

# Daily Space Weather Summary (SUPARCO)

Wednesday, January 31, 2024, 12:40 PST



## LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

<b>Critical Frequency of F2 layer (foF2)</b>	10.5 MHz							
<b>Virtual Height of F2 layer (h`F2)</b>	290 km							
<b>Total Electron Content (TEC)</b>	43 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>	10.7	11.3	12.5	14.4	16.6	18.9	24.0	27.2
<b>FOT (MHz)</b>	9.1	9.1	10.6	12.4	14.1	16.1	20.4	23.1

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

## LOCAL GEOMAGNETIC CONDITIONS

<b>K-index</b>	1 (Quiet)
<b>Total Field (F) (Son/Isb)</b>	45625/50635 nT

The local geomagnetic field is quiet at the moment.

## LATEST SOLAR CONDITIONS

<b>Sunspot Number (SN)</b>	53
<b>Solar radio flux (F10.7)</b>	135 sfu
<b>Solar wind speed</b>	481.9 km/s (varied in the past 24 hrs between 426 & 506 km/s)
<b>Solar x-ray flares</b>	B8.5 (max flare in the past 24 hrs (C5, 1739 UT))
<b>Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)</b>	+3.7 nT (varied in the past 12 hrs between +2.2 nT & +4.8 nT) +0.4 nT (varied in the past 12 hrs between -2.3 nT & +1.8 nT)

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

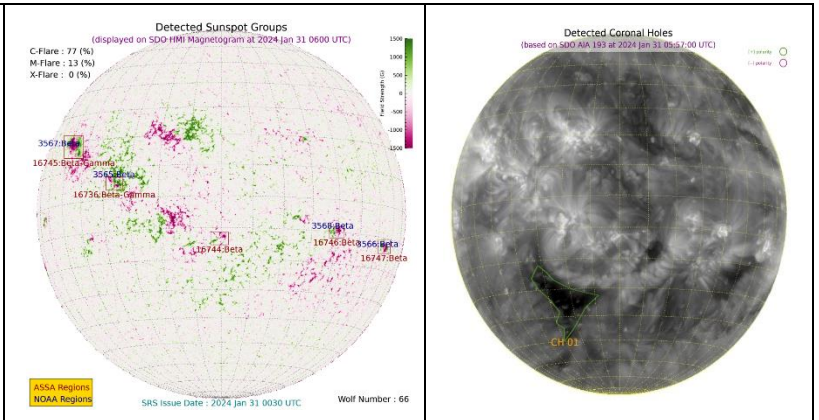
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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: 31 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 low to moderate levels. In case of more solar flares, shortwave fadeouts may be observed. Low to moderate solar wind speed is expected to prevail due the combine effect of CME and coronal holes. Geomagnetic activity is expected to be quiet. HF conditions are slightly enhanced.