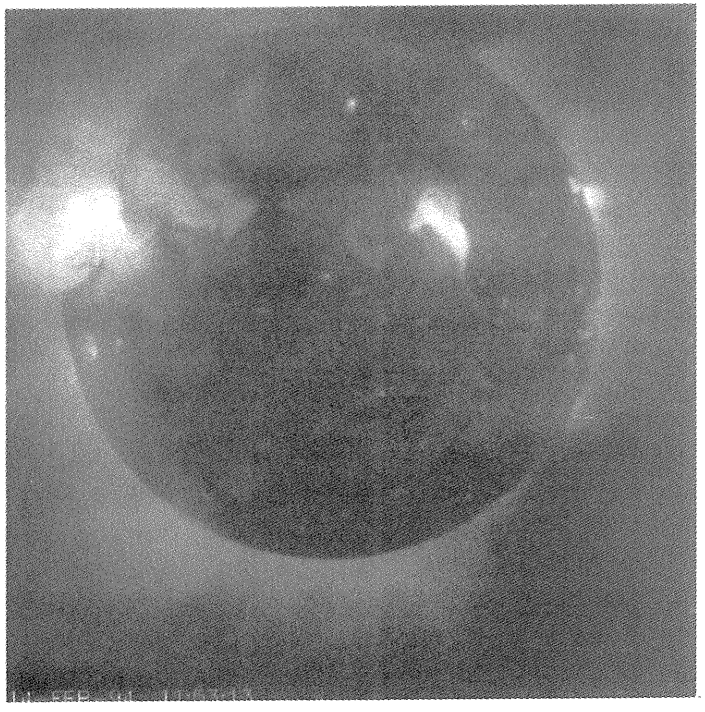
## February 1994



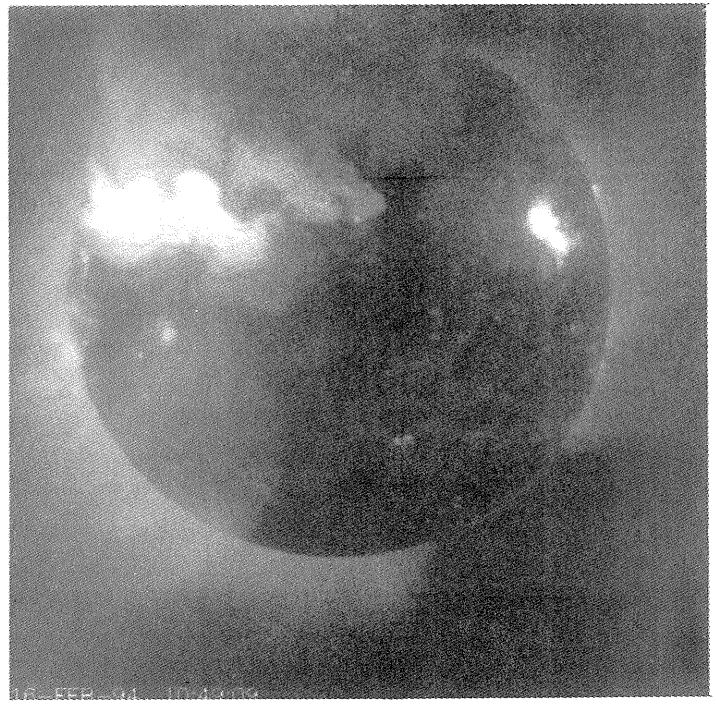
Day 13
17:29:37 UT



Day 15
11:57:35 UT



Day 14
11:53:13 UT



Day 16
10:49:09 UT

# YOHKOH SOFT X-RAY TELESCOPE IMAGES

## February 1994

Day 13
17:29:37 UT

3-FEB-94 17:29:37

Day 15
11:57:35 UT

15-FEB-94 11:57:35

Day 14
11:53:13 UT

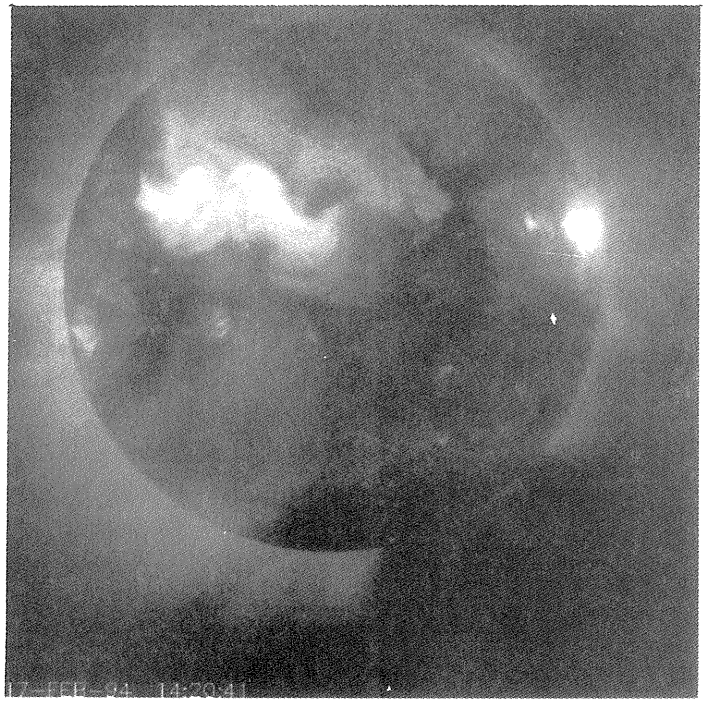
4-FEB-94 11:53:13

Day 16
10:49:09 UT

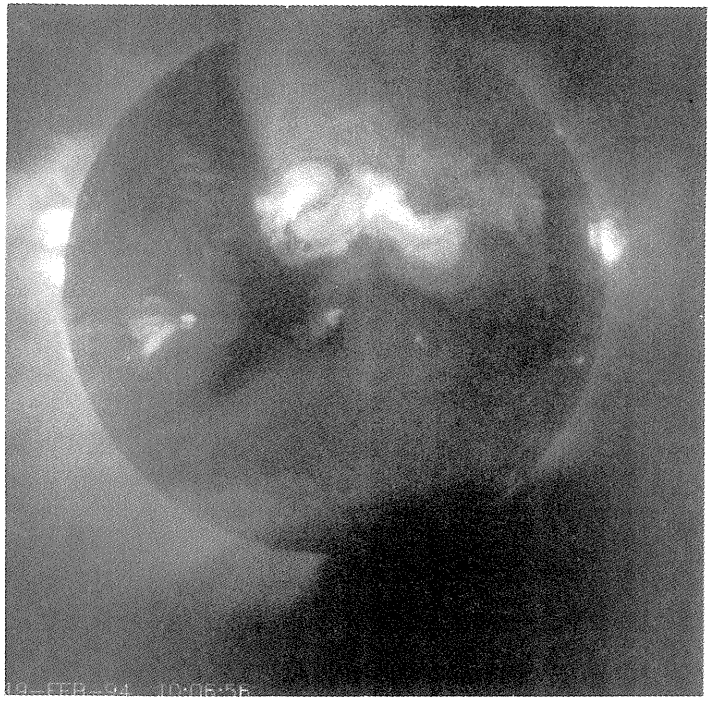
16-FEB-94 10:49:09

# YOHKOH SOFT X-RAY TELESCOPE IMAGES

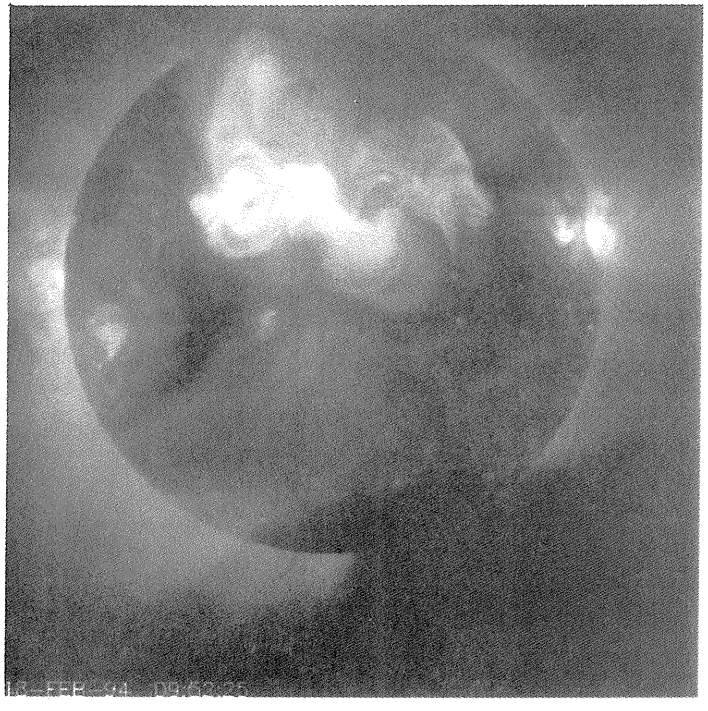
## February 1994



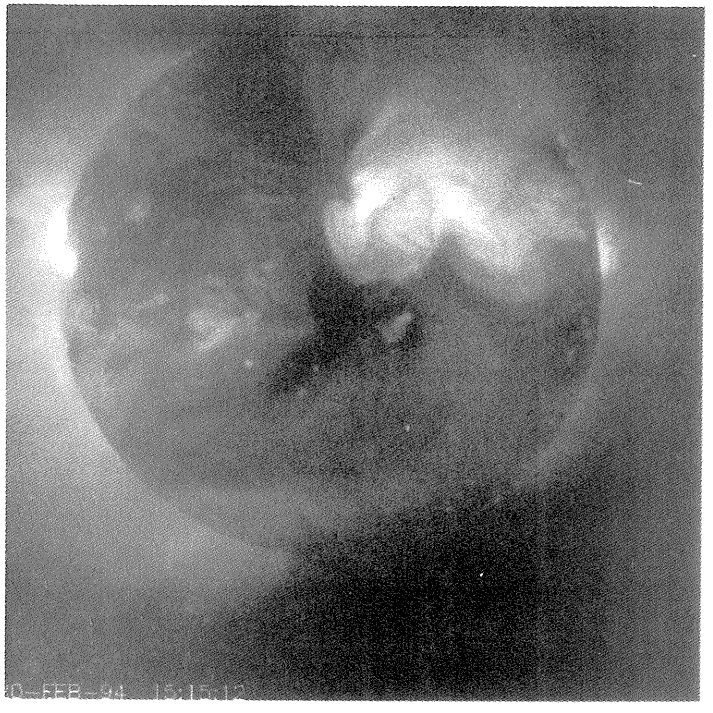
Day 17
14:20:41 UT



Day 19
10:06:56 UT



Day 18
09:52:25 UT



Day 20
15:15:12 UT

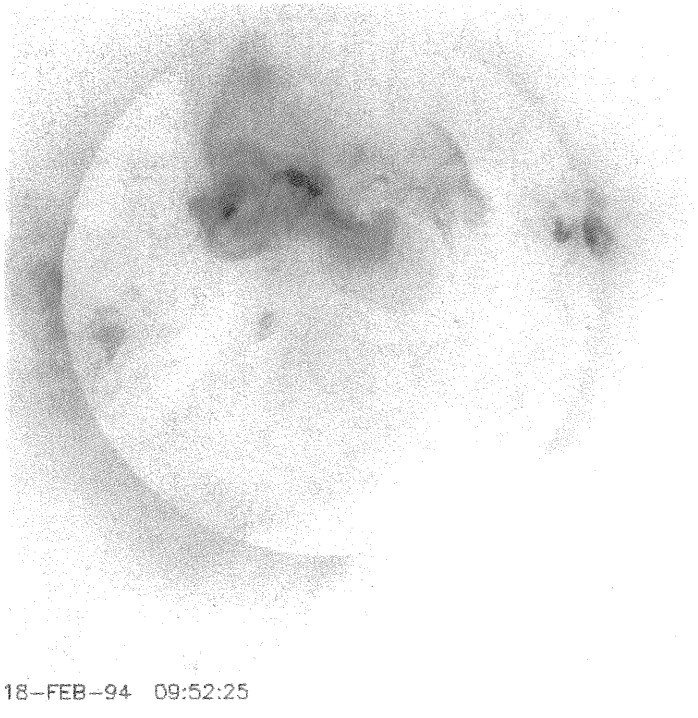
# YOHKOH SOFT X-RAY TELESCOPE IMAGES

## February 1994

Day 17
14:20:41 UT


Day 19
10:06:56 UT

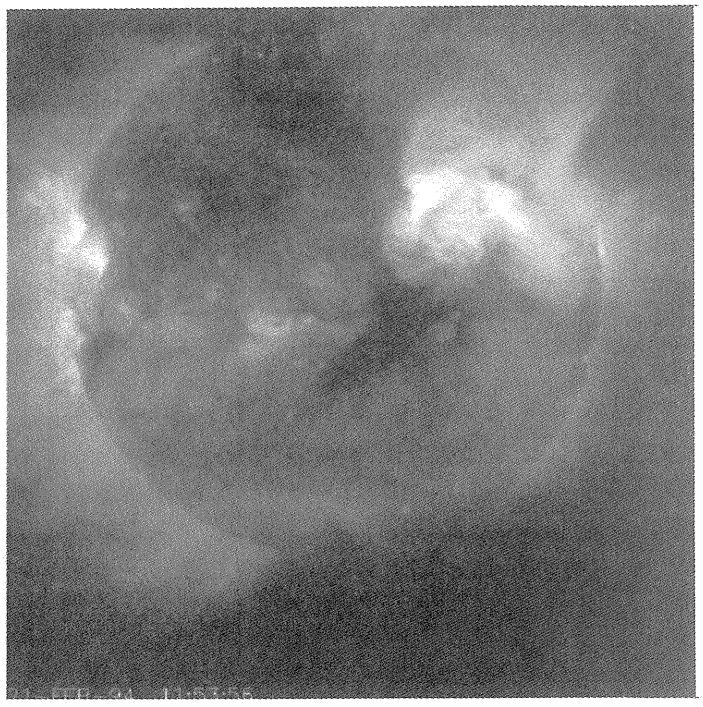

Day 18
09:52:25 UT



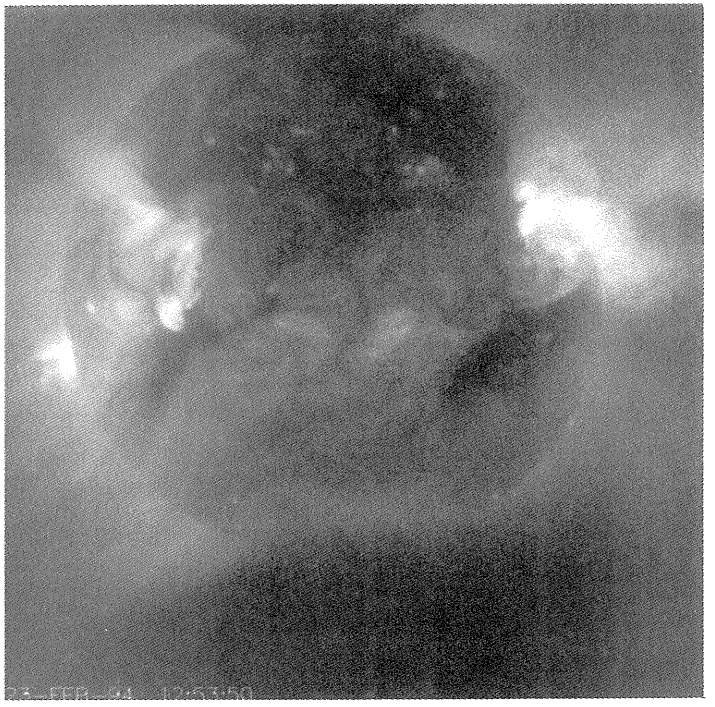

Day 20
15:15:12 UT

# YOHKOH SOFT X-RAY TELESCOPE IMAGES

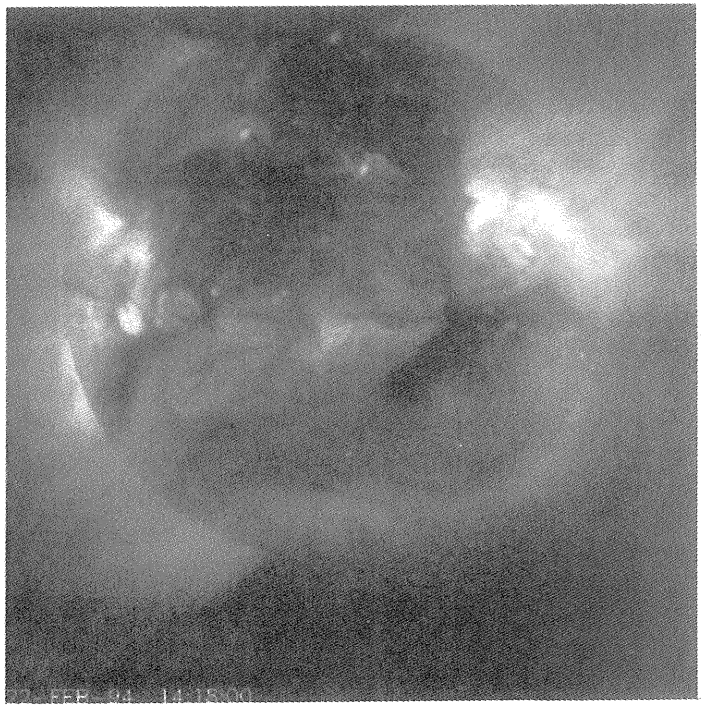
## February 1994



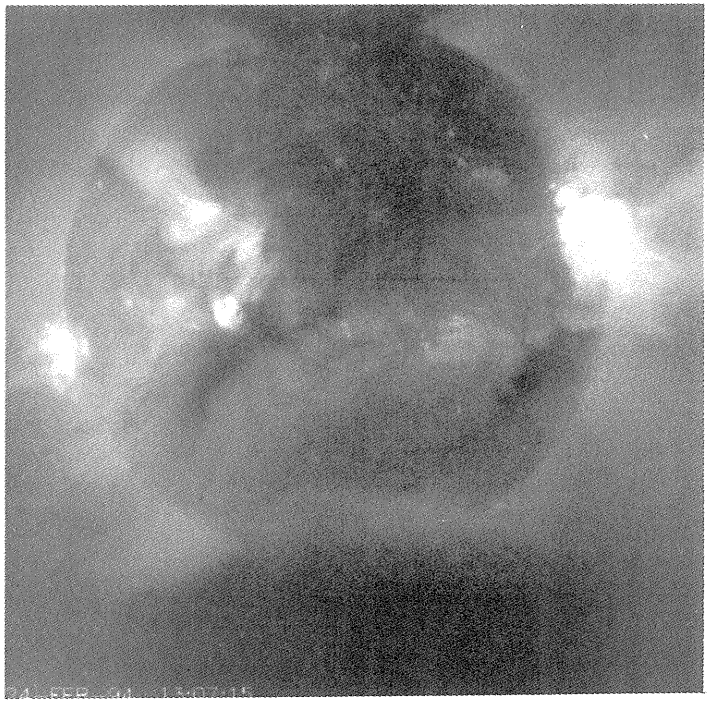
Day 21
11:53:56 UT



Day 23
12:53:50 UT



Day 22
14:18:00 UT

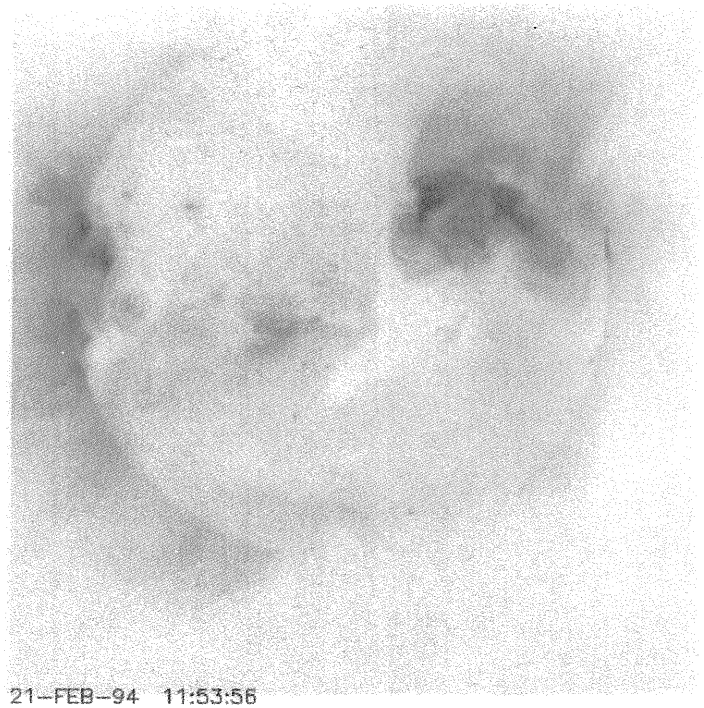


Day 24
13:07:15 UT

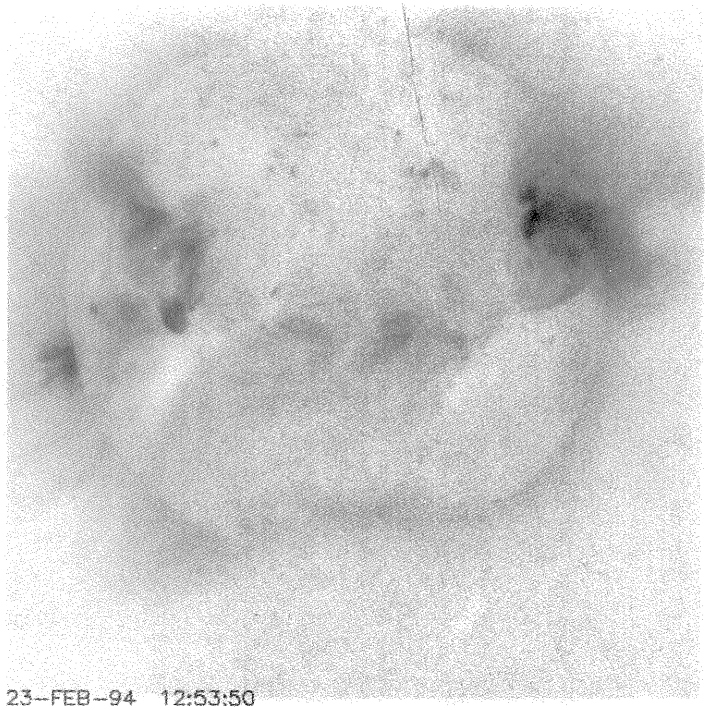
# YOHKOH SOFT X-RAY TELESCOPE IMAGES

## February 1994

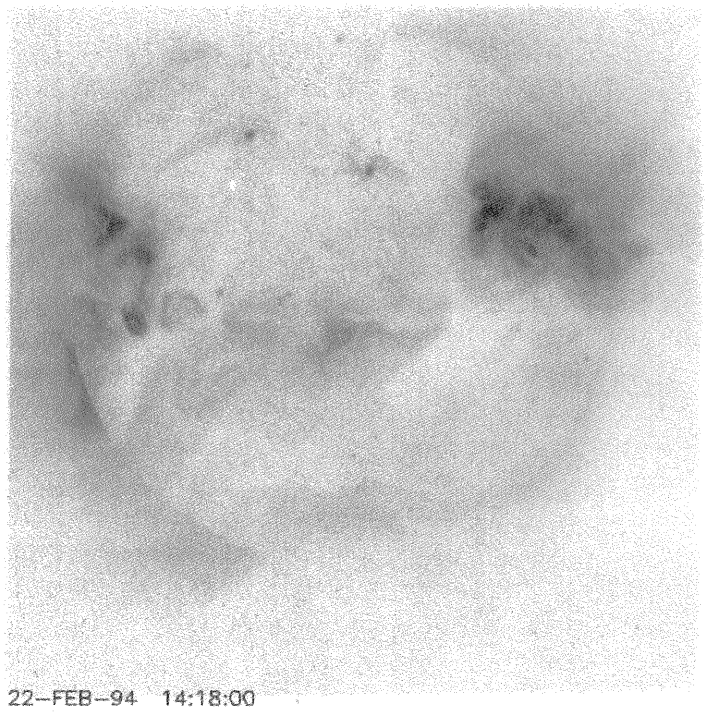
Day 21
11:53:56 UT



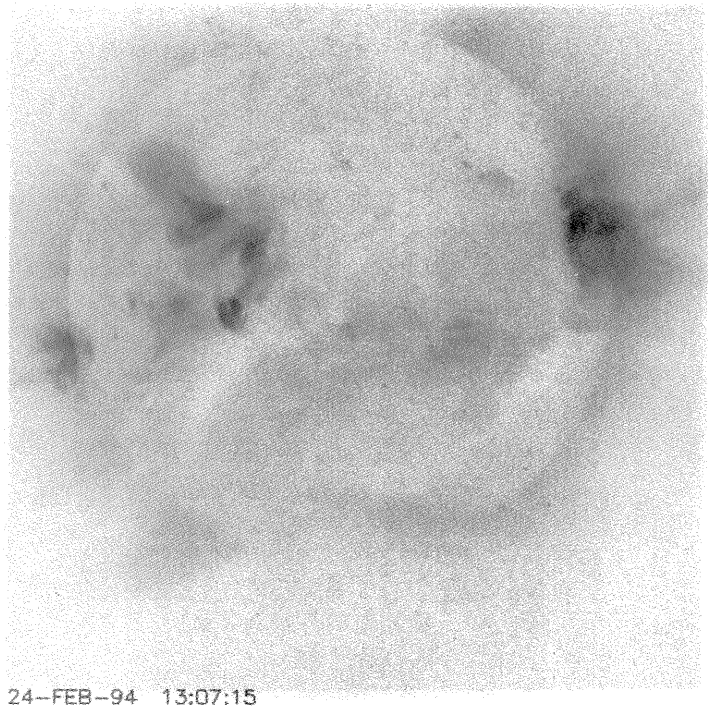

Day 23
12:53:50 UT




Day 22
14:18:00 UT




Day 24
13:07:15 UT

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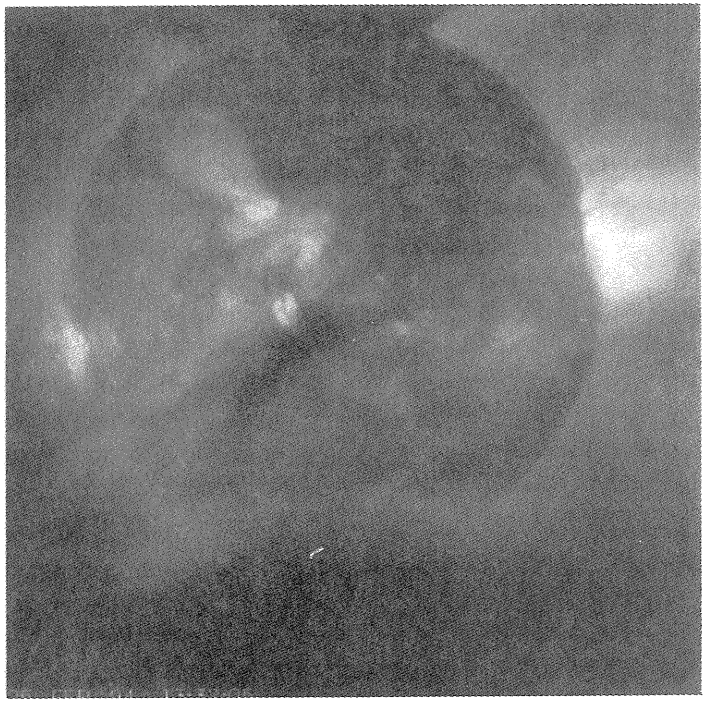
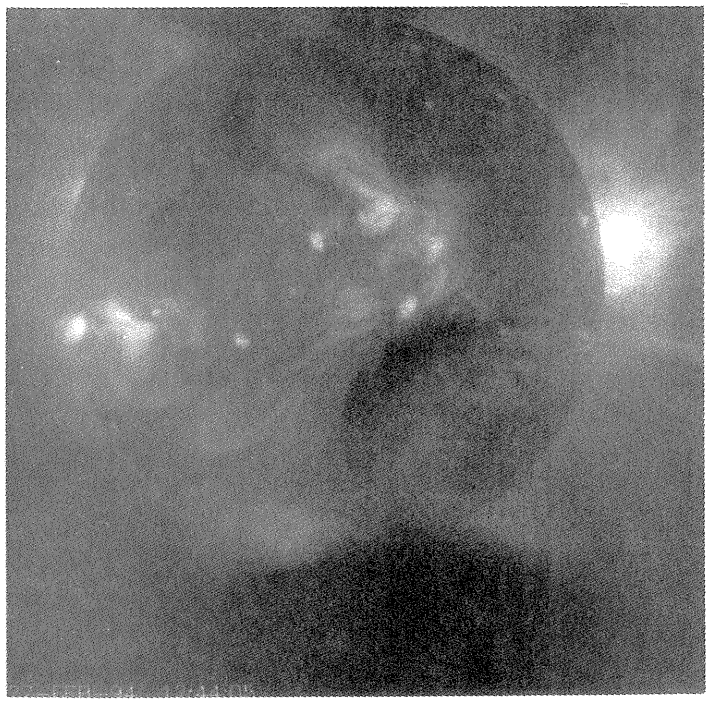
Feb 94

