

README FOR LEVEL 0 AND LEVEL 2 S-BAND DATA, FOR THE VALE DO PARAIBA CHUVA EXPERIMENT

IACIT geographical info:

Lat = -23 14' 57"

Lon = -45 56' 09"

Height = 690 m

Sao Roque geographical info:

Lat = -23 31' 00"

Lon = -47 07' 01"

Height = 1150 m

CTH geographical info:

Lat = -23 36' 00"

Lon = -45 58' 20"

Height = 916 m

Level 0 info:

Level 0 data for both IACIT and Sao Roque radars are in HDF5 format. There are 4 variables in each file:

- Uncorrected reflectivity (no clutter filter)
- Corrected reflectivity (w/ clutter filter)
- Velocity
- Spectral Width (IACIT data only)

The HDF5 data are encoded with 1 byte per record, with values varying from 0 to 255. These values should be converted using the Dynamic Range info found within each file.

Some data have their velocity and spectral width dynamic range set to -0, +0. If you find these values while using the data, please use the following values instead:

For velocity:

-48.805, +48.805 (Sao Roque)

-54.900, +54.900 (IACIT)

For spectral width:

0, +13.725 (IACIT only)

Level 0 data for CTH radar are in UF format. There is only corrected reflectivity data available for this radar.

Level 2 info:

Level 2 data are corrected reflectivity (i.e.: w/ clutter filter) CAPPIs from 2 up to 16 km, one CAPPI each 1 km. The data are 4 bytes (floating point), 500 x 500 x 15, i.e., 15 blocks (one for each level) of 500 x 500 grid points. The first matrix is the 2 km CAPPI, then the 3 km, up to the 16 km CAPPI.

Undefined values are signed with:

BADVAL: 0x20000 (decimal: 131072)

NOECHO: BADVAL - 5 (decimal: 131067)

BADVAL means that the cell lies outside data range.

NOECHO means that there is no echo in the raw data.

In some rare cases values between 131067 and 131072 might appear, meaning that H or V data were not found. We recommend to replace any value over 131067 with BADVAL (131072).

The horizontal resolution is 1 km, 250 km radius.

For more info contact

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