SPACE WEATHER INFORMATION AND FORECAST SERVICES
(SWIFtS)
WEEKLY SPACE WEATHER SUMMARY
Periods: 13 – 19 May 2016

SOLAR ACTIVITY

During the week, Solar activity in general at eruptive level though there are only four active regions with spots (NOAA 2542, 2543, 2544, and 2545) in the solar disk. The entire active region produced C-class flares except for NOAA 2545. The maximum flare is C7.4 occurred on May 14, 2016 peaked at 11:34 UT from NOAA 2543. Also recorded several times type III solar radioburst events and only one type II event. The noteworthy CME events are CME occurred on May 15, 2016 with 158^{o} angular width hurled to the west with an estimated speed of 574 km/s. Also a Long Duration Flare event occured on May 15, 2016 cause increased in high-energy protons flux, though still below the Solar Proton Event (SPE) threshold. It is predicted that solar activity will still be at the eruptive level in the coming week.

GEOMAGNETIC ACTIVITY

Geomagnetic activity based on Sumedang's local observatorium data this week, at May 13th until 19th 2016 was on quiet level. Minimum Dst index has reached -32 nT which occurred at May 14th 2016. This local quiet condition was agreed with middle and high latitude condition. Maximum Kp index this week was 3+ which is in a quiet level. The intensity of this week,s substorms were below 1000 nT. At May 15th 2016 a CME partial halo has taken place on geoeffective area, and was estimated to reach earth at May 19th 2016 but until May 20th, it has no effect to geomagnetic activity yet. Huge coronal hole on 12544 NOAA's active region on the northern hemisphere of the sun was geoeffective since May 14th is still exists and may trigger fast stream.

IONOSPHERIC CONDITIONS

In this week, ionospheric condition were quiet to strong level disturbance.
Quiet conditions occured at 13th, 17th, and 18th May 2016. Minor level occurred at 19th 2016. Strong disturbance occurred at 14th to 16th May 2016. The disturbances occurred due to the depression of *F/F2* critical frequencies (*foF/F2*) more than 30% from it's median values with duration from several minutes to more than 3 hours at premidnight and postmidnight. Those conditions impacting the HF radio communication which defined as *Radio Blackout*. There was no increment of minimum frequencies (*fmin*) which is a source of *Shortwave Fadeout* (SWF) disturbance. Also there was no occurrence of *Spread-F* which is a source of. Based on the observations using GISTM over Biak, the *scintillation* (S4) condition for this week were in quiet. These conditions of *scintillation* could lead quiet levels of *loss of lock*. The value of W index in this week were -2 and 2. Only on 17th May 2016, W index was -3. Those values could affecting 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*** *or please e-mail us for request by facsimile*

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