

# Daily Space Weather Summary (SUPARCO)

Wednesday, July 09, 2025, 02:15 PST



| Radio Blackouts |         |           | Solar Radiation Storms |         |           | Geomagnetic Storms |         |           |
|-----------------|---------|-----------|------------------------|---------|-----------|--------------------|---------|-----------|
| -24 Hr          | Current | Predicted | -24 Hr                 | Current | Predicted | -24 Hr             | Current | Predicted |
| R0 – R1         | R0 / R1 | R1 – R2   | S0                     | S0      | S0        | G0                 | G0      | G0        |

## LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

|  |      |      |      |          |      |      |      |      |
|--|------|------|------|----------|------|------|------|------|
| Critical Frequency of F2 layer (foF2)  |      |      |      | 12.8 MHz |      |      |      |      |
| Virtual Height of F2 layer (h`F2)  |      |      |      | 338 km   |      |      |      |      |
| Total Electron Content (TEC)   |      |      |      | 68 TECU  |      |      |      |      |
| Maximum Usable Frequency (MUF) and Optimum Traffic Frequency (FOT) for various distances |      |      |      |          |      |      |      |      |
| Distance (Km)  | 100  | 200  | 400  | 600      | 800  | 1000 | 1500 | 3000 |
| MUF (MHz)  | 13.0 | 13.3 | 15.2 | 17.2     | 19.8 | 22.9 | 25.4 | 28.0 |
| FOT (MHz)  | 11.1 | 11.3 | 13.2 | 14.9     | 16.9 | 19.6 | 22.1 | 24.4 |

Local HF conditions are normal as compared to the predicted monthly median MUF.

## LOCAL GEOMAGNETIC CONDITIONS

|                           |  |                |  |  |  |  |  |  |
|---------------------------|--|----------------|--|--|--|--|--|--|
| K-index                   |  | 2 (Quiet)      |  |  |  |  |  |  |
| Total Field (F) (Son/Isb) |  | 45775/50710 nT |  |  |  |  |  |  |

The local geomagnetic field is quiet at the moment.

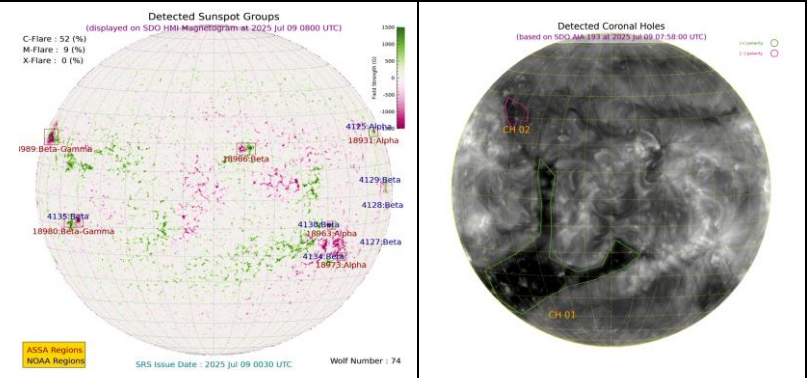
## LATEST SOLAR CONDITIONS

|  |  |   |  |  |  |  |  |  |
|--|--|---|--|--|--|--|--|--|
| Sunspot Number (SN)  |  | 88  |  |  |  |  |  |  |
| Solar radio flux (F10.7)   |  | 115 sfu   |  |  |  |  |  |  |
| Solar wind speed   |  | 434.8 km/s (varied in the past 24 hrs between 431 & 578 km/s)   |  |  |  |  |  |  |
| Solar x-ray flares   |  | B5.4 (max flare in the past 24 hrs (M1, 0425 UT)  |  |  |  |  |  |  |
| Interplanetary Magnetic Field (IMF)<br>Total Field (Bt)<br>Z Component of Field (Bz) |  | +3.55 nT (varied in the past 12 hrs between +3.56 nT & +4.56 nT)<br>-1.9 nT (varied in the past 12 hrs between -3.38 nT & +2.13 nT) |  |  |  |  |  |  |

Solar conditions are at low to moderate levels with background X-ray flux at B-class level.

There is no active region present on the Sun capable of producing strong solar flares.

02 Coronal Holes (CHs) are detected on the solar disk.



DISCUSSION:

Solar activity is expected to be at low to moderate levels. In case of M/X-class solar flares, minor to moderate levels radio blackouts may be observed. Low to moderate solar wind is expected to prevail due to the presence of coronal hole. Geomagnetic activity is expected to be at quiet levels. HF conditions are normal.

Credits:

Solar conditions courtesy to SOHO, DSCOVR and GOES-16 missions.  
NOAA SWPC is acknowledged for solar radio flux conditions.  
Korean Space Weather Centre is acknowledged for solar disk and coronal hole images.

Sonmiani (SON): 25.2° N, 66.75° E  
Islamabad (ISB): 33.7° N, 73.13° E

RSG SCALES

| Radio Blackouts        |          |        |        |         |
|------------------------|----------|--------|--------|---------|
| Minor                  | Moderate | Strong | Severe | Extreme |
| R1                     | R2       | R3     | R4     | R5      |
| Solar Radiation Storms |          |        |        |         |
| Minor                  | Moderate | Strong | Severe | Extreme |
| S1                     | S2       | S3     | S4     | S5      |
| Geomagnetic Storms     |          |        |        |         |
| Minor                  | Moderate | Strong | Severe | Extreme |
| G1                     | G2       | G3     | G4     | G5      |