

Daily Space Weather Summary (SUPARCO)

Thursday, June 26, 2025, 14:32 PST



| Radio Blackouts | | | Solar Radiation Storms | | | Geomagnetic Storms | | |
|-----------------|---------|-----------|------------------------|---------|-----------|--------------------|---------|-----------|
| -24 Hr | Current | Predicted | -24 Hr | Current | Predicted | -24 Hr | Current | Predicted |
| R1 – R2 | R0 / R1 | R1 – R2 | S0 | S0 | S0 | G0 | G0 | G0 / G1 |

LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

| | |
|---------------------------------------|----------|
| Critical Frequency of F2 layer (foF2) | 10.8 MHz |
| Virtual Height of F2 layer (h`F2) | 368 km |
| Total Electron Content (TEC) | 65 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) | 11.0 | 11.6 | 13.3 | 15.2 | 17.2 | 19.8 | 22.9 | 25.4 |
| FOT (MHz) | 9.4 | 9.9 | 11.3 | 13.2 | 14.9 | 16.9 | 19.6 | 22.1 |

Local HF conditions are slightly depressed 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.

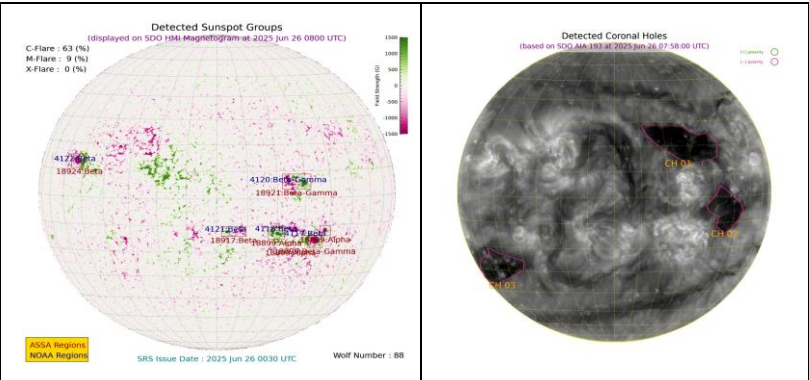
LATEST SOLAR CONDITIONS

| | |
|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Sunspot Number (SN) | 90 |
| Solar radio flux (F10.7) | 117 sfu |
| Solar wind speed | 700.1 km/s (varied in the past 24 hrs between 382 & 840 km/s) |
| Solar x-ray flares | C1.4 (max flare in the past 24 hrs (C1, 0855 UT) |
| Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz) | +10.65 nT (varied in the past 12 hrs between +10.51 nT & +15.74 nT) +1.09 nT (varied in the past 12 hrs between -6.92 nT & +11.88 nT) |

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

There is one active region AR4120 present on the Sun capable of producing strong C and M-class solar flares having chances of 63% and 9% respectively.

03 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. Slightly elevated solar wind is expected to prevail due to the presence of coronal holes. Geomagnetic activity is expected to be at quiet to unsettled levels. HF conditions are slightly depressed.

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

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