

# QUARTERLY REPORT ON PAST SPACE WEATHER

Q3 2019

13.6.2019 - 15.9.2019

## SUNSPOT NUMBERS

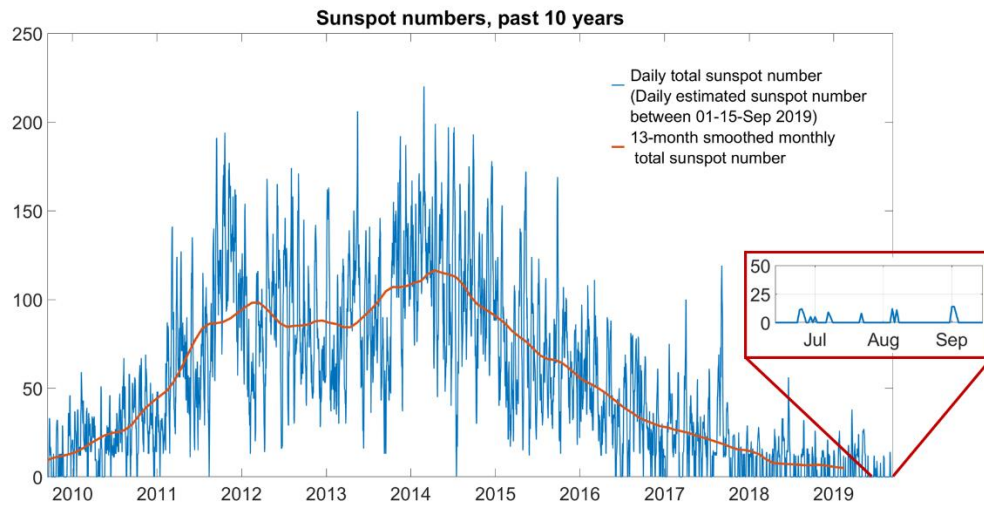


Figure 1: Sunspot numbers (SILSO)

## FLARES

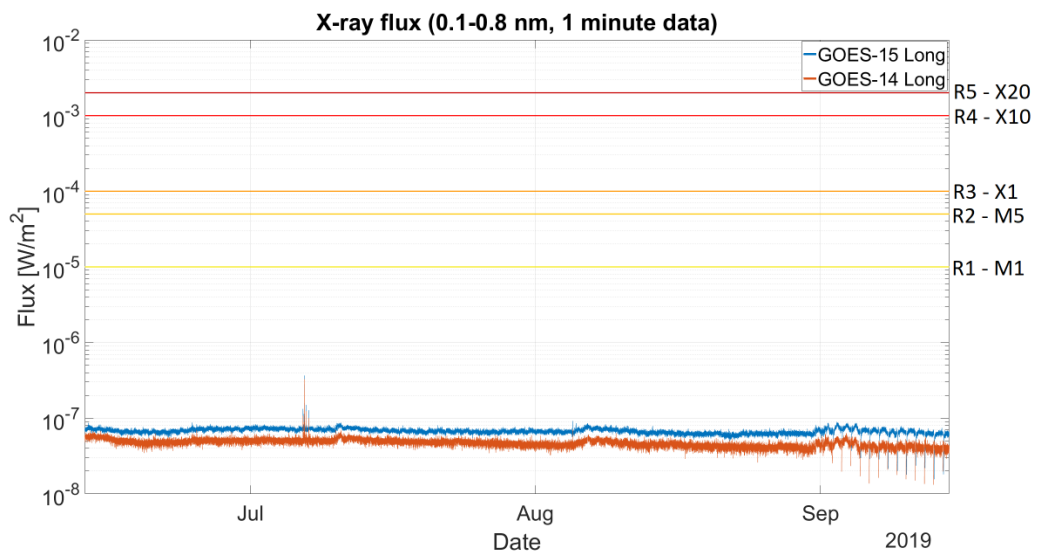


Figure 2: GOES X-ray flux (GOES – SWPC/NOAA) together with the NOAA Space weather scale thresholds for radio blackouts. (For more information on the NOAA Space Weather Scales, see <https://www.swpc.noaa.gov/noaa-scales-explanation>)

## CMES

No major Earth-directed CME's were observed during the reporting period.

