

# SPACE WEATHER INFORMATION AND FORECAST SERVICES

(SWIFtS)

## WEEKLY SPACE WEATHER SUMMARY

Periods: 20 – 26 May 2016

### SOLAR ACTIVITY

In general, last week solar activity can be considered as quiet or less eruptive. There was only four C class flares occurred in active region NOAA 2546 and NOAA 2548. The strongest was C1.3 occurring on May 24th at 10:20 UT from the west region NOAA 2546. Along this week there were only 5 active regions observed in solar hemisphere: NOAA 2544, 2546, 2547, and 2548. The largest and the most active region was NOAA 2546 which is recorded erupting three C class flares within this week. Several type III radio bursts occurred in the past week, some of them were related to the flare events. From the coronal observation, several mass ejection were detected by CACTUS system from SOHO/LASCO C-2 observation, but none of them can be considered as halo CME. For the next week, solar activity is predicted to remain in quiet or less eruptive level. Proton flux was normal as it categorised in quiet level.

### GEOMAGNETIC ACTIVITY

Geomagnetic activity based on Sumedang's local observatorium data this week, at May 20<sup>th</sup> until 26<sup>th</sup> 2016 was on quiet level. Minimum Dst index has reached -30 nT which occurred at May 21<sup>th</sup> 2016. This local quiet condition was agreed with middle and high latitude condition. Maximum Kp index this week was 4 which is in a quiet level. The intensity of this weeks substorms were below 1000 nT.

### IONOSPHERIC CONDITIONS

In this week, ionospheric condition were quiet to strong level disturbance.

Minor level occurred at 24<sup>th</sup> 2016. The disturbances occurred due to the depression of  $F/F_2$  critical frequencies ( $foF_2$ ) more than 30% from it's median values with duration from several minutes to more than 2 hours at premidnight. Those conditions impacting the HF radio communication which defined as *Radio Blackout*. There was no increment of minimum frequencies ( $f_{min}$ ) which is a source of *Shortwave Fadeout* (SWF) disturbance. However there was occurrence of *Spread-F* on 25<sup>th</sup> and 26<sup>th</sup> May 2016. 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 26<sup>th</sup> 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](http://swifts.sains.lapan.go.id) or please e-mail us for request by facsimile*



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