

# Daily Space Weather Summary (SUPARCO)

Thursday, December 05, 2024, 12:14 PST



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

## LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

<b>Critical Frequency of F2 layer (foF2)</b>	13.5 MHz							
<b>Virtual Height of F2 layer (h`F2)</b>	288 km							
<b>Total Electron Content (TEC)</b>	58 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>	13.7	14.1	15.9	18.3	21.1	24.0	30.9	32.0
<b>FOT (MHz)</b>	11.6	12.0	13.5	15.6	17.9	20.4	26.2	27.2

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

## LOCAL GEOMAGNETIC CONDITIONS

<b>K-index</b>	2 (Quiet)
<b>Total Field (F) (Son/Isb)</b>	45674/50714 nT

The local geomagnetic field is quiet at the moment.

## LATEST SOLAR CONDITIONS

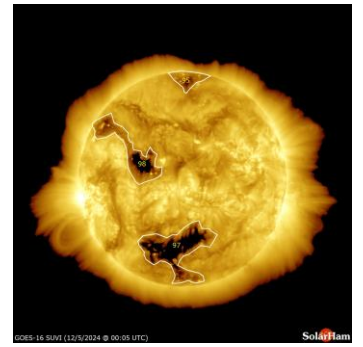
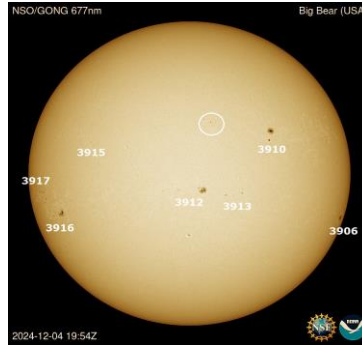
<b>Sunspot Number (SN)</b>	105
<b>Solar radio flux (F10.7)</b>	175 sfu
<b>Solar wind speed</b>	452.6 km/s (varied in the past 24 hrs between 409 & 534 km/s)
<b>Solar x-ray flares</b>	C2.0 (max flare in the past 24 hrs (M2, 1000 UT)
<b>Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)</b>	+6.23 nT (varied in the past 12 hrs between +6.18 nT & +7.31 nT) +3.83 nT (varied in the past 12 hrs between -5.79 nT & +5.11 nT)

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

## Daily Sun: 5 December 2024

There are two active regions AR3906 and AR3912 present on the Sun capable of producing strong solar flares.

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



### DISCUSSION:

Solar activity is expected to be at low to moderate levels. Few M-class solar flares, have occurred from the regions present on the sun. In case of more M/X flares, minor level radio blackouts may be observed. Low solar wind speed and quiet geomagnetic activity is expected. HF conditions are slightly enhanced.

### 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