## SOLAR WIND

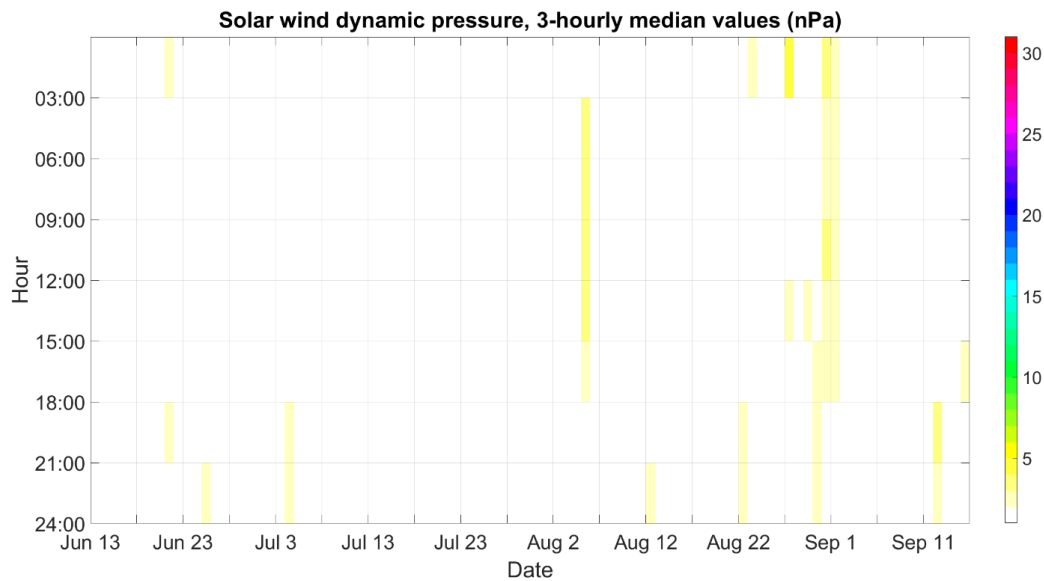


Figure 3: 3-hourly median values of Solar wind dynamic pressure based on ACE data. (NOAA/SWPC)

## GEOMAGNETIC CONDITIONS

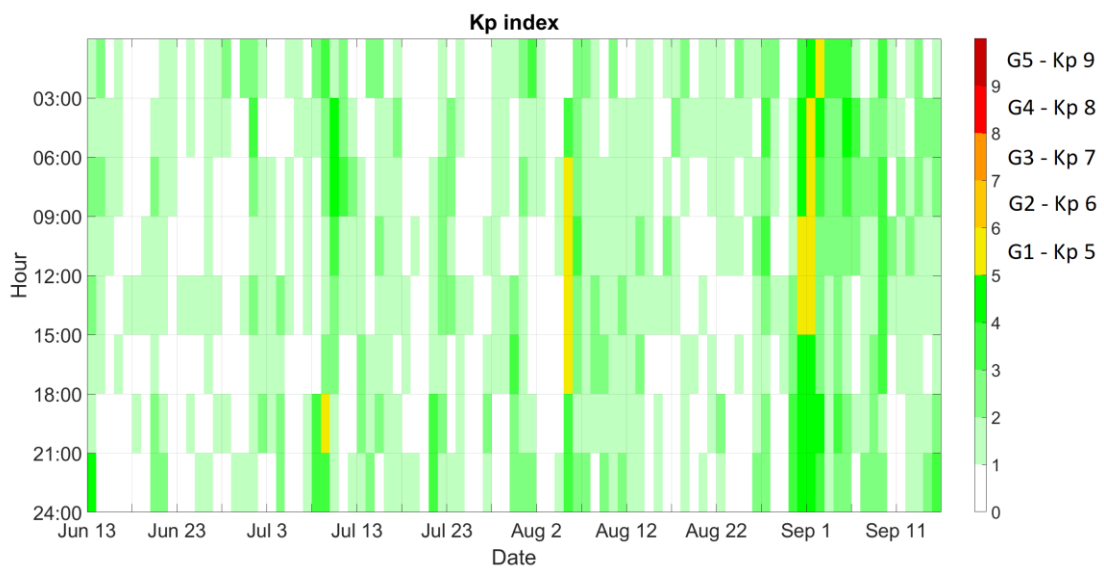


Figure 4: Kp index (Data from GFZ Potsdam) together with the NOAA Space weather scale thresholds for geomagnetic storms. (For more information on the NOAA Space Weather Scales, see <https://www.swpc.noaa.gov/noaa-scales-explanation>)

## AKNOWLEDGEMENTS

Data from:

SILSO <http://sidc.be/silso/>

GOES <https://www.ngdc.noaa.gov/stp/satellite/goes/index.html>

DONKI (CCMC/GSFC/NASA) <https://kauai.ccmc.gsfc.nasa.gov/DONKI/>

DSCOVR/ACE – NASA/NOAA /SWCP <https://www.ngdc.noaa.gov/dscovr/portal/>

GFZ <https://www.gfz-potsdam.de/en/kp-index/>