

REF ID: A171300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 229A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED - 300Z 17 AUGUST 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 16/1200Z TO 17/1200Z:

SOLAR ACTIVITY CONTINUED MODERATE DUE PRIMARILY TO REGION 3257 WHICH WON'T GIVE UP ITS M-CLASS FLARE PRODUCTION EVEN FROM BEHIND THE SW LIMB. AT 0256Z THIS REGION, WHICH IS CENTERED AT LEAST 4 DEGREES BEYOND S09, PRODUCED AN M2/BSL WITH A MODERATE TYPE II RADIO SWEEP ASSOCIATED WITH IT. REGION 3266 (S16E09), THE LARGEST GROUP NOW ON THE VISIBLE DISK, CONTINUES TO BE AN UNIMPRESSIVE FLARE PRODUCER. OF THE REMAINING 12 OR SO SPOTTED REGIONS, ONLY 3274 (S07E35) AND 3278 (S03E53) HAVE SHOWN MUCH ACTIVITY OR PROMISE. A STRONG TYPE I STORM AND TYPE III BURSTS WERE OBSERVED BY CULGOORA COMING FROM A LOCATION NEAR OR BEHIND THE SE LIMB, POSSIBLY INDICATING THE RETURN OF AN ACTIVE REGION NEAR OLD SESC REGION 3234 (S12, GAR 281).

IB. SOLAR ACTIVITY FORECAST:

MODERATE LEVELS OF ACTIVITY SHOULD CONTINUE, ALTHOUGH A GENERAL DECLINE IN FREQUENCY IS EXPECTED. REGION 3266'S HISTORY FOR M-CLASS FLARE PRODUCTION IS POOR INDICATING POTENTIAL FOR ONLY ISOLATED MODERATE FLARES. REGIONS 3274 AND 3279 (S18E55) HAVE THE POTENTIAL FOR AN INFREQUENT M-CLASS EVENT. THE SLOW INCREASE FORECAST IN THE 10.7 CM SOLAR FLUX IS DUE TO EXPECTED ACTIVITY AT EAST LIMB ALONG WITH DISK DEVELOPMENT.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD WAS UNSETTLED UNTIL 17/0051Z WHEN A SUDDEN COMMENCEMENT OF 57 GAMMAS WAS OBSERVED AT BOULDER. ACTIVE TO BRIEF MINOR STORM CONDITIONS HAVE BEEN OBSERVED SINCE THAT TIME. THE POSSIBLE SOURCE OF THIS ACTIVITY WAS THE SMALL CORONAL HOLE AND TRANSIENTS ASSOCIATED WITH REGION 3257. THIS DISTURBANCE IS EXPECTED TO SUBSIDE LATE TODAY, WITH UNSETTLED LEVELS FORECAST FOR TOMORROW.

III. EVENT PROBABILITIES: 18 AUGUST - 20 AUGUST

CLASS M 85/80/75

CLASS X 10/05/05

PROTON 10/05/05

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 16 AUG 219

ESTIMATED 17 AUG 221

PREDICTED 18-20 AUG 223/228/232

90 DAY MEAN 16 AUG 176

V. GEOMAGNETIC A INDICES

OBSERVED AFR 15 AUG 12 AP 16 AUG 10

ESTIMATED AFR 16 AUG 10 AFR/AP 17 AUG 19/20

PREDICTED AFR/AP 18-20 AUG 10/08 - 15/10 - 15/19

SOLTERWARN

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HFUS 3 BOU 172200  
FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO  
SDF NUMBER 229B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 2200Z 17 AUGUST 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 17/1200Z  
TO 17/2100Z: SOLAR ACTIVITY HAS BEEN LOW DURING THIS PERIOD.  
REGIONS 3257-3267 HAVE COMPLETED WEST LIMB PASSAGE AND REGION  
3266 (S16E04) HAS BEGUN TO DECLINE. MINOR GROWTH HAS OCCURRED  
IN REGION 3285 (S16E15) NEAR THE LARGE TRAILING SPOT OF REGION  
3266. CONTINUED DEVELOPMENT HERE MIGHT LEAD TO AN ACTIVE,  
REVERSED-POLARITY CONFIGURATION. MINOR SPOT GROWTH AND INCREASED  
FILAMENT ACTIVITY NEAR REGION 3278 (S02E46) GIVE PROSPECT FOR  
INCREASED SURFLARE ACTIVITY. SMALL SPOTS AT S08E75 (REGION  
3284) AND SMALL SURGES FROM S08-S15 E90 MARK THE RETURN OF A  
LARGE ACTIVITY COMPLEX.

IB. SOLAR ACTIVITY FORECAST: SOLAR INDICES ARE EXPECTED TO  
REMAIN NEAR THE PRESENT LEVEL AS GROWTH AND DECAY AMONG  
DIFFERENT REGIONS BALANCE ONE ANOTHER.

IC. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS  
REMAINED SLIGHTLY ACTIVE THIS PERIOD FOLLOWING THE SC AT 0050Z.  
UNSETTLED CONDITIONS ARE EXPECTED TOMORROW AND THEN A RETURN TO  
SLIGHTLY ACTIVE CONDITIONS.

IID. EVENT PROBABILITIES 18 AUGUST - 20 AUGUST

CLASS M 85/80/75

CLASS X 10/05/05

PROTON 10/05/05

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 17 AUGUST 223

PREDICTED 18-20 AUGUST 224/224/220

90-DAY MEAN 17 AUGUST 176

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 16 AUGUST 09/10

ESTIMATED AFR/AP 17 AUGUST 20/20

PREDICTED AFR/AP 18-20 AUGUST 10/08 - 15/10 - 15/19

SOLTERWARN

BT