

# Daily Space Weather Summary (SUPARCO)

Wednesday, September 17, 2025, 14:22 PST



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

## LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

|                                                                                          |      |      |      |          |      |      |      |      |
|------------------------------------------------------------------------------------------|------|------|------|----------|------|------|------|------|
| Critical Frequency of F2 layer (foF2)                                                    |      |      |      | 13.2 MHz |      |      |      |      |
| Virtual Height of F2 layer (h`F2)                                                        |      |      |      | 318 km   |      |      |      |      |
| Total Electron Content (TEC)                                                             |      |      |      | 74 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)                                                                                | 13.4 | 15.1 | 17.6 | 20.4     | 23.2 | 25.4 | 27.7 | 30.2 |
| FOT (MHz)                                                                                | 11.4 | 12.8 | 15.0 | 17.3     | 19.7 | 21.6 | 23.5 | 25.7 |

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) |  | 45770/50714 nT |  |  |  |  |  |  |

The local geomagnetic field is quiet at the moment.

## LATEST SOLAR CONDITIONS

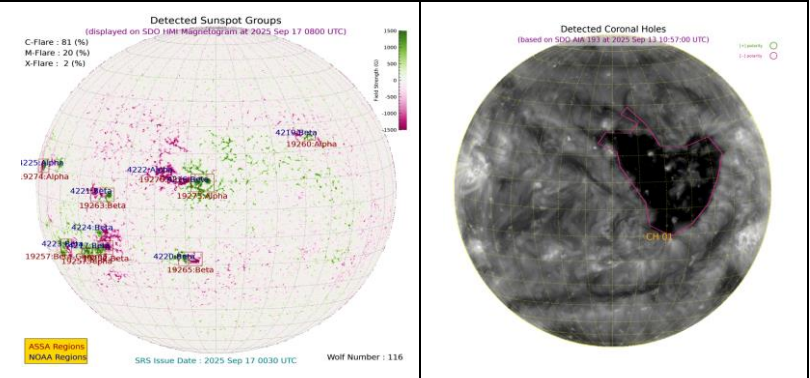
|                                                                                      |  |                                                                                                                                      |  |  |  |  |  |  |
|--------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|
| Sunspot Number (SN)                                                                  |  | 130                                                                                                                                  |  |  |  |  |  |  |
| Solar radio flux (F10.7)                                                             |  | 135 sfu                                                                                                                              |  |  |  |  |  |  |
| Solar wind speed                                                                     |  | 655.0 km/s (varied in the past 24 hrs between 604 & 774 km/s)                                                                        |  |  |  |  |  |  |
| Solar x-ray flares                                                                   |  | C1.1 (max flare in the past 24 hrs (C3, 1314 UT)                                                                                     |  |  |  |  |  |  |
| Interplanetary Magnetic Field (IMF)<br>Total Field (Bt)<br>Z Component of Field (Bz) |  | +4.01 nT (varied in the past 12 hrs between +3.93 nT & +5.49 nT)<br>+1.09 nT (varied in the past 12 hrs between -3.97 nT & +4.57 nT) |  |  |  |  |  |  |

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

Daily Sun: 17 September 2025

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

01 Coronal Hole (CH) is 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 levels radio blackouts may be observed. Low to moderate levels of solar wind speed and quiet geomagnetic activity is expected. Normal HF conditions are expected.

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      |