

# Daily Space Weather Summary (SUPARCO)

Tuesday, June 03, 2025, 14:48 PST



Radio Blackouts			Solar Radiation Storms			Geomagnetic Storms		
-24 Hr	Current	Predicted	-24 Hr	Current	Predicted	-24 Hr	Current	Predicted
R1 – R2	R1 / R2	R1 – R2	S0	S0	S0	G1 – G2	G1	G0 / G1

## LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

Critical Frequency of F2 layer (foF2)	11.4 MHz
Virtual Height of F2 layer (h`F2)	315 km
Total Electron Content (TEC)	22 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)	11.6	13.3	15.2	17.2	19.8	22.9	25.4	28.0
FOT (MHz)	9.9	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	4 (Unsettled)
Total Field (F) (Son/Isb)	45775/50710 nT

The local geomagnetic field is unsettled at the moment.

## LATEST SOLAR CONDITIONS

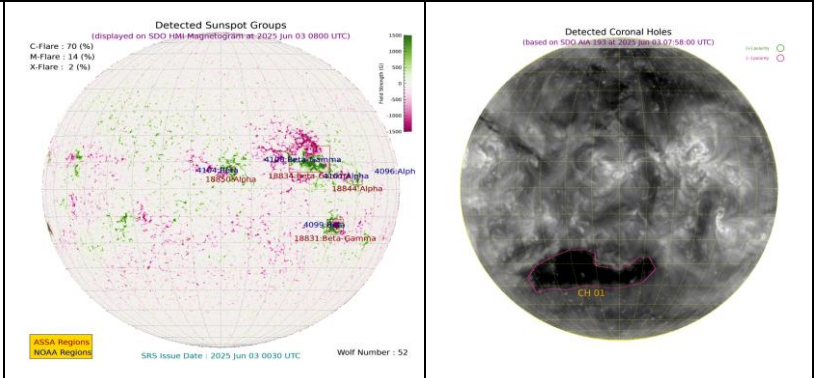
Sunspot Number (SN)	103
Solar radio flux (F10.7)	140 sfu
Solar wind speed	580.6 km/s (varied in the past 24 hrs between 554 & 751 km/s)
Solar x-ray flares	B9.8 (max flare in the past 24 hrs (M3, 1118 UT)
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)	+8.41 nT (varied in the past 12 hrs between +9.03 nT & +15.31 nT) -7.04 nT (varied in the past 12 hrs between -13.85 nT & -4.98 nT)

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

## Daily Sun: 3 June 2025

There is one active region AR4100 present on the Sun capable of producing strong M and X-class solar flares having chances of 14% and 2% respectively.

01 Coronal Hole (CH) is detected on the solar disk.



### DISCUSSION:

Solar activity is expected to be at low to moderate levels. Multiple M-class solar flares, have already occurred from the region mentioned above causing R2-R3 levels radio blackouts and moderate to strong (G2-G3) levels geomagnetic storms. In case of more 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 to unsettled 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

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