

HFUS 1 BOU 301300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 273A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 30 SEP 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 29/1200Z TO 30/1200Z: SOLAR ACTIVITY HAS BEEN MODERATE DURING THE PAST 24 HOURS. REGION 3922 (N14W04) HAS PRODUCED SEVERAL STRONG C-CLASS X-RAY EVENTS AND AN M3/1B FLARE, 30/0139Z MAXIMUM, WHICH WAS ACCCOMPANIED BY A MAJOR TYPE II RADIO SWEEP AND A WEAK BUT ENDURING TYPE IV SWEEP. OPTICALLY, THIS FLARE BEGAN NORTH OF THE TRAILER SPOTS AND THEN SPREAD EAST IN A Y-SHAPED CONFIGURATION. THE TRAILER SPOTS ARE REPORTED TO HAVE COALESCED INTO A VERY LARGE SINGLE SPOT CONTAINING MIXED POLARITIES (MAGNETIC DELTA). REGION 3917 (N17W19), JUST EAST OF 3922, HAS BEEN QUIET FOR THE PAST 48 HOURS AND IT HAS UNDERGONE SOME WHITE LIGHT DECAY. HOWEVER, 3917 HAS RETAINED ITS MAGNETIC COMPLEXITY AND ITS EAST/WEST INVERSION LINE IS SHARPLY KINKED. REGION 3919 (S10W20) IS DEVELOPING IN ITS TRAILER PORTION AND IS EXHIBITING A VERY ACTIVE ARCH FILAMENT SYSTEM. SEVERAL C-CLASS X-RAY EVENTS OCCURRED HERE AND CONTINUED DEVELOPMENT COULD LEAD TO SIGNIFICANT ACTIVITY. REGION 3921 (S18E05), A DIFFUSE F-CLASS GROUP, HAS NEARLY DOUBLED IN SPOT AREA AND NUMBER BUT DOES NOT APPEAR THREATENING AT THIS TIME. REGION 3923 (S02E07) HAS SIMPLIFIED AND 3916 (S16W45) HAS STABILIZED. AN ACTIVE DARK FILAMENT NEAR N15E70 SHOULD BE WATCHED FOR FURTHER DEVELOPMENT. THIS IS NEAR A SUBFAINT FLARE IN AN UNSPOTTED REGION AT N18E58 WHICH OCCURRED AT 0425Z.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE MODERATE WITH CONTINUED SIGNIFICANT FLARES FROM 3922 AND THE POSSIBILITY OF M-CLASS ACTIVITY FROM 3919 AND 3917. REGION 3922 COULD PRODUCE A MAJOR FLARE IF DEVELOPMENT CONTINUES.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN QUIET TO UNSETTLED FOR THE PAST 24 HOURS. HOWEVER, TODAY'S SOLAR FLARE IS EXPECTED TO PRODUCE A GEOMAGNETIC STORM BEGINNING WITH A SUDDEN COMMENCEMENT AFTER 1800Z ON 01 OCTOBER. OVERALL MINOR STORM LEVELS ON 02 OCTOBER MAY BE PUNCTUATED WITH SOME PERIODS AT MAJOR STORM LEVELS. THE STORM IS EXPECTED TO END ON 03 OCTOBER. NO PROTONS HAVE YET BEEN MEASURED AT SATELLITE LEVELS FROM THE M3/1B FLARE. A FEW ENERGETIC PROTONS MAY BE OBSERVED COINCIDENT WITH THE STORM COMMENCEMENT.

III. EVENT PROBABILITIES 01 OCT-03 OCT

CLASS M 55/55/45

CLASS X 10/10/05

PROTON 10/10/05

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 29 SEP 204

ESTIMATED 30 SEP 208

PREDICTED 01 OCT-03 OCT 205/203/200

90 DAY MEAN 29 SEP 166

V. GEOMAGNETIC A INDICES

OBSERVED AFR 28 SEP 016 AP 29 SEP 013

ESTIMATED AFR 29 SEP 012 AFR/AP 30 SEP 010/010

PREDICTED AFR/AP 01 OCT-03 OCT 017/015-040/030-025/030

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HFUS 3 BOU 302200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 273B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 30 SEP 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
30/1200Z TO 30/2100Z: SOLAR ACTIVITY HAS BEEN LOW. REGION 3922
(N14W10) HAS PRODUCED SEVERAL MID CLASS C FLARES SINCE THE
M3/1B AT 30/0139Z. THIS REGION IS GROWING AND A SMALL, HIGH
GRADIENT, DELTA CONFIGURATION HAS FORMED IN THE TRAILER.
REGIONS 3919 (S12W25) AND 3921 (S18E01) ARE ALSO GROWING BUT
HAVE PRODUCED LITTLE ACTIVITY. SEVERAL SMALL SPOTS ARE
APPARENTLY EMERGING IN THE NE QUADRANT BUT AS YET HAVE NOT BEEN
NUMBERED.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD RESUME
MODERATE LEVELS WITH REGION 3922 BEING THE PRINCIPAL
CONTRIBUTOR. THE FREQUENCY OF FLARE ACTIVITY FROM THIS REGION
SHOULD BEGIN TO INCREASE. CLASS M FLARES ARE EXPECTED ON AN
INFREQUENT BASIS FROM REGIONS 3917 (N15W25), 3919, AND 3921. NO
SIGNIFICANT ACTIVE REGIONS ARE EXPECTED TO RETURN TO THE EAST
LIMB DURING THE NEXT THREE DAYS.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS
BEEN UNSETLED. UNSETLED CONDITIONS SHOULD CONTINUE UNTIL LATE
ON 01 OCT WHEN A MINOR STORM IS EXPECTED TO BEGIN IN RESPONSE
TO THE M3 FLARE THIS MORNING. MINOR STORM CONDITIONS SHOULD
CONTINUE THROUGH 03 OCT.

III. EVENT PROBABILITIES: 01 OCT-03 OCT

CLASS M 55/55/55

CLASS X 10/10/10

PROTON 10/10/10

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 30 SEP 202

PREDICTED 01 OCT-03 OCT 205/203/200

90 DAY MEAN 30 SEP 167

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 29 SEP 009/013

ESTIMATED AFR/AP 30 SEP 012/013

PREDICTED AFR/AP 01 OCT-03 OCT 017/015-040/030-025/030

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