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DE BOU 280500Z

THIS IS THE MESSAGE FOR REFILE

FROM SPACE DISTURBANCE FORECAST CENTER ESSA BOULDER COLO

SPACE DISTURBANCE FORECAST NUMBER 542C ISSUED AT 0500Z

MAY 28 1967

MAJOR FLARES POSSIBLE DURING NEXT 12 HOURS.

BT

THIS IS THE MSG FOR REFILE
FROM SPACE DISTURBANCE FORECAST CENTER ESSA BOULDER COLO
SPACE DISTURBANCE FORECAST NUMBER 542D ISSUED AT 1100Z
MAY 28 1967

MAJOR PROTON EVENT IN PROGRESS. MODERATE MAGNETIC
STORM IN PROGRESS. DURING THE NEXT 12 HOURS MAJOR FLARES
ARE POSSIBLE.

- A. AN IMPORTANCE THREE BRIGHT FLARE OCCURRED AT 0527Z AT N28 W32
AND WAS ACCOMPANIED BY LOOPS ON THE DISK AND VERY STRONG
IONOSPHERIC EFFECTS. AT 0625Z HIGH ENERGY PROTONS WERE
DETECTED BY SATELLITE SENSORS AND CONFIRMED BY GROUND
OBSERVATIONS AT 0626Z. AT 0700Z SATELLITES REPORTED A PROTON
FLUX OF AT LEAST THREE TIMES NORMAL IN THE ENERGY RANGE GREATER
THAN 20 MEV. AN IMPORTANCE TWO FLARE OCCURRED AT 0725Z AT
N27 W45 BUT WAS NOT ASSOCIATED WITH STRONG EFFECTS.
- B. THE FLUX OF HIGH ENERGY PROTONS IS EXPECTED TO DECLINE
RAPIDLY WITHIN THE NEXT 12 HOURS. IT WILL BE FOLLOWED
BY A GREAT INCREASE IN PROTONS OF LOW ENERGY WITHIN THE
NEXT 24 HOURS. THE FLARE AT 0725Z WILL NOT PRODUCE PROTONS.
A MAJOR MAGNETIC STORM IS EXPECTED TO BEGIN WITHIN 36 HOURS.
- C. REVISED PROTON PROBABILITIES FOR MAY 28-30 ARE 100/100/80.
- BT

FROM SPACE DISTURBANCE FORECAST CENTER ESSA BOULDER COLO

SPACE DISTURBANCE FORECAST NUMBER 543A ISSUED AT 1700Z

MAY 28 1967

PROTON EVENT IN PROGRESS MODERATE MAGNETIC STORM IN PROGRESS
MAJOR FLARES POSSIBLE NEXT 12 HOURS

A. AN IMPORTANCE 3 FLARE AT 0527Z WITH VERY STRONG RADIO EMISSION AND IONOSPHERIC EFFECTS HAS PRODUCED PROTON EMISSION AT THE EARTH BEGINNING 0625Z. EARLY REPORTS INDICATE THAT THIS EVENT IS CONSIDERABLY SMALLER THAN THE EVENT OF 25 MAY BUT MAY CONTAIN PARTICLES OF SLIGHTLY HIGHER ENERGIES. THE FLARE OCCURRED OVER THE DELTA MAGNETIC CONFIGURATION IN THE SPOT GROUP NOW AT N26 W36. AN IMPORTANCE 2 FLARE ALSO OCCURRED THERE AT ABOUT 0718Z AND AN IMPORTANCE ONE FLARE WAS REPORTED THERE AT 0035Z. AS OF 1300Z THE SPOT GROUP HAD DECAYED CONSIDERABLY BUT IT RETAINS SUFFICIENT STRENGTH AND COMPLEXITY TO SUPPORT FURTHER MAJOR ACTIVITY. HYDROGEN FINE STRUCTURE IN THE REGION SUPPORTS THIS VIEW. FREQUENT SMALL BUT ENERGETIC LIMB FLARES ARE OCCURRING NEAR N23 ELIMB. A SMALL SUN SPOT IS VISIBLE AT N23 W78 IN A BRIGHT PLAGE THAT EXTENDS OVER THE LIMB. THE SPOTS NEAR N11 W11 REMAIN OF MODERATE SIZE AND SLIGHTLY COMPLICATED CMMA SUGGESTING THE EXISTENCE OF SOME POTENTIAL FOR MAJOR FLARES. THE REMAINING REGIONS ARE LITTLE CHANGED AND ARE INACTIVE.

