

SPACE WEATHER INFORMATION AND FORECAST SERVICES

(SWIFtS)

WEEKLY SPACE WEATHER NEWS

Periode: March, 24th – 30th 2017

SOLAR ACTIVITY

For the past week, solar activity was in quiet to eruptive condition. The sun mostly erupted B class flares, though on March, 28th 2017 there was 7 times C-class flares occurred along with the enhancement of sunspot region's activities. Five of those flares originated from NOAA 2645, while the other two were from NOAA 2644. The strongest flare was C3.2 from NOAA 2645 peaking at 04:56 UT. Other than these eruptively region, there were quiet and stable region, NOAA 2643 & NOAA 2644 existing on the solar disk within the last week. Complexity of regions were slightly shown by two eruptive sunspots with $\beta\gamma$ configuration, before returning back to be simple β at the end of this week. According to SDO AIA 304 observation, there were two small filament eruptions. The first one which occurred on March 24th 2017 at around 17:00 UT near the south east limb was associated with weak CME event that probably came from backside. The second one was observed on 25th March 2017 on the South west region at around 10:00 UT, without any association with other event. Meanwhile, based on SOHO/LASCO and radio observation, neither CME nor radio burst were observed within the last week.

GEOMAGNETIC ACTIVITY

Geomagnetic activities during March, 24th – 30rd 2017 were in quiet to minor storm level. The minimum Dst index was -74 nT on March 27th, 2017 and maximum Kp index reached 6 which means moderate storm at high and mid latitude region. Solar wind speed were increase from 350 km/s to 750 km/s. Enhancement of solar wind speed occurred on March 27th 2017. IMF condition reached -15 nT to 15 nT on March 27th 2017. Geoeffective coronal hole was on equator which expand to southern Solar Hemisphere that moved to westward during the week. The coronal holes polarity was negative (-) and the fast stream plasma from the coronal hole might be the cause of geomagnetic disturbance on this week. The highest intensity of substorm was 1500 nT occurred on March 27th 2017 and still in progress until today. Electron fluxes were in low to very high level.

IONOSPHERIC CONDITIONS

Ionosphere conditions in this week were in quiet to minor condition. Only one day was moderate disturbances level on March 29, 2017.

The moderate 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). The error positioning conditions were generally in normal level condition with W index up to 1.

*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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