

Daily Space Weather Summary (SUPARCO)

Monday, December 04, 2023, 12:50 PST



LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)

| | | | | | | | | |
|---|------------|------------|------------|------------|------------|-------------|-------------|-------------|
| Critical Frequency of F2 layer (foF2) | 10.0 MHz | | | | | | | |
| Virtual Height of F2 layer (h`F2) | 280 km | | | | | | | |
| Total Electron Content (TEC) | 40 TECU | | | | | | | |
| Maximum Usable Frequency (MUF) and Optimum Traffic Frequency (FOT) for various distances | | | | | | | | |
| Distance (Km) | 100 | 200 | 400 | 600 | 800 | 1000 | 1500 | 3000 |
| MUF (MHz) | 10.2 | 10.4 | 11.4 | 12.5 | 14.8 | 17.1 | 20.4 | 23.0 |
| FOT (MHz) | 8.7 | 8.9 | 9.7 | 10.6 | 12.6 | 14.5 | 17.3 | 20.0 |

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

LOCAL GEOMAGNETIC CONDITIONS

| | |
|----------------------------------|----------------|
| K-index | 1 (Quiet) |
| Total Field (F) (Son/Isb) | 45515/50025 nT |

The local geomagnetic field is quiet at the moment.

LATEST SOLAR CONDITIONS

| | |
|---|---|
| Sunspot Number (SN) | 107 |
| Solar radio flux (F10.7) | 148 sfu |
| Solar wind speed | 516.7 km/s (varied in the past 24 hrs between 394 & 551 km/s) |
| Solar x-ray flares | B9.0 (max flare in the past 24 hrs (C8, 0126 UT)) |
| Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz) | +8.3 nT (varied in the past 12 hrs between +3.3 nT & +10.3 nT) +7.0 nT (varied in the past 12 hrs between -2.5 nT & +3.0 nT) |

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

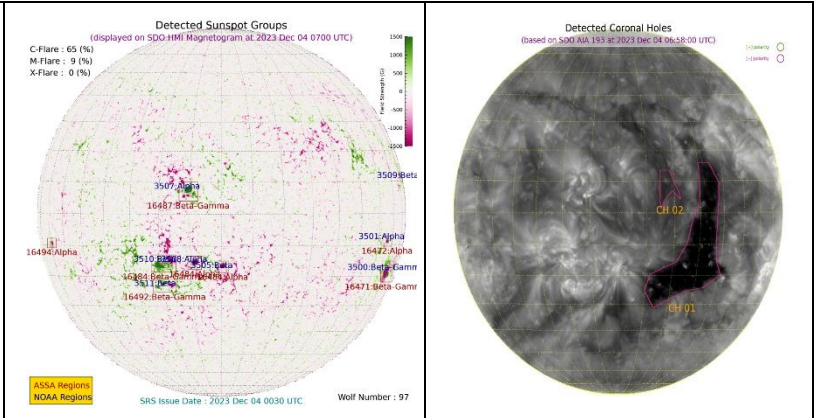
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

Notes: Credits: www.spaceweather.go.kr, www.sws.bom.gov.au, www.spaceweather.com, www.solen.info

Daily Sun: 4 December 2023

There is one active region AR3500 present on the Sun capable of producing strong C and M-class solar flares having chances of 65% and 9% respectively.

02 Coronal Holes (CHs) are 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. Low to moderate solar wind speed is expected due to the presence of coronal holes. Geomagnetic activity is expected to be quiet. HF conditions are depressed.