

HEUS 1 BOU 161302

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDE NUMBER 289A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 16 OCTOBER 1981

I A. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
15/1200Z TO 16/1200Z:

SOLAR ACTIVITY HAS BEEN MODERATE. REGION 3403 (S11E33) PRODUCED M2/1B EVENT AT 0641Z AND A SLOW RISE AND FALL M1/1B AT 0914Z (MAX). THE ASSOCIATED GIANT SPOT GROUP CONTINUES COMPLEX WITH DELTA CONFIGURATION AND A BRILLIANT COMPACT PLAGE. REGION 3390/3397 (S18E31) IS MERGING NOW WITH REGION 3402 (S20W14) TO FORM A GREAT SPOT GROUP NEARLY 30 DEGREES IN EXTENT. THE SPOT GROUP AND PLAGE HAVE BECOME LESS COMPACT AND FLARE ACTIVITY HAS BECOME LESS INTENSE. THE STRUCTURE, SIZE AND DYNAMICS OF THIS REGION STILL SUGGEST PROTON-FLARE POTENTIAL. REGION 3406 (S10E57) IS A COMPACT BUT SMALLER REGION BUT HAS STRUCTURE APPROPRIATE FOR MODERATE FLARE ACTIVITY. REGION 3409 (N14W23) HAS GROWN RAPIDLY TO A CLASS D SPOT GROUP AND IS PRODUCING BRIGHT SUBFLARES. SPOTS AND BRIGHT PLAGE MARK A SIGNIFICANT NEW REGION AT S10E80 (REGION 3410). SMALL NEW REGIONS HAVE FORMED AT S20E08 (REGION 3411) AND S19E62 (REGION 3412).

I B. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO BE MODERATE TO HIGH.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD DIMINISHED FROM MINOR STORM TO QUIET CONDITIONS DURING THE PAST 24 HOURS. QUIET TO SLIGHTLY UNSETLED CONDITIONS ARE EXPECTED UNTIL OR UNLESS ANOTHER MAJOR EVENT OCCURS. A RESUMPTION OF STORM CONDITIONS WOULD FOLLOW 36-48 HOURS AFTER THE NEXT CLASS X EVENT. THE SATELLITE-LEVEL PROTON EVENT IS EXPECTED TO DROP BELOW EVENT THRESHOLD (10 PARTICLES/SEC/CM²/STER AT GT 10 MEV) BY 16/2400Z. THE POLAR CAP ABSORPTION EVENT ENDED AT 15/1500Z.

III. EVENT PROBABILITIES:

CLASS M 90/90/90

CLASS X 40/40/40

PROTON 40/40/40

PCAF YELLOW

IV. OTTAWA 10.7 FLUX

OBSERVED 15 OCTOBER 289

ESTIMATED 16 OCTOBER 292

PREDICTED 17-19 OCTOBER 296/296/280

90 DAY MEAN 15 OCTOBER 220

V. GEOMAGNETIC INDICES

OBSERVED AFR 14 OCTOBER 39 AFR/AP 15 OCTOBER 18

ESTIMATED AFR 15 OCTOBER 20 AFR/AP 16 OCTOBER 08/12

PREDICTED AFR/AP 17-19 OCTOBER 08/15 15/15 20/20

SOLTERWARN

PT

HFUS 3 BOU 162200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 2898

JOINT USAF/NCAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1200Z 16 OCT 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY

FROM 16/1200Z TO 16/2100Z

SOLAR ACTIVITY HAS BEEN MODERATE DURING THIS PERIOD. THE LARGEST EVENT WAS A M2/2B EVENT FROM REGION 3397 (S19W40) AT 1428 UT. A TEFNFLARE OF 400 FLUX UNITS WAS RECORDED WITH A SB/M1 FROM 3390 (S16W27) AT 1932 UT. NEW REGIONS TODAY 3410 (S11E68), 3411 (S20W04), 3412 (S20E48) AND 3413 (N05E26) ARE GENERALLY SIMPLE GROUPS.

IP. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO BE MODERATE TO HIGH.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN SLIGHTLY UNSETTLED. THE GEOMAGNETIC FIELD IS EXPECTED TO BE UNSETTLED THE FIRST PORTION OF THE PERIOD THEN ACTIVE THE REST OF THE FORECAST PERIOD.

III. EVENT PROBABILITIES: 17 - 19 OCT

CLASS M 90/90/90

CLASS X 40/40/40

PROTON 40/40/40

PCAF YELLOW

IV. OTTAWA 10.7 FLUX

OBSERVED 15 OCT 305

PREDICTED 17 - 19 OCT 296/292/280

90 DAY MEAN 16 OCT 221

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 15 OCT 21/18

ESTIMATED AFR/AP 16 OCT 10/12

PREDICTED AFR/AP 17 - 19 OCT 08/15 15/15 20/20

SOLARFLARE

BT