

WFNS 1 BOU 191300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 2924

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 1300Z 19 OCT 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM

18/1200Z TO 19/1200Z:

SOLAR ACTIVITY WAS LOW DURING THIS PERIOD. THE LARGEST EVENT WAS A C8/2B FLARE FROM REGION 3406 (S08E14) AT 19/0323Z. THERE HAS NOT BEEN TOO MUCH CHANGE IN THE SUN DURING THE PAST 24 HOURS. REGION 3403 (S11W09) STILL DOMINATES THE CENTER OF THE SOLAR DISK. THE REGION CURRENTLY POSSESSES 1800 MILLIONTHS SPOT AREA AND A BETA/DELTA MAGNETIC CONFIGURATION. REGION 3390 (S17W70) HAS CONTINUED TO DETERIORATE AS IT APPROACHES THE WEST LIMB.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO BE MODERATE. THE SUN HAS PRODUCED SEVERAL DOZEN FLARES THE LAST 3 DAYS, BUT NONE OF THESE ARE AS LARGE AS THE TYPE FLARE THE SUN IS CAPABLE OF PRODUCING - IN PARTICULAR, REGION 3403 IS STILL VERY LIKELY TO PRODUCE AN X-CLASS EVENT.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD WAS QUIET UNTIL 18/1200Z BUT HAS BEEN UNSETLED TO ACTIVE SINCE THEN. THERE IS A CHANCE OF SOME MINOR RECURRENT ACTIVITY ON 22 OR 23 OCT. OTHERWISE, UNSETLED CONDITIONS SHOULD BE THE RULE FOR THE NEXT 72 HOURS.

III. EVENT PROBABILITIES: 20 - 22 OCT

CLASS M 80/90/90

CLASS X 30/20/20

PROTON 30/20/20

PCAF YELLOW

IV. OTTAWA 10.7 FLUX

OBSERVED 18 OCT 305

ESTIMATED 19 OCT 300

PREDICTED 20-22 OCT 285/275/260

90 DAY MEAN 18 OCT 223

V. GEOMAGNETIC INDICES

OBSERVED AFR 17 OCT 13 AP 18 OCT 13

ESTIMATED AFR 18 OCT 04 AFR/AP 19 OCT 15/15

PREDICTED AFR/AP 20-22 OCT 10/12 10/12 10/12

SOLAR/WARN

BT

HELIOS 3 BOU 192200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO

SDF NUMBER 992R

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 2200Z 19 OCTOBER 1981

I. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 19/1200Z TO 19/2100Z: SOLAR ACTIVITY HAS BEEN LOW. VERY LITTLE REAL TIME DATA HAVE BEEN RECEIVED. REGION 3390 (S17W74) CONTINUES A SLOW DECAY WITH LITTLE FLARE ACTIVITY. REGION 3402 (S19W60) HAS CONTINUED TO GROW NOW BEING A MODERATE SIZE CLASS E GROUP BUT STILL BASICALLY BIPOLAR. REGION 3403 (S10W14) HAS DECAYED SLIGHTLY BUT THERE ARE INDICATIONS OF INCREASING SHEAR ALONG THE LONG NEUTRAL LINE THROUGH THIS REGION. REGION 3397 HAS BEEN COMBINED WITH 3390.

II. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD CONTINUE AT GENERALLY MODERATE LEVELS. THE FORECAST FOR CLASS X FLARES IS SHOWN TO BE SLOWLY DECREASING DUE MAINLY TO THE DECAY IN AND IMMINENT WEST LIMB TRANSIT, OF 3390. HOWEVER, THE PROBABILITY OF A MAJOR FLARE FROM 3403 REMAINS DUE TO RECENT MAGNETIC FIELD CHANGES.

III. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN UNSETLED SINCE THE DISTURBANCE EARLIER TODAY. UNSETLED CONDITIONS ARE EXPECTED TO CONTINUE FOR THE NEXT THREE DAYS.

III. EVENT PROBABILITIES 20 OCTOBER - 22 OCTOBER

CLASS M 90/80/80

CLASS X 30/20/20

PROTON 30/20/20

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 19 OCTOBER 281

PREDICTED 20-22 OCTOBER 270/260/255

90-DAY MEAN 19 OCTOBER 224

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 18 OCTOBER 05/07

ESTIMATED AFR/AP 19 OCTOBER 16/18

PREDICTED AFR/AP 20-22 OCTOBER 10/12 - 10/12 - 10/12

SOLTERWARN PT