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HFUS 3 BOU 122200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 163B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 12 JUN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 12/1200Z TO 12/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE. REGION 3776 (N12E74) HAS PRODUCED FREQUENT CLASS M FLARES WITH AN M3/1N AT 12/1627UT, AN M1/1N AT 12/1742UT, AN M2/SN AT 12/1832UT, AND WAS MOST LIKELY RESPONSIBLE FOR AN M3 AT 12/1859UT. THIS IS A HUGE SUNSPOT GROUP WITH AN AREA EXCEEDING 2000 MILLIONTHS, COMPACT STRUCTURE, AND MULTIPLE DELTA CONFIGURATIONS. ERUPTIVE LIMB ACTIVITY CONTINUES BUT IN WHITE LIGHT THE REGION APPEARS TO HAVE COMPLETED EAST LIMB TRANSIT. ARCH FILAMENTS HAVE BEEN REPORTED IN BOTH REGIONS 3763 (S09W60) AND 3770 (S18W06) INDICATING LOCALIZED GROWTH MAY BE OCCURRING.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD BE INTERMITTENTLY HIGH FOR THE FORECAST PERIOD. REGION 3776 SHOULD CONTINUE TO PRODUCE FREQUENT CLASS M FLARES WITH CLASS X FLARES LIKELY. 3776 IS LOCATED WITHIN LONGITUDES WHICH HAVE PREVIOUSLY BEEN PRODUCTIVE IN PCA AND PARTICLE EVENTS. 3763 MAY PRODUCE AN ISOLATED LARGE FLARE PRIOR TO WEST LIMB TRANSIT.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD WAS UNSETLED UNTIL 12/1442UT WHEN A STRONG SSC OF 59 GAMMA OCCURRED. SINCE THAT TIME THE FIELD HAS BEEN AT MINOR STORM LEVELS. THIS DISTURBANCE IS POSSIBLY DUE TO A VERY LONG LIVED M1 FROM 3763 LATE ON 10 JUNE. WHILE THE FIELD HAS CALMED SOMEWHAT AT THIS TIME, SOLAR WIND DATA INDICATE THIS DISTURBANCE WILL CONTINUE INTO 13 JUNE. UNSETLED GEOMAGNETIC CONDITIONS ARE FORECAST FOR 14 JUNE RETURNING TO ACTIVE ON 15 JUNE.

III. EVENT PROBABILITIES 13 JUN-15 JUN

CLASS M 99/99/99

CLASS X 40/40/40

PROTON 20/20/25

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 12 JUN 256 (FLARE ENHANCED)

PREDICTED 13 JUN-15 JUN 250/255/250

90 DAY MEAN 12 JUN 166

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 11 JUN 025/033

ESTIMATED AFR/AP 12 JUN 030/040

PREDICTED AFR/AP 13 JUN-15 JUN 025/030-014/020-025/020

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HFXUS 1 BOU 121300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO.

SDF NUMBER 163A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 12 JUN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 11/1200Z TO 12/1200Z: SOLAR ACTIVITY HAS BEEN HIGH. AN X3/1B FLARE AT 0536Z OCCURRED WITH A SYSTEM OF SURGES AND BRILLIANT ERUPTIVE CENTERS IN REGION 3776(N12E85). A LOOP PROMINENCE SYSTEM (INDICATIVE OF PROTON EMISSION) DEVELOPED OVER THE REGION AFTER THE EVENT MAX. THIS REGION WAS THE SOURCE OF M1 EVENTS AT 1847Z, 2331Z, 0522, 0258Z AND 0402Z. ITS MOST RECENT EVENT WAS M3/SB AT 1130Z. LARGE SPOTS ARE NOW VISIBLE IN AN EKC GROUP EXTENDING TO THE SOLAR LIMB. PLAGUE, SURGES AND ACTIVE PROMINENCES EXTEND FROM S05 TO N25 AND MUCH OF THE STRUCTURE ORIGINATES FROM BEYOND THE LIMB. THIS ENORMOUS REGION REPRESENTS THE 8TH ACTIVE DISK PASSAGE FOR THIS HELIOGRAPHIC LOCATION. REGION N 3763(S09W5/) PRODUCED AN M3/1B EVENT AT 11/1502Z. IT CONTINUES TO DECAY BUT RETAINS A STRONG DELTA CONFIGURATION. REGION 3770(S18 W01) HAS DEVELOPED A MINOR DELTA IN AN OTHERWISE SIMPLE REGION. MINOR GROWTH HAS OCCURRED IN FOUR SMALLER REGIONS.

IB. SOLAR ACTIVITY FORECAST: MAJOR FLARES, INCLUDING ONE OR TWO OF CLASS X, ARE EXPECTED DAILY FOR THIS FORECAST PERIOD.

II. GEOPHYSICAL SUMMARY AND FORECAST : THE GEOMAGNETIC FIELD RESUMED MINOR STORM ACTIVITY AFTER 1800Z AND CONTINUED UNTIL 0600Z. CONDITIONS HAVE SINCE BECOME UNSETLED. THESE CONDITIONS WILL CONTINUE UNTIL RECURRENCE OF A M INOR STORM ON 15 JUNE.

III. EVENT PROBABILITIES 13 JUN-15 JUN

CLASS M 99/99 /9 9

CLASS X 40/40/40

PROTON 20/20/20

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 11 JUN 218

ESTIMATED 12 JUN 250

PREDICTED 13 JUN-15 JUN 280/310/280

90 DAY MEAN 11 JUN 165

V. GEO MAGNETIC A INDICES

OBSERVED AFR 10 JUN 039 AP 11 JUN 033

ESTIMATED AFR 11 JUN 027 AFR/AP 12 JUN 016/020

PREDICTED AFR/AP 13 JUN-15 JUN 014/015-014/020-025/020

SOLTERWARN

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HXUS BOU 121300

PREDM 09913 09914 09915

PREDX 04013 04014 04015

PREDP 02013 02014 02015

PCAF 00213

TENCM 28013 31014 28015

AFRED 01413 01414 02515

AFAPF 01513 02014 02015

KKK 22233 32333 33332

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