

Algorithm Inventory Template

1. Description/Theory

Geo scale estimates using histogram matching of IR and MW data, as describe in Tapiador, F.J., Kidd, C., Levizzani, V. and Marzano, F.S., 2004. A maximum entropy approach to satellite quantitative precipitation estimation (QPE). *International Journal of Remote Sensing* 25, 21, 4629-4639.

2. Strengths and Weaknesses

Strengths: Easy to implement

Weaknesses: Requires fine-tuning for location. Provides a first guess of the precipitation field. Too easy to misinterpretate and when wrongly implemented. More suitable for tropical rainfall.

3. Algorithm Inputs

A. Satellite Data

1. Geostationary

Any

2. Low Earth Orbit

A. Anything available

B. Ancillary Data

1. Model Data

A. None

2. In Situ

A. None

3. Other (i.e. topography data base)

A. None

4. Processing (i.e. Level 2 processing ingests Level 1 products as input)

Ingests level 1 data.

5. Output Products

A. Final Product 1 Identification

1. Temporal/Spatial Resolution

The same as the input Geo image.

2. Spatial Coverage

The same as the input Geo image.

3. Dedicated Product Web Page Location

None at the moment, discontinued.

4. Processing Specifics (if possible)

Requires a good PDF of precipitation to be matched.

5. Operational Availability of Product (if possible)

Discontinued

6. Historical Availability of Product (if possible)

Discontinued

6. Planned Modifications/Improvements

Replaced by the one described in Tapiador, F.J., 2008. A Physically-Based Satellite Rainfall Estimation Method Using Fluid Dynamics Modelling. *International Journal of Remote Sensing*, Vol. 29, No. 20, 5851–5862, doi 10.1080/01431160802029677.

7. Capability of Producing Retrospective Data

Reprocessing is possible.

8. Contact Personnel

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9. Additional Comments

The support of this algorithm has been discontinued. This information is given for historical purposes only.