# ESA-JAXA Pre-Launch EarthCARE Science and Validation Workshop

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## EarthCARE BBR L1 and L2 Products Assessment

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# Objectives of the Cal/Val activity:

- Thorough assessment of BBR instrument performance and product quality
- Establish the quality of the level 1 instrument radiances products (B-NOM and B-SNG) : spatial and radiometric accuracy, consistency, stability, noise and anomalous behavior.
- Establish the quality of the level 2 instrument radiances (BM-RAD) and fluxes (BMA-FLX) .

# Methodology includes:

- Intercomparisons with other BB sensors (CERES, GERB, ScaRaB, …).
- Earth reference targets (Deep Convective clouds, …).
- Climatologies (e.g. Angular Dependency Models).
- Co-incident MSI observations.
- Coastlines.
- Radiative transfer modelling over instrumented sites (e.g. Valencia Anchor Station).

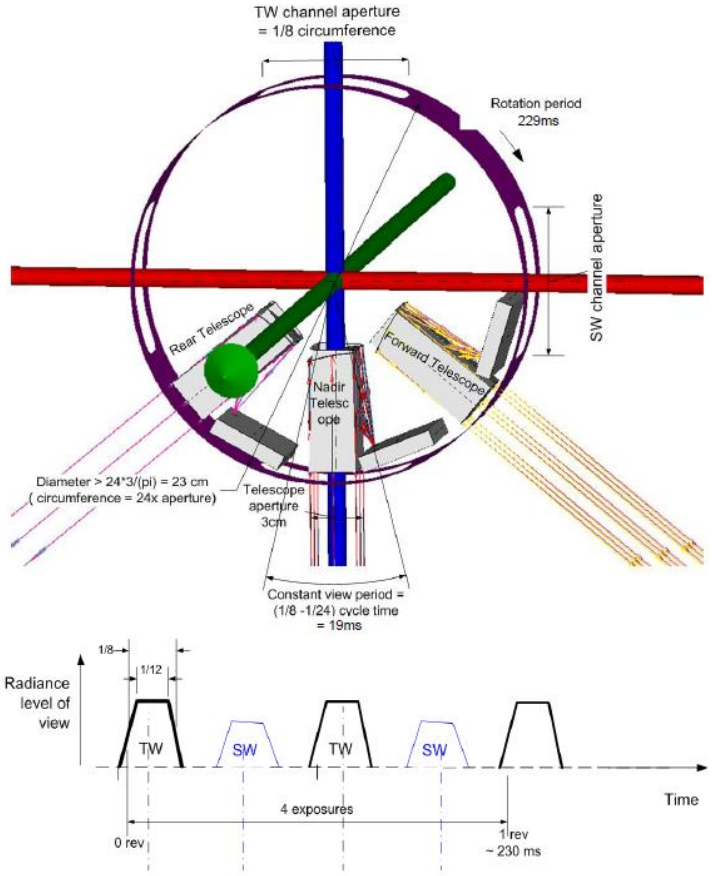


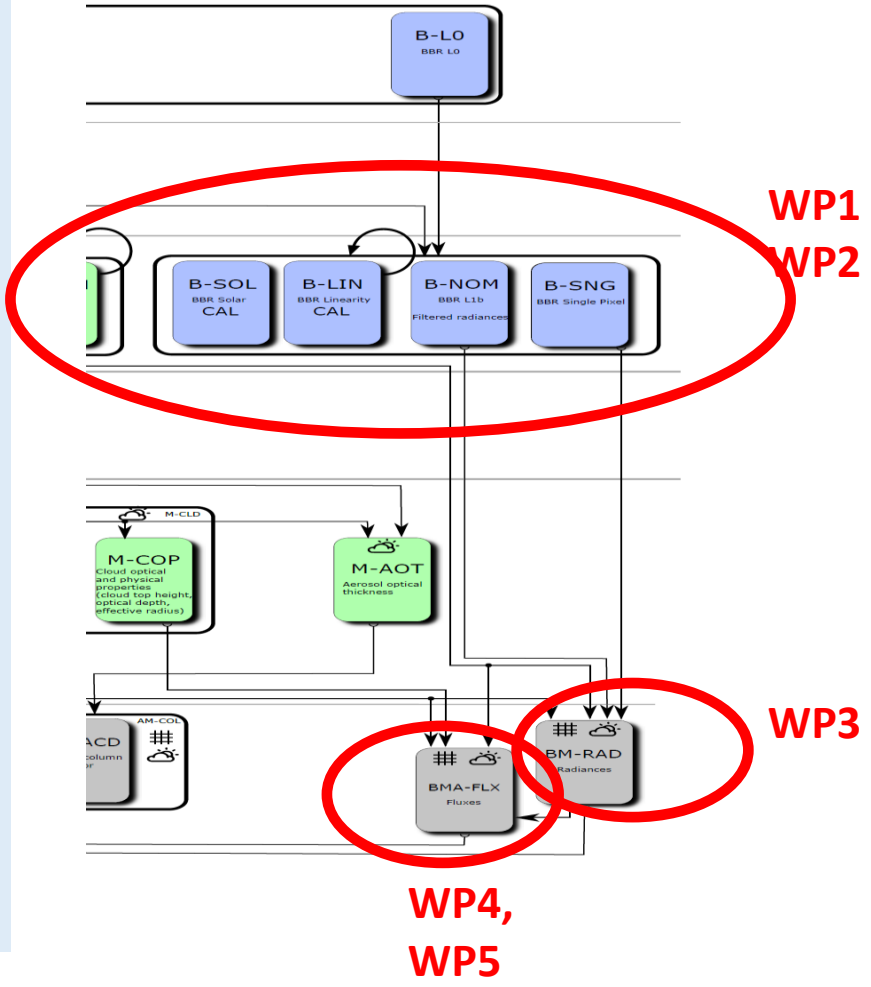

**Figure 1-4 : Chopper and chopper operation**

## Workplan :

- WP1 : Baseline data integrity of level 1b products
