Readme for Radiosonde Data obtained at BMKG CGK/PGK Stations during YMC-CSO 2021

October 26, 2023

<< Basic Information >>

Radiosonde Type	:	Meisei iMS-100
Processor	:	Meisei MGPS2 (software version: unknown)
Data archive	:	ASCII files are archived every 1 second.
Balloon	:	TOTEX TA-350 (except for 0600Z at CGK, where “600” is used)
Observation period	:	January 8, 2021, 0000Z - March 8, 2021, 1800Z

<< 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. This information is provided in the header (Remarks).
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	Launch site/ID
	Line-03	Location in deg-E, deg-N, height in meter
	Line-04	Actual Launch Time in UTC
	Line-05	Nominal Launch 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 >>
As level-3 (and 4), additional correction was applied to reduce solar radiation-induced error. Its correction scheme was developed based on the intercomparison with Vaisala RS41, Cryogenic Frost-point Hygrometer, and GNSS-derived precipitable water vapor, which was done at the BMKG Bengkulu meteorological station during the YMC-Sumatra 2017 campaign.

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