On the gravity wave activities based on intensive radiosonde observations at Bengkulu during YMC-Sumatra 2017

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Gravity waves are generated from local region such as convection, topography, jet stream and fronts. It is important to understand their activities because the quasi-biennial and semiannual oscillations and general circulation in middle atmosphere are affected by their activities. However, the scale of gravity waves is too broad to understand their characters and activities in detail. The purpose of this study is to clarify three-dimensional dynamical circulation driven by gravity waves around equatorial region.

The Campaign of Years of Maritime Continent-Sumatra (YMC-Sumatra) has been operated since 2017 to expedite the progress of improving understanding and prediction of local multi-scale variability of the maritime continent weather-climate system and its global impact. We use intensified radiosonde observation data at Bengkulu during December 2017 and report the analysis results of the relation between gravity wave activities and vertical structure of ozone. We will discuss the difference between the background state of YMC-Sumatra 2017 and that of Pre-YMC 2015.