

# Daily Space Weather Summary (SUPARCO)

Monday, October 10, 2022, 12:20 PST



## LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

<b>Critical Frequency of F2 layer (foF2)</b>	12.8 MHz							
<b>Virtual Height of F2 layer (h`F2)</b>	273 km							
<b>Total Electron Content (TEC)</b>	45 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>	13.0	13.6	15.8	18.8	22.0	25.3	32.8	36.9
<b>FOT (MHz)</b>	11.0	11.6	13.4	15.9	18.7	21.5	27.8	31.4

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>	45507/50014 nT

The local geomagnetic field is quiet at the moment.

## LATEST SOLAR CONDITIONS

<b>Sunspot Number (SN)</b>	141
<b>Solar radio flux (F10.7)</b>	161 sfu
<b>Solar wind speed</b>	536 km/sec (varied in the past 24 hrs between 433 & 621 km/s)
<b>Solar x-ray flares</b>	B 7.7 (max flare in the past 24 hrs: (M 1.0, 0047 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 2.4 nT & 15.3 nT) +1.1 nT (varied in the past 12 hrs between -8.9 nT & +11.4 nT)

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

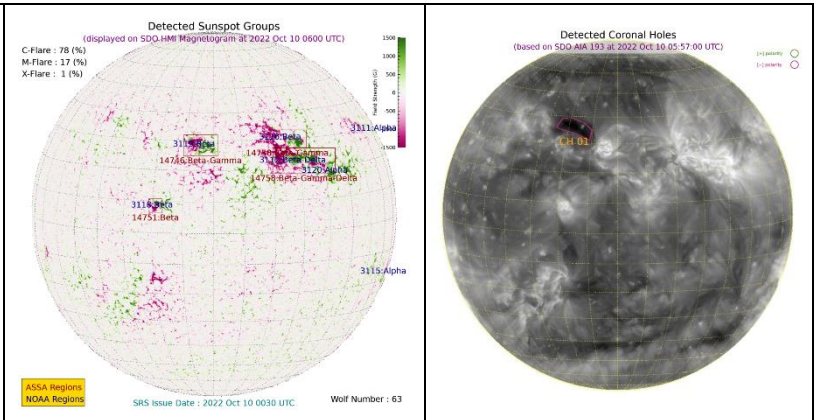
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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: 10 October 2022

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 low with a chance for M-class flares. In case of solar flares, shortwave fadeouts are possible. Moderate to enhanced solar wind speed and unsettled to active geomagnetic activity is expected due to CH HSS influences. HF conditions are enhanced.