

Readme for Radiosonde Data obtained at BMKG Weather Stations during YMC
March 9, 2020

<< Basic Information >>

Radiosonde type : Meisei IMS-100
Processor : Meisei MGPS2 (software: ver. 3.1.0)
Original data archive : ASCII files are archived every 1 second.

<< Processing Level >>

Level-0 Original
Level-1 Same as original except for their format
Level-2 Only apparent erroneous data have been removed.
Level-3 Additional corrections have been made. Those information are provided in the header.
Level-4 Same as Level-3 except for their format (5 hPa interval from 1000 hPa to 80 hPa in addition to the surface value, etc.).

<< Data Format >>

Level-2/3

Header	Line-01	Project ID
	Line-02	Release site/ID
	Line-03	Location in deg-E, deg-N, height in meter
	Line-04	Actual Release Time in UTC
	Line-05	Nominal Release Time in UTC
	Line-06	Serial Number / Radiosonde Type
	Line-07	Ground station software
	Line-08-11	Remarks

Data

Following parameters are archived every 1 second as (f7.1, 2f8.2, 2x, 7f7.1, f8.0)

Time in second
Longitude in degree East
Latitude in degree North
Pressure in hPa
Temperature in degree C
Dewpoint temperature in degree C
Relative Humidity with respect to water in %
Zonal wind component in m/sec
Meridional wind component in m/sec
Mixing ratio in g/kg
Height in meters

Level-4

Data

Following parameters are stored every 5hPa from 1000hPa to 80hPa in addition to the surface as (2f8.2, 2x, 11f7.1, f8.0)

- Longitude in degree East
- Latitude in degree North
- Pressure in hPa
- Temperature in degree C
- Dewpoint temperature in degree C
- Relative Humidity with respect to water in %
- Zonal wind component in m/sec
- Meridional wind component in m/sec
- Mixing ratio in g/kg
- Specific Humidity ratio in g/kg
- Potential temperature in K
- Equivalent potential temperature in K
- Saturated equivalent potential temperature in K
- Height in meters

<< Remarks >>

Quality Control: For Level-2, erroneous data near surface (wrong input of pressure and wind as initial values) were expressed as "9999". As for Level-3/4, humidity data have been adjusted to that obtained by Vaisala RS41. This procedure has been done based on the intercomparison with Vaisala RS41, Cryrogeo Frost-point Hygrometer, and GNSS-derived precipitable water. In these datasets, basically heating/cooling near ground surface in daytime/nighttime were not removed by considering the usage for local impact study. Otherwise (=if applied), such information is provided in the header.

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