

HFUS 3 BOU 112200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 162B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 11 JUN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 11/1200Z TO 11/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE. TWO MAJOR REGIONS ARE NOW ON THE DISK. REGION 3763 (S08W46) PRODUCED A M3/1B AT 11/1502UT WITH MODERATE INTENSITY CENTIMETRIC BURSTS. THIS REGION CONTINUES TO EVOLVE AND MAGNETIC GRADIENTS ARE ONCE AGAIN INCREASING IN SPITE OF OVERALL AREAL DECREASE. NEW REGION 3776 (N13E83) HAS EXHIBITED ALMOST CONTINUAL ERUPTIVE ACTIVITY AND WAS THE PROBABLE SOURCE OF AN M1 AT 11/1847UT. 3776 HAS THUS FAR SHOWN A VERY LARGE LEADER SPOT AT THE LIMB WITH A LATITUDINAL EXTENT NEAR SIX DEGREES. THIS REGION IS ALSO THE CAUSE OF THE DRAMATIC INCREASE IN THE FULL DISK 10CM FLUX. REGION 3770 (S15E08) IS GROWING. MAGNETIC GRADIENTS HAVE INCREASED, AND DELTA CONFIGURATIONS HAVE FORMED IN ITS LEADER AND TRAILER.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD CONTINUE AT MODERATE LEVELS AS A BASELINE. WHILE 3776 HAS NOT AS YET PRODUCED A MAJOR FLARE ON THE DISK, ITS POTENTIAL CANNOT BE DENIED. A MAJOR FLARE IS STILL POSSIBLE FROM 3763 AND REGION 3770 COULD ALSO BEGIN TO PRODUCE MODERATE SIZE EVENTS.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN ACTIVE. ACTIVE CONDITIONS ARE EXPECTED TO CONTINUE FOR THE NEXT 24 HOURS. SOLAR WIND SPEEDS ARE OVER 600 KM/S AND SUBSTORMS SHOULD BE EXPERIENCED IN THE NIGHTTIME SECTORS. UNSETTLED TO SLIGHTLY ACTIVE CONDITIONS ARE EXPECTED FOR THE REMAINDER OF THE FORECAST PERIOD. GREATER THAN 10MEV PROTON FLUXES CONTINUE A SLOW DECLINE AND ARE CURRENTLY AT 4 P/CM2 STER.

III. EVENT PROBABILITIES 12 JUN-14 JUN

CLASS M 99/99/99

CLASS X 40/40/40

PROTON 20/20/20

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 11 JUN 218

PREDICTED 12 JUN-14 JUN 240/250/250

90 DAY MEAN 11 JUN 165

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 10 JUN 039/044

ESTIMATED AFR/AP 11 JUN 022/030

PREDICTED AFR/AP 12 JUN-14 JUN 018/020-014/020-014/015

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FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 162A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY,
ISSUED 1300Z 11 JUN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
10/1200Z TO 11/1200Z: SOLAR ACTIVITY HAS REMAINED MODERATE AS A
STRONG REGION RETURNING TO THE NE LIMB BEGAN PRODUCING STRONG
SURGES ACCOMPANIED BY LONG-LIVED CLASS X RAY EMISSION. NO
SPOTS ARE VISIBLE YET TO MARK REGION 3776. ITS LATITUDE RANGES
FROM N07 TO N20 AND SO MAY BE A COMPLEX OF TWO STRONG REGIONS.
REGION 3763 (S08W40) HAS PRODUCED TWO M1 EVENTS (1840Z AND
1112Z) BUT BOTH OCCURRED SIMULTANEOUSLY WITH STRONG SURGE
ACTIVITY IN REGION 3776. THE GRADUAL RISE AND FALL OF THE XRAY
EMISSION WITH THESE EVENTS INDICATE A STRONG CONTRIBUTION FROM
THE NE LIMB REGION. THE STRONGEST EVENT OF THE PAST 24 HOURS
WAS SOLELY FROM THE NE LIMB: M3 AT 0719Z WITH A 40 MINUTE RISE
TIME. XRAY BACKGROUND IS CURRENTLY AT C8, INDICATING THE
PRESENCE OF AN EXCEPTIONALLY ACTIVE REGION. THE PLAGE AND
SUNSPOTS IN REGION 3763 HAVE DECAYED AND MAGNETIC GRADIENTS
HAVE RELAXED. A HELICAL CONFIGURATION STILL EXISTS AND THE
NEUTRAL LINE CONTINUES HIGHLY CONVOLUTED. SLOW GROWTH CONTINUES
IN THE RELATIVELY SMALL AND SIMPLE REGIONS 3770 (S18E14),
3772 (N18E57) AND 3773 (S14E54). REGION 3774 (N07E65) IS NOW
VISIBLE AS A CLASS E SPOT GROUP. REGION 3770 HAS ENLARGED TO
BKO SPOT GROUP.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO
REMAIN MODERATE AS THE REGION(S) AT EAST LIMB ROTATE INTO VIEW.
COMPENSATING FOR THE DECLINING ACTIVITY IN REGION 3763. AN
ISOLATED CLASS X/PROTON EVENT IS STILL POSSIBLE FROM REGION
3763. THE RETURNING REGION(S) MUST ALSO BE SUSPECTED AS A
POTENTIAL SOURCE OF PROTONS.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS
BEEN IN A MINOR STATE FOR MOST OF THE PAST 24 HOURS AND IS
GRADUALLY DIMINISHING TO UNSETTLED CONDITIONS. BRIEF PERIODS OF
ACTIVE CONDITIONS ARE EXPECTED DURING LOCAL NIGHTTIME HOURS AGAIN
TOMORROW. UNSETTLED CONDITIONS WILL PREVAIL FOR THE REMAINDER OF
THE FORECAST PERIOD. PROTONS AT ENERGIES 610 KEV INCREASED
FROM 0130Z TO A PEAK OF 16 CTS/SEC AT 0630Z. PARTICLE COUNTS
HAVE SINCE SUBSIDED TO BELOW EVENT LEVELS.

III. EVENT PROBABILITIES: 12 JUN-14 JUN

CLASS M 95/95/95

CLASS X 25/25/25

PROTON 20/20/20

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 10 JUN 188

ESTIMATED 11 JUN 205

PREDICTED 12 JUN-14 JUN 215/220/210

90 DAY MEAN 10 JUN 165

V. GEOMAGNETIC A INDICES

OBSERVED APR 09 JUN 015 APR 10 JUN 044

ESTIMATED APR 10 JUN 035 APR/APR 11 JUN 025/030

PREDICTED APR/APR 12 JUN-14 JUN 015/030-012/020-014/015

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