

BT

SDF NUMBER 259A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 1300Z 16 SEPT 1981

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

SOLAR ACTIVITY HAS BEEN MODERATE. AN X2/2B FLARE AT 15/2116Z  
WAS ACCOMPANIED BY A TENFLARE OF 510 F.U. BUT NO TYPE II OR  
TYPE IV RADIO BURST. THE SOURCE WAS THE DECASNL GREAT REGION  
3317 (N09W82) WHICH STILL CONTAINS A DELTA CONFIGURATION.  
GREAT SURGES AND ACTIVE PROMINENCES MARK ITS LIMB PASSAGE TODAY.  
AN M1/2B FLARE AT 15/1918Z IS VARIOUSLY REPORTED AMONG REGIONS  
3334, 3333 AND 3339 NEAR S12E30 AT THIS TIME. THIS AREA IS A  
REMNANT OF REGIONS THAT WERE SIGNIFICANT LAST SOLAR ROTATION.  
ACTIVITY HAS BEEN MINOR AND INFREQUENT IN THE INTERACTING PAIR  
OF REGIONS 3329-3332 (N15W02) AS GROWTH HAS VIRTUALLY CEASED IN  
THE YOUNGER OF THESE TWO WITH RELATIVELY SIMPLE MAGNETIC CONFIG-  
URATION. REGION 3344 (N07E78) IS SURGING FREQUENTLY BUT STILL  
APPEARS AS A SMALL REGION. 10 CM EAST-WEST SCAN INDICATES NO  
SIGNIFICANT REGIONS AT OR NEAR EAST LIMB.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY

IS EXPECTED TO DECREASE SIGNIFICANTLY WHEN REGION  
3317 COMPLETES WEST LIMB PASSAGE. MAJOR EVENTS ARE POSSIBLE FOR  
THE NEXT 48 HOURS.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN QUIET TO SLIGHTLY UNSETTLED. THE  
X2 FLARE EVENT RESULTED IN A CROCHET AT 2114Z OF 18 GAMMAS.  
SLIGHTLY UNSETTLED CONDITIONS ARE EXPECTED TO CONTINUE UNTIL THE  
THIRDDAY WHEN A MINOR DISTURBANCE IS EXPECTED AS A RESULT OF TWO  
ERUPTING FILAMENTS ON 14-15 SEPTEMBER. THEY BOTH BORDERED A  
SMALL CORONAL HOLE OF NEGATIVE POLARITY.

III. EVENT PROBABILITIES: 17-19 SEPTEMBER

CLASS M 70/60/50

CLASS X 20/10/05

PROTON 10/05/01

PCAF YGREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 15 SEP 228

ESTIMATED 16 SEP 224

PREDICTED 17-19 SEP 220/214/205

90 DAY MEAN 15 SEP 206

V. GEOMAGNETIC A INDICES

OBSERVED AFR 14 SEP 09 AP 15 SEP 12

ESTIMATED AFR 15 SEP 10 AFR/AP 16 SEP 08/12

PREDICTED AFR/AP 17-19 SEP 12/12 10/10 20/20

SOLTERWARN

NNNN

E  
HFUS 3 BOU 162200  
FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO  
SDF NUMBER 259B  
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 2200Z 16 SEPTEMBER 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 16/1200Z  
TO 16/2100Z: SOLAR ACTIVITY HAS BEEN LOW TO MODERATE. A SMALL  
M1/SB FROM 3329 (N20W03) AT 1344Z (MAX) WAS THE MOST SIGNIFICANT  
EVENT REPORTED DURING THIS INTERVAL. RECENT REPORTS INDICATE THAT  
THE ANTICIPATED INTERACTION BETWEEN 3329 AND 3332 (N15W09) IS  
INDEED TAKING PLACE. ARCH FILAMENTS ARE VISIBLE IN 3332 AND THE  
NEUTRAL LINE, NOW SHARED BY BOTH REGIONS, IS QUIET COMPLEX. THIS  
SITUATION SHOULD RESULT IN ADDITIONAL FLARE ACTIVITY FROM THIS  
COMPLEX. REGION 3317 (N09W90) IS HAVING A RATHER DRAMATIC LIMB  
TRANSIT AS EJECTA, MULTI-SHAPED PROMINENCES AND VARIOUS APR ARE  
BEING REPORTED. REGION 3341 (S08E47) REMAINS A SMALL "C" TYPE  
GROUP BUT CHANGES IN ITS TRAILING PORTIONS IS RESULTING IN AN  
OCCASIONAL SUBFLARE.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO  
CONTINUE AT MODERATE LEVELS AS 3329 AND 3332 REMAIN DYNAMIC.  
REGION 3317 COULD GIVE A LIMB (OR BEHIND THE LIMB) EVENT BUT  
ITS CURRENT POSITION PROHIBITS EVALUATING THIS LIKELIHOOD.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS  
BEEN UNSETTLED. GENERALLY UNSETTLED CONDITIONS SHOULD CONTINUE  
FOR THE NEXT 24 HOURS.

III. EVENT PROBABILITIES 17 SEPTEMBER - 19 SEPTEMBER

CLASS M	70/60/50
CLASS X	20/10/05
PROTON	10/05/01
PCAF	GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED	16 SEPTEMBER	225
PREDICTED	17-19 SEPTEMBER	224/222/220
90-DAY MEAN	16 SEPTEMBER	206

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP	15 SEPTEMBER	10/12
ESTIMATED AFR/AP	16 SEPTEMBER	09/12
PREDICTED AFR/AP	17-19 SEPTEMBER	12/12 - 10/10 - 20/20

SOLTERWARN

BT