

# SPACE WEATHER INFORMATION AND FORECAST SERVICES

(SWIFtS)

## WEEKLY SPACE WEATHER SUMMARY

Periods: 4-10 March 2016

### SOLAR ACTIVITY

In general, solar activity last week was at the eruptive level with four C class flare was detected. The strongest flare was C3.3 peaked at 12:50 UT of 9 March 2016, came from NOAA 2519 that was just emerged on the east limb. There were 13 active regions observed: NOAA 2506, 2507, 2508, 2509, ...and 2519. All those regions had simple magnetic configuration alpha or beta. From the coronal observation, several mass ejections with narrow angular width were detected by CACTUS. Solar activity is predicted to be at the eruptive level for the next week.

### GEOMAGNETIC ACTIVITY

Geomagnetic activity during the week, from 4 to 10 March 2016 has encountered minor storm that peaked on March 6<sup>th</sup> 2016 at 22:00 UT. Dst index reached -96 nT and Kp index was 6 at that time. The local response from magnetometer in Kototabang showed a disturbance in minor storm level has occurred with K index reached 5. IMF condition during storm was varied between -20 to 15 nT. Coinciding with the minor storm, a substorm has also occurred and lasted for 38 hours. The substorm began on March 6<sup>th</sup> 2016 at 13:00 UT and finished on March 8<sup>nd</sup> 2016 at 03:00 UT with Ae index show value < 1500 nT.

### IONOSPHERIC CONDITIONS

Ionospheric conditions for this week were dominant in quiet conditions.

The minimum frequencies ( $f_{min}$ ) and the critical frequencies  $F/F2$  layers of ionosphere ( $f_oF2$ ) were dominant in normal conditions. There was occurrence of Spread-F which could be a source of *Fading* disturbances on March 6, 2016 in high category. Based on the observations using GPS Ionospheric Scintillation and TEC Monitor (GISTM) over Manado, ionospheric scintillation were dominant in quiet conditions. But the strong category of Scintillation occurred on March 9, 2016. The peaks of TEC values for this week were between 51 to 70 TECU. Those values could affect to the Error positioning parameters into the medium scale of disturbance conditions.

*For daily space weather information and forecast, please refer to our **Space Weather Information and Forecast Services (SWIFtS)** official website at [swifts.sains.lapan.go.id](http://swifts.sains.lapan.go.id) or please e-mail us for request by facsimile*