# YOHKOH SOFT X-RAY TELESCOPE IMAGES

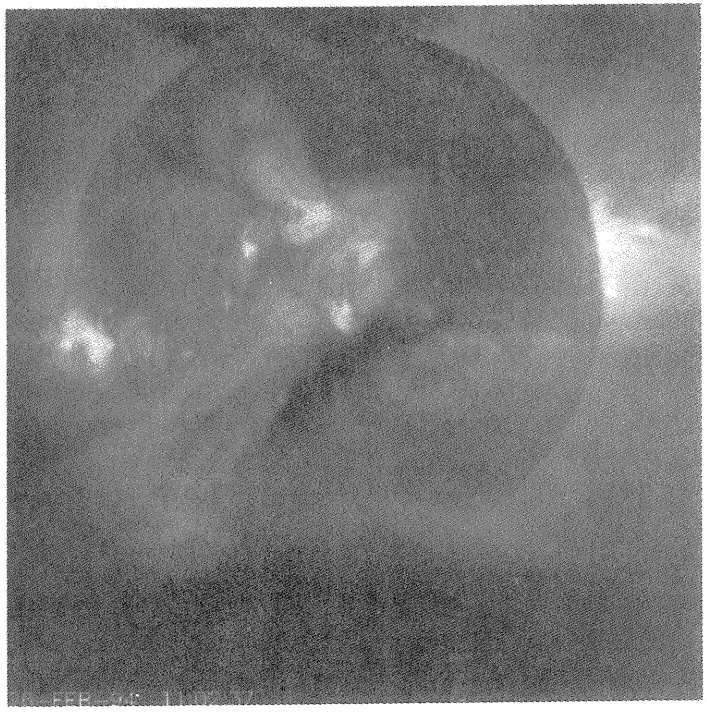
## February 1994



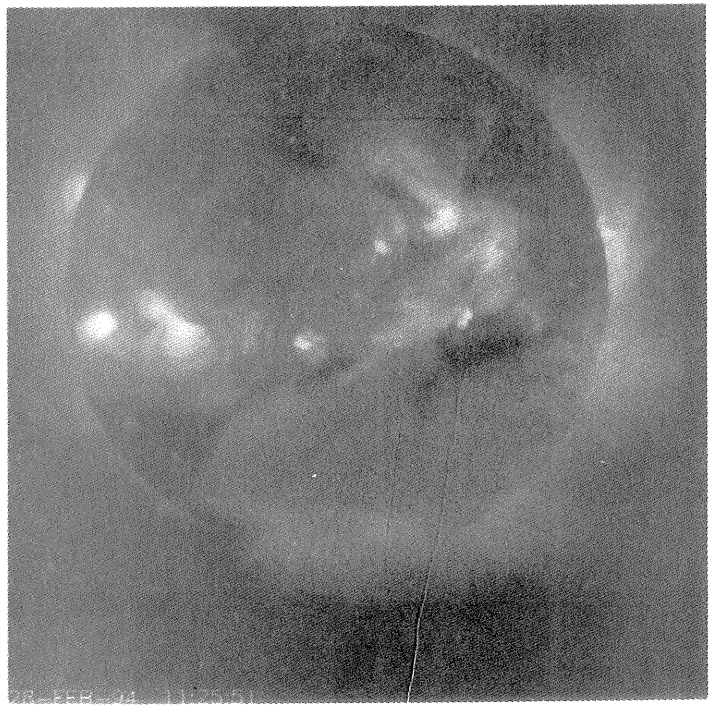
Day 25
13:32:05 UT



Day 27
12:44:05 UT



Day 26
11:02:37 UT

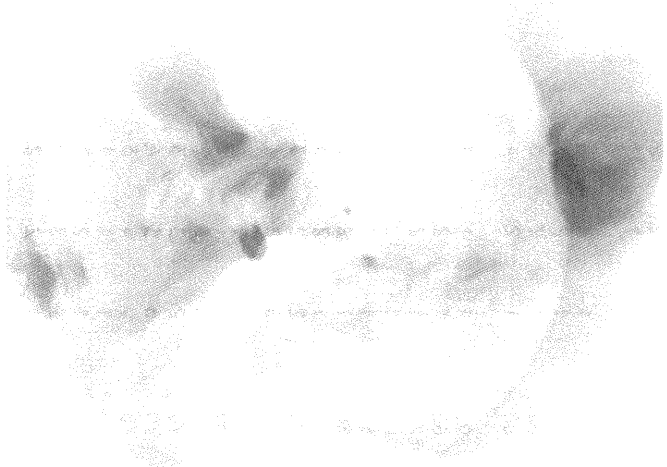


Day 28
11:25:51 UT

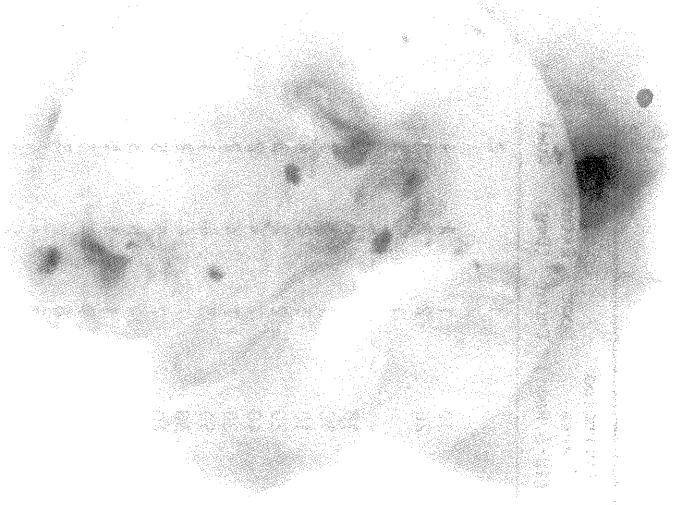
# YOHKOH SOFT X-RAY TELESCOPE IMAGES

## February 1994

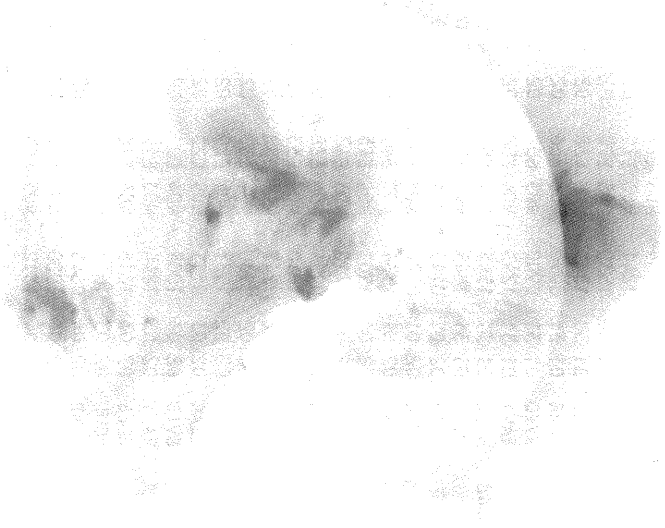
Day 25
13:32:05 UT



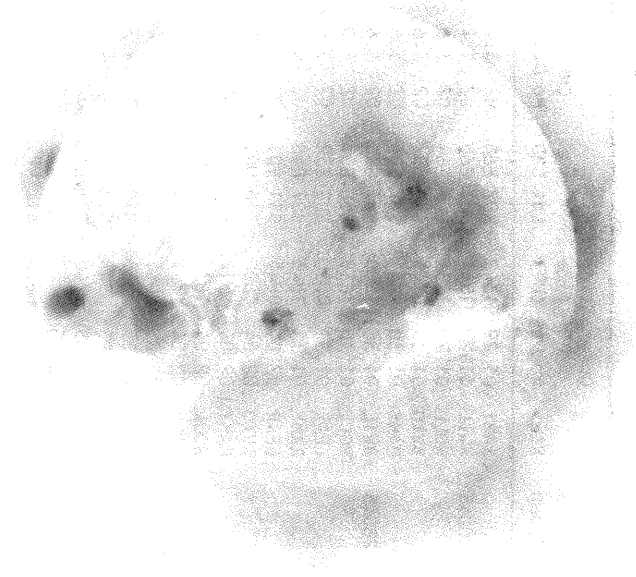

Day 27
12:44:05 UT




Day 26
11:02:37 UT




Day 28
11:25:51 UT



# SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

## FEBRUARY 1994

| NOAA/ USAF Group | Mt Wilson Group | Sta | Observation Time Mo | Day | (UT) | Lat | CMD | CMP Mo | Day | Max H | Mag Class | Spot Class | Corrected Area (10-6 Hemi) | Spot Count | Long. Extent (Deg) | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7664 | | RAMY | 01 | 29 | 1342 | S07 | E68 | 02 | 3.7 | | A | AX | | 1 | | 2 |
| 7664 | 28045 | MWIL | 01 | 29 | 1545 | S07 | E68 | 02 | 3.7 | 4 | (AP) | | | | | |
| 7664 | | HOLL | 01 | 29 | 1856 | S07 | E64 | 02 | 3.6 | | A | AX | 30 | 1 | 1 | 4 |
| 7664 | | SVTO | 01 | 30 | 0745 | S08 | E57 | 02 | 3.6 | | B | BXO | 20 | 2 | 6 | 2 |
| 7664 | | RAMY | 01 | 30 | 1241 | S07 | E55 | 02 | 3.6 | | A | AX | | 1 | | 3 |
| 7664 | 28045 | MWIL | 01 | 30 | 1530 | S07 | E53 | 02 | 3.6 | 4 | (AP) | | | | | |
| 7664 | | HOLL | 01 | 30 | 1830 | S08 | E57 | 02 | 4.0 | | A | AX | 10 | 1 | 6 | 2 |
| 7664 | | LEAR | 01 | 31 | 0050 | S09 | E52 | 02 | 3.9 | | A | AX | 10 | 1 | 1 | 3 |
| 7664 | | RAMY | 01 | 31 | 1243 | S07 | E48 | 02 | 4.1 | | B | BXO | 10 | 3 | 2 | 4 |
| 7664 | | LEAR | 02 | 04 | 0045 | S11 | E03 | 02 | 4.2 | | A | AX | 20 | 2 | 2 | 3 |
| 7664 | | SVTO | 02 | 04 | 1000 | S10 | W01 | 02 | 4.3 | | B | DRO | 40 | 7 | 4 | 2 |
| 7664 | | RAMY | 02 | 04 | 1512 | S11 | W05 | 02 | 4.2 | | B | BXO | 20 | 7 | 4 | 2 |
| 7664 | | BOUL | 02 | 04 | 1634 | S11 | W05 | 02 | 4.3 | | B | CAO | 50 | 3 | 4 | 1 |
| 7664 | | HOLL | 02 | 04 | 1759 | S12 | W06 | 02 | 4.3 | | B | BXO | 30 | 7 | 4 | 2 |
| 7664 | | LEAR | 02 | 05 | 0038 | S13 | W08 | 02 | 4.4 | | B | BXO | 40 | 7 | 5 | 3 |
| 7664 | | RAMY | 02 | 05 | 1235 | S12 | W16 | 02 | 4.3 | | B | BXO | 20 | 10 | 5 | 3 |
| 7664 | | BOUL | 02 | 05 | 1545 | S10 | W15 | 02 | 4.5 | | A | AX | 10 | 1 | 1 | 1 |
| 7664 | | HOLL | 02 | 05 | 1740 | S11 | W18 | 02 | 4.4 | | B | BXO | 20 | 9 | 4 | 3 |
| 7664 | | LEAR | 02 | 06 | 0225 | S11 | W23 | 02 | 4.4 | | B | BXO | 20 | 8 | 6 | 3 |
| 7664 | | SVTO | 02 | 06 | 0835 | S12 | W25 | 02 | 4.5 | | B | CRO | 40 | 9 | 7 | 2 |
| 7664 | | RAMY | 02 | 06 | 1241 | S11 | W29 | 02 | 4.3 | | B | CAO | 60 | 20 | 5 | 4 |
| 7664 | | HOLL | 02 | 06 | 1800 | S11 | W32 | 02 | 4.3 | | B | CAI | 60 | 18 | 7 | 3 |
| 7664 | | LEAR | 02 | 07 | 0208 | S10 | W36 | 02 | 4.4 | | B | CRO | 40 | 15 | 10 | 3 |
| 7664 | | SVTO | 02 | 07 | 1145 | S12 | W42 | 02 | 4.3 | | B | DAO | 160 | 27 | 9 | 2 |
| 7664 | | RAMY | 02 | 07 | 1310 | S13 | W45 | 02 | 4.1 | | B | DAI | 160 | 21 | 8 | 3 |
| 7664 | | HOLL | 02 | 07 | 2225 | S11 | W49 | 02 | 4.2 | | B | DAO | 170 | 20 | 8 | 2 |
| 7664 | | LEAR | 02 | 08 | 0142 | S13 | W50 | 02 | 4.3 | | B | DAO | 160 | 11 | 9 | 3 |
| 7664 | | SVTO | 02 | 08 | 0800 | S12 | W55 | 02 | 4.2 | | B | DAO | 120 | 13 | 10 | 3 |
| 7664 | | RAMY | 02 | 08 | 1325 | S14 | W58 | 02 | 4.2 | | B | DAO | 90 | 11 | 9 | 2 |
| 7664 | | LEAR | 02 | 09 | 0045 | S12 | W61 | 02 | 4.4 | | B | EAO | 190 | 7 | 11 | 3 |
| 7664 | | SVTO | 02 | 09 | 1310 | S13 | W68 | 02 | 4.4 | | B | DAO | 120 | 10 | 10 | 3 |
| 7664 | | RAMY | 02 | 09 | 1326 | S13 | W70 | 02 | 4.3 | | B | EAO | 190 | 8 | 11 | 4 |
| 7664 | | HOLL | 02 | 09 | 1534 | S10 | W70 | 02 | 4.4 | | B | ESI | 210 | 11 | 12 | 3 |
| 7664 | | BOUL | 02 | 09 | 1615 | S13 | W74 | 02 | 4.1 | | B | CSO | 60 | 2 | 8 | 1 |
| 7664 | 28050 | MWIL | 02 | 09 | 1700 | S12 | W72 | 02 | 4.3 | 4 | (BP) | | | | | |
| 7664 | | LEAR | 02 | 10 | 0015 | S10 | W75 | 02 | 4.4 | | B | CAO | 100 | 5 | 7 | 3 |
| 7664 | | SVTO | 02 | 10 | 1235 | S13 | W79 | 02 | 4.6 | | A | HS | 90 | 2 | 2 | 2 |
| 7664 | | RAMY | 02 | 10 | 1238 | S14 | W80 | 02 | 4.5 | | A | CAO | 50 | 1 | 1 | 3 |
| 7664 | | HOLL | 02 | 10 | 1530 | S12 | W82 | 02 | 4.5 | | A | HS | 120 | 1 | 2 | 3 |
| 7665 | | HOLL | 01 | 29 | 1856 | N04 | E79 | 02 | 4.7 | | A | HA | 60 | 1 | 2 | 4 |
| 7665 | | LEAR | 01 | 30 | 0050 | N04 | E76 | 02 | 4.7 | | A | HA | 40 | 2 | 2 | 3 |
| 7665 | | SVTO | 01 | 30 | 0745 | N03 | E75 | 02 | 4.9 | | A | HS | 90 | 2 | 2 | 2 |
| 7665 | | RAMY | 01 | 30 | 1241 | N03 | E71 | 02 | 4.8 | | A | HS | 60 | 1 | 1 | 3 |
| 7665 | 28048 | MWIL | 01 | 30 | 1530 | N03 | E70 | 02 | 4.9 | 5 | (AF) | | | | | |
| 7665 | | HOLL | 01 | 30 | 1830 | N03 | E68 | 02 | 4.8 | | A | HS | 80 | 1 | 2 | 2 |
| 7665 | | LEAR | 01 | 31 | 0050 | N08 | E66 | 02 | 5.0 | | A | HS | 80 | 1 | 2 | 3 |
| 7665 | | SVTO | 01 | 31 | 0900 | N03 | E62 | 02 | 5.0 | | A | HS | 60 | 1 | 2 | 3 |
| 7665 | | RAMY | 01 | 31 | 1243 | N04 | E58 | 02 | 4.9 | | A | HS | 80 | 1 | 2 | 4 |
| 7665 | 28048 | MWIL | 01 | 31 | 1545 | N04 | E57 | 02 | 4.9 | 5 | (AF) | | | | | |
| 7665 | | HOLL | 01 | 31 | 1845 | N04 | E56 | 02 | 5.0 | | A | HS | 90 | 1 | 1 | 3 |
| 7665 | | LEAR | 02 | 01 | 0145 | N04 | E52 | 02 | 5.0 | | A | HS | 60 | 1 | 2 | 3 |
| 7665 | | SVTO | 02 | 01 | 0820 | N03 | E48 | 02 | 4.9 | | A | HS | 120 | 1 | 2 | 3 |
| 7665 | | RAMY | 02 | 01 | 1334 | N08 | E44 | 02 | 4.9 | | A | HS | 80 | 1 | 2 | 3 |
| 7665 | | BOUL | 02 | 01 | 1501 | N04 | E43 | 02 | 4.8 | | A | HS | 50 | 1 | 1 | 1 |
| 7665 | | HOLL | 02 | 01 | 1710 | N03 | E43 | 02 | 4.9 | | A | HS | 80 | 1 | 2 | 2 |
| 7665 | | LEAR | 02 | 02 | 0054 | N04 | E38 | 02 | 4.9 | | B | BXO | 60 | 1 | 2 | 3 |
| 7665 | | SVTO | 02 | 02 | 1010 | N03 | E33 | 02 | 4.9 | | A | HS | 110 | 2 | 2 | 3 |
| 7665 | | RAMY | 02 | 02 | 1247 | N04 | E32 | 02 | 4.9 | | A | HS | 50 | 3 | 2 | 4 |
| 7665 | 28048 | MWIL | 02 | 02 | 1530 | N04 | E30 | 02 | 4.9 | 5 | (BF) | | | | | |
| 7665 | | HOLL | 02 | 02 | 1533 | N04 | E29 | 02 | 4.8 | | B | CAO | 60 | 4 | 7 | 3 |
| 7665 | | LEAR | 02 | 03 | 0115 | N05 | E23 | 02 | 4.8 | | B | CAO | 50 | 3 | 3 | 3 |
| 7665 | | SVTO | 02 | 03 | 1005 | N04 | E21 | 02 | 5.0 | | A | HS | 70 | 2 | 3 | 3 |
| 7665 | | RAMY | 02 | 03 | 1244 | N03 | E19 | 02 | 4.9 | | B | CSO | 70 | 6 | 3 | 4 |
| 7665 | | HOLL | 02 | 03 | 1616 | N04 | E18 | 02 | 5.0 | | B | CSO | 70 | 9 | 4 | 3 |
| 7665 | | BOUL | 02 | 03 | 1617 | N04 | E16 | 02 | 4.9 | | A | HS | 40 | 1 | 1 | 1 |
| 7665 | | LEAR | 02 | 04 | 0045 | N05 | E10 | 02 | 4.8 | | B | CSO | 50 | 1 | 2 | 3 |
| 7665 | | SVTO | 02 | 04 | 1000 | N04 | E08 | 02 | 5.0 | | B | CSO | 60 | 3 | 3 | 2 |
| 7665 | | RAMY | 02 | 04 | 1512 | N03 | E03 | 02 | 4.8 | | A | HS | 80 | 1 | 2 | 2 |

