

# Daily Space Weather Summary (SUPARCO)

Tuesday, November 12, 2024, 14:42 PST



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

## LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

<b>Critical Frequency of F2 layer (foF2)</b>	14.6 MHz							
<b>Virtual Height of F2 layer (h`F2)</b>	288 km							
<b>Total Electron Content (TEC)</b>	62 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>	14.8	15.5	17.7	20.8	24.3	27.8	31.8	36.5
<b>FOT (MHz)</b>	12.6	13.1	15.1	17.7	20.7	23.7	26.2	30.7

Local HF conditions are 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>	45675/50718 nT

The local geomagnetic field is quiet at the moment.

## LATEST SOLAR CONDITIONS

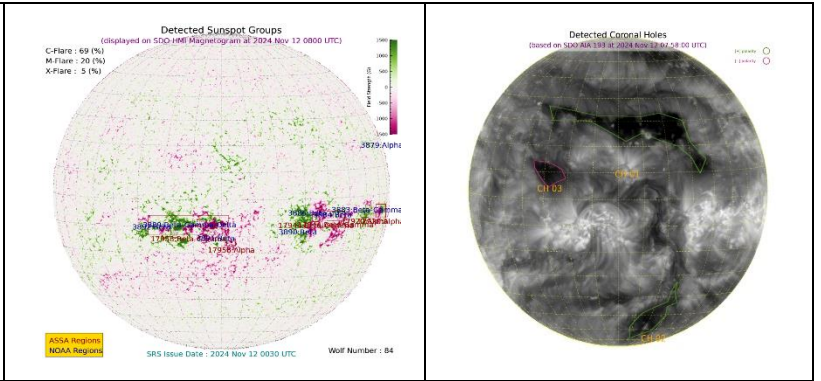
<b>Sunspot Number (SN)</b>	138
<b>Solar radio flux (F10.7)</b>	182 sfu
<b>Solar wind speed</b>	430.2 km/s (varied in the past 24 hrs between 460 & 556 km/s)
<b>Solar x-ray flares</b>	C1.5 (max flare in the past 24 hrs (C4, 1428 UT))
<b>Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)</b>	+4.61 nT (varied in the past 12 hrs between +3.78 nT & +5.75 nT) +4.47 nT (varied in the past 12 hrs between -3.77 nT & +2.6 nT)

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

## Daily Sun: 12 November 2024

There are two active regions AR3883 and AR3889 present on the Sun capable of producing strong M and X-class solar flares having chances of 20% and 5% respectively.

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



### DISCUSSION:

Solar activity is expected to be at high levels. Few M -class solar flares, have already occurred from the regions mentioned above. In case of more M/X-class solar flares, minor levels radio blackouts may be observed. Moderate to slightly elevated solar wind speed is expected to prevail due to the presence of coronal holes. Geomagnetic activity is expected to be quiet. HF conditions are 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