

# Daily Space Weather Summary (SUPARCO)

Monday, January 01, 2024, 12:05 PST



## LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

<b>Critical Frequency of F2 layer (foF2)</b>	10.0 MHz							
<b>Virtual Height of F2 layer (h`F2)</b>	280 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>	10.2	10.4	11.4	12.5	15.8	18.4	23.2	27.0
<b>FOT (MHz)</b>	8.7	8.9	9.7	10.6	13.4	15.6	19.7	23.0

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

## LOCAL GEOMAGNETIC CONDITIONS

<b>K-index</b>	0 (Quiet)
<b>Total Field (F) (Son/Isb)</b>	45618/50628 nT

The local geomagnetic field is quiet at the moment.

## LATEST SOLAR CONDITIONS

<b>Sunspot Number (SN)</b>	55
<b>Solar radio flux (F10.7)</b>	146 sfu
<b>Solar wind speed</b>	321.3 km/s (varied in the past 24 hrs between 276 & 472 km/s)
<b>Solar x-ray flares</b>	C1.1 (max flare in the past 24 hrs (X4, 2155 UT))
<b>Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)</b>	+5.2 nT (varied in the past 12 hrs between +3.9 nT & +6.2 nT) -4.1 nT (varied in the past 12 hrs between -3.2 nT & +2.4 nT)

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

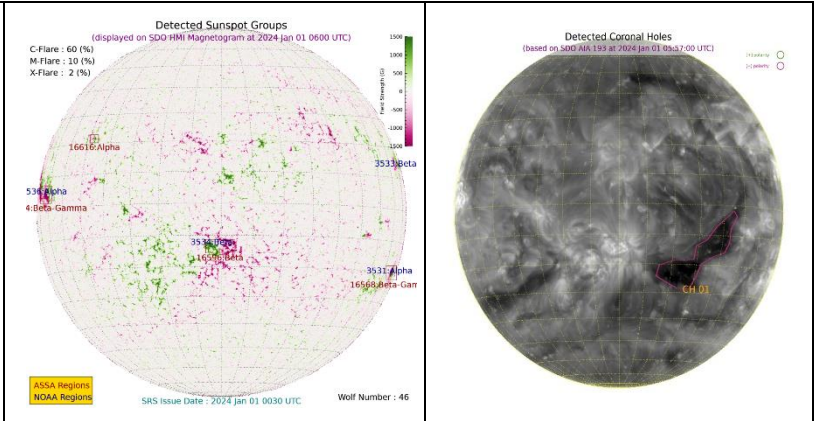
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

Notes: Credits: [www.spaceweather.go.kr](http://www.spaceweather.go.kr), [www.sws.bom.gov.au](http://www.sws.bom.gov.au), [www.spaceweather.com](http://www.spaceweather.com), [www.solen.info](http://www.solen.info)

## Daily Sun: 1 January 2024

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 moderate to high levels. In case of M/X-class solar flares, radio blackouts may be observed. Moderate to slightly elevated solar wind speed is expected due to the presence of coronal hole. Geomagnetic activity is expected to be quiet. HF conditions are normal.