

# Daily Space Weather Summary (SUPARCO)

Tuesday, January 09, 2024, 12:44 PST



## LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

<b>Critical Frequency of F2 layer (foF2)</b>	10.4 MHz							
<b>Virtual Height of F2 layer (h`F2)</b>	288 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>	10.5	11.0	12.5	14.5	16.8	19.2	24.7	27.2
<b>FOT (MHz)</b>	8.8	9.4	10.6	12.3	14.3	16.3	21.0	23.0

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

## LOCAL GEOMAGNETIC CONDITIONS

<b>K-index</b>	1 (Quiet)
<b>Total Field (F) (Son/Isb)</b>	45628/50638 nT

The local geomagnetic field is quiet at the moment.

## LATEST SOLAR CONDITIONS

<b>Sunspot Number (SN)</b>	152
<b>Solar radio flux (F10.7)</b>	167 sfu
<b>Solar wind speed</b>	381.4 km/s (varied in the past 24 hrs between 314 & 466 km/s)
<b>Solar x-ray flares</b>	C1.4 (max flare in the past 24 hrs (C7, 0959 UT))
<b>Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)</b>	+5.1 nT (varied in the past 12 hrs between +4.4 nT & +6.9 nT) -2.1 nT (varied in the past 12 hrs between -3.6 nT & +2.6 nT)

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

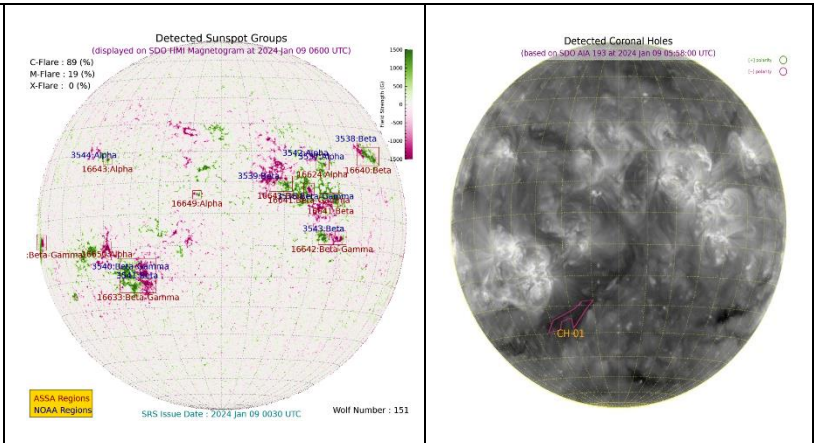
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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: 9 January 2024

There are two active regions AR3536 and AR3540 present on the Sun capable of producing strong C and M-class solar flares having chances of 89% and 19% respectively.

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 solar flares, shortwave fadeouts may be observed. Low solar wind speed and quiet geomagnetic activity is expected. HF conditions are normal.