

# Daily Space Weather Summary (SUPARCO)

Wednesday, September 25, 2024, 11:51 PST



| LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)   |     |  |      |      |      |      |      |      |
|--|-----|--|------|------|------|------|------|------|
| <b>Critical Frequency of F2 layer (foF2)</b>   |     | 13. MHz  |      |      |      |      |      |      |
| <b>Virtual Height of F2 layer (h`F2)</b>   |     | 282 km   |      |      |      |      |      |      |
| <b>Total Electron Content (TEC)</b>  |     | 72 TECU  |      |      |      |      |      |      |
| Maximum Usable Frequency (MUF) and Optimum Traffic Frequency (FOT) for various distances |     |  |      |      |      |      |      |      |
| Distance (Km)  | 100 | 200  | 400  | 600  | 800  | 1000 | 1500 | 3000 |
| <b>MUF (MHz)</b>   | 9.2 | 9.7  | 11.6 | 14.1 | 16.9 | 19.8 | 26.4 | 29.6 |
| <b>FOT (MHz)</b>   | 7.8 | 8.2  | 9.8  | 12.  | 14.4 | 16.9 | 22.5 | 26.3 |
| Local HF conditions are Normal as compared to the predicted monthly median MUF.          |     |  |      |      |      |      |      |      |
| LOCAL GEOMAGNETIC CONDITIONS   |     |  |      |      |      |      |      |      |
| <b>K-index</b>   |     | 5 (Storm)  |      |      |      |      |      |      |
| <b>Total Field (F) (Son/Isb)</b>   |     | 45659/51569 nT   |      |      |      |      |      |      |
| The local geomagnetic field is quiet at the moment.                                      |     |  |      |      |      |      |      |      |
| LATEST SOLAR CONDITIONS  |     |  |      |      |      |      |      |      |
| <b>Sunspot Number (SN)</b>   |     | 123  |      |      |      |      |      |      |
| <b>Solar radio flux (F10.7)</b>  |     | 172 sfu  |      |      |      |      |      |      |
| <b>Solar wind speed</b>  |     | 498.7 km/s (varied in the past 24 hrs between 378 & 526 km/s)      |      |      |      |      |      |      |
| <b>Solar x-ray flares</b>  |     | C6.91 (max flare in the past 24 hrs (C6 1146 UT Sep24))            |      |      |      |      |      |      |
| <b>Interplanetary Magnetic Field (IMF)</b>   |     | +10.73 nT (varied in the past 12 hrs between +1.59 nT & +11.12 nT) |      |      |      |      |      |      |
| <b>Total Field (Bt)</b>  |     | -5.89 nT (varied in the past 12 hrs between -9.91 nT & +7.63 nT)   |      |      |      |      |      |      |
| <b>Z Component of Field (Bz)</b>   |     |  |      |      |      |      |      |      |
| Solar conditions are at moderate levels with background X-ray flux at C-class level.     |     |  |      |      |      |      |      |      |

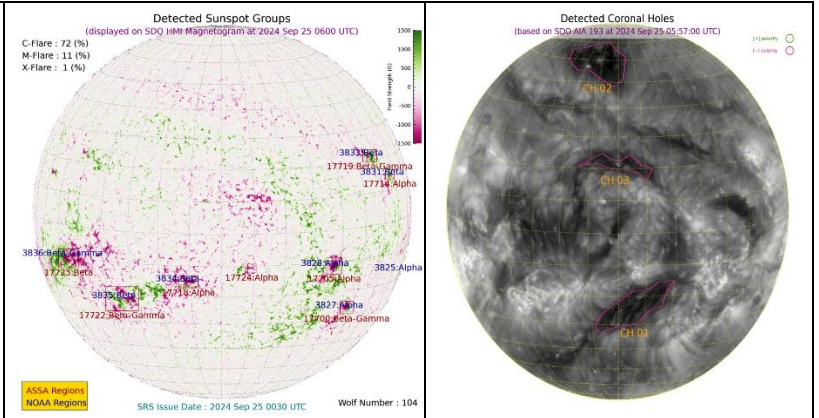
Sonmiani (SON): 25.2° N, 66.75° E, Islamabad (ISB): 33.7° N, 73.13° E

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: 25 September 2024

There is one regions present on the Sun capable of producing strong M and X-class solar flares having chances of 11% and 1% respectively.

03 Coronal Hole (CH) are detected on the solar disk.



### DISCUSSION:

Solar activity is expected to be at High levels. Some M-class solar flares, have already occurred from the regions mentioned. In case of more M/X-class solar flares, moderate radio blackouts may be observed. Moderate solar wind speed and quiet geomagnetic activity is expected. HF conditions are Enhanced.