



Oct 3rd, 2017

Release Notes for the PR Level 1 products

All users of PR Level 1 data should keep in mind the following changes in Version 5 products.

<Major changes in the PR Level 1 products from TRMM Version7 to GPM Version 5>

1. Changes of the PR's calibration parameters.
JAXA reexamined the PR's calibration parameters in the GPM Version 5 products based on a new knowledge obtained by GPM/DPR's calibration. With the new parameters, the measured radar reflectivity factors increase by about +1.1 dB for PR from the corresponding TRMM Version 7 products, and PR's normalized surface cross section (σ_0) statistics agrees with KuPR's σ_0 .
2. Improvements of beam-mismatch correction.
The TRMM orbit boost from 350 km to 402.5 km in August 2001 caused a mismatch of transmitted and received antenna directions by one pulse due to a design of PR's hardware (called as "beam-mismatch"). Although the beam-mismatch has been partially corrected by Takahashi and Iguchi (2004) in TRMM Version7 products, a systematic bias by its correction error has been found. JAXA applied a new correction method in GPM Version5 products to mitigate the correction error (Kanemaru et al., in preparation).
3. Improvements of geolocation.
Since satellite attitude and orbit information was reexamined by NASA/PPS, geolocation of the PR's IFOV (Instantaneous Field of View) was improved.
4. Data format was changed to the GPM/KuPR's format.
PR Level 1 product format in GPM Version 5 was changed to be the same with KuPR Level 1 product in GPM Version 5. Users can refer to following web site.
http://www.eorc.jaxa.jp/TRMM/documents/PR_algorithm_product_information/top_e.html