B. MAJOR FLARE POTENTIAL WILL REMAIN HIGH UNTIL WEST LIMB PASSAGE OF THE DELTA REGION ON 31 MAY - 1 JUNE. THE PROTON EVENT SHOULD CONTINUE FOR AT LEAST 24 HOURS. THE PRESENT MAGNETIC STORM WAS INCREASING IN INTENSITY AS OF 1630Z AND A MAJOR INCREASE IS EXPECTED DURING THE NEXT 24 HOURS. OVERALL SOLAR ACTIVITY INDICES SHOULD CHANGE ONLY SLIGHTLY AS A SIGNIFICANT REGION APPEARING AT NE LIMB WILL TEND TO BALANCE THE DECAY OF THE NW REGION.

C. THE PROBABILITIES FOR FLARES AND PROTON EVENTS FOR THE THREE DAY PERIOD MAY 29-31 ARE AS FOLLOWS /FIGURES ARE PERCENTAGES FOR EACH OF THE THREE DAYS/
IMPORTANCE ONE OR GREATER 100/100/100
IMPORTANCE TWO OR GREATER 80/80/80
IMPORTANCE THREE OR GREATER 40/40/40
PROTON EVENTS 100/80/60

D. THE OTTAWA 10.7 CM FLUX TODAY IS ESTIMATED TO BE 198.
THE PREDICTED VALUES FOR MAY 29-31 ARE 195/193/185

BT

FROM SPACE DISTURBANCE FORECAST CENTER, ESSA BOULDER COLO.

SPACE DISTURBANCE FORECAST NUMBER 543B ISSUED 2300Z

MAY 28 1967.

PROTON EVENT IN PROGRESS. MAGNETIC STORM IN PROGRESS EXPECTED TO INTENSIFY NEXT 12 HOURS. MAJOR FLARES POSSIBLE NEXT 12 HOURS.

A. NO MAJOR SOLAR FLARES HAVE OCCURRED SINCE 0718Z. THE PROTON EVENT FROM THE 0527Z FLARE REMAINS SMALL AND IS NOW BEING MASKED ON RIOMETERS BY AN ELECTRON EVENT. THE DELTA CONFIGURATION AT N26 W40 HAS ALTERED ITS GEOMETRY AND APPEARS TO BE WEAK. VERY LITTLE ACTIVITY HAS BEEN REPORTED NEAR THIS LOCATION SINCE THE MAJOR EVENTS. SURGE ACTIVITY CONTINUES AT NE LIMB AND IS ASSOCIATED WITH IONOSPHERIC DISTURBANCES. A MAGNETIC STORM CONTINUES AT MODERATE INTENSITY.

B. THE POTENTIAL FOR MAJOR FLARES MAY BE DECREASING BUT MAJOR EVENTS ARE POSSIBLE UNTIL JUNE 2. A MAJOR MAGNETIC STORM IS EXPECTED TO BEGIN IN 6-12 HOURS.

C. THE PROBABILITIES FOR FLARES AND PROTON EVENTS FOR THE THREE DAY PERIOD MAY 29-31 ARE AS FOLLOWS /FIGURES ARE PERCENTAGES FOR EACH OF THE THREE DAYS/
IMPORTANCE ONE OR GREATER 100/100/100
IMPORTANCE TWO OR GREATER 80/70/70
IMPORTANCE THREE OR GREATER 40/30/30
PROTON EVENTS 100/80/50

D. THE OTTAWA 10.7 CM FLUX TODAY IS 197. THE PREDICTED VALUES FOR MAY 29-31 ARE 193/188/182.

E. THE FREDERICKSBURG MAGNETIC A INDEX FOR YESTERDAY WAS 16. TODAY IT WILL BE ABOUT 43. THE PREDICTED AP RANGES FOR MAY 29-31 ARE 80-150/40-60/20-30.