

Correction for the MEISEI RS-06G radiosonde data obtained at the Indonesian BMKG sites

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During the extended observing period of the 2011-12 MJO field campaign, high-resolution (1 sec interval during the ascent) radiosonde sounding data were taken at the 13 stations of the Indonesian Meteorological, Climatological and Geophysical Agency (BMKG). In particular, 12 of their stations adopt Japanese Meisei RS-06G radiosonde system. Since it is essential to obtain high accurate data for analyses, quality control of those data has been carried out. For this purpose, we performed the correction to the following components; 1) dry bias due to solar-radiation during daytime sounding based on the simultaneous sounding comparison with cryogenic frost-point hygrometer, 2) time-lag error at lower temperatures, 3) discontinuity of relative humidity at 0 °C level due to original insufficient correction procedure, 4) unrealistic noisy data caused by the wrong operational procedure, 5) significantly heated/cooled values near the surface affected by surrounding obstacles, and 6) operational errors for the surface values. Quality-controlled data show the availability of sounding data can be used for the MJO study even under the complicated orographic conditions with strong local circulations.