# SUNSPOT GROUPS
## (Ordered by Central Meridian Passage Date)

## FEBRUARY 1994

| NOAA/ USAF Group | Mt Wilson Group | Sta | Observation Time Mo Day (UT) | Lat CMD | CMP Mo Day | Max H | Mag Class | Spot Class | Corrected Area (10-6 Hemi) | Spot Count | Long. Extent (Deg) | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7665 | | BOUL | 02 04 1634 | N04 E03 | 02 4.9 | | A | HS | 40 | 1 | 1 | 1 |
| 7665 | | HOLL | 02 04 1759 | N04 E02 | 02 4.9 | | B | CSO | 50 | 3 | 3 | 2 |
| 7665 | | LEAR | 02 05 0038 | N04 W03 | 02 4.8 | | B | CSO | 50 | 1 | 2 | 3 |
| 7665 | | RAMY | 02 05 1235 | N05 W09 | 02 4.8 | | B | CSO | 50 | 3 | 3 | 3 |
| 7665 | | BOUL | 02 05 1545 | N04 W10 | 02 4.9 | | A | HS | 10 | 1 | 1 | 1 |
| 7665 | | HOLL | 02 05 1740 | N04 W12 | 02 4.8 | | B | CAO | 50 | 3 | 3 | 3 |
| 7665 | | LEAR | 02 06 0225 | N04 W16 | 02 4.9 | | A | HS | 60 | 2 | 3 | 3 |
| 7665 | | SVTO | 02 06 0835 | N04 W19 | 02 4.9 | | B | CSO | 40 | 2 | 3 | 2 |
| 7665 | | RAMY | 02 06 1241 | N04 W22 | 02 4.9 | | B | CAO | 40 | 2 | 3 | 4 |
| 7665 | | HOLL | 02 06 1800 | N04 W25 | 02 4.9 | | A | HA | 60 | 1 | 2 | 3 |
| 7665 | | LEAR | 02 07 0208 | N04 W30 | 02 4.8 | | A | AX | 30 | 2 | 2 | 3 |
| 7665 | | SVTO | 02 07 1145 | N04 W36 | 02 4.8 | | B | DRO | 20 | 2 | 1 | 2 |
| 7665 | | RAMY | 02 07 1310 | N03 W37 | 02 4.8 | | A | HA | 10 | 1 | 1 | 3 |
| 7665 | | HOLL | 02 07 2225 | N05 W41 | 02 4.9 | | A | HS | 30 | 2 | 2 | 2 |
| 7665 | | LEAR | 02 08 0142 | N03 W44 | 02 4.8 | | A | HR | 20 | 1 | 2 | 3 |
| 7665 | | SVTO | 02 08 0800 | N04 W48 | 02 4.7 | | B | CRO | 20 | 4 | 1 | 3 |
| 7665 | | RAMY | 02 08 1325 | N02 W50 | 02 4.8 | | A | AX | 10 | 1 | 1 | 2 |
| 7665 | | LEAR | 02 09 0045 | N03 W57 | 02 4.8 | | A | AX | 20 | 1 | 1 | 3 |
| 7665 | | SVTO | 02 09 1310 | N04 W62 | 02 4.9 | | A | AX | 10 | 2 | 1 | 3 |
| 7665 | | RAMY | 02 09 1326 | N02 W63 | 02 4.8 | | A | AX | | 1 | | 4 |
| 7666 | | RAMY | 02 02 1247 | N18 E69 | 02 7.8 | | A | AX | 10 | 1 | 1 | 4 |
| 7666 | | HOLL | 02 02 1533 | N17 E69 | 02 7.9 | | A | AX | 30 | 2 | 1 | 3 |
| 7666 | | LEAR | 02 03 0115 | N18 E65 | 02 8.0 | | B | CAO | 60 | 2 | 5 | 3 |
| 7666 | | SVTO | 02 03 1005 | N18 E59 | 02 7.9 | | B | CAO | 60 | 4 | 7 | 3 |
| 7666 | | RAMY | 02 03 1244 | N17 E56 | 02 7.8 | | B | CAO | 90 | 5 | 7 | 4 |
| 7666 | | HOLL | 02 03 1616 | N17 E57 | 02 8.0 | | B | CSO | 100 | 9 | 6 | 3 |
| 7666 | | BOUL | 02 03 1617 | N19 E56 | 02 7.9 | | B | CSO | 120 | 3 | 5 | 1 |
| 7666 | | LEAR | 02 04 0045 | N18 E48 | 02 7.7 | | B | DAO | 100 | 6 | 8 | 3 |
| 7666 | | SVTO | 02 04 1000 | N17 E44 | 02 7.8 | | B | DRO | 150 | 10 | 7 | 2 |
| 7666 | | RAMY | 02 04 1512 | N18 E42 | 02 7.8 | | B | DAO | 100 | 11 | 6 | 2 |
| 7666 | | BOUL | 02 04 1634 | N18 E42 | 02 7.9 | | B | DAO | 140 | 3 | 5 | 1 |
| 7666 | | HOLL | 02 04 1759 | N17 E41 | 02 7.9 | | B | DAO | 130 | 11 | 7 | 2 |
| 7666 | | LEAR | 02 05 0038 | N18 E33 | 02 7.5 | | B | DAO | 140 | 11 | 9 | 3 |
| 7666 | | RAMY | 02 05 1235 | N19 E31 | 02 7.9 | | B | DAO | 100 | 12 | 7 | 3 |
| 7666 | | BOUL | 02 05 1545 | N20 E28 | 02 7.8 | | B | CSO | 70 | 2 | 7 | 1 |
| 7666 | | HOLL | 02 05 1740 | N18 E27 | 02 7.8 | | B | DAO | 130 | 11 | 8 | 3 |
| 7666 | | LEAR | 02 06 0225 | N18 E23 | 02 7.8 | | B | CAO | 110 | 10 | 9 | 3 |
| 7666 | | SVTO | 02 06 0835 | N18 E22 | 02 8.0 | | B | CSO | 90 | 6 | 8 | 2 |
| 7666 | | RAMY | 02 06 1241 | N19 E19 | 02 8.0 | | B | DAO | 120 | 11 | 8 | 4 |
| 7666 | | HOLL | 02 06 1800 | N17 E13 | 02 7.7 | | B | CAO | 140 | 4 | 8 | 3 |
| 7666 | | LEAR | 02 07 0208 | N19 E11 | 02 7.9 | | B | CSO | 80 | 5 | 8 | 3 |
| 7666 | | SVTO | 02 07 1145 | N17 E07 | 02 8.0 | | B | DSO | 120 | 3 | 8 | 2 |
| 7666 | | RAMY | 02 07 1310 | N18 E05 | 02 7.9 | | B | CAO | 90 | 5 | 8 | 3 |
| 7666 | | HOLL | 02 07 2225 | N18 W02 | 02 7.8 | | A | HS | 90 | 2 | 2 | 2 |
| 7666 | | LEAR | 02 08 0142 | N18 W03 | 02 7.8 | | B | CAO | 80 | 11 | 6 | 3 |
| 7666 | | SVTO | 02 08 0800 | N18 W08 | 02 7.7 | | B | CAO | 90 | 2 | 2 | 3 |
| 7666 | | RAMY | 02 08 1325 | N17 W08 | 02 7.9 | | B | CAO | 100 | 5 | 6 | 2 |
| 7666 | | LEAR | 02 09 0045 | N18 W16 | 02 7.8 | | B | CAO | 110 | 5 | 4 | 3 |
| 7666 | | SVTO | 02 09 1310 | N18 W22 | 02 7.9 | | B | CAO | 100 | 3 | 4 | 3 |
| 7666 | | RAMY | 02 09 1326 | N17 W22 | 02 7.9 | | B | CAO | 120 | 4 | 3 | 4 |
| 7666 | | HOLL | 02 09 1534 | N18 W24 | 02 7.8 | | B | CAO | 110 | 3 | 4 | 3 |
| 7666 | | BOUL | 02 09 1615 | N19 W24 | 02 7.8 | | B | CSO | 60 | 2 | 2 | 1 |
| 7666 | 28051 | MWIL | 02 09 1700 | N17 W25 | 02 7.8 | 5 | (AP) | | | | | |
| 7666 | | LEAR | 02 10 0015 | N17 W32 | 02 7.6 | | B | CAO | 90 | 3 | 2 | 3 |
| 7666 | | SVTO | 02 10 1235 | N17 W36 | 02 7.8 | | A | HS | 120 | 1 | 2 | 2 |
| 7666 | | RAMY | 02 10 1238 | N17 W35 | 02 7.9 | | B | AX | 110 | 3 | 3 | 3 |
| 7666 | | HOLL | 02 10 1530 | N18 W36 | 02 7.9 | | B | CSO | 80 | 4 | 4 | 3 |
| 7666 | | BOUL | 02 10 1608 | N18 W38 | 02 7.8 | | A | HS | 60 | 1 | 1 | 2 |
| 7666 | 28051 | MWIL | 02 10 1715 | N17 W38 | 02 7.8 | 5 | (BP) | | | | | |
| 7666 | | LEAR | 02 11 0009 | N16 W46 | 02 7.5 | | B | CSO | 100 | 2 | 2 | 3 |
| 7666 | | RAMY | 02 11 1222 | N18 W48 | 02 7.9 | | B | CSO | 70 | 2 | 3 | 3 |
| 7666 | 28051 | MWIL | 02 11 1545 | N18 W51 | 02 7.8 | 5 | (AP) | | | | | |
| 7666 | | BOUL | 02 11 1546 | N18 W51 | 02 7.8 | | B | CSO | 90 | 2 | 3 | 3 |
| 7666 | | HOLL | 02 11 1726 | N20 W52 | 02 7.7 | | B | CSO | 70 | 2 | 3 | 3 |
| 7666 | | LEAR | 02 12 0420 | N15 W58 | 02 7.8 | | A | HS | 80 | 1 | 2 | 3 |
| 7666 | | RAMY | 02 12 1253 | N17 W63 | 02 7.7 | | B | CSO | 100 | 2 | 3 | 3 |
| 7666 | | HOLL | 02 12 1537 | N18 W66 | 02 7.6 | | A | HS | 30 | 1 | 1 | 3 |
| 7666 | 28051 | MWIL | 02 12 1545 | N18 W64 | 02 7.8 | 4 | (AP) | | | | | |

# SUNSPOT GROUPS
## (Ordered by Central Meridian Passage Date)

## FEBRUARY 1994

| NOAA/ USAF Group | Mt Wilson Group | Sta | Observation Time Mo Day (UT) | Lat CMD | CMP Mo Day | Max H | Mag Class | Spot Class | Corrected Area (10-6 Hemi) | Spot Count | Long. Extent (Deg) | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7666 | | BOUL | 02 12 1635 | N18 W65 | 02 7.7 | | A | HA | 110 | 1 | 4 | 3 |
| 7666 | | LEAR | 02 13 0325 | N15 W70 | 02 7.8 | | A | HS | 50 | 1 | 2 | 3 |
| 7666 | | RAMY | 02 13 1250 | N17 W79 | 02 7.5 | | A | HS | 40 | 1 | 2 | 3 |
| 7666 | | HOLL | 02 13 1443 | N17 W77 | 02 7.8 | | A | HA | 30 | 1 | 2 | 2 |
| 7666 | 28051 | MWIL | 02 13 1545 | N16 W77 | 02 7.8 | 4 | (AP) | | | | | |
| 7667 | | HOLL | 02 05 1740 | S07 E44 | 02 9.0 | | A | AX | 10 | 3 | 2 | 3 |
| 7667 | | LEAR | 02 06 0225 | S07 E39 | 02 9.0 | | B | BXO | 10 | 2 | 4 | 3 |
| 7667 | | SVTO | 02 06 0835 | S07 E38 | 02 9.2 | | A | AX | 10 | 2 | 1 | 2 |
| 7667 | | RAMY | 02 06 1241 | S08 E34 | 02 9.1 | | B | BXO | 10 | 3 | 5 | 4 |
| 7667 | | HOLL | 02 06 1800 | S09 E33 | 02 9.2 | | B | BXO | 20 | 4 | 4 | 3 |
| 7667 | | LEAR | 02 07 0208 | S08 E25 | 02 9.0 | | B | BXO | 10 | 3 | 3 | 3 |
| 7667 | | SVTO | 02 07 1145 | S09 E22 | 02 9.1 | | B | BXO | 30 | 6 | 8 | 2 |
| 7667 | | RAMY | 02 07 1310 | S07 E21 | 02 9.1 | | B | BXO | 10 | 5 | 5 | 3 |
| 7667 | | LEAR | 02 08 0142 | S07 E10 | 02 8.8 | | B | BXO | 30 | 7 | 7 | 3 |
| 7668 | | SVTO | 02 07 1145 | N07 E70 | 02 12.7 | | A | AX | 30 | 3 | 1 | 2 |
| 7668 | | HOLL | 02 07 2225 | N08 E64 | 02 12.7 | | B | BXO | 10 | 2 | 4 | 2 |
| 7668 | | LEAR | 02 08 0142 | N09 E61 | 02 12.6 | | B | CSO | 40 | 2 | 6 | 3 |
| 7668 | | SVTO | 02 08 0800 | N08 E58 | 02 12.7 | | B | DRO | 60 | 6 | 6 | 3 |
| 7668 | | RAMY | 02 08 1325 | N08 E55 | 02 12.7 | | B | DAO | 70 | 10 | 6 | 2 |
| 7668 | | LEAR | 02 09 0045 | N10 E49 | 02 12.7 | | B | DAO | 160 | 9 | 8 | 3 |
| 7668 | | SVTO | 02 09 1310 | N07 E41 | 02 12.6 | | B | DAO | 230 | 11 | 9 | 3 |
| 7668 | | RAMY | 02 09 1326 | N08 E40 | 02 12.5 | | B | DAO | 300 | 10 | 9 | 4 |
| 7668 | | HOLL | 02 09 1534 | N08 E40 | 02 12.6 | | B | DAO | 260 | 11 | 8 | 3 |
| 7668 | | BOUL | 02 09 1615 | N10 E40 | 02 12.7 | | B | DSO | 170 | 4 | 8 | 1 |
| 7668 | 28052 | MWIL | 02 09 1700 | N08 E41 | 02 12.8 | 5 | (B ) | | | | | |
| 7668 | | LEAR | 02 10 0015 | N09 E32 | 02 12.4 | | B | EAO | 190 | 10 | 12 | 3 |
| 7668 | | SVTO | 02 10 1235 | N08 E28 | 02 12.6 | | B | DSO | 390 | 9 | 10 | 2 |
| 7668 | | RAMY | 02 10 1238 | N08 E29 | 02 12.7 | | B | DAO | 480 | 13 | 10 | 3 |
| 7668 | | HOLL | 02 10 1530 | N08 E27 | 02 12.7 | | B | DSO | 250 | 16 | 10 | 3 |
| 7668 | | BOUL | 02 10 1608 | N10 E26 | 02 12.6 | | B | ESO | 250 | 6 | 11 | 2 |
| 7668 | 28052 | MWIL | 02 10 1715 | N08 E27 | 02 12.7 | 5 | (B ) | | | | | |
| 7668 | | LEAR | 02 11 0009 | N13 E18 | 02 12.4 | | B | ESO | 300 | 7 | 12 | 3 |
| 7668 | | RAMY | 02 11 1222 | N09 E16 | 02 12.7 | | B | EAO | 190 | 13 | 11 | 3 |
| 7668 | 28052 | MWIL | 02 11 1545 | N08 E15 | 02 12.8 | 5 | (B ) | | | | | |
| 7668 | | BOUL | 02 11 1546 | N09 E14 | 02 12.7 | | B | EAO | 250 | 13 | 11 | 3 |
| 7668 | | HOLL | 02 11 1726 | N08 E14 | 02 12.8 | | B | EAO | 200 | 17 | 11 | 3 |
| 7668 | | LEAR | 02 12 0420 | N09 E07 | 02 12.7 | | B | EAO | 200 | 10 | 11 | 3 |
| 7668 | | RAMY | 02 12 1253 | N08 E02 | 02 12.7 | | B | EAO | 170 | 10 | 11 | 3 |
| 7668 | | HOLL | 02 12 1537 | N09 E02 | 02 12.8 | | B | EAO | 200 | 11 | 11 | 3 |
| 7668 | 28052 | MWIL | 02 12 1545 | N08 E02 | 02 12.8 | 5 | (B ) | | | | | |
| 7668 | | BOUL | 02 12 1635 | N08 E00 | 02 12.7 | | B | DAO | 100 | 9 | 9 | 3 |
| 7668 | | LEAR | 02 13 0325 | N07 W05 | 02 12.8 | | B | DAO | 900 | 9 | 10 | 3 |
| 7668 | | RAMY | 02 13 1250 | N08 W12 | 02 12.6 | | B | DAO | 60 | 17 | 10 | 3 |
| 7668 | | HOLL | 02 13 1443 | N09 W13 | 02 12.6 | | B | DAO | 90 | 9 | 10 | 2 |
| 7668 | | BOUL | 02 13 1545 | N08 W12 | 02 12.7 | | B | DSO | 60 | 6 | 10 | 2 |
| 7668 | 28052 | MWIL | 02 13 1545 | N08 W12 | 02 12.7 | 5 | (B ) | | | | | |
| 7668 | | LEAR | 02 14 0032 | N09 W17 | 02 12.7 | | B | CSO | 80 | 9 | 9 | 3 |
| 7668 | | RAMY | 02 14 1258 | N08 W23 | 02 12.8 | | B | DAO | 50 | 12 | 9 | 3 |
| 7668 | 28052 | MWIL | 02 14 1545 | N08 W25 | 02 12.8 | 5 | (B ) | | | | | |
| 7668 | | HOLL | 02 14 1747 | N09 W26 | 02 12.8 | | B | BXO | 20 | 11 | 10 | 2 |
| 7668 | | LEAR | 02 15 0035 | N08 W30 | 02 12.8 | | B | BXO | 30 | 10 | 9 | 3 |
| 7668 | | RAMY | 02 15 1224 | N08 W37 | 02 12.7 | | B | BXO | 10 | 5 | 9 | 4 |
| 7668 | | HOLL | 02 15 1522 | N09 W38 | 02 12.8 | | B | BXO | 20 | 4 | 7 | 3 |
| 7668 | 28052 | MWIL | 02 15 1545 | N09 W38 | 02 12.8 | 4 | (B ) | | | | | |
| 7668 | | LEAR | 02 16 0020 | N08 W44 | 02 12.7 | | B | BXO | 10 | 3 | 5 | 3 |
| 7668 | | RAMY | 02 16 1325 | N08 W48 | 02 13.0 | | B | BXO | 20 | 7 | 4 | 3 |
| 7668 | | HOLL | 02 16 1518 | N08 W48 | 02 13.0 | | B | BXO | 30 | 7 | 6 | 3 |
| 7668 | | BOUL | 02 16 1801 | N08 W52 | 02 12.8 | | B | BXO | 10 | 2 | 2 | 2 |
| 7668 | 28052 | MWIL | 02 16 2145 | N08 W53 | 02 12.9 | 3 | X | | | | | |
| 7668 | | LEAR | 02 17 0035 | N07 W58 | 02 12.7 | | B | BXO | 20 | 2 | 3 | 3 |
| 7668 | | RAMY | 02 17 1231 | N09 W58 | 02 13.2 | | A | AX | 10 | 3 | 2 | 4 |
| 7668 | | HOLL | 02 17 2029 | N10 W63 | 02 13.1 | | A | AX | 10 | 2 | 2 | 3 |
| 7668 | | LEAR | 02 18 0245 | N09 W66 | 02 13.2 | | A | AX | 10 | 2 | 1 | 3 |
| 7668 | | BOUL | 02 18 1533 | N11 W80 | 02 12.6 | | B | BXO | 20 | 2 | 3 | 3 |
| 7668 | | HOLL | 02 18 1750 | N09 W79 | 02 12.8 | | A | AX | 20 | 1 | | 2 |
| 7673 | 28058 | MWIL | 02 16 2145 | N08 W38 | 02 14.0 | 3 | X | | | | | |

# SUNSPOT GROUPS
## (Ordered by Central Meridian Passage Date)

### FEBRUARY 1994

| NOAA/ USAF Group | Mt Wilson Group | Sta | Observation Mo | Day | Time (UT) | Lat | CMD | CMP Mo | Day | Max H | Mag Class | Spot Class | Corrected Area (10-6 Hemi) | Spot Count | Long. Extent (Deg) | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7673 | | LEAR | 02 | 17 | 0035 | N07 | W40 | 02 | 14.0 | | B | BXO | 30 | 2 | 3 | 3 |
| 7673 | | RAMY | 02 | 17 | 1231 | N09 | W45 | 02 | 14.1 | | B | BXO | 10 | 2 | 3 | 4 |
| 7673 | | HOLL | 02 | 17 | 2029 | N09 | W50 | 02 | 14.1 | | B | DSO | 40 | 5 | 3 | 3 |
| 7673 | | LEAR | 02 | 18 | 0245 | N08 | W54 | 02 | 14.1 | | B | CRO | 50 | 3 | 5 | 3 |
| 7673 | | RAMY | 02 | 18 | 1237 | N08 | W59 | 02 | 14.1 | | B | BXO | 10 | 3 | 3 | 4 |
| 7673 | | BOUL | 02 | 18 | 1533 | N09 | W59 | 02 | 14.2 | | A | AX | 20 | 1 | 1 | 3 |
| 7673 | | HOLL | 02 | 18 | 1750 | N10 | W61 | 02 | 14.1 | | A | HA | 20 | 1 | 1 | 2 |
| 7673 | | LEAR | 02 | 19 | 0125 | N08 | W66 | 02 | 14.1 | | A | AX | 10 | 1 | 1 | 2 |
| 7673A | 28054 | MWIL | 02 | 13 | 1545 | S04 | E12 | 02 | 14.5 | 4 | (B ) | | | | | |
| 7669 | | RAMY | 02 | 11 | 1222 | N06 | E78 | 02 | 17.3 | | A | HS | 10 | 1 | 1 | 3 |
| 7669 | 28053 | MWIL | 02 | 11 | 1545 | N04 | E77 | 02 | 17.4 | 4 | AP | | | | | |
| 7669 | | BOUL | 02 | 11 | 1546 | N06 | E75 | 02 | 17.3 | | B | BXO | 30 | 2 | 4 | 3 |
| 7669 | | HOLL | 02 | 11 | 1726 | N05 | E75 | 02 | 17.3 | | A | AX | | 1 | | 3 |
| 7669 | | LEAR | 02 | 12 | 0420 | N08 | E69 | 02 | 17.3 | | A | HR | 30 | 1 | 1 | 3 |
| 7669 | | RAMY | 02 | 12 | 1253 | N05 | E64 | 02 | 17.3 | | A | HS | 20 | 1 | 1 | 3 |
| 7669 | | HOLL | 02 | 12 | 1537 | N05 | E62 | 02 | 17.3 | | A | AX | | 1 | | 3 |
| 7669 | 28053 | MWIL | 02 | 12 | 1545 | N05 | E63 | 02 | 17.4 | 4 | (AP | | | | | |
| 7669 | | BOUL | 02 | 12 | 1635 | N06 | E62 | 02 | 17.3 | | A | HR | 20 | 1 | 1 | 3 |
| 7669 | | LEAR | 02 | 13 | 0325 | N08 | E57 | 02 | 17.4 | | A | AX | 200 | 1 | 1 | 3 |
| 7669 | | RAMY | 02 | 13 | 1250 | N07 | E51 | 02 | 17.3 | | A | AX | 10 | 1 | 1 | 3 |
| 7669 | | HOLL | 02 | 13 | 1443 | N06 | E49 | 02 | 17.3 | | A | AX | 20 | 1 | 1 | 2 |
| 7669 | | BOUL | 02 | 13 | 1545 | N06 | E49 | 02 | 17.3 | | A | HR | 20 | 1 | 1 | 2 |
| 7669 | 28053 | MWIL | 02 | 13 | 1545 | N06 | E49 | 02 | 17.3 | 5 | (AP) | | | | | |
| 7669 | | LEAR | 02 | 14 | 0032 | N06 | E45 | 02 | 17.4 | | A | AX | 10 | 1 | 1 | 3 |
| 7669 | | RAMY | 02 | 14 | 1258 | N05 | E38 | 02 | 17.4 | | A | HA | 10 | 2 | 1 | 3 |
| 7669 | 28053 | MWIL | 02 | 14 | 1545 | N05 | E37 | 02 | 17.4 | 4 | (AP) | | | | | |
| 7669 | | HOLL | 02 | 14 | 1747 | N05 | E36 | 02 | 17.4 | | A | AX | | 1 | | 2 |
| 7669 | | LEAR | 02 | 15 | 0035 | N06 | E32 | 02 | 17.4 | | A | AX | 10 | 2 | 1 | 3 |
| 7669 | 28053 | MWIL | 02 | 15 | 1545 | N07 | E26 | 02 | 17.6 | 4 | (B ) | | | | | |
| 7669 | | LEAR | 02 | 16 | 0020 | N08 | E19 | 02 | 17.4 | | B | BXO | 10 | 2 | 4 | 3 |
| 7669 | | BOUL | 02 | 16 | 1801 | N08 | E10 | 02 | 17.5 | | B | BXO | 10 | 2 | 4 | 2 |
| 7669 | | LEAR | 02 | 17 | 0035 | N07 | E06 | 02 | 17.5 | | B | CRO | 20 | 3 | 6 | 3 |
| 7669 | | RAMY | 02 | 17 | 1231 | N08 | E03 | 02 | 17.7 | | A | AX | | 1 | | 4 |
| 7669 | | LEAR | 02 | 18 | 0245 | N07 | W07 | 02 | 17.6 | | B | BXO | 10 | 3 | 5 | 3 |
| 7669 | | RAMY | 02 | 18 | 1237 | N08 | W07 | 02 | 18.0 | | B | SO | 10 | 3 | 3 | 4 |
| 7670A | 28057 | MWIL | 02 | 15 | 1545 | N11 | E44 | 02 | 19.0 | 5 | (BG) | | | | | |
| 7670A | | RAMY | 02 | 16 | 1325 | N11 | E33 | 02 | 19.0 | | B | BXO | 10 | 3 | 2 | 3 |
| 7670A | | HOLL | 02 | 16 | 1518 | N12 | E34 | 02 | 19.2 | | A | AX | | 2 | 1 | 3 |
| 7670A | 28057 | MWIL | 02 | 16 | 2145 | N11 | E26 | 02 | 18.9 | 4 | X | | | | | |
| 7670 | | RAMY | 02 | 12 | 1253 | N07 | E79 | 02 | 18.4 | | A | AX | 10 | 1 | 1 | 3 |
| 7670 | | HOLL | 02 | 12 | 1537 | N06 | E79 | 02 | 18.6 | | A | AX | | 1 | | 3 |
| 7670 | | BOUL | 02 | 12 | 1635 | N10 | E80 | 02 | 18.7 | | A | AX | 20 | 1 | | 3 |
| 7670 | | LEAR | 02 | 13 | 0325 | N11 | E73 | 02 | 18.6 | | A | AX | 300 | 1 | 1 | 3 |
| 7670 | | RAMY | 02 | 13 | 1250 | N09 | E66 | 02 | 18.5 | | A | AX | 10 | 1 | 1 | 3 |
| 7670 | | HOLL | 02 | 13 | 1443 | N07 | E64 | 02 | 18.4 | | A | AX | 20 | 1 | 1 | 2 |
| 7670 | 28055 | MWIL | 02 | 13 | 1545 | N08 | E66 | 02 | 18.6 | 5 | (AF) | | | | | |
| 7670 | | BOUL | 02 | 13 | 1545 | N09 | E65 | 02 | 18.5 | | A | AX | 20 | 1 | | 2 |
| 7670 | | LEAR | 02 | 14 | 0032 | N08 | E61 | 02 | 18.6 | | A | AX | 10 | 1 | 1 | 3 |
| 7670 | | RAMY | 02 | 14 | 1258 | N08 | E53 | 02 | 18.5 | | B | BXO | 10 | 4 | 5 | 3 |
| 7670 | 28055 | MWIL | 02 | 14 | 1545 | N08 | E52 | 02 | 18.5 | 4 | (B ) | | | | | |
| 7670 | | HOLL | 02 | 14 | 1747 | N09 | E51 | 02 | 18.6 | | B | BXO | 10 | 3 | 6 | 2 |
| 7670 | | LEAR | 02 | 15 | 0035 | N12 | E48 | 02 | 18.6 | | B | BXO | 40 | 5 | 7 | 3 |
| 7670 | | RAMY | 02 | 15 | 1224 | N10 | E46 | 02 | 19.0 | | B | DAO | 30 | 6 | 4 | 4 |
| 7670 | | BOUL | 02 | 15 | 1457 | N11 | E44 | 02 | 18.9 | | B | BXO | 20 | 2 | 3 | 1 |
| 7670 | | HOLL | 02 | 15 | 1522 | N09 | E41 | 02 | 18.7 | | B | BXO | 30 | 7 | 10 | 3 |
| 7670 | 28055 | MWIL | 02 | 15 | 1545 | N08 | E37 | 02 | 18.4 | 4 | (B ) | | | | | |
| 7670 | | LEAR | 02 | 16 | 0020 | N11 | E39 | 02 | 18.9 | | B | BXO | 40 | 6 | 5 | 3 |
| 7670 | | RAMY | 02 | 16 | 1325 | N09 | E28 | 02 | 18.7 | | B | CRO | 30 | 9 | 11 | 3 |
| 7670 | | HOLL | 02 | 16 | 1518 | N08 | E27 | 02 | 18.7 | | B | CRO | 60 | 9 | 12 | 3 |
| 7670 | | BOUL | 02 | 16 | 1801 | N11 | E28 | 02 | 18.8 | | B | CAO | 20 | 6 | 5 | 2 |
| 7670 | 28055 | MWIL | 02 | 16 | 2145 | N07 | E20 | 02 | 18.4 | 4 | X | | | | | |
| 7670 | | LEAR | 02 | 17 | 0035 | N10 | E23 | 02 | 18.7 | | B | BXO | 30 | 4 | 7 | 3 |
| 7670 | | RAMY | 02 | 17 | 1231 | N11 | E18 | 02 | 18.9 | | B | CRO | 30 | 8 | 9 | 4 |
| 7670 | | HOLL | 02 | 17 | 2029 | N09 | E16 | 02 | 19.0 | | B | BXO | 10 | 3 | 5 | 3 |
| 7670 | | LEAR | 02 | 18 | 0245 | N11 | E13 | 02 | 19.1 | | B | BXO | 10 | 3 | 1 | 3 |

