

# Daily Space Weather Summary (SUPARCO)

Wednesday, April 20, 2022, 12:20 PST



## LOCAL CURRENT IONOSPHERIC CONDITIONS (SONMIANI)

<b>Critical Frequency of F2 layer (foF2)</b>	12.4 MHz							
<b>Virtual Height of F2 layer (h`F2)</b>	340 km							
<b>Total Electron Content (TEC)</b>	42 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>	12.5	12.8	14.1	15.9	18.0	20.2	25.5	31.1
<b>FOT (MHz)</b>	10.6	10.8	12.0	13.5	15.3	17.2	21.7	26.5

Local HF conditions are 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>	45583/50093 nT

The local geomagnetic field is quite at the moment.

## LATEST SOLAR CONDITIONS

<b>Sunspot Number (SN)</b>	68
<b>Solar radio flux (F10.7)</b>	135 sfu
<b>Solar wind speed</b>	411.0 km/sec (varied in the past 24 hrs between 439 & 525 km/s)
<b>Solar x-ray flares</b>	C1.8 (max flare in the past 24 hrs: X2 0357 UT Apr 20)
<b>Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)</b>	3.9 nT (varied in the past 12 hrs between 3.2 nT & 4.7 nT) 2.3 nT (varied in the past 12 hrs between -2.4 nT & 2.9 nT)

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

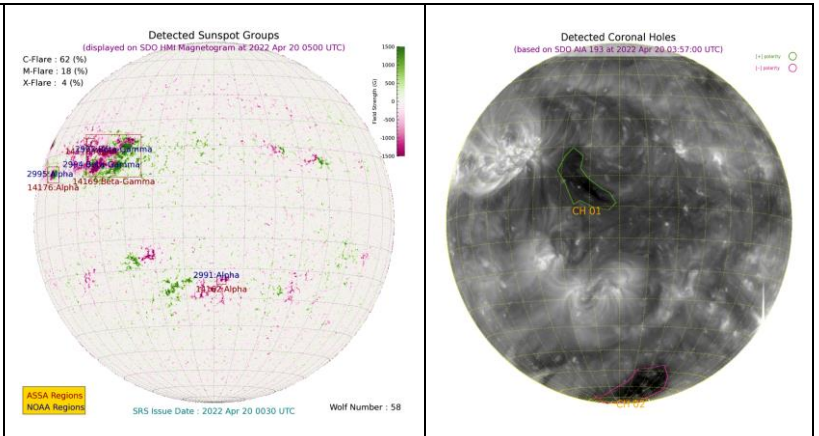
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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: 20 April 2022

There are two active regions AR2993 and AR2994 present on the Sun capable of producing strong M and X-Class solar flares having 18% and 4% chances respectively.

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



### DISCUSSION:

Solar activity is expected to remain at moderate levels. Low solar wind speed and quiet geomagnetic activity is expected. Local HF conditions are enhanced. Minor to moderate radio blackouts may be observed in case of M and X-Class solar flares.