SPACE WEATHER INFORMATION AND FORECAST SERVICES
(SWIFtS)
WEEKLY SPACE WEATHER NEWS
Periode: 23 – 29 July 2016

SOLAR ACTIVITY

Earlier on this past week, AR NOAA 2565 and 2567 were very active by producing numerous M & C-class flares. Before completely dissappeared on 25 July, NOAA 2565 produced 4 C-class flares and 3 M-class flares, with the largest as M 7.6 on 23 July 05:00 UT. Also NOAA 2567 produced 11 C-class flares, and 2 M-class flares, with the largest was M 2.0 occured on 24 July 06:20 UT.
Both ARs were moving to the far-side after 25 July, afterwards, Solar activity was slowly decline to quiet level and only one AR left with no spot, NOAA 2569 on the vicinity of the west side. All those left the Sun in quiet level for the rest of the week.
For the past week, flux of high energy proton was far below threshold so that the activity level is quiet.

GEOMAGNETIC ACTIVITY

Geomagnetic activity at the beginning of week from July 22nd, 2016 to July 21st, 2016 was on quiet level. Disturbance at minor storm level occurred on 25 July 2016 with lowest Dst index was -37 nT and the maximum Kp index was 4 which stated active level at mid and high latitude. K index from Agam and Sumedang station was 5 which means minor storm level at Indonesian Region. The 25 July 2016 geomagnetic disturbance might caused by CME on 22 and 23 July 2016. Next geomagnetic disturb condition occurred on 28 July 2016, which was on active level with Dst index was -32 nT and maximum Kp index was 3. The disturbance might caused by high speed stream from geoefective coronal hole at equaotor. Substorm with intensity <1500 nT taken place for 24 hours from 24 July 2016 until 25 July 2016..

IONOSPHERIC CONDITIONS

In this week, the ionosphere conditions varyfrom quiet to strong level of disturbances.
The strong condition wasoccurredon July 24, 26, and 27, the moderate condition was occurred on July 25 and 28. The longestdepression of the *foF/F2* of the ionosphere were experienced is 4 hours15 minutes on July 27. So this depression could impact to the radio wave propagation over the ionosphere which known as the *Radio Blackout* in strong scale. Although the *foF/F2* experienced a depression, the minimum frequencies (*fmin*) of ionosphere were in normal conditions. The increment of *fmin* could be a source of disturbance in the HF radio communication which known as *Shortwave Fadeout* (*SWF*). The occurrences of Spread-*F* were noted twice in medium scale appear in this week on July 25 and 27. This occurrences of *Spread-F* were a source of *Fading* disturbances. Beside the *Spread-F*, the *E-Sporadic* also reported occurredwith the highest critical frequency (*foEs*) reach 9 MHz on July 22. The occurrences of *E-Sporadic* could be a positive impact especially when the depression of *foF/F2* occurred. Based on the observations using GISTM over Biak, the scintillation (*S4*) condition for this week were in quietcondition. These conditions of scintillation could lead quiet levels of loss of lock. The Range of maximumTEC value in this week were between 19 – 29 TECU. Those values could be affecting to the error positioning parameters in the slight 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** or please e-mail us for request*

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