

# Daily Space Weather Summary (SUPARCO)

Wednesday, September 14, 2022, 12:20 PST



## LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

|   |            |            |            |            |            |             |             |             |
|---|------------|------------|------------|------------|------------|-------------|-------------|-------------|
| <b>Critical Frequency of F2 layer (foF2)</b>  | 10.7 MHz   |            |            |            |            |             |             |             |
| <b>Virtual Height of F2 layer (h`F2)</b>  | 328 km     |            |            |            |            |             |             |             |
| <b>Total Electron Content (TEC)</b>   | 30 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>  | 10.8       | 11.2       | 12.3       | 14.0       | 15.9       | 17.9        | 22.6        | 27.1        |
| <b>FOT (MHz)</b>  | 9.2        | 9.5        | 10.5       | 11.9       | 13.5       | 15.2        | 19.2        | 23.1        |

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> | 45563/50073 nT |

The local geomagnetic field is quiet at the moment.

## LATEST SOLAR CONDITIONS

|   |  |
|---|--|
| <b>Sunspot Number (SN)</b>  | 93   |
| <b>Solar radio flux (F10.7)</b>   | 154 sfu  |
| <b>Solar wind speed</b>   | 311.3 km/sec (varied in the past 24 hrs between 294 & 592 km/s)  |
| <b>Solar x-ray flares</b>   | C1.5 (max flare in the past 24 hrs: (C9, 1535 UT)  |
| <b>Interplanetary Magnetic Field (IMF)<br/>Total Field (Bt)<br/>Z Component of Field (Bz)</b> | 5.8 nT (varied in the past 12 hrs between 1.6 nT & 4.5 nT)<br>-1.4 nT (varied in the past 12 hrs between -1.5 nT & 0.9 nT) |

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

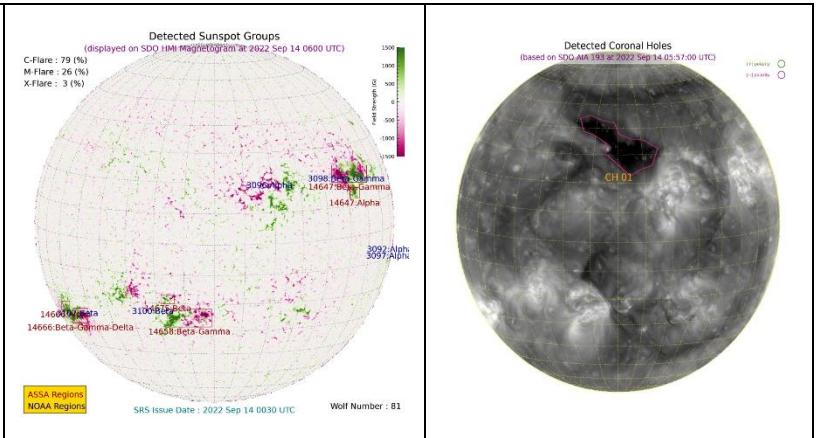
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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: 14 September 2022

There is one active region AR3098 present on the Sun capable of producing strong C and M-class solar flares having chances of 79% and 26% respectively.

01 Coronal Hole (CH) is detected on the solar disk.



### DISCUSSION:

Solar activity is expected to remain at moderate levels. Short wave fadeouts and minor radio blackouts will be observed in case of M/X solar flares. Low solar wind speed and quiet geomagnetic activity is expected. HF conditions are enhanced.