

HFUS 1 BOU 051300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 156A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 05 JUN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 04/1200Z TO 05/1200Z: SOLAR ACTIVITY REMAINS VERY HIGH. REGION 3763 (S07E41) HAS PRODUCED ELEVEN SIGNIFICANT EVENTS IN THE PAST 24 HOURS. ON 4 JUNE THEY WERE AN X5/2B AT 1311Z, AN X2/2B AT 1419Z, AN M3/SB AT 1649Z, AND AN M2/2B AT 1912Z. ON 5 JUNE THEY WERE AN M6/1B AT 0122Z, AN M2 AT 025Z, AN M2/1B AT 0247Z, AN M5 AT 0311Z, AN M3/SB AT 0415Z, AN X2/SB AT 0612Z AND AN M7/1B AT 0725Z. MOST OF THE FLARES WERE ACCCOMPANIED BY MODERATE SHORT WAVE FADES AND MODERATE TO STRONGG RADIO BURST WITH TENFLARES OF 620FU AT 1325Z, 400FU AT 1419Z, 350FU AT 0616Z, 300 FU AT 0727Z AND 300 FU AT 0740Z. THE REGION REMAINS VERY COMPLEX WITH STRON MAGNETIC FIELD GRADIENTS THAT HAVE NOT DECREASED DURING TODAYS FLARE ACTIVITY. A SMALL NEW REGION 3766 (N12W21) DEVELOPED ON THE DISK. ALL OTHER REGIONS ARE SMALL IN COMPARISON TO REGION 3763 BUT MINOR GROUTH AND SUBFLARE ACTIVITY IS REPORTED IN REGION 3762 (N21E20).

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO REMAIN VERY HIGH THROUGHOUT THE FORECAST PERIOD WITH CONTINUED M AND X-CLASS FLARES FROM REGION 3763. THE CHANCE OF NEAR-EARTH PARTICLE FLUX ENHANCEMENTS AND ASSOCIATED POLAR CAP DISTURBANCES WILL INCREASE AS THE REGION APPROACHES THE CENTER OF THE DISK.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN QUIET. ACTIVE AND THEN MINOR STORM CONDITIONS ARE EXPECTED BEGINNING 6 JUNE AS A RESULT OF THE INTENSE FLARES FROM REGION 3763 SINCE 3 JUNE AND THE DISAPPEARANCE OF TWO LARGE FILAMENTS NEAR S20E30 ON 3 JUNE. THE MAGNETIC DISTURBANCES MAY BE ACCOMPANIED BY ENHANCED LOW LEVEL BACKGOUND PROTON FLUXES AT SATELLITE ALTITUDES.

III. EVENT PROBABILITIES 06 JUN-08 JUN

CLASS M 99/99/99

CLASS X 80/80/80

PROTON 35/40/50

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 04 JUN 156

ESTIMATED 05 JUN 160

PREDICTED 06 JUN-08 JUN 165/168/170

90 DAY MEAN 04 JUN 167

V. GEOMAGNETIC A INDICES

OBSERVED AFR 03 JUN 011 AP 04 JUN 012

ESTIMATED AFR 04 JUN 008 AFR/AP 05 JUN 003/010

PREDICTED AFR/AP 06 JUN-08 JUN 025/020-040/025-030/025

SOLTERWARN

BT

HFUS 3 BOU 052200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 156B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 05 JUN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 05/1200Z TO 05/2100Z: SOLAR ACTIVITY HAS BEEN AT HIGH LEVELS THROUGHOUT THE DAY. ALL OBSERVED ACTIVITY HAS ORIGINATED FROM REGION 3763 (S08E34) WHICH HAS PRODUCED EIGHT SIGNIFICANT FLARES SINCE 1200Z. INCLUDED IN THE LIST ARE AN M1/SB AT 1207Z, M2/1B AT 1459Z, M4/1B AT 1515Z, M7/1B AT 1531Z, M2/1B AT 1739Z, M1/1B AT 1945Z, M3/1B AT 2017Z, AND AN M3 AT 2051Z. MOST EVENTS WERE ACCOMPANIED BY LOW LEVEL MICROWAVE BURSTS. A NEW REGION, 3767 (S08W01), WAS OBSERVED TODAY. OTHER REGIONS ON THE SUN WERE STABLE AND RELATIVELY INACTIVE.

IB. SOLAR ACTIVITY FORECAST: REGION 3763, THE SOLE SOURCE OF THE RECENT HIGH LEVELS OF SOLAR ACTIVITY, APPEARS TO HAVE MATURED. BOTH ITS SUNSPOT AREA AND 10.7 MICROWAVE FLUX HAVE STABILIZED SINCE YESTERDAY. DURING TODAY, THE XRAY EVENTS FROM THE REGION HAVE BEEN CHARACTERIZED BY VERY GRADUAL RISES AND FALLS IN THE EMISSIONS, SUGGESTING THAT A RELATIVELY ORDERLY REORGANIZATION IS UNDERWAY. OPTICALLY, MOST ACTIVITY HAS BEEN CENTERED NEAR THE DELTA WITHIN THE LARGEST SUNSPOT. ALTHOUGH THE REGION IS STILL VERY COMPLEX, IT HAS ASSUMED A MORE NORMAL EAST-WEST MAGNETIC ORIENTATION, ALBEIT REVERSED. UNLESS NEW GROWTH OR RAPID RESTRUCTURING BEGINS, ACTIVITY SHOULD STABILIZE AT THE MODERATELY HIGH LEVELS, OBSERVED TODAY.

II. GEOPHYSICAL

SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD IS EXPECTED TO BECOME INCREASINGLY ACTIVE AS A CONSEQUENCE OF THE DISAPPEARANCE OF TWO LARGE FILAMENTS NEAR S20E30 ON 3 JUN. ADDITIONALLY, AS REGION 3763 CONTINUES TO ROTATE ACROSS THE SOLAR DISK, ITS MAGNETIC COMPLEXITY AND APPARENT REVERSED POLARITY WILL CONTINUE TO POSE THE THREAT OF RAPID NEAR EARTH ENHANCEMENTS OF HIGH ENERGY CHARGED PARTICLE FLUXES AND ASSOCIATED POLAR CAP DISTURBANCES.

III. EVENT PROBABILITIES 06 JUN-08 JUN

CLASS M 99/99/99

CLASS X 50/50/50

PROTON 35/35/35

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 05 JUN 152

PREDICTED 06 JUN-08 JUN 152/151/150

90 DAY MEAN 05 JUN 167

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 04 JUN 010/012

ESTIMATED AFR/AP 05 JUN 010/011

PREDICTED AFR/AP 06 JUN-08 JUN 025/025-040/030-030/030

SOLTERWARN

BT