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FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDE NUMBER 252A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 09 SEPT 1981

I A. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
08/1200Z TO 09/1200Z:

SOLAR ACTIVITY CONTINUED MODERATE DURING THE PAST 24 HOURS.
REGION 3317 (NO8E 15) PRODUCED AN M2/1IN FLARE WITH MAXIMUM AT
08/1704Z. THE EVENT WAS ACCCOMPANIED BY STRONG SHORT WAVE
FADES TO 11 MHZ BUT VERY LITTLE MICROWAVE RADIO RESPONSE.

HOWEVER, SINCE THE FLARE, 5 VERY LARGE (GREATER THAN 1000
FLUX UNITS) 245 MHZ RADIO BURSTS HAVE BEEN REPORTED BY LEAR-
MOUTH. ONLY ONE OF THESE WAS ASSOCIATED WITH AN OPTICAL EVENT
AND THAT WAS A 10,000 FLUX UNIT BURST AT 09/0114Z (ASSOCIATED
WITH A C8/SB FLARE IN REGION 3317). IN ADDITION TO THESE
2 EVENTS, REGION 3317 PRODUCED A DOZEN C-CLASS SUBFLARES
DURING THE PAST 24 HOURS. REGION 3310 (SOSW57) IS ALSO A THREAT-
ENING LOOKING REGION BUT HAS PRODUCED ONLY 3 C-CLASS SUB-
FLARES SINCE 08/1200Z. EVEN IF THE STRONG 245 MHZ BURSTS CAN
BE ATTRIBUTED TO REGION 3317, IT IS CLEAR THAT THE RATE OF
M-CLASS FLARE PRODUCTION IS TAPERING OFF IN THE REGION.

I B. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO BE MODERATE TO LOW. REGION 3317
APPEARS TO BE STABILIZING AFTER VERY RAPID GROWTH. AUSTRALIAN REPORTS INDICATE THE DELTA CONFIGURATION MAY HAVE DISSEVED.
MOUNT WILSON SPOT POLARITY DRAWINGS SHOW SLIGHTLY RELAXED GRADIENTS
IN THE REGION. THE REGION STILL HAS THE POTENTIAL TO PRODUCE
ONE OR MORE X-CLASS FLARES AND IS MOST LIKELY TO DO THIS IF IT
BEGINS TO DISINTEGRATE RAPIDLY. REGION 3310 APPEARS CAPABLE
OF PRODUCING AN INFREQUENT SMALL M-CLASS FLARE. OTHER REGIONS
POSE NO PARTICULAR THREAT.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN MILDLY UNSETLED DURING THE PAST
24 HOURS. A FAIRLY STRONG SUDDEN IMPULSE (45 GAMMAS) WAS NOTED
AROUND 08/2150Z BUT WAS NOT FOLLOWED BY A MAIN PHASE GEOMAGNETIC
DISTURBANCE. INTERPLANETARY SCINTILLATION DATA STILL INDICATES
ACTIVE CONDITIONS SHOULD BE EXPERIENCED ON SEPTEMBER 9TH OR 10TH.
ALSO, A LOW LATITUDE CORONAL HOLE JUST PAST CENTRAL MERIDIAN MAY
RAISE ACTIVITY LEVELS ON SEPTEMBER 12TH.

III. EVENT PROBABILITIES: 10 SEPT - 12 SEPT 1981

CLASS M 70/70/70

CLASS X 15/15/15

PROTON 10/15/15

PCAF 100% YELLOW

IV. OTTAWA 10.7 FLUX

OBSERVED 08 SEPT 254

ESTIMATED 09 SEPT 248

PREDICTED 10-12 SEPT 240/220/224

50 DAY MEAN 08 SEPT 199

V. GEOMAGNETIC A INDICES

OBSERVED/AFTER 07 SEPT 05 AP 08 SEPT 14

ESTIMATED/AFT 08 SEPT 09 AFR/AP 08 SEPT 12/15

HEUS 3 RCU 092200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO
SDE NUMBER 252B

JINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 0200Z 09 SEPTEMBER 1981

I. ANALYSTS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 09/1200Z TO 09/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE SINCE 09/1200Z DUE TO AN M1/1R FLARE IN REGION 3317 (N10E06) AT 09/1331Z. THIS FLARE WAS ACCCOMPANIED BY NUMEROUS RADIO BURSTS AND SHORT WAVE FADES. THIS REGION STILL HAS AT LEAST THREE OR FOUR DELTAS AND HAS DEVELOPED A VERY STRONG GRADIENT IN THE MOUNT WILSON SPOT REPORT. REGION 3310 (S10W64) IS THE ONLY OTHER REGION WHICH FLARED THIS PERIOD, THE LARGEST WAS A C6/SF AT 1622Z. NO NEW REGIONS WERE CONFIRMED TODAY.

II. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE MODERATE DUE TO THE HISTORY AND CHARACTERISTICS OF REGION 3317.

III. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN UNSETLED DURING THE PAST 24 HOURS. ACTIVE CONDITIONS ARE EXPECTED ON 10 SEPTEMBER DUE TO PAST FLARE ACTIVITY AND AGAIN 12 SEPTEMBER DUE TO AN EQUATORIAL CORONAL HOLE NOW PASSING CENTRAL MERIDIAN. UNSETLED CONDITIONS ARE EXPECTED ON 11 SEPTEMBER.

IV. EVENT PROBABILITIES 10 SEPTEMBER - 12 SEPTEMBER

CLASS M 70/70/70

CLASS X 15/15/15

PROTON 15/15/15

PCAF YELLOW

V. OTTAWA 10.7 CM FLUX

OBSERVED 09 SEPTEMBER 253

PREDICTED 10-12 SEPTEMBER 248/238/228

90-DAY MEAN 09 SEPTEMBER 200

VI. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 08 SEPTEMBER 08/14

ESTIMATED AFR/AP 09 SEPTEMBER 13/15

PREDICTED AFR/AP 10-12 SEPTEMBER 23/23 - 14/18 - 19/22

SOLAR/WARN

BT