



Typhoon Activity in August 2014 in the Northwestern Pacific

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In the Northwestern Pacific area, August is the most active period for typhoon formation, development, and decay. But, last year, 2014, has become the first year that there was no typhoon genesis activity in this area in August since 1951, excluding typhoon Genevieve (1413) that crossed the dateline on August 7, 2014, from the East Pacific area. This study tried to check the monthly mean distribution of typhoon genesis-related factors and to simply compare with their climatological mean values in order to investigate the reason that the typhoon formation was inhibited during this period. The data used in this study was the re-analyzed data set produced by NCEP/NCAR/NOAA, USA. According to results, there were several conditions to inhibit the typhoon formation activities: i) the relative vorticity in 850 hPa showed negative anomaly indicating that there is less chance of initial formation, ii) the outgoing longwave radiation (OLR) displayed a condition to suppress the vertical flow of atmosphere, iii) the velocity potential of the upper layer (200 hPa) was negative anomaly in the Equatorial area, and iv) the strength of the west wind pattern around Philippine area which is a signal when typhoon formation is occurring, was also weak compared to the climatological value indicating that there was relatively strong east wind. However there were also favorable conditions for typhoon formation such as positive anomaly of SST and over 29 oC in mean value, positive anomaly of relative humidity of middle layer (700 hPa), and negative anomaly of vertical velocity shear in south area of 15 oN. These environmental conditions looked like having relationship to the mean distribution of the North Pacific Subtropical High on August. For example, looking at the distribution of geopotential height 5880, it much more extended to southwest than climatological pattern.

Keywords: Typhoon genesis activity, relative vorticity, outgoing longwave radiation, North Pacific Subtropical High