# S U N S P O T G R O U P S
## (Ordered by Central Meridian Passage Date)

## FEBRUARY 1994

| NOAA/ USAF Group | Mt Wilson Group | Sta | Observation Mo | Day | Time (UT) | Lat | CMD | CMP Mo | Day | Max H | Mag Class | Spot Class | Corrected Area (10-6 Hemi) | Spot Count | Long. Extent (Deg) | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7670 | | RAMY | 02 | 18 | 1237 | N09 | E06 | 02 | 19.0 | | A | AX | 10 | 3 | 4 | 4 |
| 7670 | | HOLL | 02 | 19 | 1601 | N09 | W07 | 02 | 19.1 | | A | AX | | 1 | 1 | 3 |
| 7671 | | RAMY | 02 | 13 | 1250 | N11 | E80 | 02 | 19.5 | | A | HH | 80 | 1 | 2 | 3 |
| 7671 | | HOLL | 02 | 13 | 1443 | N09 | E79 | 02 | 19.5 | | A | HH | 30 | 1 | 2 | 2 |
| 7671 | | BOUL | 02 | 13 | 1545 | N11 | E80 | 02 | 19.7 | | A | AX | 60 | 1 | 1 | 2 |
| 7671 | 28056 | MWIL | 02 | 13 | 1545 | N11 | E82 | 02 | 19.8 | 5 | AP | | | | | |
| 7671 | | LEAR | 02 | 14 | 0032 | N09 | E78 | 02 | 19.9 | | A | HA | 90 | 1 | 3 | 3 |
| 7671 | | RAMY | 02 | 14 | 1258 | N11 | E71 | 02 | 19.9 | | B | CHO | 470 | 4 | 8 | 3 |
| 7671 | 28056 | MWIL | 02 | 14 | 1545 | N10 | E70 | 02 | 19.9 | 5 | (AP) | | | | | |
| 7671 | | HOLL | 02 | 14 | 1747 | N09 | E69 | 02 | 19.9 | | B | CHO | 420 | 2 | 4 | 2 |
| 7671 | | LEAR | 02 | 15 | 0035 | N12 | E65 | 02 | 19.9 | | B | CAO | 500 | 3 | 6 | 3 |
| 7671 | | RAMY | 02 | 15 | 1224 | N09 | E58 | 02 | 19.9 | | B | DAO | 430 | 7 | 6 | 4 |
| 7671 | | BOUL | 02 | 15 | 1457 | N11 | E55 | 02 | 19.8 | | A | HH | 250 | 2 | 3 | 1 |
| 7671 | | HOLL | 02 | 15 | 1522 | N10 | E57 | 02 | 19.9 | | B | DHO | 510 | 4 | 5 | 3 |
| 7671 | 28056 | MWIL | 02 | 15 | 1545 | N10 | E56 | 02 | 19.9 | 6 | (BP) | | | | | |
| 7671 | | LEAR | 02 | 16 | 0020 | N12 | E51 | 02 | 19.8 | | B | CKO | 380 | 7 | 5 | 3 |
| 7671 | | RAMY | 02 | 16 | 1325 | N09 | E44 | 02 | 19.9 | | B | CKO | 510 | 4 | 5 | 3 |
| 7671 | | HOLL | 02 | 16 | 1518 | N09 | E44 | 02 | 19.9 | | B | CHO | 420 | 2 | 4 | 3 |
| 7671 | | BOUL | 02 | 16 | 1801 | N10 | E42 | 02 | 19.9 | | B | CKO | 370 | 2 | 5 | 2 |
| 7671 | 28056 | MWIL | 02 | 16 | 2145 | N10 | E38 | 02 | 19.8 | 6 | AP | | | | | |
| 7671 | | LEAR | 02 | 17 | 0035 | N11 | E34 | 02 | 19.6 | | B | CHO | 410 | 4 | 7 | 3 |
| 7671 | | RAMY | 02 | 17 | 1231 | N11 | E33 | 02 | 20.0 | | B | CKO | 430 | 7 | 8 | 4 |
| 7671 | | HOLL | 02 | 17 | 2029 | N11 | E30 | 02 | 20.1 | | B | CHO | 420 | 2 | 8 | 3 |
| 7671 | | LEAR | 02 | 18 | 0245 | N10 | E26 | 02 | 20.1 | | B | CKO | 370 | 6 | 8 | 3 |
| 7671 | | RAMY | 02 | 18 | 1237 | N11 | E21 | 02 | 20.1 | | B | CKO | 460 | 24 | 8 | 4 |
| 7671 | | BOUL | 02 | 18 | 1533 | N11 | E17 | 02 | 19.9 | | B | CKI | 300 | 16 | 8 | 3 |
| 7671 | | HOLL | 02 | 18 | 1750 | N10 | E18 | 02 | 20.1 | | B | CHO | 380 | 13 | 8 | 2 |
| 7671 | | LEAR | 02 | 19 | 0125 | N11 | E12 | 02 | 20.0 | | B | CKO | 330 | 14 | 9 | 2 |
| 7671 | | RAMY | 02 | 19 | 1322 | N12 | E06 | 02 | 20.0 | | B | DAO | 350 | 13 | 8 | 3 |
| 7671 | | SVTO | 02 | 19 | 1343 | N09 | E05 | 02 | 19.9 | | B | CKO | 310 | 8 | 7 | 1 |
| 7671 | 28056 | MWIL | 02 | 19 | 1600 | N10 | E03 | 02 | 19.9 | 5 | (BP) | | | | | |
| 7671 | | BOUL | 02 | 19 | 1600 | N11 | E03 | 02 | 19.9 | | B | DAO | 220 | 5 | 4 | 1 |
| 7671 | | HOLL | 02 | 19 | 1601 | N11 | E05 | 02 | 20.0 | | B | CKO | 400 | 5 | 7 | 3 |
| 7671 | | SVTO | 02 | 20 | 0820 | N10 | W07 | 02 | 19.8 | | B | DSI | 300 | 11 | 5 | 2 |
| 7671 | | RAMY | 02 | 20 | 1238 | N11 | W08 | 02 | 19.9 | | B | DAO | 340 | 19 | 10 | 3 |
| 7671 | | BOUL | 02 | 20 | 1600 | N10 | W11 | 02 | 19.8 | | B | DAO | 190 | 6 | 7 | 2 |
| 7671 | | HOLL | 02 | 20 | 1748 | N11 | W08 | 02 | 20.1 | | B | CSO | 230 | 6 | 9 | 1 |
| 7671 | | RAMY | 02 | 21 | 1243 | N10 | W22 | 02 | 19.9 | | B | DAO | 330 | 9 | 6 | 3 |
| 7671 | | BOUL | 02 | 21 | 1458 | N10 | W24 | 02 | 19.8 | | B | DAO | 220 | 5 | 5 | 2 |
| 7671 | 28056 | MWIL | 02 | 21 | 1800 | N10 | W26 | 02 | 19.8 | 5 | (AP) | | | | | |
| 7671 | | SVTO | 02 | 22 | 0750 | N09 | W34 | 02 | 19.8 | | B | DHO | 320 | 8 | 5 | 3 |
| 7671 | | RAMY | 02 | 22 | 1339 | N11 | W36 | 02 | 19.9 | | A | HAO | 350 | 11 | 6 | 3 |
| 7671 | 28056 | MWIL | 02 | 22 | 1545 | N11 | W37 | 02 | 19.9 | 5 | (BP) | | | | | |
| 7671 | | HOLL | 02 | 22 | 1714 | N10 | W38 | 02 | 19.9 | | B | DA | 200 | 11 | 6 | 3 |
| 7671 | | SVTO | 02 | 23 | 0755 | N11 | W45 | 02 | 19.9 | | B | DHO | 340 | 7 | 7 | 4 |
| 7671 | | BOUL | 02 | 23 | 1455 | N11 | W51 | 02 | 19.8 | | B | CAO | 200 | 4 | 6 | 1 |
| 7671 | 28056 | MWIL | 02 | 23 | 1530 | N10 | W51 | 02 | 19.8 | 5 | (BP) | | | | | |
| 7671 | | HOLL | 02 | 23 | 1535 | N11 | W50 | 02 | 19.9 | | B | CSO | 260 | 12 | 6 | 3 |
| 7671 | | RAMY | 02 | 24 | 1220 | N10 | W61 | 02 | 19.9 | | B | DAO | 180 | 8 | 6 | 4 |
| 7671 | 28056 | MWIL | 02 | 24 | 1545 | N10 | W64 | 02 | 19.8 | 5 | (AP) | | | | | |
| 7671 | | HOLL | 02 | 24 | 1546 | N11 | W65 | 02 | 19.8 | | B | CSO | 220 | 7 | 5 | 3 |
| 7671 | | SVTO | 02 | 25 | 0745 | N12 | W75 | 02 | 19.7 | | B | DAO | 300 | 6 | 6 | 4 |
| 7671 | | RAMY | 02 | 25 | 1221 | N09 | W74 | 02 | 20.0 | | B | DAO | 170 | 3 | 5 | 3 |
| 7671 | 28056 | MWIL | 02 | 25 | 1545 | N10 | W78 | 02 | 19.8 | 4 | (AP) | | | | | |
| 7671 | | HOLL | 02 | 25 | 1605 | N12 | W78 | 02 | 19.8 | | B | DSO | 60 | 2 | 3 | 3 |
| 7674 | | RAMY | 02 | 19 | 1322 | S13 | E30 | 02 | 21.8 | | B | CRO | 10 | 2 | 3 | 3 |
| 7674 | | SVTO | 02 | 19 | 1343 | S15 | E28 | 02 | 21.7 | | B | CSO | 20 | 3 | 3 | 1 |
| 7674 | | BOUL | 02 | 19 | 1600 | S13 | E29 | 02 | 21.8 | | B | BXO | | 2 | 3 | 1 |
| 7674 | 28059 | MWIL | 02 | 19 | 1600 | S14 | E30 | 02 | 21.9 | 3 | (B ) | | | | | |
| 7674 | | HOLL | 02 | 19 | 1601 | S14 | E29 | 02 | 21.8 | | B | BX | 10 | 2 | 4 | 3 |
| 7674 | | SVTO | 02 | 20 | 0820 | S13 | E18 | 02 | 21.7 | | B | BXO | 10 | 2 | 3 | 2 |
| 7674 | | RAMY | 02 | 20 | 1238 | S14 | E15 | 02 | 21.7 | | A | AX | | 1 | | 3 |
| 7674A | | RAMY | 02 | 22 | 1339 | N20 | W06 | 02 | 22.1 | | B | BXO | 10 | 4 | 3 | 3 |
| 7674A | | HOLL | 02 | 22 | 1714 | N19 | W09 | 02 | 22.0 | | B | BXO | 10 | 3 | 3 | 3 |
| 7677 | | RAMY | 02 | 27 | 1236 | N11 | W67 | 02 | 22.5 | | B | BXO | 10 | 2 | 1 | 3 |

# SUNSPOT GROUPS
## (Ordered by Central Meridian Passage Date)

## FEBRUARY 1994

| NOAA/ USAF Group | Mt Wilson Group | Sta | Observation Mo | Day | Time (UT) | Lat | CMD | CMP Mo | Day | Max H | Mag Class | Spot Class | Corrected Area (10-6 Hemi) | Spot Count | Long. Extent (Deg) | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7675 | 28060 | MWIL | 02 | 21 | 1800 | S11 | E58 | 02 | 26.1 | 4 | (AP) | | | | | |
| 7675 | | SVTO | 02 | 22 | 0750 | S11 | E52 | 02 | 26.2 | | B | CRO | 40 | 7 | 7 | 3 |
| 7675 | | RAMY | 02 | 22 | 1339 | S12 | E47 | 02 | 26.1 | | B | CAO | 30 | 4 | 4 | 3 |
| 7675 | 28060 | MWIL | 02 | 22 | 1545 | S11 | E45 | 02 | 26.0 | 5 | (BP) | | | | | |
| 7675 | | HOLL | 02 | 22 | 1714 | S12 | E44 | 02 | 26.0 | | A | HA | 40 | 2 | 1 | 3 |
| 7675 | | SVTO | 02 | 23 | 0755 | S12 | E38 | 02 | 26.2 | | B | DSO | 100 | 7 | 5 | 4 |
| 7675 | | BOUL | 02 | 23 | 1455 | S11 | E31 | 02 | 25.9 | | A | HS | 40 | 1 | 1 | 1 |
| 7675 | 28060 | MWIL | 02 | 23 | 1530 | S11 | E33 | 02 | 26.1 | 5 | (B ) | | | | | |
| 7675 | | HOLL | 02 | 23 | 1535 | S11 | E33 | 02 | 26.1 | | B | CSO | 50 | 5 | 5 | 3 |
| 7675 | | RAMY | 02 | 24 | 1220 | S11 | E23 | 02 | 26.2 | | B | CAO | 30 | 5 | 5 | 4 |
| 7675 | 28060 | MWIL | 02 | 24 | 1545 | S11 | E20 | 02 | 26.2 | 5 | (BP) | | | | | |
| 7675 | | HOLL | 02 | 24 | 1546 | S11 | E21 | 02 | 26.2 | | B | CSO | 30 | 9 | 6 | 3 |
| 7675 | | SVTO | 02 | 25 | 0745 | S11 | E12 | 02 | 26.2 | | B | CSO | 50 | 4 | 5 | 4 |
| 7675 | | RAMY | 02 | 25 | 1221 | S11 | E09 | 02 | 26.2 | | B | CRO | 20 | 2 | 5 | 3 |
| 7675 | 28060 | MWIL | 02 | 25 | 1545 | S11 | E06 | 02 | 26.1 | 5 | (AP) | | | | | |
| 7675 | | HOLL | 02 | 25 | 1605 | S11 | E06 | 02 | 26.1 | | A | HS | 20 | 1 | 1 | 3 |
| 7675 | | SVTO | 02 | 26 | 0815 | S11 | W04 | 02 | 26.0 | | A | HR | 10 | 3 | 1 | 3 |
| 7675 | | RAMY | 02 | 26 | 1300 | S12 | W04 | 02 | 26.2 | | B | CAO | 10 | 2 | 9 | 3 |
| 7675 | | HOLL | 02 | 26 | 1537 | S11 | W08 | 02 | 26.0 | | A | AX | | 2 | | 3 |
| 7675 | 28060 | MWIL | 02 | 26 | 1735 | S11 | W09 | 02 | 26.0 | 4 | (AP) | | | | | |
| 7681 | | RAMY | 02 | 26 | 1300 | S14 | E02 | 02 | 26.7 | | A | AX | | 1 | | 3 |
| 7681 | | HOLL | 02 | 26 | 1537 | S13 | W01 | 02 | 26.6 | | A | AX | | 2 | | 3 |
| 7681 | 28064 | MWIL | 02 | 26 | 1735 | S13 | W01 | 02 | 26.6 | 4 | (AP) | | | | | |
| 7681 | | LEAR | 02 | 27 | 0030 | S13 | W06 | 02 | 26.6 | | A | AX | 10 | 4 | 1 | 3 |
| 7681 | | SVTO | 02 | 27 | 0800 | S13 | W10 | 02 | 26.6 | | A | AX | 10 | 4 | 1 | 3 |
| 7681 | | RAMY | 02 | 27 | 1236 | S14 | W12 | 02 | 26.6 | | B | BXO | 10 | 2 | 1 | 3 |
| 7681 | | HOLL | 02 | 27 | 1517 | S13 | W13 | 02 | 26.6 | | A | AX | | 3 | 1 | 3 |
| 7681 | 28064 | MWIL | 02 | 27 | 1545 | S13 | W14 | 02 | 26.6 | 4 | (AP) | | | | | |
| 7676 | | RAMY | 02 | 21 | 1243 | N09 | E69 | 02 | 26.7 | | B | BXO | 10 | 2 | 5 | 3 |
| 7676 | | SVTO | 02 | 22 | 0750 | N09 | E60 | 02 | 26.8 | | B | CRO | 80 | 16 | 10 | 3 |
| 7676 | | RAMY | 02 | 22 | 1339 | N09 | E56 | 02 | 26.8 | | B | BXO | 10 | 4 | 9 | 3 |
| 7676 | 28061 | MWIL | 02 | 22 | 1545 | N08 | E55 | 02 | 26.8 | 4 | (B ) | | | | | |
| 7676 | | HOLL | 02 | 22 | 1714 | N08 | E53 | 02 | 26.7 | | B | BXO | 30 | 3 | 9 | 3 |
| 7676 | | SVTO | 02 | 23 | 0755 | N08 | E50 | 02 | 27.1 | | A | HA | 20 | 1 | 1 | 4 |
| 7676 | | BOUL | 02 | 23 | 1455 | N08 | E46 | 02 | 27.1 | | A | AX | | 1 | | 1 |
| 7676 | 28061 | MWIL | 02 | 23 | 1530 | N08 | E44 | 02 | 26.9 | 4 | (B ) | | | | | |
| 7676 | | HOLL | 02 | 23 | 1535 | N08 | E42 | 02 | 26.8 | | B | BXO | 10 | 2 | 7 | 3 |
| 7676 | | RAMY | 02 | 24 | 1220 | N08 | E33 | 02 | 27.0 | | B | BXO | 10 | 2 | 4 | 4 |
| 7676 | 28061 | MWIL | 02 | 24 | 1545 | N08 | E33 | 02 | 27.1 | 3 | (AF) | | | | | |
| 7683 | | LEAR | 03 | 02 | 0210 | S20 | W35 | 02 | 27.5 | | B | CRO | 20 | 3 | 4 | 3 |
| 7683 | | SVTO | 03 | 02 | 1010 | S18 | W44 | 02 | 27.2 | | B | CRO | 40 | 10 | 7 | 2 |
| 7683 | | RAMY | 03 | 02 | 1223 | S18 | W42 | 02 | 27.4 | | B | CRO | 30 | 8 | 6 | 4 |
| 7683 | | BOUL | 03 | 02 | 1453 | S18 | W42 | 02 | 27.5 | | B | BXO | 30 | 5 | 6 | 2 |
| 7683 | 28067 | MWIL | 03 | 02 | 1545 | S18 | W43 | 02 | 27.5 | 5 | (B ) | | | | | |
| 7683 | | HOLL | 03 | 02 | 1841 | S18 | W45 | 02 | 27.4 | | B | BXO | 40 | 4 | 6 | 2 |
| 7683 | | PALE | 03 | 02 | 2109 | S19 | W48 | 02 | 27.3 | | B | DSO | 50 | 5 | 6 | 4 |
| 7683 | | LEAR | 03 | 03 | 0016 | S18 | W47 | 02 | 27.5 | | B | BXO | 20 | 9 | 7 | 5 |
| 7683 | | RAMY | 03 | 03 | 1241 | S18 | W55 | 02 | 27.4 | | B | CRO | 10 | 4 | 7 | 3 |
| 7683 | 28067 | MWIL | 03 | 03 | 1530 | S17 | W57 | 02 | 27.4 | 4 | (B ) | | | | | |
| 7683 | | BOUL | 03 | 03 | 1532 | S17 | W56 | 02 | 27.5 | | B | BXO | 30 | 6 | 8 | 3 |
| 7683 | | PALE | 03 | 03 | 2310 | S18 | W64 | 02 | 27.2 | | B | BXO | 30 | 3 | 9 | 3 |
| 7683 | | LEAR | 03 | 04 | 0030 | S18 | W60 | 02 | 27.5 | | B | BXO | 20 | 4 | 7 | 3 |
| 7683 | | BOUL | 03 | 04 | 1538 | S16 | W76 | 02 | 27.0 | | A | AX | 10 | 1 | | 3 |
| 7679A | 28063 | MWIL | 02 | 25 | 1545 | N12 | E29 | 02 | 27.8 | 4 | (B ) | | | | | |
| 7679A | 28063 | MWIL | 02 | 26 | 1735 | N12 | E15 | 02 | 27.9 | 5 | (B ) | | | | | |
| 7679A | 28063 | MWIL | 02 | 27 | 1545 | N12 | E00 | 02 | 27.6 | 4 | (AP) | | | | | |
| 7679A | 28063 | MWIL | 02 | 28 | 1545 | N12 | W15 | 02 | 27.5 | 4 | (AP) | | | | | |
| 7679 | | HOLL | 02 | 25 | 1605 | N02 | E29 | 02 | 27.8 | | B | BXO | 10 | 5 | 3 | 3 |
| 7679 | | SVTO | 02 | 26 | 0815 | N03 | E19 | 02 | 27.8 | | B | CAO | 20 | 6 | 4 | 3 |
| 7679 | | RAMY | 02 | 26 | 1300 | N02 | E17 | 02 | 27.8 | | B | DAO | 40 | 9 | 4 | 3 |
| 7679 | | BOUL | 02 | 26 | 1459 | N02 | E15 | 02 | 27.7 | | B | DSO | 70 | 2 | 4 | 1 |
| 7679 | | HOLL | 02 | 26 | 1537 | N03 | E15 | 02 | 27.8 | | B | DSO | 40 | 5 | 4 | 3 |
| 7679 | | LEAR | 02 | 27 | 0030 | N03 | E09 | 02 | 27.7 | | B | CAO | 30 | 6 | 5 | 3 |

# SUNSPOT GROUPS
## (Ordered by Central Meridian Passage Date)

## FEBRUARY 1994

| NOAA/ USAF Group | Mt Wilson Group | Sta | Observation Mo | Day | Time (UT) | Lat | CMD | CMP Mo | Day | Max H | Mag Class | Spot Class | Corrected Area (10-6 Hemi) | Spot Count | Long. Extent (Deg) | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7679 | | SVTO | 02 | 27 | 0800 | N02 | E07 | 02 | 27.8 | | B | BXO | 10 | 4 | 5 | 3 |
| 7679 | | RAMY | 02 | 27 | 1236 | N02 | E03 | 02 | 27.7 | | B | BXO | 10 | 6 | 4 | 3 |
| 7679 | | HOLL | 02 | 27 | 1517 | N03 | E02 | 02 | 27.8 | | B | CSO | 10 | 2 | 4 | 3 |
| 7679 | | BOUL | 02 | 27 | 1615 | N03 | E00 | 02 | 27.7 | | B | BXO | 10 | 3 | 3 | 3 |
| 7679 | | LEAR | 02 | 28 | 0138 | N03 | W05 | 02 | 27.7 | | A | AX | 10 | 3 | 1 | 3 |
| 7679 | | SVTO | 02 | 28 | 0710 | N02 | W08 | 02 | 27.7 | | B | CSO | 30 | 2 | 4 | 2 |
| 7679 | | RAMY | 02 | 28 | 1241 | N02 | W12 | 02 | 27.6 | | A | HR | | 1 | | 3 |
| 7682 | 28066 | MWIL | 02 | 28 | 1545 | S18 | E02 | 02 | 28.8 | 3 | (AP) | | | | | |
| 7682 | | LEAR | 03 | 01 | 0447 | S18 | W04 | 02 | 28.9 | | B | BXO | 20 | 10 | 6 | 3 |
| 7682 | | SVTO | 03 | 01 | 1010 | S18 | W08 | 02 | 28.8 | | B | CSO | 90 | 8 | 6 | 2 |
| 7682 | | RAMY | 03 | 01 | 1315 | S19 | W07 | 03 | 1.0 | | B | CAO | 30 | 11 | 7 | 4 |
| 7682 | 28066 | MWIL | 03 | 01 | 1530 | S19 | W09 | 02 | 28.9 | 4 | (B ) | | | | | |
| 7682 | | HOLL | 03 | 01 | 1535 | S19 | W10 | 02 | 28.9 | | BG | CSO | 40 | 7 | 6 | 3 |
| 7682 | | BOUL | 03 | 01 | 1650 | S18 | W10 | 02 | 28.9 | | B | CRO | 20 | 2 | 6 | 2 |
| 7682 | | LEAR | 03 | 02 | 0210 | S21 | W14 | 03 | 1.0 | | B | CSO | 40 | 5 | 8 | 3 |
| 7682 | | SVTO | 03 | 02 | 1010 | S18 | W22 | 02 | 28.7 | | B | DAO | 60 | 17 | 9 | 2 |
| 7682 | | RAMY | 03 | 02 | 1223 | S19 | W21 | 02 | 28.9 | | B | DAO | 50 | 17 | 9 | 4 |
| 7682 | | BOUL | 03 | 02 | 1453 | S18 | W23 | 02 | 28.9 | | B | CRO | 60 | 9 | 6 | 2 |
| 7682 | 28066 | MWIL | 03 | 02 | 1545 | S18 | W23 | 02 | 28.9 | 5 | (B ) | | | | | |
| 7682 | | HOLL | 03 | 02 | 1841 | S19 | W25 | 02 | 28.9 | | B | DAI | 120 | 15 | 8 | 2 |
| 7682 | | PALE | 03 | 02 | 2109 | S19 | W27 | 02 | 28.8 | | B | DSI | 60 | 22 | 10 | 4 |
| 7682 | | LEAR | 03 | 03 | 0016 | S18 | W27 | 02 | 28.9 | | B | DRI | 60 | 44 | 10 | 5 |
| 7682 | | RAMY | 03 | 03 | 1241 | S18 | W35 | 02 | 28.9 | | B | DAI | 140 | 23 | 10 | 3 |
| 7682 | 28066 | MWIL | 03 | 03 | 1530 | S18 | W35 | 03 | 1.0 | 5 | (B ) | | | | | |
| 7682 | | BOUL | 03 | 03 | 1532 | S18 | W36 | 02 | 28.9 | | B | DAI | 150 | 24 | 9 | 3 |
| 7682 | | PALE | 03 | 03 | 2310 | S20 | W43 | 02 | 28.7 | | B | EAO | 170 | 17 | 12 | 3 |
| 7682 | | LEAR | 03 | 04 | 0030 | S19 | W40 | 03 | 1.0 | | B | EAI | 120 | 17 | 11 | 3 |
| 7682 | | RAMY | 03 | 04 | 1225 | S19 | W47 | 02 | 28.9 | | B | DAO | 170 | 13 | 10 | 2 |
| 7682 | | BOUL | 03 | 04 | 1538 | S19 | W52 | 02 | 28.7 | | B | EAI | 230 | 20 | 11 | 3 |
| 7682 | | HOLL | 03 | 04 | 1845 | S18 | W51 | 02 | 28.9 | | B | DAI | 180 | 16 | 10 | 2 |
| 7682 | 28066 | MWIL | 03 | 04 | 2100 | S19 | W54 | 02 | 28.7 | 4 | (B ) | | | | | |
| 7682 | | LEAR | 03 | 05 | 0020 | S20 | W55 | 02 | 28.8 | | B | EAO | 130 | 19 | 11 | 4 |
| 7682 | | SVTO | 03 | 05 | 0735 | S18 | W60 | 02 | 28.7 | | B | ESO | 190 | 14 | 11 | 3 |
| 7682 | | BOUL | 03 | 05 | 1449 | S20 | W63 | 02 | 28.8 | | B | CRO | 140 | 7 | 11 | 1 |
| 7682 | 28066 | MWIL | 03 | 05 | 1700 | S19 | W65 | 02 | 28.7 | 4 | (BP) | | | | | |
| 7682 | | LEAR | 03 | 06 | 0030 | S22 | W65 | 03 | 1.0 | | B | CAO | 120 | 14 | 11 | 3 |
| 7682 | | SVTO | 03 | 06 | 0925 | S18 | W71 | 03 | 1.0 | | B | CAO | 120 | 10 | 5 | 2 |
| 7682 | | BOUL | 03 | 06 | 1513 | S19 | W77 | 02 | 28.7 | | B | BXO | 20 | 3 | 14 | 3 |
| 7682 | | RAMY | 03 | 06 | 1542 | S19 | W74 | 03 | 1.0 | | B | CAO | 40 | 5 | 3 | 2 |
| 7682 | | HOLL | 03 | 06 | 1833 | S18 | W78 | 02 | 28.8 | | B | ESO | 90 | 4 | 11 | 3 |
| 7682 | | PALE | 03 | 06 | 2254 | S21 | W85 | 02 | 28.4 | | A | AX | 30 | 1 | 1 | 3 |

