Daily Space Weather Summary (SUPARCO)
Monday, September 30, 2024, 14:14 PST

LOCAL CURRENT IONOSPHERIC CONDITIONS (SON)	
Critical Frequency of F2 layer (foF2)	14.4 MHz
Virtual Height of F2 layer (h`F2)	378 km
Total Electron Content (TEC)	78 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)	14.5	14.8	16.1	17.9	20.1	22.5	28.3	36.0
FOT (MHz)	12.3	12.6	13.7	15.2	17.1	19.1	24.1	30.6

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

LOCAL GEOMAGNETIC CONDITIONS	
K-index	1 (Quiet)
Total Field (F) (Son/Isb)	45669/51569 nT

The local geomagnetic field is quiet at the moment.

LATEST SOLAR CONDITIONS	
Sunspot Number (SN)	154
Solar radio flux (F10.7)	197 sfu
Solar wind speed	440.9 km/s (varied in the past 24 hrs between 347 & 547 km/s)
Solar x-ray flares	C2.3 (max flare in the past 24 hrs (M1, 1441 UT)
Interplanetary Magnetic Field (IMF) Total Field (Bt) Z Component of Field (Bz)	+8.17 nT (varied in the past 12 hrs between +8.0 nT & +12.47 nT) +4.69 nT (varied in the past 12 hrs between -10.95 nT & +4.29 nT)

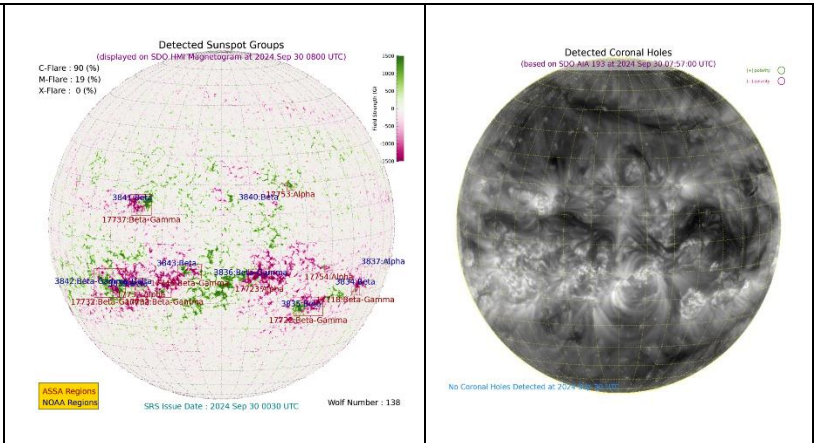**Solar conditions are at low to moderate levels with background X-ray flux at C-class level.**

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

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

Daily Sun: 30 September 2024

There are two active regions AR3836 and AR3842 present on the Sun capable of producing strong C and M-class solar flares having chances of 90% and 19% respectively.

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 M/X-class solar flares, minor to moderate radio blackouts may be observed. Low to moderate solar wind speed and quiet geomagnetic conditions are expected. HF conditions are slightly enhanced.