- WP2 : Radiometric quality assessment of L1b filtered radiance products
- WP3 : Accuracy assessment of unfiltered radiances L2 BM-RAD product
- WP4 : Level 2 fluxes basic quality verification
- WP 5: Quantitative evaluation of level 2 flux products, closure analysis

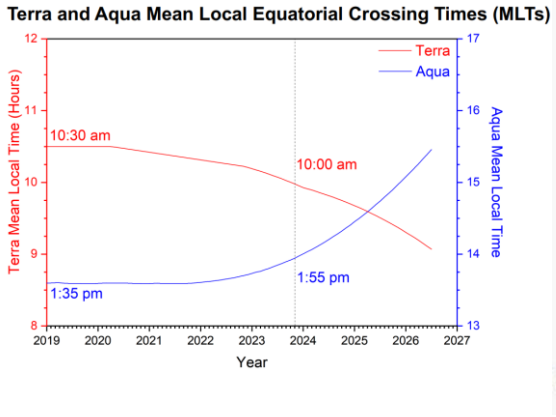
For each WP: preparation (tools dev.), data collection, analysis, documentation.

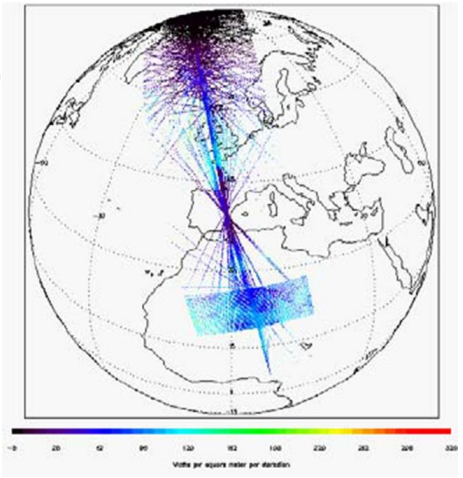
***Details on Poster 15.***



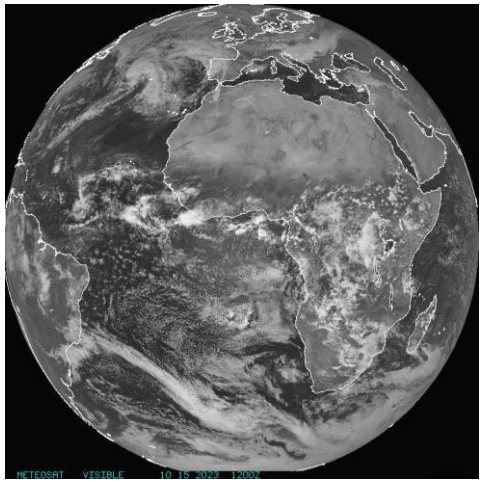
# Changes and Status update :

- Expected availability for intercomparison:
  - CERES : from Terra and Aqua spacecrafts, likely in “EarthCARE Campaign” mode.
  - GERB at 0° and 45°East (MTG/FCI to be considered also).
  - ~~ScaRaB on Megha-Tropiques~~
  - CLARREO-pathfinder on ISS (likely not before 2026)
- Absolute BBR geolocation and co-registration assessment now part of CARDINAL.
- Funding via Prodex (RMIB partner) to be confirmed.

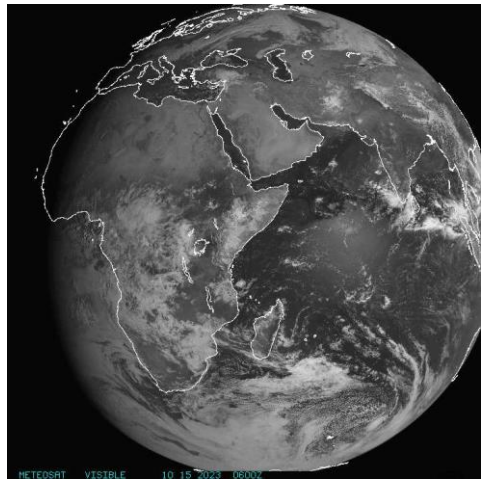


0° service



Indian Ocean (45° East)



# Thank You !