Stations reporting:

BOUL = Boulder
CULG = Culgoora
HOLL = Holloman
LEAR = Learmonth
MWIL = Mt. Wilson
PALE = Palehua
RAMY = Ramey
SVTO = San Vito

FEBRUARY 1994

| Day | Start (UT) | Max (UT) | End (UT) | Imp | Wide Spread Index | Number of Station Reports by Type SWF | SEA | SPA | LF-SPA | SES | Flare (UT) | X-ray Class | NOAA Region |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02 | 1011 | 1017 | 1100 | 1 | 3 | | 2 | | | | No flare | | |
| 02 | 1912 | 1920 | 1955 | 2 | 1 | | | | | 2 | 1912 | B4.0 | |
| 03 | 0416 | 0424 | 0455 | 1- | 1 | | | 1 | | | 0414 | C1.5 | 7666 |
| 03 | 0614 | 0622 | 0648 | 1- | 1 | | | 1 | | | 0609 | C1.1 | |
| 03 | 1836 | 1844 | 1914 | 2- | 3 | | | | | 4 | 1836 | C1.1 | 7663 |
| 04 | 1009 | 1013 | 1030 | 1 | 1 | | | | | 1 | 1006 | B3.8 | |
| 04 | 1100 | 1111 | 1150 | 1 | 1 | | 1 | | | | * | | |
| 04 | 1752 | 1759 | 1810 | 1- | 1 | | | | | 1 | 1752 | B1.6 | |
| 05 | 1933 | 1935 | 1945 | 1- | 1 | | | | | 1 | 1931 | B1.5 | |
| 05 | 2342 | 2344 | 2350 | 1- | 1 | | | | | 1 | 2342 | B1.3 | |
| 06 | 0813 | 0815 | 0835 | 1 | 1 | | | | | 1 | 0813 | B5.0 | 7664 |
| 06 | 0832 | 0843 | 0855 | 1 | 3 | | 2 | | | | No flare | | |
| 06 | 0900 | 0915 | 0933 | 1 | 3 | | 2 | | | | No flare | | |
| 06 | 1314 | 1316 | 1341 | 1+ | 1 | | | | | 1 | 1300 | B7.9 | 7664 |
| 06 | 1510 | 1512 | 1527 | 3 | 1 | | | | | 1 | No flare | | |
| 06 | 1651 | 1655 | 1706 | 1- | 1 | | | | | 1 | 1650 | B1.6 | |
| 07 | 0454 | 0456 | 0514 | 1- | 1 | | | 1 | | | 0452 | B6.4 | 7664 |
| 07 | 0853 | 0856 | 0906 | 1- | 1 | | | | | 1 | 0854 | B2.4 | |
| 07 | 1117 | 1129 | 1150 | 1 | 3 | | 2 | | | | * | | |
| 07 | 1242 | 1250 | 1310 | 1 | 5 | | 2 | | | 2 | 1251 | B3.9 | |
| 07 | 1349 | 1401 | 1430 | 1+ | 5 | | 1 | | | 2 | 1350 | B8.2 | 7664 |
| 07 | 1403 | 1412 | 1423 | 1- | 5 | | | | | 3 | 1404 | B8.6 | |
| 08 | 1525 | 1529 | 1549 | 1 | 1 | | | | | 1 | No flare | | |
| 08 | 1606 | 1625 | 1645 | 2 | 1 | | | | | 1 | 1603 | B7.3 | 7668 |
| 08 | 1750 | 1754 | 1831 | 2 | 1 | | | | | 1 | 1750 | | 7668 |
| 09 | 0914 | 0939U | 1030 | 1 | 1 | | 1 | | | | * | | |
| 09 | 1337 | 1338 | 1415 | 2 | 1 | | | | | 1 | 1334 | B3.8 | |
| 09 | 1444 | 1455 | 1520 | 1 | 1 | | 1 | | | | No flare | | |
| 09 | 1531 | 1544 | 1634D | 2+ | 1 | | | | | 1 | No flare | | |
| 09 | 1634 | 1645 | 1721 | 2 | 3 | | | | | 2 | No flare | | |
| 09 | 1717 | 1725 | 1802 | 2 | 3 | | | | | 2 | No flare | | |
| 09 | 1728 | 1740 | 1802 | 2- | 5 | | | | | 3 | No flare | | |
| 09 | 1805 | 1815 | 1857 | 1 | 5 | | | | | 5 | 1806 | C3.0 | 7664 |
| 09 | 2032 | 2044 | 2059 | 1+ | 3 | | | | | 2 | 2034 | C1.1 | |
| 09 | 2150 | 2153 | 2201 | 1- | 1 | | | | | 1 | 2149 | B4.2 | |
| 10 | 0854 | 0910 | 0933 | 1 | 1 | | 1 | | | | * | | |
| 10 | 1817 | 1825 | 1903 | 2 | 5 | | | | | 3 | 1813 | C1.3 | |
| 11 | 1157 | 1211 | 1231 | 1 | 5 | | 1 | | | 1 | No flare | | |
| 11 | 1315 | 1320 | 1345 | 1 | 1 | | 1 | | | | No flare | | |
| 11 | 1357 | 1400 | 1415 | 1 | 1 | | | | | 1 | 1356 | B4.5 | |
| 11 | 1500 | 1509 | 1527 | 1 | 5 | | | | | 3 | 1455 | C1.3 | |
| 11 | 1642 | 1645 | 1656 | 1- | 3 | | | | | 3 | 1642 | B6.1 | |
| 12 | 1321 | 1334 | 1353 | 1 | 1 | | 1 | | | | No flare | | |
| 13 | 1202 | 1220 | 1231 | 1 | 3 | | 4 | | | | No flare | | |
| 15 | 0349 | 0354 | 0411 | 1- | 1 | | | 1 | | | 0348 | C1.0 | 7670 |
| 15 | 0552 | 0601 | 0624 | 1- | 1 | | | 1 | | | 0555 | C1.1 | 7670 |
| 15 | 0751 | 0802 | 0842 | 1- | 5 | | | 1 | | 1 | 0751 | C1.8 | 7671 |
| 15 | 0900 | 0908 | 0937 | 1+ | 1 | | 1 | | | | No flare | | |
| 16 | 0852 | 0855 | 0928 | 2 | 1 | | 1 | | | | No flare | | |
| 17 | 1105 | 1117 | 1138 | 1- | 5 | | | 1 | | 1 | 1100 | C1.7 | |
| 17 | 1420 | 1429U | 1518 | 1 | 1 | | 1 | | | | No flare | | |

* = no flare patrol.

# SUDDEN IONOSPHERIC DISTURBANCES

## FEBRUARY 1994

| Day | Start (UT) | Max (UT) | End (UT) | Imp | Wide Spread Index | Number of Station Reports by Type SWF | SEA | SPA | LF-SPA | SES | Flare (UT) | X-ray Class | NOAA Region |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0800 | 0804 | 0815 | 1 | 1 | | 1 | | | | No flare | | |
| 18 | 0940E | 0954 | 1015 | 2 | 1 | | | | | 1 | 0912 | C1.1 | |
| 18 | 2148 | 2151 | 2159 | 1- | 3 | | | | | 2 | 2148 | B4.2 | |
| 19 | 1640 | 1700 | 1715 | 2 | 1 | | | | | 1 | 1636 | B5.1 | |
| 20 | 0109 | 0140 | 0525 | 3- | 5 | 2 | | 1 | | | 0138E | M4.0 | 7671 |
| 20 | 1356 | 1357 | 1407 | 1- | 1 | | | | | 1 | 1356 | B3.9 | 7671 |
| 20 | 1558 | 1559 | 1609 | 1- | 3 | | | | | 3 | 1558 | B4.2 | 7670 |
| 22 | 0224 | 0238 | 0302 | 1- | 1 | | | 1 | | | 0224 | C1.2 | |
| 22 | 1314 | 1320 | 1322 | 2 | 5 | | | | | 2 | No flare | | |
| 22 | 1425 | 1434 | 1445 | 1 | 1 | | | | | 1 | No flare | | |
| 23 | 0142 | 0149 | 0212 | 1- | 1 | | | 1 | | | 0137 | C1.0 | |
| 23 | 1204 | 1213 | 1256 | 1 | 1 | | 1 | | | | No flare | | |
| 23 | 1317 | 1323 | 1343 | 2 | 3 | | 2 | | | | No flare | | |
| 23 | 1406 | 1418 | 1446 | 1 | 1 | | 1 | | | | No flare | | |
| 23 | 1521 | 1527 | 1547 | 1 | 5 | | | | | 5 | 1520 | C1.1 | |
| 23 | 1746 | 1752 | 1815 | 1+ | 1 | | | | | 1 | 1746 | B7.0 | |
| 23 | 2045 | 2050 | 2107 | 1 | 3 | | | | | 2 | 2043 | C1.4 | |
| 24 | 1804 | 1831 | 1913 | 2- | 5 | | | | | 3 | 1757 | C2.9 | |
| 25 | 1039 | 1044 | 1117 | 2 | 3 | | 2 | | | | No flare | | |
| 26 | 0849 | 0856 | 0911 | 1 | 3 | | 2 | | | | No flare | | |
| 26 | 1038 | 1042 | 1055 | 1- | 1 | | | | | 1 | 1036 | B3.6 | |
| 26 | 1435 | 1446 | 1518 | 1 | 1 | | 1 | | | | No flare | | |
| 26 | 2330 | 2336 | 2357 | 1 | 3 | | | | | 2 | 2327 | B5.5 | 7675 |
| 27 | 0812 | 0821 | 0908 | 1 | 1 | | 1 | | | | No flare | | |
| 27 | 0858 | 0921 | 1037 | 2+ | 5 | | 1 | 1 | | 4 | 0825 | M2.8 | |
| 27 | 1532 | 1540 | 1548 | 3 | 1 | | | | | 1 | 1538 | B6.1 | 7680 |
| 27 | 1650 | 1655 | 1710 | 1 | 1 | | | | | 1 | 1648 | B4.1 | |
| 27 | 2024 | 2029 | 2045 | 1 | 1 | | | | | 1 | 2024 | B4.5 | |
| 28 | 1908 | 1912 | 1920 | 1- | 1 | | | | | 1 | 1902 | B6.0 | |

* = no flare patrol.

## OBSERVATORIES REPORTING FOR FEBRUARY 1994

| | | | |
|---|---|---|---|
| Amherst, New Hampshire, USA | SES | Manahawkin, New Jersey, USA | SES |
| Boksburg, Rep of S. Africa | SES | Maui, Hawaii, USA | SWF |
| Brazilian Antarctic Station | SPA, SES | McDonough, Georgia, USA | SES |
| Cambridge, England, UK | SES | Nampa, Idaho, USA | SES |
| Cranford, New Jersey, USA | SES | Nerja, Spain | SES |
| Durham, New Hampshire, USA | SES | Panska Ves, Czech Republic | SES, SEA, SWF |
| Fort Wayne, Indiana, USA | SES | Rimavska Sobota, Slovakia | SEA |
| Gettysburg, Pennsylvania, USA | SES | Rochester, New Hampshire, USA | SES |
| Hiraiso, Japan | SWF | Tucson, Arizona, USA | SES |
| Houston, Texas, USA | SES | Upice, Slovakia | SEA |
| Hudson, Ohio, USA | SES | Wellington, Ohio, USA | SES |
| Inubo, Japan | SPA | Windsor Locks, Connecticut, USA | SES |
| Itapetinga, Brazil | SPA, SES | Ziar nad Hronom, Slovakia | SEA |
| LaCrescenta, California, USA | SES | Zilina, Slovakia | SEA |
| Madison, Wisconsin, USA | SES | | |

Observations are not necessarily continuous.

# S O L A R  R A D I O  E M I S S I O N
## Spectral Observations

### FEBRUARY 1994

| Day | Observation Start (UT) | Observation End (UT) | Sta | Decimetric Band Start (UT) | Decimetric Band End (UT) | Decimetric Band Int (1-3) | Metric Band Start (UT) | Metric Band End (UT) | Metric Band Int (1-3) | Dekametric Band Start (UT) | Dekametric Band End (UT) | Dekametric Band Int (1-3) | Spectral Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0756 | 1429 | ONDR | | | | | | | | | | |
| 02 | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0754 | 1433 | ONDR | | | | | | | | | | |
| 03 | | | PALE | | | | 0129.0 | 0130.0 | 2 | | | | III |
| | | | LEAR | | | | 0621.0 | 0622.0 | 1 | | | | III |
| | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0752 | 1435 | ONDR | | | | | | | | | | |
| | | | SVTO | | | | 1136.0 | 1441.0 | 1 | | | | CONT |
| 04 | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0708 | 1438 | ONDR | | | | | | | | | | |
| | | | PALE | | | | 2133.0 | 2133.0 | 1 | | | | III |
| 05 | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0748 | 1438 | ONDR | | | | | | | | | | |
| 06 | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0746 | 1442 | ONDR | | | | | | | | | | |
| | | | PALE | | | | 1739.0 | 1739.0 | 1 | | | | III |
| 07 | | | LEAR | | | | 0408.0 | 0409.0 | 1 | | | | III |
| | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0743 | 1443 | ONDR | | | | | | | | | | |
| | | | SVTO | | | | 1148.0 | 1213.0 | 2 | | | | CONT |
| | | | PALE | | | | 2053.0 | 2053.0 | 1 | | | | III |
| 08 | | | LEAR | | | | 0223.0 | 0224.0 | 1 | | | | III |
| | | | PALE | | | | 0231.0 | 0232.0 | 1 | | | | III |
| | | | LEAR | | | | 0232.0 | 0234.0 | 2 | | | | III |
| | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0742 | 1445 | ONDR | | | | | | | | | | |
| | | | LEAR | | | | 0942.0 | 0943.0 | 1 | | | | III |
| | | | SVTO | | | | 0942.0 | 0943.0 | 2 | | | | III |
| 09 | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0740 | 1450 | ONDR | | | | | | | | | | |
| 10 | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0738 | 1450 | ONDR | | | | | | | | | | |
| | 0741 | 1453 | POTS | | | | 0952.0 | 0952.2 | 1 | | | | IIIG |
| | | | POTS | | | | 1100.9 | 1101.3 | 1 | | | | IIIG |
| | | | POTS | | | | 1115.2 | 1115.6 | 2 | | | | IIIG |
| | | | POTS | | | | 1150.0 | 1208.0 | 1 | | | | I,S |
| | | | POTS | | | | 1232.1 | 1233.9 | 1 | | | | IIIG |
| | | | POTS | | | | 1255.4 | 1255.5 | 1 | | | | IIIB |
| | | | POTS | | | | 1326.9 | 1453.0U | 1 | | | | I,S |
| | | | POTS | | | | 1327.2 | 1327.3 | 1 | | | | UNCLF |
| | | | PALE | | | | 1808.0 | 1813.0 | 1 | | | | III |
| 11 | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0736 | 1332 | ONDR | | | | | | | | | | |
| | 0730 | 1452 | POTS | | | | 0826.9 | 0828.2 | 1 | | | | IIIG |
| | | | POTS | | | | 0909.1 | 0909.2 | 1 | | | | IIIB |
| | | | POTS | | | | 0959.2 | 0959.4 | 1 | | | | IIIG |
| | | | POTS | | | | 1159.0 | 1159.5 | 1 | | | | IIIG |
| | | | POTS | | | | 1217.6 | 1217.7 | 1 | | | | IIIB |
| | | | POTS | | | | 1238.7 | 1240.2 | 1 | | | | IIIG |
| | | | POTS | | | | 1245.9 | 1246.1 | 1 | | | | IIIG |
| 12 | 0017 | 1500 | ONDR | | | | | | | | | | |
| | | | LEAR | | | | | | | 0137.0 | 0138.0 | 1 | III |
| | 0700 | 1200 | IZMI | | | | | | | | | | |
| | | | PALE | | | | 1954.0 | 1956.0 | 1 | | | | III |
| 13 | | | LEAR | | | | 0153.0 | | 1 | | | | CONT |
| | | | SVTO | | | | 0609.0 | 0609.0 | 2 | | | | III |

# SOLAR RADIO EMISSION
## Spectral Observations

### FEBRUARY 1994

| Day | Observation Start (UT) | Observation End (UT) | Sta | Decimetric Band Start (UT) | Decimetric Band End (UT) | Decimetric Band Int (1-3) | Metric Band Start (UT) | Metric Band End (UT) | Metric Band Int (1-3) | Dekametric Band Start (UT) | Dekametric Band End (UT) | Dekametric Band Int (1-3) | Spectral Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0739 | 1458 | ONDR | | | | | | | | | | |
| | | | PALE | | | | 2101.0 | 2103.0 | 1 | | | | III |
| | | | SGMR | | | | 2101.0 | 2102.0 | 1 | | | | III |
| 14 | 0730 | 1452 | POTS | | | | 0942.4 | 0942.6 | 1 | | | | IIIG |
| | | | POTS | | | | 1010.4 | 1010.5 | 1 | | | | I,S |
| | | | POTS | | | | 1012.4 | 1015.2 | 3 | | | | IIIG,V |
| | | | LEAR | | | | 1013.0 | 1014.0 | 3 | | | | III |
| | | | SVTO | | | | 1013.0 | 1015.0 | 3 | | | | III |
| | 0700 | 1200 | IZMI | | | | 1013.7 | 1014.6 | 2 | | | | IIIG, V |
| | 0731 | 1500 | ONDR | | | | 1013.8 | 1014.2 | 2 | | | | IIIGG |
| | | | POTS | | | | 1028.1 | 1028.5 | 1 | | | | I,S |
| | | | POTS | | | | 1240.3 | 1240.6 | 1 | | | | IIIG |
| | | | POTS | | | | 1438.1 | 1438.2 | 1 | | | | IIIG |
| | | | SGMR | | | | 1502.0 | 1502.0 | 1 | | | | V |
| | | | SVTO | | | | 1502.0 | 1502.0 | 2 | | | | III |
| 15 | | | SVTO | | | | 0642.0 | 0831.0 | 1 | | | | CONT |
| | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0728 | 1502 | ONDR | | | | | | | | | | |
| | 0730 | 1452 | POTS | | | | 1449.4 | 1449.5 | 1 | | | | IIIB |
| 16 | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0730 | 1452 | POTS | | | | 0816.0 | 0841.0 | 1 | | | | I,S |
| | | | POTS | | | | 0942.0 | 1010.0 | 1 | | | | I,S |
| | 0725 | 1504 | ONDR | | | | 1115.1 | 1115.2 | 1 | | | | IIIG |
| | | | POTS | | | | 1210.0 | 1235.0 | 1 | | | | I,S |
| 17 | 0730 | 1451 | POTS | | | | 0745.0U | 0850.0U | 1 | | | | I,S |
| | 0723 | 1505 | ONDR | | | | 0749.0 | 1130.0 | 1 | | | | IN |
| | | | LEAR | | | | 0941.0 | 0942.0 | 1 | | | | III |
| | | | POTS | | | | 0941.6 | 0942.1 | 2 | | | | IIIG |
| | | | SVTO | | | | 0942.0 | 0942.0 | 1 | | | | III |
| | | | POTS | | | | 1001.8 | 1002.6 | 1 | | | | IIIG |
| | | | POTS | | | | 1010.2 | 1011.1 | 1 | | | | IIIG |
| | | | POTS | | | | 1018.1 | 1023.5U | 2 | | | | IIIG,C,UNCLF |
| | | | SVTO | | | | 1103.0 | 1103.0 | 2 | | | | III |
| | | | POTS | | | | 1103.3 | 1104.1 | 3 | | | | IIIG,V |
| | 0700 | 1200 | IZMI | | | | 1103.4 | 1103.8 | 2 | | | | IIIG |
| | | | POTS | 1235.1 | 1243.0U | 1 | | | | | | | DCIM, IIIG,RS,P |
| 18 | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0720 | 1508 | ONDR | | | | | | | | | | |
| | 0730 | 1452 | POTS | 0853.6 | 0854.9 | 1 | | | | | | | DCIM |
| | | | POTS | | | | 0950.3 | 0952.8 | 1 | | | | (I,S)?,IIIG |
| | | | POTS | | | | 1230.5U | 1310.0U | 1 | | | | I,S |
| 19 | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0718 | 1509 | ONDR | | | | | | | | | | |
| | | | PALE | | | | 1930.0 | 1931.0 | 1 | | | | III |
| 20 | | | LEAR | | | | 0108.0 | 0117.0 | 3 | | | | II 1400km/s |
| | | | PALE | | | | 0108.0 | 0116.0 | 3 | | | | II 1000km/s |
| | | | LEAR | | | | 0116.0 | 0554.0 | 3 | | | | IV |
| | | | PALE | | | | 0116.0 | 0415.0 | 3 | | | | IV |
| | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0716 | 1511 | ONDR | | | | | | | | | | |
| | | | SVTO | | | | 0901.0 | 0902.0 | 1 | | | | III |
| 21 | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0714 | 1515 | ONDR | | | | | | | | | | |
| | 0714 | 1452 | POTS | | | | 0843.6 | 0843.7 | 1 | | | | IIIB |
| | | | POTS | | | | 1210.4 | 1211.2U | 1 | | | | IIIG |
| 22 | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0711 | 1516 | ONDR | | | | | | | | | | |
| | 0714 | 1452 | POTS | | | | | | | | | | |
| | | | SVTO | | | | 0808.0 | 0809.0 | 2 | | | | III |

# SOLAR RADIO EMISSION
## Spectral Observations

## FEBRUARY 1994

| Day | Observation Start (UT) | Observation End (UT) | Sta | Decimetric Band Start (UT) | Decimetric Band End (UT) | Decimetric Band Int (1–3) | Metric Band Start (UT) | Metric Band End (UT) | Metric Band Int (1–3) | Dekametric Band Start (UT) | Dekametric Band End (UT) | Dekametric Band Int (1–3) | Spectral Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0709 | 1517 | ONDR | | | | | | | | | | |
| | 0714 | 1452 | POTS | | | | | | | | | | |
| | | | PALE | | | | 1837.0 | 1848.0 | 1 | | | | S |
| 24 | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0707 | 1518 | ONDR | | | | | | | | | | |
| | 0713 | 1452 | POTS | | | | 0744.3 | 0746.4 | 1 | | | | IIIG |
| | | | POTS | | | | 1009.0 | 1035.0 | 1 | | | | I,S |
| | | | POTS | | | | 1121.4 | 1121.7 | 1 | | | | IIIG |
| | | | POTS | | | | 1151.1 | 1151.6 | 1 | | | | IIIG |
| | | | POTS | | | | 1255.0 | 1255.3 | 1 | | | | IIIG |
| 25 | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0705 | 1522 | ONDR | | | | | | | | | | |
| | 0714 | 1452 | POTS | | | | 1310.5 | 1312.3 | 1 | | | | IIIG |
| | | | PALE | | | | 2100.0 | 2109.0 | 1 | | | | III |
| 26 | | | LEAR | | | | 0637.0 | 0638.0 | 1 | | | | III |
| | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0702 | 1524 | ONDR | | | | | | | | | | |
| | | | PALE | | | | 2157.0 | 2158.0 | 1 | | | | III |
| | | | PALE | | | | 2326.0 | 2329.0 | 1 | | | | V |
| | | | LEAR | | | | 2327.0 | 2329.0 | 1 | | | | III |
| 27 | | | LEAR | | | | 0439.0 | 0440.0 | 2 | | | | III |
| | 0707 | 1403 | ONDR | | | | | | | | | | |
| | | | LEAR | | | | 0909.0 | 0930.0 | 2 | | | | CONT |
| | | | SVTO | | | | 0912.0 | 0930.0 | 1 | | | | CONT |
| | 0700 | 1200 | IZMI | | | | 1154.0 | 1154.12 | | | | | III |
| 28 | 0658 | 1526 | ONDR | | | | | | | | | | |
| | 0700 | 1200 | IZMI | | | | | | | | | | |
| | 0714 | 1452 | POTS | | | | | | | | | | |
| | | | SGMR | | | | 2012.0 | 2013.0 | 2 | | | | III |
| | | | PALE | | | | 2019.0 | 2019.0 | 1 | | | | III |

