

HFUS 1 ROU 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

IA. 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.

IB. SOLAR ACTIVITY FORECAST:

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

II. 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

III. EVENT PROBABILITIES: 12 - 14 MAY

CLASS M 90/90/90

CLASS X 35/35/35

PROTON 25/25/25

PCAF IN PROGRESS

IV. 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

V. 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

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HFUS 3 BOU 112200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO

SDF NUMBER 131B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 2200 UT 11 MAY 1981

IA. 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 SURFLARES 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. REGIONS 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.

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

II. 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/CM2/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.

III. EVENT PROBABILITIES 12 MAY - 14 MAY.

CLASS M	90/90/90
CLASS X	35/35/35
PROTON	25/25/25
POAF	IN PROGRESS

IV. OTTAWA 10.7 CM FLUX

OBSERVED	11 MAY 222
PREDICTED	12-14 MAY 230/235/240
90-DAY MEAN	11 MAY 214

V. 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

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