

# Daily Space Weather Summary (SUPARCO)

Wednesday, January 15, 2025, 14:54 PST



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

## LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

<b>Critical Frequency of F2 layer (foF2)</b>	11.2 MHz							
<b>Virtual Height of F2 layer (h`F2)</b>	298 km							
<b>Total Electron Content (TEC)</b>	40 TECU							
<b>Maximum Usable Frequency (MUF) and Optimum Traffic Frequency (FOT) for various distances</b>								
<b>Distance (Km)</b>	<b>100</b>	<b>200</b>	<b>400</b>	<b>600</b>	<b>800</b>	<b>1000</b>	<b>1500</b>	<b>3000</b>
<b>MUF (MHz)</b>	11.4	13.2	15.2	17.9	21.0	23.4	27.3	30.5
<b>FOT (MHz)</b>	9.7	11.2	12.9	15.2	17.8	20.0	23.2	26.0

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

## LOCAL GEOMAGNETIC CONDITIONS

<b>K-index</b>	2 (Quiet)
<b>Total Field (F) (Son/Isb)</b>	45770/50714 nT

The local geomagnetic field is quiet at the moment.

## LATEST SOLAR CONDITIONS

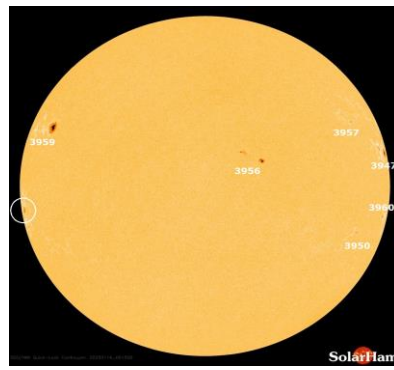
<b>Sunspot Number (SN)</b>	106
<b>Solar radio flux (F10.7)</b>	166 sfu
<b>Solar wind speed</b>	437.4 km/s (varied in the past 24 hrs between 376 & 564 km/s)
<b>Solar x-ray flares</b>	C3.2 (max flare in the past 24 hrs (C6, 0856 UT))
<b>Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)</b>	+7.95 nT (varied in the past 12 hrs between +5.28 nT & +7.83 nT) +2.47 nT (varied in the past 12 hrs between -6.09 nT & +6.82 nT)

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

**Daily Sun: 15 January 2025**

There is one active region AR3959 present on the Sun capable of producing strong solar flares.

02 Coronal Holes (CHs) are detected on the solar disk.



**DISCUSSION:**

Solar activity is expected to be at low levels. In case of M/X-class solar flares, minor level radio blackouts may be observed. Low solar wind speed and quiet 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**

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