The symbols used under the column heading SPECTRAL TYPE have the following definitions:

B = Single burst
G = Small group (< 10) of bursts
GG = Large group (> 10) of burst
C = Underlying continuum (particularly with Type I)
S = Storm in the sense of intermittent but apparently connected activity
N = Intermittent activity in this period
U = U-shaped burst of Type III
SP = SPIKES
RS = Reverse slope burst
DP = Drifting pairs
DC = Drifting Chains
H = Herringbone
W = Weak
P = Pulsations
CONT = Continuum
UNCLF = Unclassified activity
DCIM = Fast drift

Stations Reporting:

IZMI = IZMIRAN  LEAR = Learmonth  ONDR = Ondrejov  PALE = Palehua  POTS = Potsdam
SGMR = Sagamore Hill  SVTO = San Vito

# SOLAR RADIO NOISE STORM AT 164 MHZ
# FROM NANCAY RADIOHELIOGRAPH

## FEBRUARY 1994

| DAY | HELIOGRAPHIC POSITIONS MEAN VALUES* E-W | S-N | IMP** | OBSERVING TIME*** START (UT) | END (UT) |
|---|---|---|---|---|---|
| 07/02/94 | +0.83 | +0.12 | 1 | 0847 E | 1439 D |
| 08/02/94 | -1.03 | +0.30 | 1 | 1010 | 1440 D |
| 08/02/94 | +0.94 | -0.37 | 1 | 0911 E | 1440 D |
| 09/02/94 | -0.76 | -0.02 | 1 | 0925 E | 1440 D |
| 10/02/94 | -0.44 | +0.01 | 1 | 0945 E | 1440 D |
| 11/02/94 | -0.15 | +0.11 | 1 | 0931 E | 1440 D |
| 12/02/94 | -0.02 | +0.26 | 1 | 1035 E | 1500 D |
| 13/02/94 | +0.11 | +0.24 | 1 | 1022 E | 1500 D |
| 14/02/94 | +0.51 | +0.13 | 1 | 1045 E | 1440 D |
| 20/02/94 | +0.06 | +0.31 | 1 | 0846 E | 1438 D |

21, 22 NO DATA
OTHER DAYS : NO DETECTABLE NOISE STORMS

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* POSITIVE E-W AND S-N COORDINATES CORRESPOND TO THE N-W SOLAR QUADRANT

** IMP 1: FLUX<5 SFU IMP 2: 5<FLUX<20 IMP 3: 20<FLUX<100 SFU
IMP 4: 100FLUX<300 SFU IMP 5: FLUX>300 SFU

*** E NOISE STORM IN PROGRESS AT THE BEGINNING OF THE NANCAY OBSERVATIONS
D NOISE STORM IN PROGRESS AT THE END OF THE NANCAY OBSERVATIONS

# COSMIC RAY INDICES
## (Neutron Monitor)
## FEBRUARY 1994

| Day | THULE Average (cts/h)/100 | DEEP RIVER Average (cts/h)/300 | KIEL Average (cts/h)/100 | CLIMAX Average (cts/h)/100 | BEIJING Average (cts/h) 256 | TOKYO Average (cts/h)/256 | HALEAKALA Average (cts/h)/1000 |
|---|---|---|---|---|---|---|---|
| 1 | 4425 | 6963.2 | | 4052.8 | 2000.8 | 3551.5 | 3492.4 |
| 2 | 4407 | 6962.0 | | 4057.1 | 1995.6 | 3561.3 | 3495.8 |
| 3 | 4412 | 6978.5 | | 4059.6 | 1989.8 | 3558.2 | 3496.4 |
| 4 | 4424 | 6985.5 | | 4064.9 | 1996.0 | 3552.3 | 3498.9 |
| 5 | 4388 | 6974.5 | | 4088.0 | 1998.0 | 3551.2 | 3505.2 |
| 6 | 4274 | 6815.3 | | 3986.3 | 1978.1 | 3504.0 | 3467.9 |
| 7 | 4291 | 6793.9 | | 3971.5 | 1979.7 | 3520.4 | 3459.8 |
| 8 | 4327 | 6834.4 | | 4007.0 | 1985.1 | --- | 3478.3 |
| 9 | 4357 | 6846.8 | | 4001.9 | 1993.7 | --- | 3473.8 |
| 10 | 4346 | 6841.0 | | 3998.5 | 1995.3 | --- | 3472.1 |
| 11 | 4368 | 6866.7 | | 4045.5 | 2011.1 | 3540.9 | 3492.7 |
| 12 | 4401 | 6899.2 | | 4050.8 | 2015.6 | --- | 3490.1 |
| 13 | 4419 | 6921.1 | | 4046.1 | 2019.9 | 3532.6 | 3489.5 |
| 14 | 4419 | 6947.2 | | 4054.4 | 2015.3 | 3546.7 | 3483.7 |
| 15 | 4413 | 6932.8 | | 4036.7 | 2011.7 | 3562.3 | 3495.6 |
| 16 | 4401 | 6924.6 | | 4033.2 | 2014.0 | 3569.1 | 3493.2 |
| 17 | 4412 | 6932.3 | | 4043.3 | 2017.5 | 3586.8 | 3509.3 |
| 18 | 4428 | 6969.2 | | 4099.5 | 2022.7 | 3590.0 | 3522.6 |
| 19 | 4437 | 6955.5 | | 4100.6 | 2020.6 | 3585.8 | 3513.0 |
| 20 | 4432 | 6975.4 | | 4103.7 | 2033.3 | 3578.0 | 3518.5 |
| 21 | 4343 | 6859.5 | | 4021.6 | 2003.5 | 3567.1 | 3496.1 |
| 22 | 4277 | 6796.5 | | 3982.8 | 1998.0 | 3548.1 | 3484.0 |
| 23 | 4298 | 6818.0 | | 3982.9 | 1999.7 | 3544.3 | 3484.5 |
| 24 | 4321 | 6843.3 | | 3981.5 | 1998.7 | 3540.9 | 3480.6 |
| 25 | 4334 | 6876.1 | | 3987.7 | 1995.3 | 3539.0 | 3482.4 |
| 26 | 4354 | 6891.0 | | 3984.5 | 1993.3 | 3536.9 | 3471.8 |
| 27 | 4353 | 6901.5 | | 3994.4 | 2003.0 | 3531.9 | 3478.1 |
| 28 | 4349 | 6892.3 | | 3999.1 | 2001.3 | 3529.3 | 3483.2 |
| Mean | 4372 | 6899.9 | | 4029.9 | 2003.1 | 3551.2 | 3489.6 |

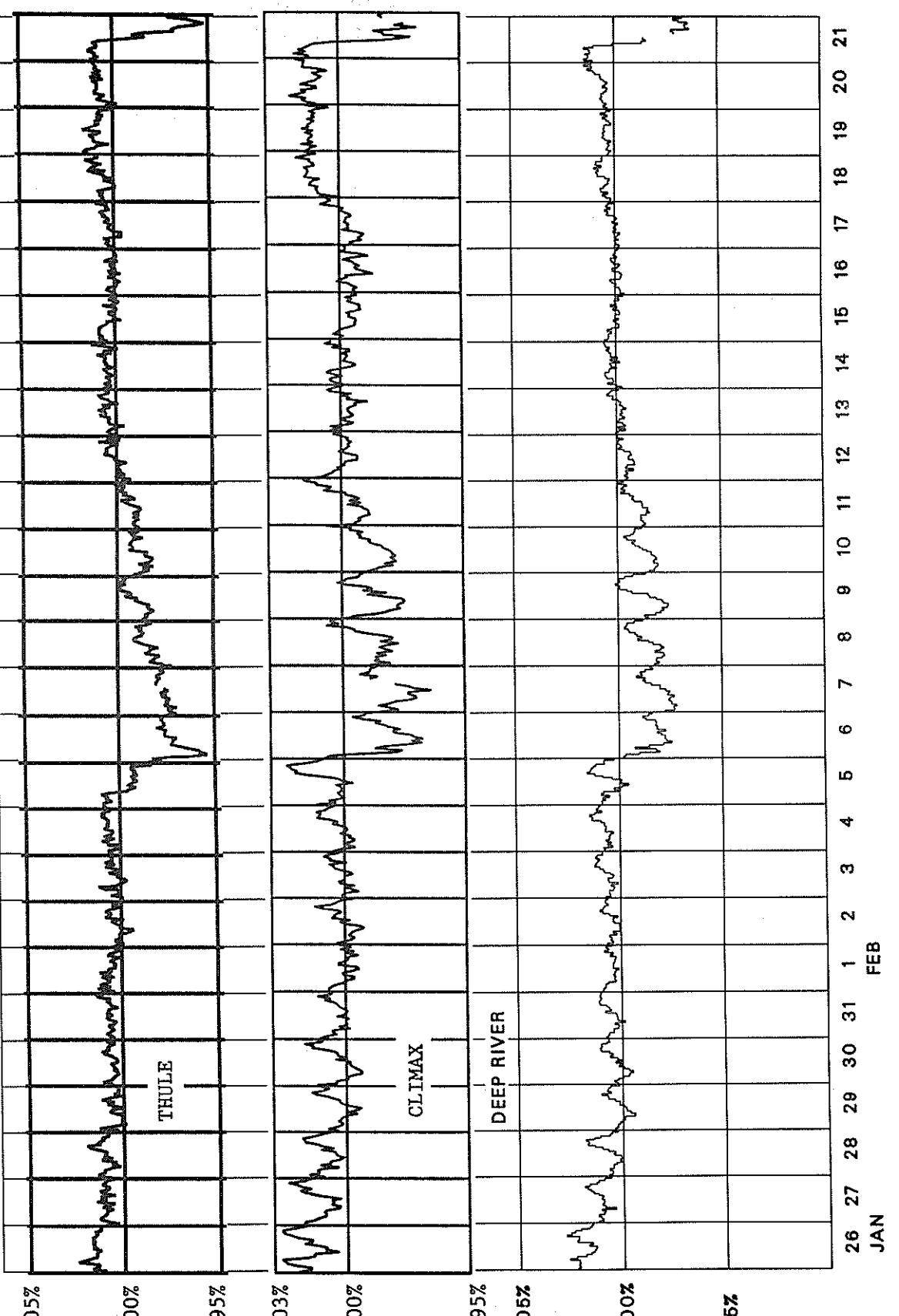
For less than 24-hour coverage, parentheses enclose the number of hours for which data are available. For Climax and Haleakala, parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours.

* = A&B includes only hours when both A&B sections are available.

The Haleakala super neutron monitor data replace the Huancayo IGY neutron monitor data.

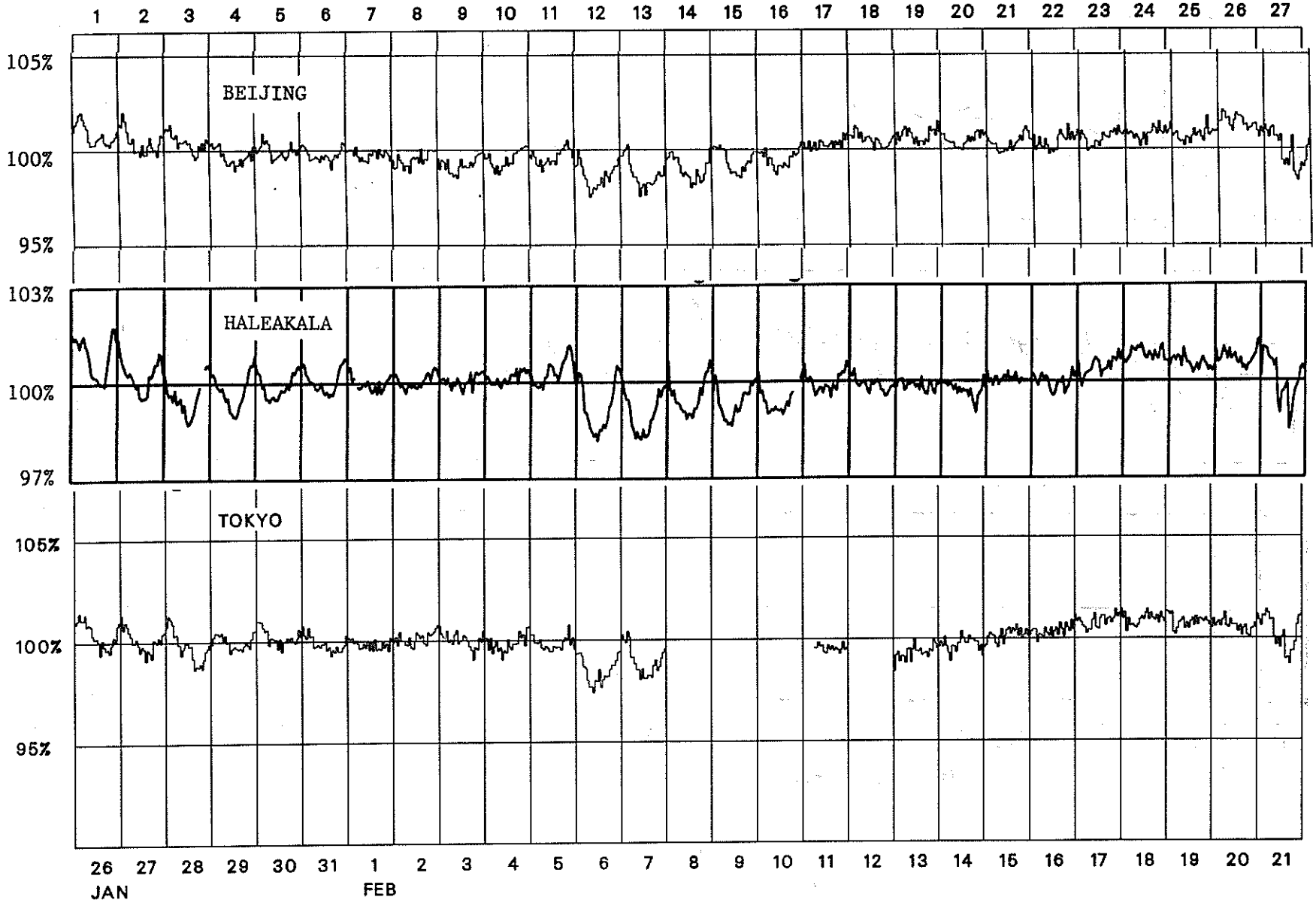
# COSMIC RAY INDICES
## (Neutron Monitor)

Bartels Rotation 2192 (January 1994-February 1994)



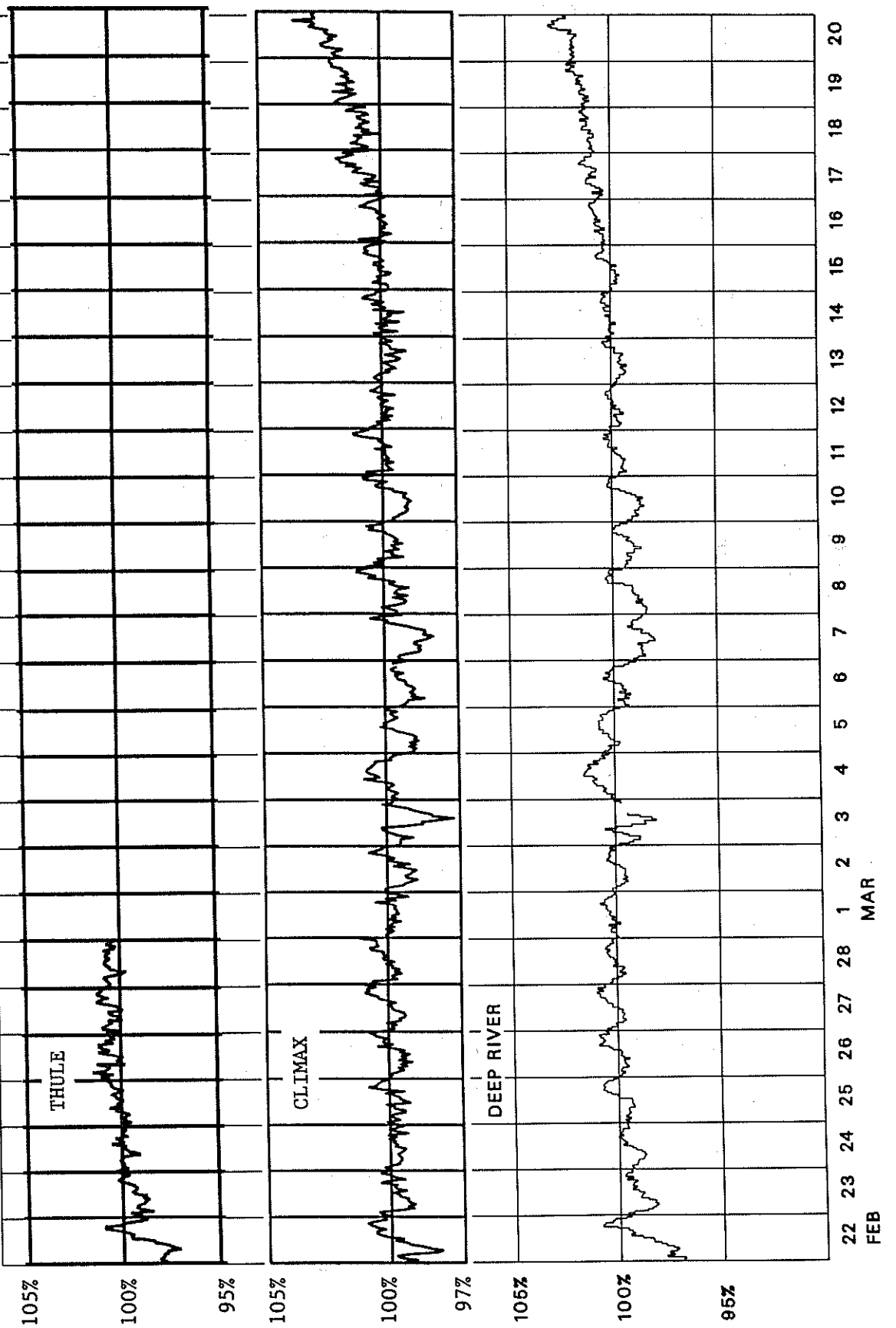
# COSMIC RAY INDICES
## (Neutron Monitor)

Bartels Rotation 2192 (January 1994-February 1994)



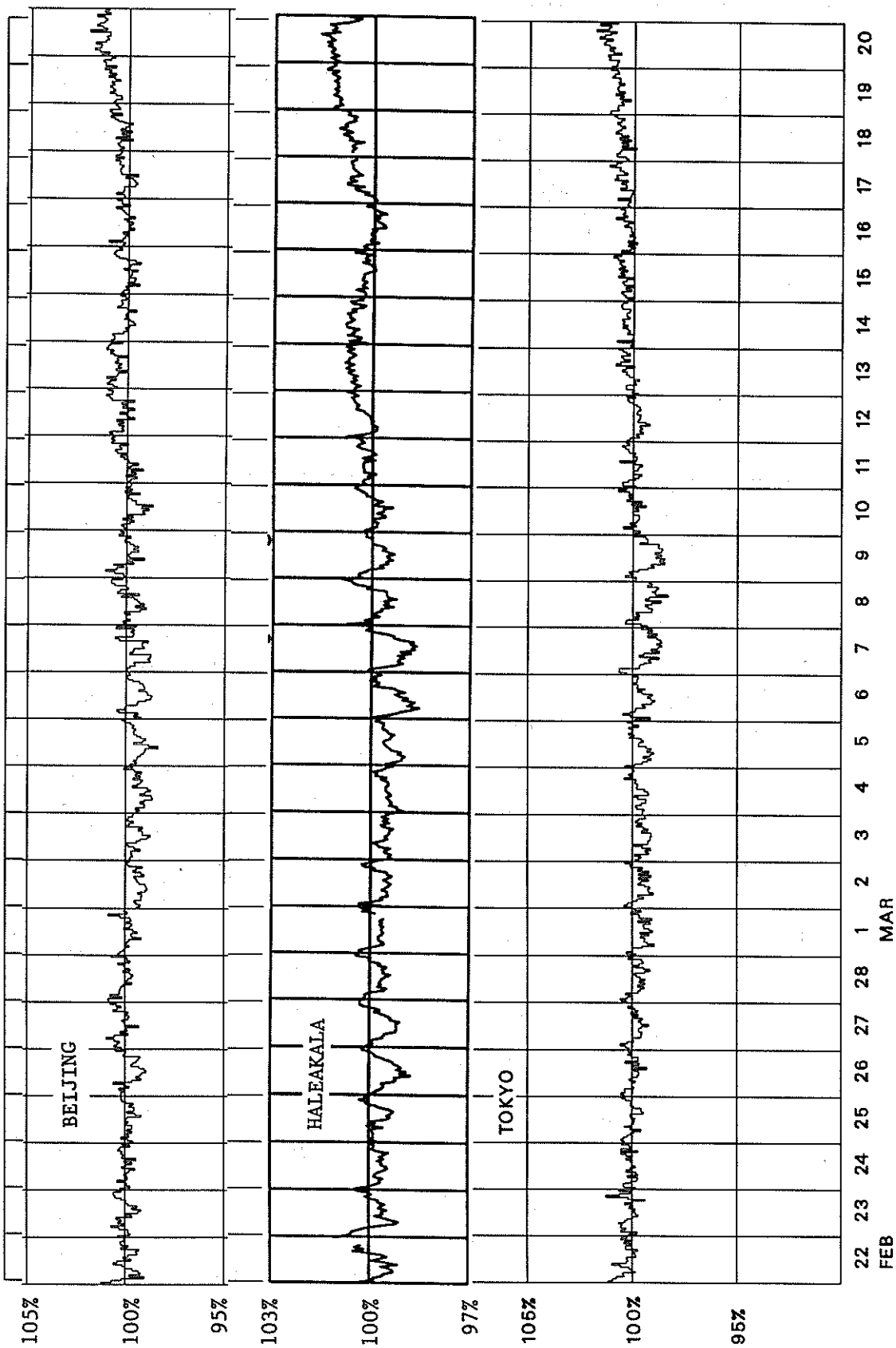
# COSMIC RAY INDICES
## (Neutron Monitor)

Bartels Rotation 2193 (February 1994-March 1994)

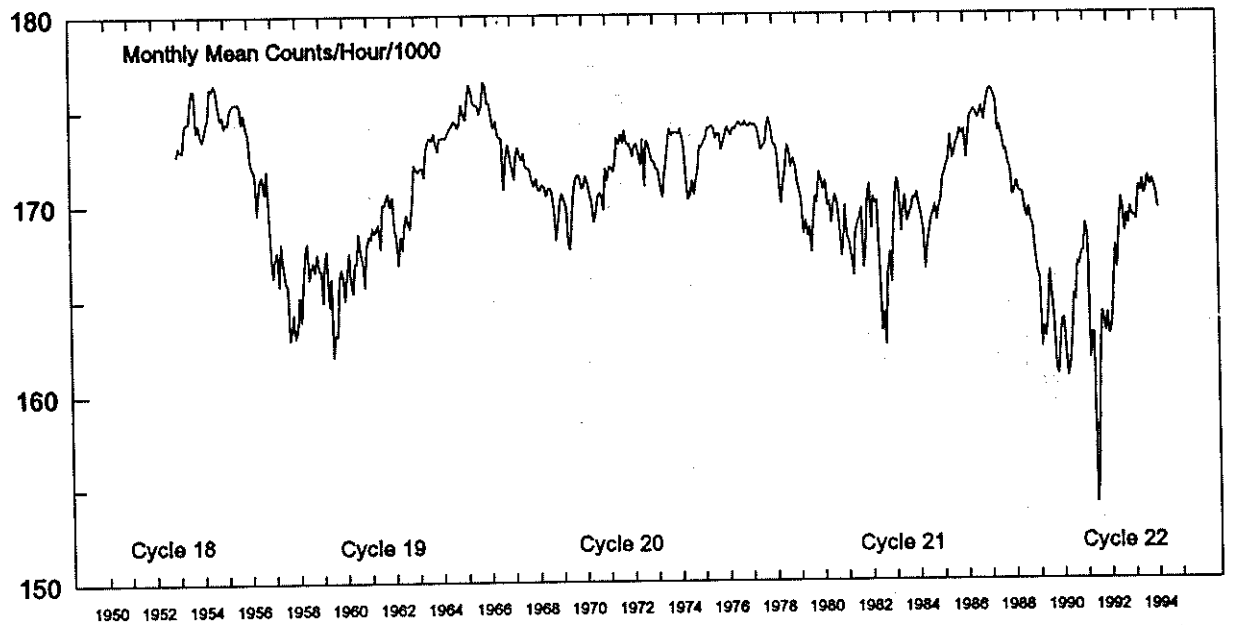


# COSMIC RAY INDICES
## (Neutron Monitor)

Bartels Rotation 2193 (February 1994-March 1994)



