

HEUS 1 BOUL 111300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 131A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 1200UT 11 MAY 1981

I A. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM  
10/1200UT TO 11/1200UT:

SOLAR ACTIVITY HAS BEEN MODERATE. REGION 3106 (N10E67) PRODUCED  
AN M3 XRAY EVENT WITH EPL TO 0.15 SOLAR RADIUS AND SIGNIFICANT  
CENTIMETRIC OUTPUT AT 10/1256Z. A NUMBER OF OTHER REGIONS HAVE  
CONTRIBUTED LOW LEVELS OF ACTIVITY, BUT MOST RECENT ACTIVITY  
HAS BEEN FROM REGION 3099 (N09E01) INCLUDING A 2B OPTICAL FLARE  
OF NEARLY FOUR HOURS DURATION, MAXIMUM AT 11/0548Z WITH SEVERAL  
C CLASS XRAY PEAKS. REGION 3099 RETAINS ITS COMPLEXITY, HAS  
SHOWN REORGANIZATION IN THE LEADER AREA, AND FURTHER GROWTH IN  
THE TRAILER PORTION. REGION 3106 HAS MOVED FURTHER ONTO THE DISK  
BUT STILL DOES NOT FULLY REVEAL ITS CHARACTER. IT DOES SHOW  
EVIDENCE OF A RADIO RICHNESS. BOTH OF THESE REGIONS APPEAR  
CAPABLE OF PRODUCING MAJOR FLARES.

II. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO APPROACH HIGH LEVELS WITH ENERGETIC  
FLARES ANTICIPATED FROM REGIONS 3099 AND 3106.

III. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD REACHED MAJOR STORM LEVELS BRIEFLY FOLLOWING  
SUDDEN COMMENCEMENT AT 10/2208. IT IS EXPECTED TO REMAIN AT ACTIVE  
TO NEAR STORM LEVELS FOR MOST OF THE FORECAST PERIOD.

IV. EVENT PROBABILITIES: 12 - 14 MAY

CLASS M 90/90/90

CLASS X 35/35/35

PROTON 25/25/25

PCAF IN PROGRESS

V. OTTAWA 10.7 FLUX

OBSERVED 10 MAY 212

ESTIMATED 11 MAY 230

PREDICTED 12-14 MAY 240/255/270

90 DAY MEAN 10 MAY 213

VI. GEOMAGNETIC A INDICES

OBSERVED AFR 09 MAY 34 AP 10 MAY 32

ESTIMATED AFR 10 MAY 24 AFR/AP 11 MAY 35/60

PREDICTED AFR/AP 12-14 MAY 25/25 20/20 16/20

SOLTERWARN

PT

HEUS 3 POU 112200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO

SDF NUMBER 131R

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 2200 UT 11 MAY 1981

I. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 11/1200 UT TO 11/2200 UT: SOLAR ACTIVITY HAS BEEN MODERATE. REGION 3099 (N10W15) PRODUCED A M2/1B FLARE AT 11/1608 UT AND ALSO SEVERAL SUBFLARES WITH CLASS C X-RAY EVENTS AND MINOR RADIO BURSTS. THE SPOT GROUP CONTINUES TO CHANGE AND SOME MOTION IS EVIDENT IN THE LEADER SPOTS. REGION 3106 (N11E56) CONTAINS A LARGE COMPLEX GROWING SPOT GROUP OF CLASS/AREA E/660, BUT HAS PRODUCED ONLY MINOR FLARES TODAY. AN ERUPTIVE PROMINENCE WAS OBSERVED AT 11/1815 UT ON THE EAST LIMB BEYOND REGION 3106 INDICATING ANOTHER NEW REGION WILL BE VISIBLE TOMORROW. TWO SMALL NEW REGIONS WERE NUMBERED, 3107 (N12W04) AND 3108 (S21W40). ALL OTHER REGIONS ARE QUIET.

II. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE HIGH WITH MAJOR FLARES POSSIBLE FROM REGIONS 3099 AND 3106.

III. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN ACTIVE THE PAST 10 HOURS. ACTIVE CONDITIONS ARE EXPECTED DURING THE FORECAST PERIOD. THE SATELLITE PROTON EVENT WHICH BEGAN 09/1400 UT REACHED A PEAK FLUX OF 200P/CM<sup>2</sup>/SEC/STER AT GT 10 MEV ON 11/0000 UT. A SLOW DECLINE HAS CONTINUED THROUGHOUT THE DAY WITH A FLUX OF 56 PARTICLES AT 2200 UT.

IV. EVENT PROBABILITIES 12 MAY - 14 MAY:

CLASS M 90/90/80

CLASS X 35/35/35

PROTON 25/25/25

PCAF IN PROGRESS

V. OTTAWA 10.7 CM FLUX

OBSERVED 11 MAY 222

PREDICTED 12-14 MAY 230/235/240

90-DAY MEAN 11 MAY 214

VI. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 10 MAY 25/32

ESTIMATED AFR/AP 11 MAY 32/50

PREDICTED AFR/AP 12-14 MAY 25/25 - 20/20 - 16/20

SOLTERWARN

BT