

Daily Space Weather Summary (SUPARCO)

Thursday, May 29, 2025, 14:55 PST



Radio Blackouts			Solar Radiation Storms			Geomagnetic Storms		
-24 Hr	Current	Predicted	-24 Hr	Current	Predicted	-24 Hr	Current	Predicted
R2	R0 / R1	R1 – R2	S0	S0	S0	G3	G1	G0 / G1

LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

Critical Frequency of F2 layer (foF2)				13.1 MHz				
Virtual Height of F2 layer (h`F2)				365 km				
Total Electron Content (TEC)				24 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)	13.2	14.4	16.7	18.8	22.0	24.2	28.1	30.8
FOT (MHz)	11.2	12.1	14.2	17.2	19.8	22.1	24.3	26.0

Local HF conditions are normal as compared to the predicted monthly median MUF.

LOCAL GEOMAGNETIC CONDITIONS

K-index		5 (Storm)						
Total Field (F) (Son/Isb)		45775/50715 nT						

The local geomagnetic field is disturbed (storm) at the moment.

LATEST SOLAR CONDITIONS

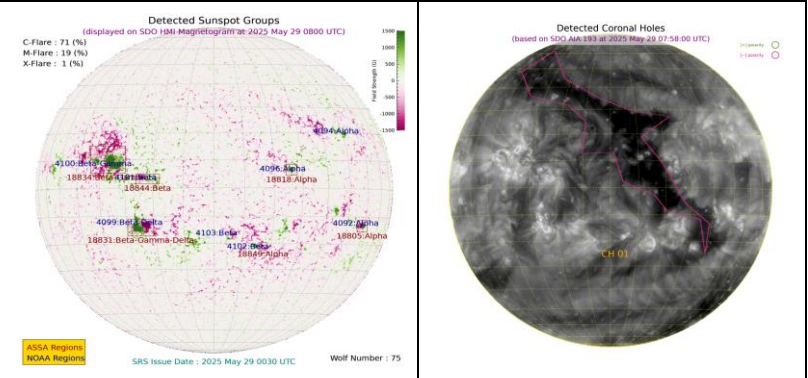
Sunspot Number (SN)		126						
Solar radio flux (F10.7)		137 sfu						
Solar wind speed		674.1 km/s (varied in the past 24 hrs between 364 & 751 km/s)						
Solar x-ray flares		B8.8 (max flare in the past 24 hrs (C7, 0301 UT)						
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)		+11.24 nT (varied in the past 12 hrs between +11.06 nT & +24.03 nT) +5.87 nT (varied in the past 12 hrs between -17.54 nT & +9.3 nT)						

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

Daily Sun: 29 May 2025

There are two active regions AR4099 and AR4100 present on the Sun capable of producing strong M and X-class solar flares having chances of 19% and 1% respectively.

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 level radio blackouts may be observed. A G3-class geomagnetic storm, triggered by a co-rotating interaction region (CIR), hit Earth early today. The storm is now subsided to G1-class level. High levels of solar wind speed and quiet to unsettled geomagnetic activity is expected. 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 R1	Moderate R2	Strong R3	Severe R4	Extreme R5
Solar Radiation Storms				
Minor S1	Moderate S2	Strong S3	Severe S4	Extreme S5
Geomagnetic Storms				
Minor G1	Moderate G2	Strong G3	Severe G4	Extreme G5