

Data from the Microwave Profiling Radiometer (MP3000A) during CHUVA experiment.

The date of the beginning of the measurement is indicated in the filename, for instance the file 2010-03-19_11-20-06_lv0.csv corresponds to March 19th, 11:20:06 GMT, then 03 is the month, and 20 is the day, 11 is the hour, and 20 is the minute, and 06 is the second.

lv0 - level 0
lv1 - level 1
lv2 - level 2

Level0 files contain raw, unprocessed data in engineering units. files contain 100% of the information needed to reprocess the raw data with alternative calibration information or algorithms.

Level0 files contain the following record types:

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00 - Record type for all error reports
15 - Header for sky observations
16 - Sky observation
17 - 21 channel sky observation
25 - Header for observation of internal ambient black body
26 - BB observation
30 - Header for tdp command (GPS) records
31 - GPS time/date/position data
40 - Header for surface met records
41 - Tamb, RH, pressure, Tir and rain sensor
60 - Header for LN2 calibrations
61 - Record of LN2 cal data (includes BB, LN2 observations)
90 - Header for housekeeping data (eng command)
91 - Engineering data

Level1 files contain real-time brightness temperatures for 35 channel (22-30 GHz and 51-59 GHz band). Real-time level1 files are produced from contemporaneous level0 data and calibration information.

Alacantara experiment: Level1 files contain the following record types for 6 elevation angles (30,35,40,45,50 e 90)

Fortaleza e Belem experiment: Level1 files contain the following record types for 90 elevation angles

40 Header for surface met records
41 Surface met data record
50 Header for sky observations
51 sky observation data record for each elevation angle, az=0

Level2 files contain records of real-time retrievals of temperature (K), water vapor (g/m3), relative humidity (%) and liquid water (g/m3) profiles. The retrievals are produced using the contemporaneous level1 (90 elevation) data and the neural network files.

Level2 files contain the following record types:

100 Header for vector retrieval index
101 Vector retrieval index entry
200 Header for surface met records
201 Tamb, RH, pressure, Tir and rain sensor
300 Header for scalar retrieval records
301 Scalar retrieval data record
400 Header for vector retrieval records (58 heights)
401 Temperature vector retrieval data record (profile)
402 Vapor Density vector retrieval data record (profile)

403 Liquid Density vector retrieval data record (profile)
404 Relative Humidity vector retrieval data record (profile)

-first row: Header data
-first column: Time

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reference: Operators Manual Copyright March 2008 65 Radiometrics
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