# Huancayo* Neutron Monitor Pressure-Corrected/Adjusted Values
## Jan 1953 - Feb 1994




| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1953 | 1727 | 1732 | 1730 | 1729 | 1742 | 1744 | 1744 | 1756 | 1762 | 1761 | 1740 | 1744 | 1743 |
| 1954 | 1737 | 1735 | 1738 | 1744 | 1747 | 1763 | 1761 | 1764 | 1762 | 1754 | 1746 | 1748 | 1750 |
| 1955 | 1742 | 1744 | 1744 | 1751 | 1754 | 1755 | 1754 | 1755 | 1753 | 1744 | 1749 | 1741 | 1749 |
| 1956 | 1738 | 1724 | 1719 | 1718 | 1696 | 1707 | 1715 | 1716 | 1706 | 1719 | 1697 | 1675 | 1711 |
| 1957 | 1663 | 1671 | 1675 | 1658 | 1680 | 1670 | 1659 | 1658 | 1630 | 1633 | 1643 | 1630 | 1656 |
| 1958 | 1635 | 1652 | 1639 | 1657 | 1677 | 1680 | 1661 | 1667 | 1670 | 1665 | 1675 | 1666 | 1662 |
| 1959 | 1666 | 1649 | 1671 | 1676 | 1647 | 1661 | 1621 | 1632 | 1632 | 1661 | 1666 | 1663 | 1654 |
| 1960 | 1650 | 1663 | 1675 | 1660 | 1654 | 1669 | 1669 | 1685 | 1674 | 1670 | 1657 | 1677 | 1667 |
| 1961 | 1684 | 1682 | 1688 | 1685 | 1688 | 1690 | 1677 | 1701 | 1700 | 1704 | 1706 | 1699 | 1692 |
| 1962 | 1704 | 1687 | 1683 | 1668 | 1683 | 1677 | 1690 | 1695 | 1690 | 1688 | 1703 | 1721 | 1691 |
| 1963 | 1720 | 1718 | 1720 | 1720 | 1715 | 1729 | 1734 | 1736 | 1734 | 1739 | 1732 | 1729 | 1727 |
| 1964 | 1735 | 1736 | 1736 | 1736 | 1739 | 1741 | 1742 | 1744 | 1744 | 1741 | 1743 | 1753 | 1741 |
| 1965 | 1748 | 1745 | 1756 | 1764 | 1762 | 1754 | 1753 | 1753 | 1748 | 1754 | 1765 | 1764 | 1755 |
| 1966 | 1754 | 1754 | 1747 | 1741 | 1744 | 1737 | 1736 | 1736 | 1708 | 1725 | 1732 | 1727 | 1737 |
| 1967 | 1721 | 1714 | 1726 | 1731 | 1727 | 1724 | 1727 | 1720 | 1720 | 1718 | 1713 | 1710 | 1721 |
| 1968 | 1714 | 1708 | 1708 | 1710 | 1710 | 1705 | 1708 | 1709 | 1706 | 1698 | 1681 | 1689 | 1704 |
| 1969 | 1702 | 1706 | 1702 | 1698 | 1678 | 1676 | 1695 | 1708 | 1714 | 1716 | 1714 | 1709 | 1701 |
| 1970 | 1709 | 1715 | 1712 | 1707 | 1701 | 1691 | 1695 | 1705 | 1706 | 1705 | 1697 | 1719 | 1705 |
| 1971 | 1712 | 1720 | 1720 | 1718 | 1722 | 1735 | 1732 | 1737 | 1732 | 1739 | 1732 | 1732 | 1728 |
| 1972 | 1730 | 1726 | 1731 | 1732 | 1728 | 1721 | 1734 | 1710 | 1733 | 1733 | 1726 | 1723 | 1727 |
| 1973 | 1723 | 1719 | 1718 | 1709 | 1704 | 1716 | 1723 | 1733 | 1740 | 1737 | 1738 | 1738 | 1725 |
| 1974 | 1730 | 1733 | 1734 | 1740 | 1740 | 1742 | 1740 | 1735 | 1737 | 1738 | 1729 | 1733 | 1736 |
| 1975 | 1737 | 1740 | 1736 | 1729 | 1713 | 1703 | 1704 | 1712 | 1705 | 1713 | 1718 | 1731 | 1720 |
| 1976 | 1738 | 1741 | 1739 | 1737 | 1740 | 1740 | 1742 | 1743 | 1742 | 1742 | 1744 | 1741 | 1741 |
| 1977 | 1741 | 1743 | 1742 | 1742 | 1740 | 1735 | 1729 | 1730 | 1732 | 1742 | 1745 | 1741 | 1739 |
| 1978 | 1731 | 1731 | 1726 | 1710 | 1700 | 1710 | 1717 | 1731 | 1729 | 1719 | 1724 | 1720 | 1721 |
| 1979 | 1711 | 1707 | 1702 | 1684 | 1691 | 1682 | 1688 | 1674 | 1689 | 1703 | 1700 | 1717 | 1696 |
| 1980 | 1713 | 1708 | 1712 | 1699 | 1701 | 1690 | 1698 | 1705 | 1699 | 1688 | 1672 | 1680 | 1697 |
| 1981 | 1699 | 1682 | 1680 | 1671 | 1662 | 1685 | 1690 | 1693 | 1697 | 1666 | 1675 | 1700 | 1683 |
| 1982 | 1710 | 1687 | 1703 | 1700 | 1702 | 1662 | 1632 | 1643 | 1625 | 1662 | 1674 | 1658 | 1671 |
| 1983 | 1688 | 1703 | 1713 | 1709 | 1685 | 1697 | 1704 | 1690 | 1694 | 1697 | 1703 | 1702 | 1699 |
| 1984 | 1705 | 1699 | 1693 | 1685 | 1665 | 1677 | 1684 | 1691 | 1695 | 1699 | 1691 | 1698 | 1690 |
| 1985 | 1703 | 1714 | 1716 | 1721 | 1723 | 1736 | 1724 | 1727 | 1732 | 1734 | 1739 | 1737 | 1725 |
| 1986 | 1739 | 1724 | 1734 | 1746 | 1748 | 1750 | 1748 | 1745 | 1747 | 1751 | 1744 | 1752 | 1744 |
| 1987 | 1757 | 1760 | 1760 | 1757 | 1754 | 1738 | 1741 | 1735 | 1728 | 1728 | 1721 | 1718 | 1741 |
| 1988 | 1704 | 1706 | 1711 | 1706 | 1705 | 1705 | 1696 | 1692 | 1698 | 1690 | 1688 | 1674 | 1698 |
| 1989 | 1663 | 1660 | 1624 | 1635 | 1629 | 1638 | 1664 | 1650 | 1640 | 1611 | 1609 | 1627 | 1637 |
| 1990 | 1638 | 1638 | 1623 | 1608 | 1616 | 1630 | 1651 | 1648 | 1668 | 1666 | 1673 | 1673 | 1644 |
| 1991 | 1689 | 1682 | 1617 | 1631 | 1630 | 1540 | 1555 | 1611 | 1642 | 1638 | 1632 | 1641 | 1626 |
| 1992 | 1630 | 1635 | 1659 | 1677 | 1665 | 1689 | 1702 | 1696 | 1684 | 1693 | 1688 | 1697 | 1676 |
| 1993 | 1692 | 1692 | 1690 | 1708 | 1705 | 1711 | 1704 | 1707 | 1714 | 1709 | 1712 | 1709 | 1705 |
| 1994 | 1705 | 1696 | | | | | | | | | | | 1701 |

Multiply table entries by 100 to obtain hourly counting rate for Huancayo, Peru: S12 W75, Alt=3400m, Cutoff Rigidity=12.92GV (1980). NOTE: Secular changes in the Earth's magnetic field resulted in a slow lowering of the geomagnetic cutoff rigidity at Huancayo over the 40 year period. This dataset was adjusted by applying a linear time-correction based on the calculated change in response to the change in the vertical cutoff. * Data from Jan 92 on are from the 18-NM64 at Haleakala, Hawaii: N20 W156, Alt=3030m, Cutoff Rigitity=12.91GV (1980). Multiply table entries by 2057.6 to obtain equivalent Haleakala counting rate.

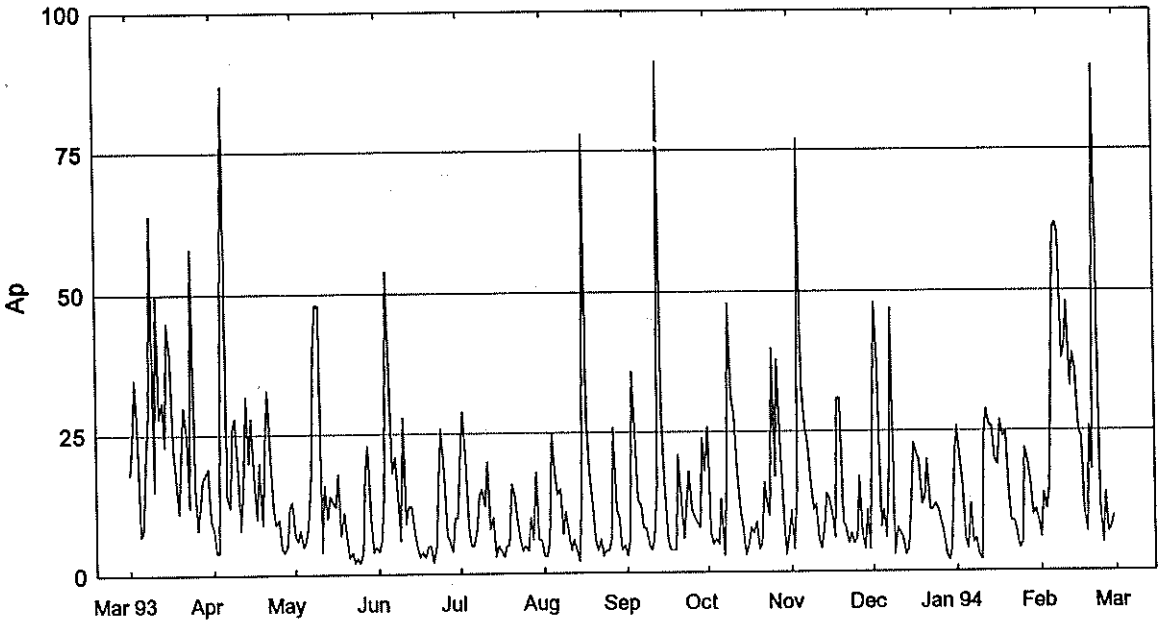
# GEOMAGNETIC ACTIVITY INDICES

February 1994

| Day | | Kp Three-Hourly Indices 1 2 3 4 | 5 6 7 8 | Sum | Ap | Cp | Km Three-Hourly Indices 1 2 3 4 | 5 6 7 8 | Am | aa Provisional N | S | M | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Q2 | 2+ 1 2 2+ | 2- 1- 1- 1- | 11+ | 6 | 0.2 | 2- 1+ 2+ 3- | 2o 1o 1o 1o | 12 | 13 | 10 | 15 | 8 C |
| 2 | Q9A | 1- 3- 3+ 4 | 4 3 2+ 0+ | 20+ | 14 | 0.8 | 1+ 2o 3o 4- | 4o 3o 3- 1- | 26 | 23 | 27 | 22 | 28 |
| 3 | Q7A | 0+ 2- 2+ 2+ | 3+ 3+ 3 3- | 19 | 11 | 0.6 | 1- 2o 3- 3o | 4- 4- 3o 3- | 26 | 24 | 25 | 16 | 33 |
| 4 | | 2 2 2 1+ | 3- 4 5- 3 | 22- | 15 | 0.8 | 1+ 2+ 2o 2- | 3+ 4- 4- 3- | 26 | 32 | 20 | 12 | 40 |
| 5 | | 4- 3 3+ 5 | 3 4 5- 6 | 33- | 33 | 1.3 | 3- 3- 3+ 4+ | 3+ 4- 5- 5o | 51 | 52 | 45 | 38 | 59 |
| 6 | D4 | 6 4+ 4- 5 | 6- 6 6 6 | 43- | 61 | 1.7 | 4+ 3+ 4- 5+ | 6- 6+ 6o 6- | 113 | 87 | 83 | 60 | 111 |
| 7 | D3 | 5- 6 5- 6 | 6+ 5+ 6 4 | 43 | 62 | 1.7 | 4+ 5- 4- 6- | 6o 5o 5+ 4+ | 94 | 93 | 78 | 80 | 91 |
| 8 | D2 | 6+ 6- 5+ 5- | 6- 5+ 5+ 5 | 43+ | 60 | 1.7 | 6- 5- 5- 5- | 5- 5o 5- 5o | 88 | 99 | 87 | 95 | 91 |
| 9 | | 4+ 4- 4 4 | 4+ 5+ 5 5+ | 36 | 38 | 1.4 | 4o 3o 3+ 4- | 4+ 5+ 5- 5o | 66 | 64 | 49 | 39 | 75 |
| 10 | | 5+ 5 4+ 4+ | 5- 5- 4+ 5- | 37+ | 40 | 1.4 | 4o 4- 4- 4+ | 5- 5o 5- 4+ | 66 | 68 | 49 | 51 | 66 |
| 11 | | 5 5 4- 6- | 4+ 5+ 5+ 5+ | 40- | 48 | 1.6 | 4+ 4+ 4- 5o | 5- 5+ 5o 4+ | 78 | 76 | 60 | 60 | 77 |
| 12 | | 5- 4+ 3+ 4 | 5- 4+ 5- 5- | 35- | 33 | 1.3 | 4o 4- 3o 4o | 5o 4o 4+ 4o | 56 | 59 | 43 | 39 | 63 |
| 13 | | 5- 4 3+ 4 | 4- 5+ 6+ 4+ | 36- | 39 | 1.4 | 4o 3o 3o 4- | 3o 5o 6o 4+ | 63 | 68 | 43 | 42 | 68 |
| 14 | | 5- 4+ 4+ 3+ | 4- 6- 4+ 5 | 35+ | 36 | 1.4 | 4- 3+ 4- 3o | 4- 5o 5- 5- | 58 | 61 | 51 | 39 | 74 |
| 15 | | 4- 3+ 3+ 3 | 4+ 4 4+ 5- | 31- | 25 | 1.2 | 3+ 3o 3- 3+ | 4+ 4- 4o 4- | 43 | 52 | 37 | 35 | 54 |
| 16 | | 5 5- 3+ 3+ | 4 3 3+ 3- | 29+ | 24 | 1.2 | 4o 4- 3- 3o | 4- 3o 3o 3- | 35 | 45 | 26 | 43 | 28 |
| 17 | Q8A | 3- 3- 3- 2+ | 3 3- 3- 2 | 21- | 11 | 0.7 | 2+ 2o 2+ 2o | 2+ 3- 3- 2- | 18 | 22 | 13 | 15 | 20 |
| 18 | Q3A | 2- 1+ 1+ 3- | 1+ 1 0+ 3 | 13- | 7 | 0.3 | 2- 1+ 2- 3- | 2- 1+ 1o 3o | 14 | 13 | 18 | 13 | 19 |
| 19 | | 4 4- 4+ 4- | 4+ 3 4+ 4- | 31 | 26 | 1.2 | 3o 3o 4- 3+ | 4- 4- 4o 3+ | 41 | 50 | 33 | 37 | 47 |
| 20 | | 5- 4 3 3 | 2+ 3- 3+ 2+ | 25+ | 18 | 1.0 | 4o 3o 3- 3- | 3- 3- 3+ 2+ | 29 | 25 | 25 | 27 | 23 |
| 21 | D1 | 2+ 3- 4- 7+ | 7+ 7+ 6 7 | 44- | 90 | 1.8 | 2- 2- 3- 7- | 7o 7+ 6- 7- | 148 | 146 | 100 | 75 | 171 |
| 22 | D5 | 7+ 7 5+ 5- | 5- 3 2+ 3 | 37+ | 57 | 1.7 | 7- 6o 5- 4+ | 4o 3o 2+ 3- | 82 | 66 | 51 | 89 | 27 |
| 23 | Q10A | 3- 3+ 3- 3- | 2+ 2- 3+ 2+ | 21 | 12 | 0.7 | 2o 3o 3- 3o | 2+ 2- 3+ 2o | 22 | 25 | 19 | 19 | 25 |
| 24 | Q1 | 2 1 1+ 1+ | 2- 1+ 1 1 | 11- | 5 | 0.2 | 2- 1o 1+ 2- | 1+ 2- 1+ 1+ | 10 | 9 | 10 | 9 | 10 C |
| 25 | | 2 3- 4 4- | 3- 3- 3- 2 | 22+ | 14 | 0.8 | 2o 2+ 4- 4- | 3- 3o 3- 2- | 26 | 24 | 25 | 27 | 22 |
| 26 | Q4A | 3+ 2 1+ 1+ | 2+ 2 1- 1- | 14- | 7 | 0.4 | 2+ 2o 1+ 1+ | 3- 2o 1o 1- | 13 | 14 | 14 | 14 | 14 |
| 27 | Q5A | 1- 2 2 3+ | 3- 2 1- 1- | 14 | 8 | 0.4 | 1o 2- 2o 3+ | 2+ 2- 1o 1- | 14 | 15 | 13 | 16 | 13 |
| 28 | Q6A | 1- 0+ 3+ 3- | 2 1 2+ 4 | 16+ | 10 | 0.6 | 1- 1o 3+ 3- | 2o 1+ 2+ 3+ | 18 | 20 | 15 | 15 | 20 |
| Mean | | | | | 29 | 1.05 | | | 47.7 | 48.0 | 38.4 | 43.2 | |

| Day | Kn Three-Hourly Indices 1 2 3 4 | 5 6 7 8 | An | Ks Three-Hourly Indices 1 2 3 4 | 5 6 7 8 | As | Sa | Prov Ri | Ra | Rs | IMF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2- 1- 2+ 3o | 2- 1- 1o 1- | 12 | 2- 1+ 2o 3- | 2+ 1o 1o 1o | 12 | 91.7 | 29 | 33 | 37 | |
| 2 | 1o 2o 3o 4o | 4- 3+ 3- 1- | 26 | 2- 2o 3o 3o | 4+ 3o 3- 0+ | 26 | 93.5 | 31 | 40 | 39 | |
| 3 | 0+ 2o 3- 3- | 4o 4- 3+ 2+ | 26 | 1- 2o 3- 3o | 3+ 3+ 3- 3- | 25 | 95.1 | 38 | 43 | 41 | |
| 4 | 1+ 2o 2+ 1+ | 3+ 4- 4o 3- | 27 | 2- 2+ 2o 2- | 4- 4- 3o 3- | 26 | 92.7 | 44 | 48 | 38 | |
| 5 | 3- 2+ 3+ 5- | 4- 4- 5- 5+ | 56 | 3- 3- 4- 4- | 3o 4o 5- 5- | 46 | 90.6 | 35 | 47 | 36 | |
| 6 | 5- 3+ 3o 5+ | 6o 6+ 6o 6o | 113 | 4o 3o 4o 5+ | 6- 7- 6+ 6- | 113 | 92.2 | 40 | 44 | 38 | |
| 7 | 4+ 5o 3+ 6- | 6o 5- 6- 4- | 93 | 4+ 5- 4- 5+ | 6o 5+ 5+ 5- | 95 | 93.3 | 46 | 49 | 39 | |
| 8 | 6- 5- 5o 5- | 5o 5+ 5o 5- | 92 | 5+ 4+ 5- 5- | 5- 5- 4+ 5+ | 83 | 92.6 | 41 | 54 | 38 | |
| 9 | 4o 3o 4- 4- | 4+ 5o 5o 5- | 65 | 4o 3o 3o 4o | 4+ 6- 4o 5+ | 67 | 98.3 | 40 | 48 | 44 | |
| 10 | 4+ 4o 4- 5- | 5- 5- 4o 4+ | 64 | 4- 3+ 4o 4o | 5- 5o 5o 4+ | 69 | 91.8 | 32 | 38 | 37 | |
| 11 | 4o 4+ 4o 5+ | 5- 5+ 4+ 4+ | 75 | 4+ 4+ 3+ 5o | 4+ 6- 5+ 5- | 80 | 90.7 | 29 | 32 | 36 | |
| 12 | 4- 4o 3o 4o | 5- 4o 4+ 4o | 57 | 4o 3o 3o 4o | 5+ 4o 4o 4o | 56 | 95.1 | 36 | 39 | 41 | |
| 13 | 4- 3+ 3- 4- | 3o 5o 6- 4+ | 59 | 4o 3o 3o 4o | 3- 5o 6+ 4+ | 66 | 95.4 | 46 | 49 | 41 | |
| 14 | 4- 4- 4- 3o | 3o 5o 4+ 4+ | 52 | 4o 3+ 4o 3+ | 4+ 5o 5- 5o | 64 | 98.9 | 39 | 44 | 45 | |
| 15 | 3+ 3o 3o 3+ | 5- 4o 4- 4- | 44 | 4- 3- 2o 3o | 4+ 4- 4+ 4- | 42 | 101.3 | 34 | 36 | 47 | |
| 16 | 4o 4- 3- 3o | 4- 3- 3o 3- | 34 | 4o 4- 3o 3- | 4o 3o 3o 3- | 36 | 102.3 | 43 | 41 | 48 | |
| 17 | 2+ 2- 3- 2+ | 3- 3- 3- 2- | 19 | 2o 2+ 2- 2- | 2+ 3- 2+ 2- | 17 | 103.9 | 43 | 45 | 50 | |
| 18 | 2- 1+ 1+ 3- | 1+ 1o 1- 3o | 13 | 1+ 1+ 2o 3o | 2- 1+ 1+ 3o | 16 | 103.9 | 42 | 43 | 50 | |
| 19 | 3+ 3o 4- 4- | 4- 3o 4+ 3+ | 40 | 3o 3+ 4- 3+ | 4- 4+ 3+ 3+ | 42 | 105.6 | 28 | 33 | 52 | |
| 20 | 4o 3+ 3- 3- | 2+ 3- 3+ 2+ | 28 | 4- 3o 3- 3o | 3- 3- 3+ 3- | 30 | 105.2 | 20 | 21 | 52 | |
| 21 | 2- 2o 3- 7- | 7o 7o 5+ 6+ | 137 | 2- 2- 3o 7- | 7+ 7+ 6o 7o | 159 | 103.1 | 19 | 17 | 49 | |
| 22 | 6+ 6+ 5- 4+ | 4o 3- 2+ 3- | 80 | 7o 6o 5- 4+ | 4o 3+ 2+ 3- | 85 | 104.4 | 35 | 40 | 51 | |
| 23 | 2o 3o 3- 3- | 2+ 2o 3+ 2o | 22 | 2o 2+ 3- 3o | 3- 1+ 3o 2+ | 21 | 105.1 | 33 | 41 | 52 | |
| 24 | 1+ 1- 1+ 1+ | 2- 2o 1o 1+ | 9 | 2- 1+ 1+ 2- | 1+ 2- 2o 1+ | 11 | 102.9 | 34 | 40 | 49 | |
| 25 | 2- 2o 4- 3+ | 3- 3o 3o 2- | 26 | 2o 3- 3+ 4o | 3o 3- 2+ 2- | 26 | 94.8 | 29 | 37 | 40 | |
| 26 | 3- 2- 1+ 1+ | 2+ 2+ 1o 0+ | 12 | 2+ 2o 1+ 1+ | 3- 2o 1+ 1o | 13 | 92.6 | 36 | 37 | 38 | |
| 27 | 1- 2- 2- 3+ | 2+ 1+ 1+ 1- | 13 | 1o 2- 2+ 3+ | 2+ 2o 1o 1- | 14 | 93.0 | 38 | 46 | 38 | |
| 28 | 1- 0+ 3+ 3o | 2o 1o 2+ 4- | 19 | 1- 2- 3o 2+ | 2o 2- 2+ 3o | 18 | 90.8 | 46 | 47 | 36 | |
| Mean | | | 46.9 | | | 48.5 | 97.2 | 35.9 | 40.4 | 43.0 | |

