Readme for Radiosonde Data during MR17-08

Revised: January 13, 2022

Drafted: March 20, 2019

<< Basic Information >>

Radiosonde type	:	Vaisala RS41-SGP
Processor	:	Vaisala MW41 (software: ver. 2.2.1 / 2.3.0 / 2.6.1)
Original data archive	:	ASCII files are archived every 1 second.
Balloon	:	Totex TA-200 & 350
Observation period	:	Nov. 27, 2017, 0300Z - Jan. 11, 2018, 0600Z

<< 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 >>
Possible wrong initial location:
Initial data are taken from not radiosonde but independent surface meteorological station, those are input manually. Thus, the location at the first and second levels sometimes show a large difference (1-2 km), when those data were taken during ship's steaming. Thus, even they show a time "0 sec" at the first point, it is possible that those were recorded 5-10 min ago. Namely, such time difference should NOT be used for any calculation. (e.g., 2019010218, 2019010221, and 2019010200)

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