

HEUS 1 BOU 161300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDE NUMBER 136A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1200UT 16 MAY 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM

15/1200UT TO 16/1200UT

SOLAR ACTIVITY MADE A SUDDEN INCREASE AT 160734Z WHEN A SLOW RISING EVENT FINALLY MAXED AS AN X1/3B FLARE AT 160859Z. THIS EVENT WAS PRODUCED BY REGION 3106 (N12E09). SHORTWAVE FADES TO 22 MHZ ACCCOMPANIED THIS FLARE AS WELL AS TYPE II/IV SWEEP FREQUENCY BURST. A MODIFIED "U" BURST SPECTRUM OCCURRED ON FIXED FREQUENCIES WITH THE 10CM FLUX REACHING 1400 UNITS. REGION 3106 REMAINS THE MOST IMPRESSIVE DISK REGION. REGION 3112 (N15E21) MAY HAVE RESUMED GROWTH AS AN AFS HAS DEVELOPED IN THE CENTRAL PORTIONS. REGION 3099 (N10W62) NOW HAS AN ACTIVE FILAMENT AND ALTHOUGH APPROACHING WEST LIMB, THIS ACTIVE FILAMENT COULD TRIGGER ENERGETIC ACTIVITY BEFORE LIMB TRANSIT.

IB. SOLAR ACTIVITY FORECAST.

SOLAR ACTIVITY SHOULD BE AT MODERATE LEVELS DURING THE NEXT 24 HOURS. REGION 3106 WILL CONTINUE TO BE A THREAT FOR SIGNIFICANT ACTIVITY.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN AT MINOR STORM LEVELS. A DECLINE TO ACTIVE CONDITIONS IS EXPECTED DURING THE NEXT 24 TO 36 HOURS AND THEN THE FIELD IS EXPECTED TO RESPOND TO THE X1/3B FLARE AND RETURN TO MINOR STORM CONDITIONS. THE FLUCTUATING PARTICLE LEVELS THAT WERE OBSERVED ON 15 MAY HAVE NOW STABILIZED.

III. EVENT PROBABILITIES: 17 MAY - 19 MAY

CLASS M 85/75/70

CLASS X 15/10/10

PROTON 10/10/10

PCAF YELLOW

IV. OTTAWA 10.7 FLUX

OBSEVED 15 MAY 214

ESTIMATED 16 MAY 210

PREDICTED 17-19 MAY 205/200/200

90 DAY MEAN 15 MAY 215

V. GEOMAGNETIC A INDICES

OBSEVED AFR 14 MAY 16 AP 15 MAY 54

ESTIMATED AFR 15 MAY 35 AFR/AP 16 MAY 27/50

PREDICTED AFR/AP 17-19 MAY 20/30 15/30 35/50

SOLTERWARN

RT

NNNZICVZD ZEZGVZL VZOUU.

KBOU

HFUS 3 BOU 162200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 136B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200UT 16 MAY 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 16/1200UT TO 16/2200UT:

SOLAR ACTIVITY HAS BEEN LOW FOR THE PAST 10 HOURS. THE LARGEST OPTICAL EVENT WAS A 1 FAINT FLARE FROM 3099 (N10W69) MAXING AT 1426 UT, AND THE LARGEST X-RAY EVENT WAS C3/SM FROM 3106 (N13E04). IMPRESSIVE GROWTH OCCURRED IN REGION 3113 (S25E43) WHICH NOW C-TYPE GROUP WITH A LARGE LEADER/PENUMBRA CONTAINING 3 NMBRA.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO BE MODERATE WITH REGION 3106 PROVIDING THE BEST POTENTIAL FOR SIGNIFICANT ACTIVITY.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS CONTINUED AT MINOR STORM LEVELS. PROTONS OF ENERGIES GREATER THAN 10 MEV CROSSED THE EVENT THRESHOLD AT 1325 UT AND REACHED 130 FLUX UNITS AT 1950 UT. A POLAR CAP ABSORPTION EVENT BEGAN AT 2015 UT. BOTH EVENTS CONTINUE IN PROGRESS. THE GEOMAGNETIC FIELD IS EXPECTED TO BE AT ACTIVE TO MINOR STORM LEVELS TOMORROW INCREASING TO MAJOR STORM LEVELS ON 18 MAY IN RESPONSE TO TODAYS FLARE.

III. EVENT PROBABILITIES: 17 MAY - 19 MAY

CLASS M 90/90/90

CLASS X 25/25/25

PROTON 25/25/25

PCAF IN PROGRESS

IV. OTTAWA 10.7 FLUX

OBSERVED	16 MAY	214
----------	--------	-----

PREDICTED	17 - 19 MAY	205/200/195
-----------	-------------	-------------

90 DAY MEAN	16 MAY	215
-------------	--------	-----

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP	15 MAY	39/54
-----------------	--------	-------

ESTIMATED AFR/AP	16 MAY	40/56
------------------	--------	-------

PREDICTED AFR/AP	17 - 19 MAY	25/30 80/80 50/50
------------------	-------------	-------------------

SOLTERWARN

BT

NNNZSV
UU

2212