

SPACE WEATHER INFORMATION AND FORECAST SERVICES

(SWIFtS)

WEEKLY SPACE WEATHER NEWS

Periode: April, 14th – April, 20th 2017

SOLAR ACTIVITY

The Sun is entering the minimum activity phase, but there were at least 4 C-class flare occurrence detected in the last week. The strongest flare was C5.5 that erupted on 18 April 20.10 UT at active region NOAA 2651. This region experienced abrupt increase of its area after eruption. Beside flares, there were a couple of CME rising from the east limb of the Sun. One of them was categorized as type II CME with angular span of 140 degrees and median speed of 800 km/s. It was possibly related to the activities around NOAA 2651. Next week solar activity is predicted to be at eruptive level as NOAA 2651 is continuously evolving and there is a chance of new active region emerging from the east limb of the Sun.

GEOMAGNETIC ACTIVITY

Geomagnetic activities during April, 14th – April, 20th 2017 began with quiet condition until 18 April 2017. Then on 19 April 2017 geomagnetic activity leveling up to active condition with minimum Dst index reached -42 nT at 06:00 UT and maximum Kp index reached 4. Furthermore the geomagnetic condition return to its quiet level until 20 April 2017, 03:00 UT. On 20 April 2017 started from 04:00 UT, Dst index began to drop and reached its minimum value -55 nT at 07:00, it stated that low and equatorial latitude regions were in minor storm level of geomagnetic disturbance. While in the High and mid latitude regions were in moderate storm condition with Kp index reached 6. The active and minor storm condition might caused by high speed stream from geoeffective coronal holes located at Solar equator. The highest intensity of substorm was 1500 nT occurred on April 20th 2017 which were coincided with the occurrence of minor storm. Electron flux was in very high level in the beginning of the week and return to low level on 19 April 2017 until today.

IONOSPHERIC CONDITIONS

Ionosphere conditions in this week were in quiet to minor condition.

The minor level disturbances in the ionosphere was occurred due to the depression of critical frequencies of F/F2 layers ($foF2$). The $foF2$ depressions were impacted to the radiowave propagation over the ionosphere which known as the MUF Depression. Although the $foF2$ experienced depression, the minimum frequencies ($fmin$) of the ionosphere in this week were in quiet condition. There was no increment of $fmin$ that could be a source of disturbance in the HF radio communication which known as *Shortwave Fadeout* (SWF). Based on the observations using GISTM over Bandung and Biak, the scintillation ($s4$) condition for this week were quiet to moderate level. The error positioning conditions were generally in slight level condition with W index up to -2.

*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 or please e-mail us for request by facsimile*



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