



EarthCARE 2026 Science and Validation workshop

8–12 June 2026 | Rhodes House | Oxford, UK

Validation Recommendations: L1 CPR

(includes L2a parameters for integration and correction)

Hiroaki Horie, NICT

Current Status and Recommendation

Reflectivity (Z factor)



Calibration: Done by NICT & JAXA

Current Status: no issue (after vCb)

Agreed with Ground-based and under flight results less than 1dB (or around 1dB)

→ Influence the retrieval result

Note: Consider frequency difference (X, K, Ku, Ka-band)

Sea Surface NRCS trend monitor (including CloudSat)

Recommendation:

- Continue ground observation and under-flight
- other activity (GPM/DPR matching, AWS(radiometer) simulation, etc)
- Trend monitor of Sea Surface NRCS (CloudSat heritage and recommendation)

S111 Tomiyama, P008 Horie

T202 Chandrasekar, T203 Feuillard,
P007 Imura, P008 Horie, P019 McLinden,
T301 Mariani, T302 Francols, T303 Mech,
T426 Behrens

T201 Richardson, T417 Mroz, T418 Fielding,
T506 Kanemaru

5dB? (AWS simulation) T405 Kalluri,
GPM T410 Hogan, T502 Aoki

T201 Richardson, T506 Kanemaru

Current Status and Recommendation

Doppler Velocity



Current Status: need antenna beam correction (current by L2a)

Agreed with Ground-based and under flight results, other instruments
about 0.5m/s

Note: Consider frequency difference (L, K, Ka-band, and Lidar)

Antenna Beam correction at next major update

ACTRIS T203 Feuillard, WINDAS T204 Ohno,
Airborne Lidar T205 Witschas
HALO P007 Imura, HG-SPIDER P008 Horie,
CRS P019 McLinden,
MRR T422 Roversi

S111 Tomiyama

Recommendation:

- Continue ground observation and under-flight
- Continue other validation activity using wind profiler(L), Micro Rain Radar(K), Doppler Lidar, etc.

Current Status and Recommendation

Spectrum Width and Other Items



Spectrum Width

Current Status: need adjustment lag 1 power (magnitude of covariance)

- Simulation by under flight is not agreed

T402 Manconi, P019 McLinden

Recommendation:

- Additional Calibration & Characterization
- Establish how to validate

Other Item

DEM

Status: introduce new DEM (AW3D30) at next major update

S111 Tomiyama