

# Daily Space Weather Summary (SUPARCO)

Monday, July 31, 2023, 12:01 PST



## LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

|   |            |            |            |            |            |             |             |             |
|---|------------|------------|------------|------------|------------|-------------|-------------|-------------|
| <b>Critical Frequency of F2 layer (foF2)</b>  | 10.1 MHz   |            |            |            |            |             |             |             |
| <b>Virtual Height of F2 layer (h`F2)</b>  | 305 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>  | 10.2       | 11.5       | 12.8       | 14.7       | 16.8       | 18.9        | 23.9        | 28.1        |
| <b>FOT (MHz)</b>  | 8.7        | 9.8        | 10.9       | 12.5       | 14.3       | 16.1        | 20.3        | 23.9        |

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

## LOCAL GEOMAGNETIC CONDITIONS

|                                  |                |
|----------------------------------|----------------|
| <b>K-index</b>                   | 0 (Quiet)      |
| <b>Total Field (F) (Son/Isb)</b> | 45515/50025 nT |

The local geomagnetic field is quiet at the moment.

## LATEST SOLAR CONDITIONS

|   |  |
|---|--|
| <b>Sunspot Number (SN)</b>  | 139  |
| <b>Solar radio flux (F10.7)</b>   | 174 sfu  |
| <b>Solar wind speed</b>   | 446.7 km/s (varied in the past 24 hrs between 435 & 532 km/s)  |
| <b>Solar x-ray flares</b>   | C1.7 (max flare in the past 24 hrs (M1, 0822 UT))  |
| <b>Interplanetary Magnetic Field (IMF)<br/>Total Field (Bt)<br/>Z Component of Field (Bz)</b> | +5.5 nT (varied in the past 12 hrs between +4.4 nT & +6.0 nT)<br>-0.2 nT (varied in the past 12 hrs between -4.9 nT & +3.0 nT) |

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

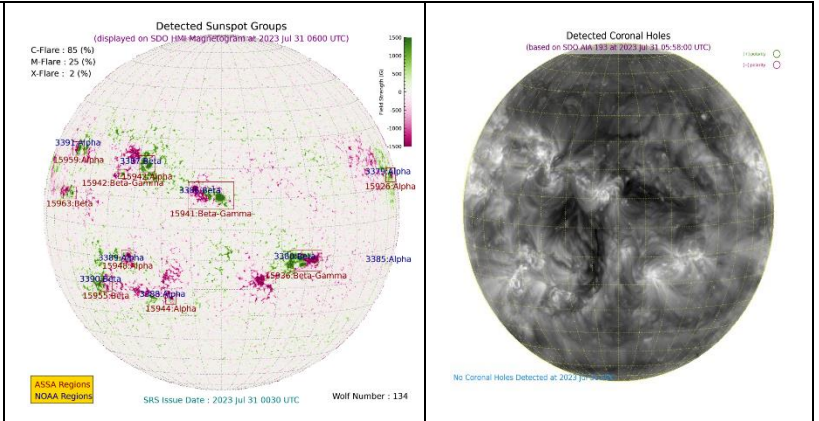
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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: 31 July 2023

There is no active region present on the Sun capable of producing strong solar flares.

No 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. Slightly elevated solar wind speed and quiet geomagnetic activity is expected. HF conditions are normal.