Daily Space Weather Summary (SUPARCO)

Wednesday, July 30, 2025, 02:30 PST

SUPARCO

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)	11.7 MHz
Virtual Height of F2 layer (h`F2)	340 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)	11.9	12.5	13.3	15.2	17.2	19.8	22.9	25.4
FOT (MHz)	10.1	10.6	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.

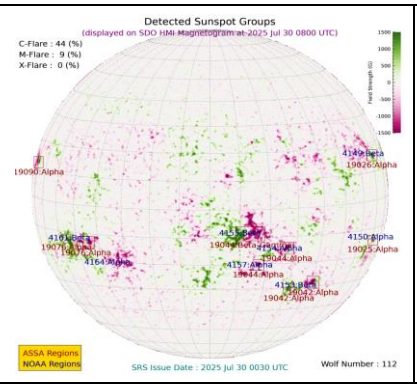
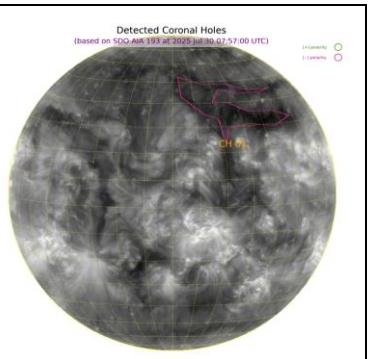
LOCAL GEOMAGNETIC CONDITIONS	
K-index	2 (Quiet)
Total Field (F) (Son/Isb)	45775/50710 nT

The local geomagnetic field is quiet at the moment.

LATEST SOLAR CONDITIONS	
Sunspot Number (SN)	112
Solar radio flux (F10.7)	152 sfu
Solar wind speed	370.5 km/s (varied in the past 24 hrs between 346 & 470 km/s)
Solar x-ray flares	B9.9 (max flare in the past 24 hrs (C4, 0616 UT)
Interplanetary Magnetic Field (IMF) **Total Field (Bt)** **Z Component of Field (Bz)**	+11.05 nT (varied in the past 12 hrs between +7.03 nT & +10.59 nT) +8.47 nT (varied in the past 12 hrs between -4.38 nT & +8.51 nT)

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

Daily Sun: 30 July 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 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 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**