

HFUS 1 BOU 291300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 029A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 29 JAN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 28/1200Z TO 29/1200Z: SOLAR ACTIVITY HAS BEEN MODERATE DURING THE PAST 24 HOURS. AN M1 X-RAY BURST OCCURRING AT 29/1049Z IS ATTRIBUTED TO REGION 3581 (N08E36) WHICH HAS BEEN SHOWING RAPID GROWTH. REGION 3576 (S14E40) CONTINUES TO BE THE MOST COMPLEX REGION ON THE DISK AND HAS APPARENTLY FORMED A MAGNETIC DELTA CONFIGURATION IN THE TRAILER SPOT CLUSTER. RAPID GROWTH HAS BEEN REPORTED IN REGIONS 3577 (S13W01) AND 3578 (S10E23) BUT THAT GROWTH MAY NOW BE SLOWING. REGION 3573 (N10E25) IS DECAYING. APPARENTLY THE DELTA CONFIGURATION IS GONE FROM THE REGION.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO CONTINUE AT A MODERATE LEVEL. REGION 3573, THOUGH DECAYING, IS STILL RATHER COMPLEX AND PROBABLY IS CAPABLE OF ONE MORE STRONG FLARE (COMPARABLE TO THE M8/3B EVENT OF 28/0656Z). REGION 3576 HAS BEEN FLARING REGULARLY AND MAY BE SUCCESSFULLY DISSIPATING ITS ENERGY WITHOUT ALLOWING STRESSES TO BUILD UP IN THE REGION FOR REALLY LARGE FLARES. REGIONS 3577, 3578 AND 3581 ARE LIKELY TO CONTINUE PRODUCING C-CLASS SUBFLARES AND PERHAPS AN ISOLATED M-CLASS EVENT.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD WAS UNSETTLED TO QUIET DURING THE PAST 24 HOURS. A SUDDEN COMMENCEMENT FROM THE M8 FLARE OF 28 JANUARY IS EXPECTED BETWEEN 30/2200Z AND 31/1000Z. THE FIELD SHOULD BE GENERALLY UNSETTLED BEFORE THE ARRIVAL OF THE SUDDEN COMMENCEMENT.

III. EVENT PROBABILITIES 30 JAN-01 FEB

CLASS M 70/70/60

CLASS X 15/15/10

PROTON 05/05/05

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 28 JAN 233

ESTIMATED 29 JAN 258

PREDICTED 30 JAN-01 FEB 259/258/255

90 DAY MEAN 28 JAN 196

V. GEOMAGNETIC A INDICES

OBSERVED AFR 27 JAN 010

ESTIMATED AFR 28 JAN 015

PREDICTED AFR/AP 30 JAN-01 FEB

AP 28 JAN 019

AFR/AP 29 JAN 006/012

012/020-035/040-019/015

SOLTERWARN

BT

HXUS BOU 291300

PREDM 07030 07031 06001

PREDX 01530 01531 01001

PREDP 00530 00531 00501

PCAFT 00130

TENCM 25930 25831 25501

AFRED 01230 03531 01901

AFAPF 02030 04031 01501

KKK 21244 33333 46543

BT

NNNNZCVZDZEGVZLVZQUU

KBOU

HFUS 3 BOU 292200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 029B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 29 JAN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 29/1200Z TO 29/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE SINCE 12Z. ALTHOUGH REGIONS 3576 (S14E32), 3577 (S13W09), AND 3573 (N10E18) ALL EXPERIENCED RAPID GROWTH SINCE YESTERDAY, THEIR RATE OF GROWTH IN THE PAST HOURS HAS SLOWED MARKEDLY, DESPITE AN AFS REPORTED IN 3573. ONLY 3577 HAS PRODUCED SIGNIFICANT ACTIVITY; A M1.0 X-RAY EVENT WAS OBSERVED AT 1746UT IN CONJUNCTION WITH A SUBBRILLIANT FLARE. NO NEW REGIONS WERE OBSERVED ON THE DISK.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY CAN BE EXPECTED TO REMAIN AT MODERATE LEVELS. REGION 3573 HAS REPORTEDLY DEVELOPED A MAGNETIC DELTA CONFIGURATION AND CLEARLY HAS THE POTENTIAL TO PRODUCE M-CLASS X-RAY EVENTS. SINCE MOST OF THE LARGE ACTIVE REGIONS ARE NEAR OR EAST OF CENTRAL MERIDIAN, THE PROBABILITY OF A PROTON EVENT WILL BE LOW OVER THE NEXT 24 HOURS.

II. GEOPHYSICAL SUMMARY AND FORECAST: A 51 GAMMA SUDDEN COMMENCEMENT WAS NOTED IN BOULDER AT 1744UT. HIGH LATITUDE STATIONS (THULE AND GOOSE BAY ONLY) OBSERVED A DISTURBANCE AT APPROXIMATELY THE SAME TIME. THE SOURCE OF THE MINOR STORM HAS TENTATIVELY BEEN ATTRIBUTED TO A DISAPPEARING FILAMENT TWO DAYS AGO. A SUDDENT COMMENCEMENT FROM AN M8 FLARE ON 28 JAN IS EXPECTED TO ARRIVE AT EARTH LATE ON THE 30TH OR EARLY ON THE 31ST OF JAN.

III. EVENT PROBABILITIES 30 JAN-01 FEB

CLASS M 70/70/70

CLASS X 15/15/15

PROTON 05/05/05

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 29 JAN 275

PREDICTED 30 JAN-01 FEB 285/290/290

90 DAY MEAN 29 JAN 196

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 28 JAN 015/019

ESTIMATED AFR/AP 29 JAN 013/015

PREDICTED AFR/AP 30 JAN-01 FEB 018/025-035/040-019/020

SOLTERWARN

BT

NNNNZSV

JUL