

# Daily Space Weather Summary (SUPARCO)

Wednesday, April 19, 2023, 12:07 PST



## LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

|   |            |            |            |            |            |             |             |             |
|---|------------|------------|------------|------------|------------|-------------|-------------|-------------|
| <b>Critical Frequency of F2 layer (foF2)</b>  | 11.4 MHz   |            |            |            |            |             |             |             |
| <b>Virtual Height of F2 layer (h`F2)</b>  | 310 km     |            |            |            |            |             |             |             |
| <b>Total Electron Content (TEC)</b>   | 52 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>  | 11.6       | 12.2       | 13.6       | 15.5       | 17.7       | 20.0        | 25.3        | 30.1        |
| <b>FOT (MHz)</b>  | 9.9        | 10.4       | 11.6       | 13.2       | 15.0       | 17.0        | 21.5        | 25.6        |

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> | 45535/50045 nT |

The local geomagnetic field is quiet at the moment.

## LATEST SOLAR CONDITIONS

|   |   |
|---|---|
| <b>Sunspot Number (SN)</b>  | 140   |
| <b>Solar radio flux (F10.7)</b>   | 153 sfu   |
| <b>Solar wind speed</b>   | 519.5 km/s (varied in the past 24 hrs between 426 & 621 km/s)   |
| <b>Solar x-ray flares</b>   | C1.2 (max flare in the past 24 hrs (C4, 1529 UT)  |
| <b>Interplanetary Magnetic Field (IMF)<br/>Total Field (Bt)<br/>Z Component of Field (Bz)</b> | +6.5 nT (varied in the past 12 hrs between +4.4 nT & +12.9 nT)<br>+4.3 nT (varied in the past 12 hrs between -4.9 nT & +1.6 nT) |

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

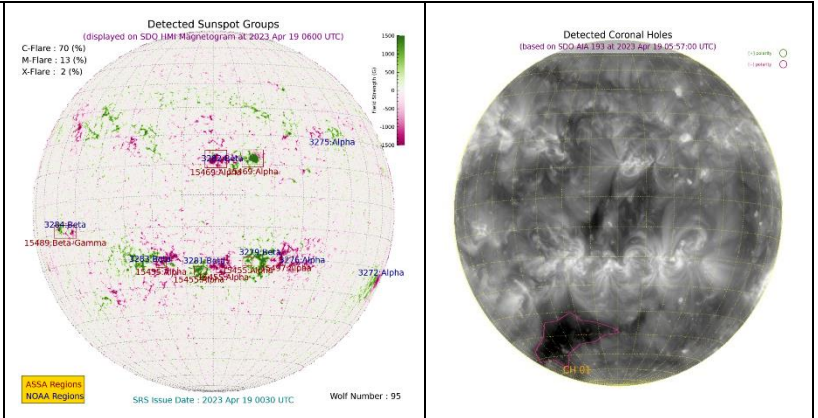
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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: 19 April 2023

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 levels. In case of solar flares, shortwave fadeouts may be observed. Moderate to slightly elevated solar wind speed is expected due to the presence of coronal holes. Geomagnetic activity is expected to be quiet. HF conditions are slightly enhanced.