

Daily Space Weather Summary (SUPARCO)

Monday, October 20, 2025, 14:45 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)	285 km
Total Electron Content (TEC)	78 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)	45703/50718 nT

The local geomagnetic field is quiet at the moment.

LATEST SOLAR CONDITIONS

Sunspot Number (SN)	103
Solar radio flux (F10.7)	156 sfu
Solar wind speed	555.8 km/s (varied in the past 24 hrs between 434 & 645 km/s)
Solar x-ray flares	C1.5 (max flare in the past 24 hrs (M1, 2015 UT)
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)	+6.2 nT (varied in the past 12 hrs between +4.01 nT & +10.23 nT) +2.09 nT (varied in the past 12 hrs between -2.06 nT & +5.85 nT)

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

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.

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

*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.*

Islamabad (ISB): 33.7° N, 73.13° E

<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