SPACE WEATHER INFORMATION AND FORECAST SERVICES
(SWIFtS)
WEEKLY SPACE WEATHER NEWS
Periode: 26 August – 1 September 2016

SOLAR ACTIVITY

For this whole week, the sun has been quiet to eruptive. During those period, there were 8 active regions on the solar disk, named NOAA 2578-2585. From NOAA 2578, NOAA 2583 and NOAA 2585, 8 C-class flares and several B class flares were erupted. The strogest was C2.2 occuring on August, 31st 2016 with the peak at 20:19 UT. There were also 15 type III solar radio bursts along these week, with majority occurance on August, 29th 2016. According to SOHO/LASCO C-2, there were only several small angle CMEs. Solar activity is predicted to becoming more eruptive in the next week as the the configuration of NOAA 2585 is getting more complex.
For the past week, flux of high energy proton was far below threshold so that the activity level is quiet. It is predicted still on the same quiet level

GEOMAGNETIC ACTIVITY

Geomagnetic activities at the beginning of the week from August 26th, 2016 to August 29th, 2016 were on quiet level. Geomagnetic disturbance in active level occurred on 30 - 31 August 2016. The minimum Dst index was -55 nT on August, 31st 2016 at 10:00 UT and the maximum Kp index reached 5. A long this week there were geoeffective coronal holes, thus affected high lattitude disturbance showed by Kp index. There were 2 geoeffective CMEs, the first was occurred at August, 29th 2016 with angular width 42^{0} and velocity about 225 km/sec and second CME occurred at 31 August 2016 having angular width around 72° with velocity about 111 km/sec according to SIDC. Although the CME's angular width were less than 90°, but they still have potential to disturb geomagnet since their duration were long enough to release quite amount of charge particles. In a week, there were substroms as a result of geoeffective coronal holes. The biggest one occurred on August, 31th 2016 with intensity <2000 nT and still going on until now.

IONOSPHERIC CONDITIONS

In this week, the ionosphere condition were vary from quiet and strong level of disturbances.
The strong condition was occurred on August 29, 2016 due to a depression of the*foF2* of the ionosphere were experienced up to 2 hours. So this depression could impact to the radio wave propagation over the ionosphere which known as the *Radio Blackout* in strong scale. Although the *foF2* 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 high and medium scale appear in this week on August 292, 2016 and September 1, 2016. This occurrences of *Spread-F* were a source of *Fading* disturbances. Beside the *Spread-F*, the *E-Sporadic* also reported occurred with the highest critical frequency (*foEs*) reach 10.90 MHz on August 26, 2016 at 19:45 LT. The occurrences of *E-Sporadic* could be a positive impact especially when the depression of *foF2* occurred. Based on the observations using GISTM over Biak, the scintillation (*S4*) condition for this week were mostly in quiet condition except on September 1, 2016 in moderate level. These conditions of scintillation could lead quiet levels of loss of lock. The Range of maximum TEC value in this week were between 28 - 47 TECU and average of W-index were between 1 – 2. Those values could be affecting to the error positioning parameters in the slight scale of disturbance conditions.

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