# Daily Average Indices Ap
## Mar 1993 - Feb 1994

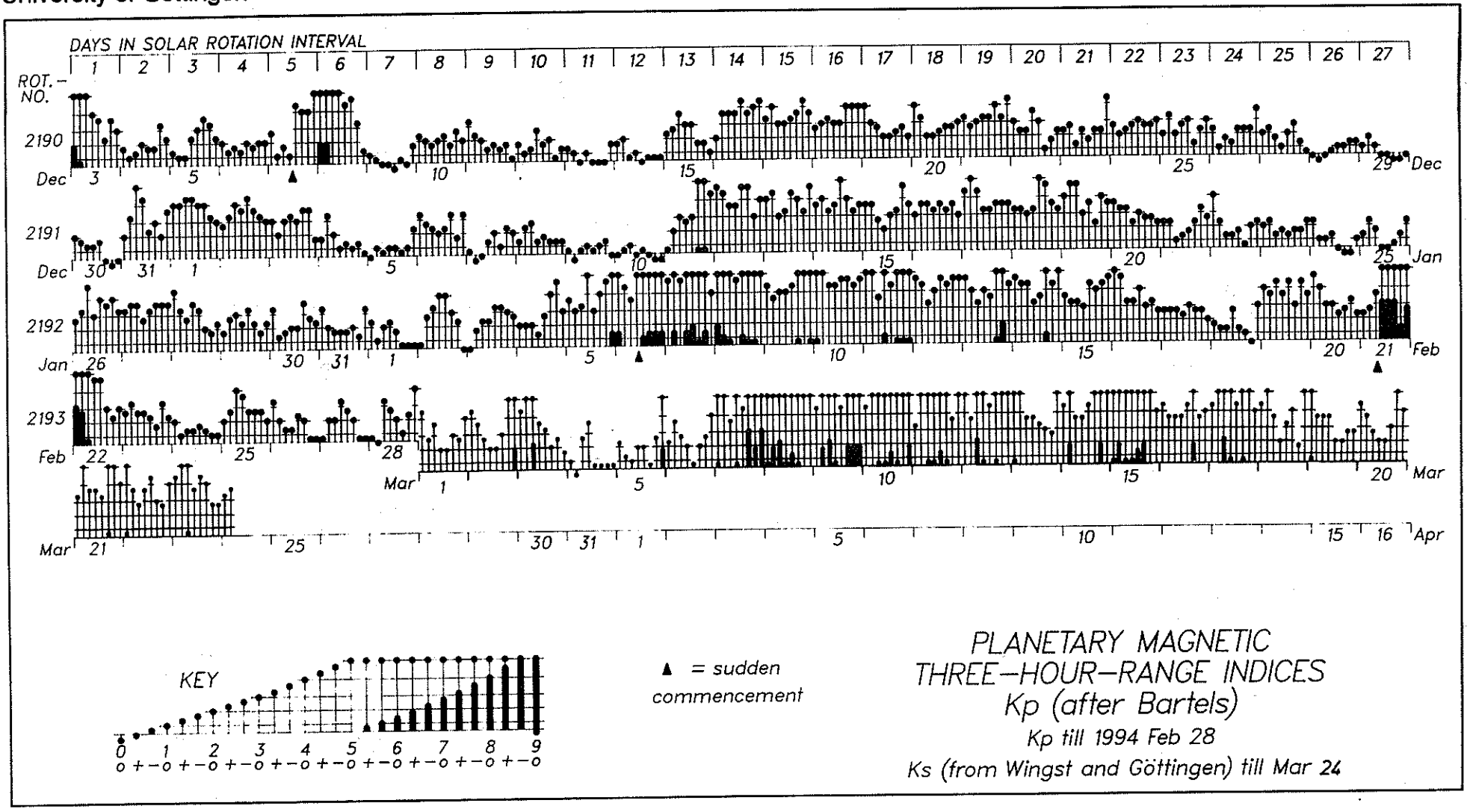



| Day | Mar 93 | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan 94 | Feb |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18 | 8 | 7 | 4 | 22 | 3 | 3 | 26 | 11 | 29 | 26 | 6 |
| 2 | 24 | 4 | 6 | 6 | 29 | 3 | 6 | 7 | 4 | 48 | 21 | 14 |
| 3 | 35 | 4 | 8 | 14 | 21 | 6 | 36 | 5 | 15 | 37 | 15 | 11 |
| 4 | 23 | 58 | 5 | 54 | 8 | 25 | 25 | 6 | 77 | 8 | 6 | 15 |
| 5 | 7 | 87 | 6 | 36 | 5 | 18 | 13 | 5 | 34 | 11 | 4 | 33 |
| 6 | 8 | 14 | 9 | 18 | 5 | 14 | 12 | 13 | 26 | 6 | 12 | 61 |
| 7 | 22 | 12 | 18 | 21 | 8 | 15 | 8 | 3 | 23 | 20 | 5 | 62 |
| 8 | 29 | 26 | 40 | 14 | 14 | 7 | 8 | 16 | 17 | 47 | 6 | 60 |
| 9 | 64 | 28 | 48 | 6 | 15 | 11 | 5 | 48 | 11 | 3 | 3 | 38 |
| 10 | 15 | 18 | 48 | 28 | 12 | 7 | 4 | 31 | 12 | 8 | 2 | 40 |
| 11 | 50 | 8 | 4 | 9 | 20 | 4 | 6 | 28 | 6 | 7 | 24 | 48 |
| 12 | 28 | 16 | 16 | 12 | 8 | 6 | 16 | 18 | 4 | 6 | 29 | 33 |
| 13 | 31 | 32 | 10 | 12 | 10 | 4 | 91 | 11 | 8 | 3 | 26 | 39 |
| 14 | 23 | 20 | 14 | 8 | 3 | 2 | 28 | 8 | 14 | 4 | 26 | 36 |
| 15 | 45 | 28 | 13 | 5 | 5 | 14 | 16 | 3 | 13 | 11 | 20 | 25 |
| 16 | 39 | 16 | 12 | 3 | 4 | 78 | 6 | 5 | 10 | 23 | 19 | 24 |
| 17 | 23 | 10 | 18 | 4 | 3 | 27 | 4 | 8 | 6 | 21 | 27 | 11 |
| 18 | 18 | 20 | 7 | 3 | 5 | 18 | 4 | 7 | 31 | 20 | 24 | 7 |
| 19 | 11 | 9 | 11 | 5 | 5 | 12 | 4 | 9 | 31 | 12 | 25 | 26 |
| 20 | 21 | 23 | 7 | 5 | 16 | 6 | 21 | 4 | 9 | 13 | 14 | 18 |
| 21 | 30 | 33 | 3 | 2 | 14 | 4 | 14 | 5 | 8 | 20 | 9 | 90 |
| 22 | 25 | 21 | 4 | 5 | 10 | 6 | 6 | 16 | 5 | 11 | 9 | 57 |
| 23 | 12 | 12 | 2 | 17 | 6 | 3 | 12 | 12 | 7 | 11 | 7 | 12 |
| 24 | 58 | 9 | 3 | 26 | 4 | 4 | 18 | 10 | 5 | 12 | 4 | 5 |
| 25 | 16 | 10 | 2 | 18 | 5 | 4 | 11 | 40 | 6 | 11 | 5 | 14 |
| 26 | 8 | 5 | 4 | 7 | 4 | 6 | 10 | 17 | 17 | 9 | 22 | 7 |
| 27 | 12 | 4 | 18 | 6 | 10 | 26 | 9 | 38 | 7 | 7 | 20 | 8 |
| 28 | 17 | 5 | 23 | 4 | 6 | 11 | 8 | 21 | 4 | 3 | 16 | 10 |
| 29 | 18 | 12 | 10 | 10 | 18 | 10 | 24 | 11 | 11 | 2 | 10 | |
| 30 | 19 | 13 | 4 | 10 | 6 | 4 | 18 | 3 | 4 | 4 | 11 | |
| 31 | 10 | | 5 | | 6 | 5 | | 7 | | 20 | 9 | |
| Mean | 24 | 19 | 12 | 12 | 10 | 12 | 15 | 14 | 15 | 14 | 15 | 29 |

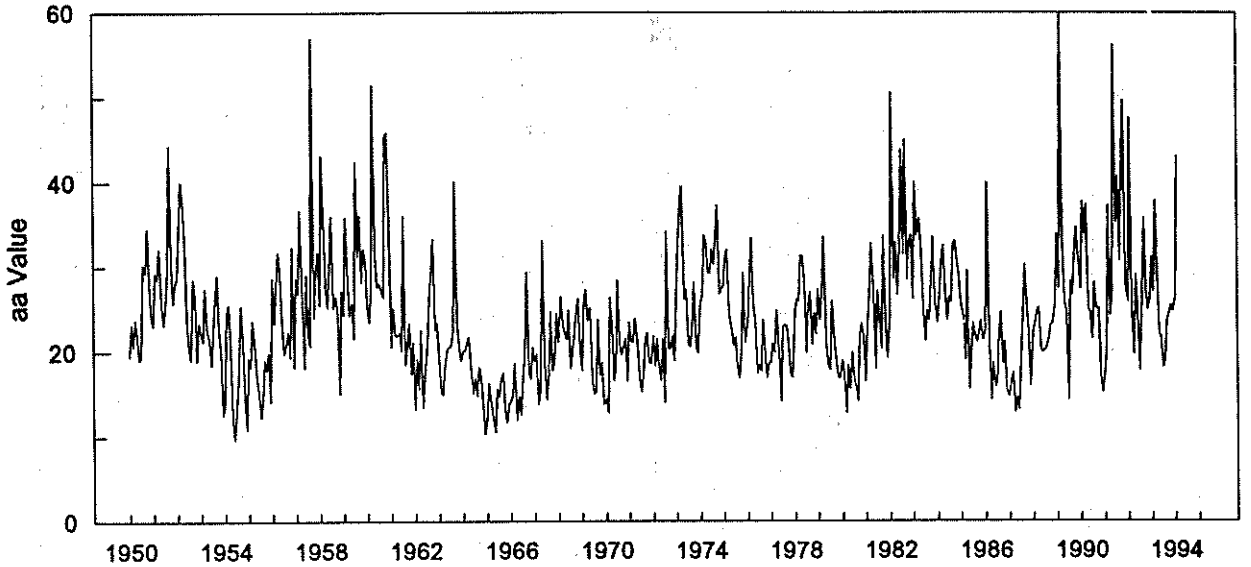
# PLANETARY 3-HOUR-RANGE INDICES (Kp) BY 27-DAY SOLAR ROTATION INTERVAL

University of Gottingen

Kp through February 28, 1994



# Monthly Mean aa Index Jan 1950 - Feb 1994




| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1950 | 19.5 | 23.2 | 20.6 | 23.8 | 21.7 | 19.0 | 19.5 | 30.2 | 29.3 | 34.5 | 28.0 | 24.0 | 24.4 |
| 1951 | 23.1 | 29.2 | 28.5 | 32.1 | 25.5 | 23.2 | 25.2 | 29.7 | 44.4 | 30.3 | 25.7 | 28.2 | 28.8 |
| 1952 | 28.5 | 34.3 | 40.1 | 38.0 | 33.1 | 23.8 | 20.7 | 19.0 | 28.5 | 26.4 | 18.9 | 23.4 | 27.9 |
| 1953 | 22.3 | 21.2 | 27.4 | 22.7 | 21.4 | 18.4 | 22.5 | 26.1 | 29.0 | 22.4 | 20.2 | 12.6 | 22.2 |
| 1954 | 13.9 | 24.5 | 25.5 | 20.6 | 12.0 | 9.7 | 13.1 | 16.5 | 25.4 | 21.1 | 14.5 | 10.9 | 17.3 |
| 1955 | 19.3 | 18.2 | 23.6 | 21.1 | 16.7 | 15.1 | 12.3 | 14.3 | 19.1 | 17.8 | 19.9 | 14.1 | 17.6 |
| 1956 | 28.7 | 23.3 | 27.6 | 31.7 | 29.3 | 23.5 | 19.8 | 20.7 | 22.4 | 19.3 | 32.3 | 18.2 | 24.7 |
| 1957 | 28.7 | 26.8 | 36.7 | 28.8 | 18.1 | 29.1 | 21.7 | 20.7 | 57.0 | 24.0 | 29.5 | 31.7 | 29.4 |
| 1958 | 25.5 | 43.2 | 36.1 | 27.6 | 25.2 | 29.7 | 36.0 | 25.1 | 26.5 | 24.7 | 15.0 | 27.2 | 28.5 |
| 1959 | 24.3 | 35.9 | 29.9 | 24.2 | 25.7 | 21.6 | 42.5 | 31.2 | 36.1 | 28.2 | 32.1 | 30.8 | 30.2 |
| 1960 | 25.2 | 23.5 | 27.6 | 51.5 | 31.6 | 27.6 | 28.1 | 27.2 | 26.4 | 45.6 | 45.9 | 34.5 | 32.9 |
| 1961 | 20.6 | 25.1 | 22.0 | 21.8 | 22.3 | 20.1 | 36.0 | 18.5 | 20.7 | 23.3 | 17.3 | 21.1 | 22.4 |
| 1962 | 13.2 | 19.2 | 15.5 | 22.6 | 13.4 | 18.1 | 21.0 | 26.2 | 29.8 | 33.3 | 22.5 | 23.5 | 21.5 |
| 1963 | 19.3 | 15.3 | 14.9 | 18.2 | 20.4 | 20.5 | 20.8 | 22.5 | 40.2 | 23.5 | 20.7 | 18.9 | 21.3 |
| 1964 | 20.1 | 20.1 | 21.0 | 21.7 | 17.5 | 15.1 | 16.9 | 14.8 | 18.2 | 16.9 | 13.8 | 10.3 | 17.2 |
| 1965 | 11.8 | 16.3 | 14.3 | 12.6 | 10.5 | 15.7 | 14.7 | 16.8 | 17.5 | 13.1 | 11.7 | 13.8 | 14.1 |
| 1966 | 14.2 | 14.8 | 18.6 | 12.0 | 14.8 | 12.5 | 17.1 | 20.0 | 29.4 | 17.5 | 16.8 | 20.5 | 17.3 |
| 1967 | 18.9 | 19.8 | 13.8 | 15.5 | 33.1 | 18.6 | 14.4 | 17.5 | 24.7 | 17.8 | 18.9 | 24.5 | 19.8 |
| 1968 | 21.1 | 26.5 | 23.3 | 22.2 | 21.4 | 24.9 | 18.0 | 20.1 | 22.0 | 24.8 | 26.2 | 20.3 | 22.6 |
| 1969 | 17.8 | 25.8 | 27.3 | 23.6 | 25.2 | 16.7 | 15.0 | 15.3 | 23.8 | 17.2 | 18.7 | 13.8 | 20.0 |
| 1970 | 14.4 | 12.7 | 26.4 | 23.1 | 16.6 | 18.3 | 28.4 | 21.0 | 19.7 | 20.6 | 21.6 | 16.5 | 19.9 |
| 1971 | 23.5 | 21.2 | 21.1 | 23.9 | 21.1 | 17.0 | 15.2 | 17.1 | 21.4 | 22.2 | 18.8 | 18.6 | 20.1 |
| 1972 | 21.9 | 18.3 | 21.5 | 18.1 | 16.6 | 21.5 | 14.0 | 34.2 | 20.4 | 20.4 | 21.8 | 18.9 | 20.6 |
| 1973 | 26.1 | 32.7 | 36.9 | 39.6 | 26.1 | 27.3 | 20.9 | 20.6 | 22.8 | 28.2 | 20.7 | 19.9 | 26.8 |
| 1974 | 25.8 | 26.4 | 33.7 | 32.9 | 29.2 | 29.2 | 32.0 | 30.2 | 33.7 | 37.3 | 26.8 | 27.5 | 30.4 |
| 1975 | 27.6 | 31.1 | 32.0 | 24.3 | 22.7 | 20.7 | 21.7 | 18.1 | 16.9 | 20.2 | 29.3 | 21.1 | 23.8 |
| 1976 | 23.3 | 28.5 | 33.4 | 25.4 | 23.7 | 17.5 | 18.4 | 17.7 | 23.7 | 20.4 | 16.9 | 18.6 | 22.3 |
| 1977 | 18.7 | 21.0 | 19.9 | 24.9 | 20.1 | 14.2 | 22.9 | 23.2 | 23.0 | 20.9 | 17.3 | 17.0 | 20.3 |
| 1978 | 24.6 | 26.2 | 25.9 | 31.3 | 31.2 | 28.3 | 19.9 | 25.6 | 27.0 | 20.8 | 24.6 | 22.0 | 25.6 |
| 1979 | 27.3 | 23.7 | 26.9 | 33.5 | 21.0 | 18.3 | 17.9 | 26.0 | 22.0 | 19.3 | 17.1 | 16.8 | 22.5 |
| 1980 | 19.0 | 17.3 | 12.7 | 18.4 | 15.6 | 20.0 | 17.0 | 15.9 | 14.2 | 21.9 | 23.3 | 21.7 | 18.1 |
| 1981 | 16.5 | 23.1 | 26.6 | 32.8 | 26.9 | 18.0 | 27.2 | 24.0 | 20.4 | 33.7 | 24.1 | 19.3 | 24.4 |
| 1982 | 24.2 | 50.6 | 28.5 | 32.9 | 26.7 | 32.1 | 43.9 | 31.4 | 45.1 | 28.5 | 33.0 | 33.8 | 34.2 |
| 1983 | 26.2 | 40.0 | 33.6 | 35.7 | 31.6 | 24.9 | 21.3 | 24.9 | 23.7 | 28.3 | 33.5 | 26.0 | 29.1 |
| 1984 | 23.5 | 26.7 | 30.7 | 32.5 | 27.2 | 23.7 | 26.4 | 25.8 | 32.6 | 33.1 | 31.0 | 29.0 | 28.5 |
| 1985 | 25.7 | 24.1 | 19.0 | 29.5 | 15.6 | 19.9 | 23.4 | 22.0 | 21.2 | 22.2 | 23.7 | 21.4 | 22.3 |
| 1986 | 22.4 | 40.0 | 21.1 | 14.3 | 18.8 | 15.9 | 16.3 | 22.3 | 24.7 | 18.6 | 21.2 | 15.3 | 20.9 |
| 1987 | 14.8 | 16.6 | 17.6 | 12.9 | 14.7 | 13.2 | 19.3 | 24.3 | 30.3 | 25.8 | 22.4 | 16.0 | 19.0 |
| 1988 | 22.4 | 23.4 | 24.8 | 25.2 | 20.5 | 20.0 | 20.2 | 20.6 | 21.4 | 23.2 | 23.3 | 25.5 | 22.5 |
| 1989 | 33.9 | 27.5 | 60.1 | 32.8 | 25.7 | 24.9 | 14.4 | 28.4 | 26.7 | 31.4 | 34.7 | 31.4 | 31.0 |
| 1990 | 27.4 | 37.8 | 33.9 | 37.4 | 25.1 | 24.6 | 21.6 | 28.2 | 25.1 | 25.1 | 17.4 | 15.2 | 26.6 |
| 1991 | 17.2 | 20.1 | 37.3 | 24.3 | 27.3 | 56.2 | 35.2 | 40.8 | 30.7 | 44.1 | 49.7 | 28.0 | 34.2 |
| 1992 | 25.9 | 47.7 | 24.5 | 19.8 | 29.1 | 24.8 | 17.9 | 24.1 | 35.8 | 27.0 | 25.0 | 26.1 | 27.3 |
| 1993 | 31.2 | 27.1 | 37.9 | 29.2 | 22.1 | 21.8 | 18.2 | 19.2 | 23.8 | 24.6 | 25.5 | 24.8 | 25.5 |
| 1994 | 26.5 | 43.2 | | | | | | | | | | | 34.9 |

# P R I N C I P A L  M A G N E T I C  S T O R M S

## FEBRUARY 1994

| Sta | Geomag Lat | Commencement Day | Commencement Time (UT) | Type | SC Amplitudes D (Min) | SC Amplitudes H (Gamma) | SC Amplitudes Z (Gamma) | Maximum 3-Hour K Index Day(3-Hour Periods) | Ranges K | Ranges D (Min) | Ranges H (Gamma) | Ranges Z (Gamma) | End Day | End Hour (UT) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GUA | 04.3N | 02 | 10-- | .. | .. | .. | .. | 02(4) | 5 | -- | 50 | 10 | 02 | 19 |
| DRV | 75.2S | 03 | 2320 | SC | 96 | -120 | -280 | 06(8) 07(1,4,5) 08(1) 09(2) 11(1) 12(1,5) 13(1) 16(1) | 6 | 814 | 967 | 1174 | 17 | 12 |
| FRD | 49.4N | 05 | 08-- | .. | .. | .. | .. | 07(5) 08(1) | 6 | 42 | 215 | 89 | 17 | -- |
| BJI | 28.8N | 05 | 0436 | SC | 0.3 | 10 | 0 | 07(4) | 6 | 19 | 182 | 31 | 09 | 01 |
| KRC | 16.4N | 05 | 0412 | .. | .. | .. | .. | 05(7) 06(4,5,6,7) 07(4) 08(5) | 6 | 98 | 206 | 100 | 09 | 00 |
| HYB | 07.6N | 05 | 0100 | .. | .. | .. | .. | 06(5,6,7) | 6 | 7 | 241 | 22 | 08 | 22 |
| GUA | 04.3N | 05 | 21-- | .. | .. | .. | .. | 06(1) | 6 | 10 | 130 | 30 | 06 | 24 |
| ETT | 00.7S | 05 | 0100 | .. | .. | .. | .. | | - | 8 | 269 | 105 | 08 | 24 |
| HER | 33.6S | 05 | 20-- | .. | .. | .. | .. | 06(6,8) | 6 | 51 | 191 | 208 | 10 | 02 |
| CAN | 43.6S | 05 | 04-- | .. | .. | .. | .. | 07(4) | 6 | 26 | 195 | 76 | 09 | 00 |
| AMS | 46.8S | 05 | 06-- | .. | .. | .. | .. | 06(6,7,8) 11(6,7) 13(7) 14(7) | 6 | 41 | 198 | 122 | 16 | 19 |
| PAF | 57.2S | 05 | 12-- | .. | .. | .. | .. | 06(6,7) 07(5) | 9 | 188 | 1398 | 481 | 16 | 21 |
| CZT | 51.5S | 06 | 10-- | .. | .. | .. | .. | 06(8) | 8 | 58 | 320 | 240 | 16 | 23 |
| GUA | 04.3N | 07 | 02-- | .. | .. | .. | .. | 07(1) | 5 | 10 | 90 | 20 | 07 | 17 |
| GUA | 04.3N | 07 | 22-- | .. | .. | .. | .. | 08(1) | 5 | -- | 100 | 30 | 08 | 13 |
| GUA | 04.3N | 08 | 22-- | .. | .. | .. | .. | 08(8) | 5 | -- | 30 | 20 | 09 | 08 |
| KRC | 16.4N | 09 | 1143 | .. | .. | .. | .. | 09(6) 10(6) 11(4,6) 12(5) 13(7) | 6 | 60 | 116 | 69 | 13 | 22 |
| HYB | 07.6N | 10 | 0500 | .. | .. | .. | .. | 11(4) | 6 | 4 | 107 | 17 | 13 | 22 |
| GUA | 04.3N | 10 | 06-- | .. | .. | .. | .. | 10(5) | 5 | -- | 50 | 10 | 10 | 19 |
| ETT | 00.7S | 10 | 0300 | .. | .. | .. | .. | | - | 4 | 167 | 75 | 14 | 23 |
| GUA | 04.3N | 11 | 08-- | .. | .. | .. | .. | 11(4) | 5 | -- | 60 | 10 | 11 | 21 |
| HER | 33.6S | 11 | 08-- | .. | .. | .. | .. | 11(7) | 5 | 27 | 72 | 87 | 12 | 03 |
| GUA | 04.3N | 12 | 09-- | .. | .. | .. | .. | 12(5) | 5 | -- | 50 | 10 | 12 | 19 |
| GUA | 04.3N | 13 | 18-- | .. | .. | .. | .. | 13(7) | 5 | -- | 30 | 10 | 13 | 22 |
| HER | 33.6S | 13 | 16-- | .. | .. | .. | .. | 13(7) | 6 | 44 | 114 | 148 | 15 | 02 |
| GUA | 04.3N | 14 | 13-- | .. | .. | .. | .. | 14(6) | 5 | -- | 50 | 10 | 14 | 20 |
| FRD | 49.4N | 21 | 0901 | SC* | - 17.2 | 96 | - 12 | 21(4,5) 22(1,2) | 7 | 99 | 258 | 144 | 22 | 17 |
| BJI | 28.8N | 21 | 0901 | SC | - 2.7 | 102 | 5 | 21(5) | 7 | 21 | 280 | 42 | 22 | 22 |
| KRC | 16.4N | 21 | 0901 | SC | 3.6 | 122 | 43 | 21(5) | 8 | 130 | 331 | 123 | 22 | 15 |
| HYB | 07.6N | 21 | 0901 | SC | - 1.2 | 84 | - 6 | 21(5) | 8 | 8 | 316 | 26 | 23 | 05 |
| GUA | 04.3N | 21 | 0901 | SC* | 0.9 | 80 | - 24 | 21(5) | 7 | 10 | 250 | 60 | 22 | 15 |
| ETT | 00.7S | 21 | 0900 | SC | .. | .. | .. | | - | 9 | 290 | 153 | 22 | 21 |
| HER | 33.6S | 21 | 0901 | SC* | 5 | 70 | 48 | 21(5,6,7,8) 22(1) | 6 | 45 | 220 | 251 | 22 | 15 |
| CAN | 43.6S | 21 | 0900 | SC | 10.9 | 118 | 27 | 21(4,5,6,8) | 6 | 24 | 370 | 101 | 22 | 15 |
| AMS | 46.8S | 21 | 0901 | SC* | - 9 * | 41 * | 38 * | 21(4,5,6,7,8) 22(1) | 6 | 55 | 276 | 288 | 22 | 15 |
| CZT | 51.5S | 21 | 0900 | SC | 8.4 | 42 | - 20 | 21(5,6) 22(1) | 9 | 86 | 592 | 662 | 22 | 15 |
| PAF | 57.2S | 21 | 0901 | SC* | - 18 | -100 * | 27 | 21(5,6,8) 22(1) | 9 | 339 | 2362 | 1364 | 22 | 15 |
| DRV | 75.2S | 21 | 0902 | SC* | -160 * | 504 * | -400 * | 21(4) | 7 | 1399 | 1503 | 1179 | 23 | 09 |

Stations:

ABG = ALIBAG
AMS = MARTIN DE VIVIES
ANN = ANNAMALAINAGAR
BJI = BEIJING
CAN = CANBERRA
CMO = COLLEGE
CZT = PORT ALFRED
DRV = DUMONT D'URVILLE
ETT = ETAIYAPURAM
FRD = FREDERICKSBURG
GNA = GNANGARA
GUA = GUAM
HER = HERMANUS
HON = HONOLULU
HYB = HYDERABAD
JAI = JAIPUR
KRC = KARACHI
PAF = PORT AUX FRANCAIS
PMG = PORT MORESBY
SHL = SHILLONG
SIT = SITKA
TRD = TRIVANDRUM
UJJ = UJJAIN

# MAGNETIC STORM SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS (PRELIMINARY REPORT ON RAPID MAGNETIC VARIATIONS)

## FEBRUARY 1994

| Storm Sudden Commencements (SSC) | | | Solar Flare Effects (sfe) | | |
|---|---|---|---|---|---|
| Day | Time | Quality: Station Group* | Day | Begin-End | Station(s) |
| 06 | 0924 | B: WNG* COI | 02 | 0419-0426 | BDV |
| | | C: SOD* NGK BDV* SPT | 02 | 0802-0807 | SOD CLF |
| | | | 02 | 1406-1416 | TEN |
| 21 | 0901 | A: SOD* LER* ESK* WNG NGK* HAD* CLF* HRB* NAG* GCK* MMB* COI* BJI SPT FRD* KAK* HTY* KNY* TEN* LNP HYB HER* | 26 | 1215-1223 | BDV |
| | | B: BDV* | | | |
| | | -: AQU AMS* CZT PAF* DRV* | | | |

REPORTING OBSERVATORIES (up to the 4th of April):
SOD DOB LER ESK WNG NGK HAD BDV CLF HRB NAG GCK MMB AQU EBR COI BJI SPT FRD KAK HTY KNY QUE TEN LNP HYB ETT HER CNB AMS CZT PAF DRV

Three-letter codes identify each observatory. Reporting stations have been grouped by the character of the observed event. The letter A means very remarkable; B means fair, but unmistakable; C means very poor, doubtful; and - means no quality figure given. The * means that the SSC, at least in one component, was preceded by a small reversed impulse. SSCs are given only when five or more stations report the event. SFEs include all reports. If an SFE is confirmed by solar or ionoshperic events, the name of the station is underlined.

# WORLD DATA CENTER A
## FOR
## SOLAR-TERRESTRIAL PHYSICS

The ICSU Panel on WDCs has recommended that it would be appropriate courtesy to acknowledge in publications that data were obtained from the originating station or investigator through the intermediary of the WDCs. The following statement is suggested:

"Data used in this study were provided by WDC-A for Solar-Terrestrial Physics, NOAA E/GC2, 325 Broadway, Boulder Colorado 80303, USA."