

HFUS 1 BOU 171404

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 075A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 1200UT 17 MARCH 1981

I. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM

16/1200UT TO 17/1200UT :

SOLAR ACTIVITY HAS BEEN LOW DURING THE PAST 24 HOURS. APPROXIMATELY TWENTY C-CLASS SURFLEARES WERE OBSERVED DURING THAT TIME. ROUGHLY A THIRD OF THESE WERE SEEN IN REGION 2971 (N07W76) WHICH HAS SHOWN MARKED SIMPLIFICATION. REGION 2971 HAS BEEN PRODUCING SMALL FLARES REGULARLY AND HAS APPARENTLY DISSIPATED ITS ENERGY. THE X-RAY LEVELS OF EACH SUBSEQUENT FLARE ARE LOWER. REGION 2978 (N13W24) IS NOW THE MOST INTERESTING REGION ON THE DISK. IT HAD LOST ITS SPOTS TWO DAYS AGO BUT IS NOW REEMERGING RAPIDLY. A STRONG ARCH FILAMENT SYSTEM IS PRESENT IN THE REGION AS WELL AS A TIGHTLY KINKED NEUTRAL LINE. THIS REGION MAY IMIC REGION 2973 WHICH GREW RAPIDLY AND PRODUCED MANY M-CLASS BURSTS AS IT CROSSED OUT OF SIGHT OVER THE SOUTHWEST LIMB. ALSO TO BE RECKONED WITH ARE REGIONS 2984, 2987 AND 2990 (N09E31, N15E49 AND N19E60 RESPECTIVELY). REGION 2984 CONTAINS A DELTA MAGNETIC CONFIGURATION AND IS NOW BECOMING ACTIVE AFTER BEING QUIET SINCE IT MOVED ONTO THE VISIBLE DISK. REGION 2987 IS QUIET BUT HAS REVERSED MAGNETIC POLARITY. REGION 2990 IS APPARENTLY GROWING AND HAS PRODUCED FAIRLY STRONG C-CLASS X-RAY BURSTS WHEN SMALL SURFLEARES HAVE BEEN SEEN IN IT (SO IT IS A PROVEN X-RAY PRODUCER). FINALLY, A SURGING REGION IS ARRIVING ON THE DISK AT NE12.

II. SOLAR ACTIVITY FORECAST :

SOLAR ACTIVITY IS EXPECTED TO BE LOW TO MODERATE FOR THE NEXT 24 HOURS. IF RAPID GROWTH CONTINUES IN REGION 2978 IT COULD DOMINATE THE DISK FOR THE NEXT FEW DAYS AND BEGIN PRODUCING M-CLASS X-RAY EVENTS SOON. FAILING THAT, THE REGIONS IN THE NORTHEAST QUADRANT SHOULD EVENTUALLY BE RESPONSIBLE FOR AN INCREASE IN ACTIVITY.

III. GEOPHYSICAL SUMMARY AND FORECAST :

THE GEOMAGNETIC FIELD HAS BEEN MILDLY ACTIVE TO MILDLY UNSETTLED OVER THE PAST 24 HOURS. THE FIELD IS EXPECTED TO BE GENERALLY QUIET FOR THE NEXT 72 HOURS.

IV. EVENT PROBABILITIES: 18 MARCH - 20 MARCH

CLASS M 35/45/55

CLASS X 01/01/02

PROTON 01/01/02

PCAF GREEN

V. OTTAWA 10.7 FLUX

OBSERVED 16 MARCH 189

ESTIMATED 17 MARCH 191

PREDICTED 18-20 MARCH 193/196/205

90 DAY MEAN 16 MARCH 202

VI. GEOMAGNETIC INDICES

OBSERVED AFR 15 MARCH 19 AP 16 MARCH 12

ESTIMATED AFR 16 MARCH 13 AFR/AP 17 MARCH 13/08

PREDICTED AFR/AP 18-20 MARCH 07/07 07/07 07/07

COLD FRONT WARN

HEUS 3 BOU 172200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 0708

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 2200UT 17 MARCH 1981

I A. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
17/1200 UT TO 17/2200 UT:

SOLAR ACTIVITY HAS BEEN LOW DURING THE LAST 24 HOURS. X-RAY
EVENTS WERE LIMITED TO C CLASS, AND OPTICAL ACTIVITY LEVELS
DID NOT EXCEED SUBNORMAL. REGION 2984 (N08E25) IS REPORTED
TO CONTAIN TWO SMALL DELTAS. REGION 2991 (N11E67) HAS MOVED
ONTO THE DISK. NOTHING MORE TO REPORT SINCE PRIMARY FORECAST
AT 1200Z.

I B. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO REMAIN LOW WITH A POSSIBLE IN-
CREASING ACTIVITY TREND WITHIN 72 HOURS.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN MILDLY ACTIVE WITHIN THE PAST
24 HOURS, SHOWING ONE K VALUE OF FOUR. IT IS EXPECTED TO
DECLINE TO QUIET VALUES FOR MOST OF THE NEXT 72 HOURS.

III. EVENT PROBABILITIES: 18 - 20 MARCH

CLASS M 35/45/55

CLASS X 01/01/02

PROTON 01/01/02

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 17 MAR 176

PREDICTED 18-20 MAR 170/170/175

90 DAY MEAN 17 MAR 201

V. GEOMAGNETIC INDICES

OBSERVED AFR/AP 16 MAR 16/12

ESTIMATED AFR/AP 17 MAR 14/15

PREDICTED AFR/AP 18-20 MAR 07/07 07/07 07/07

SOLTERWARN

BT