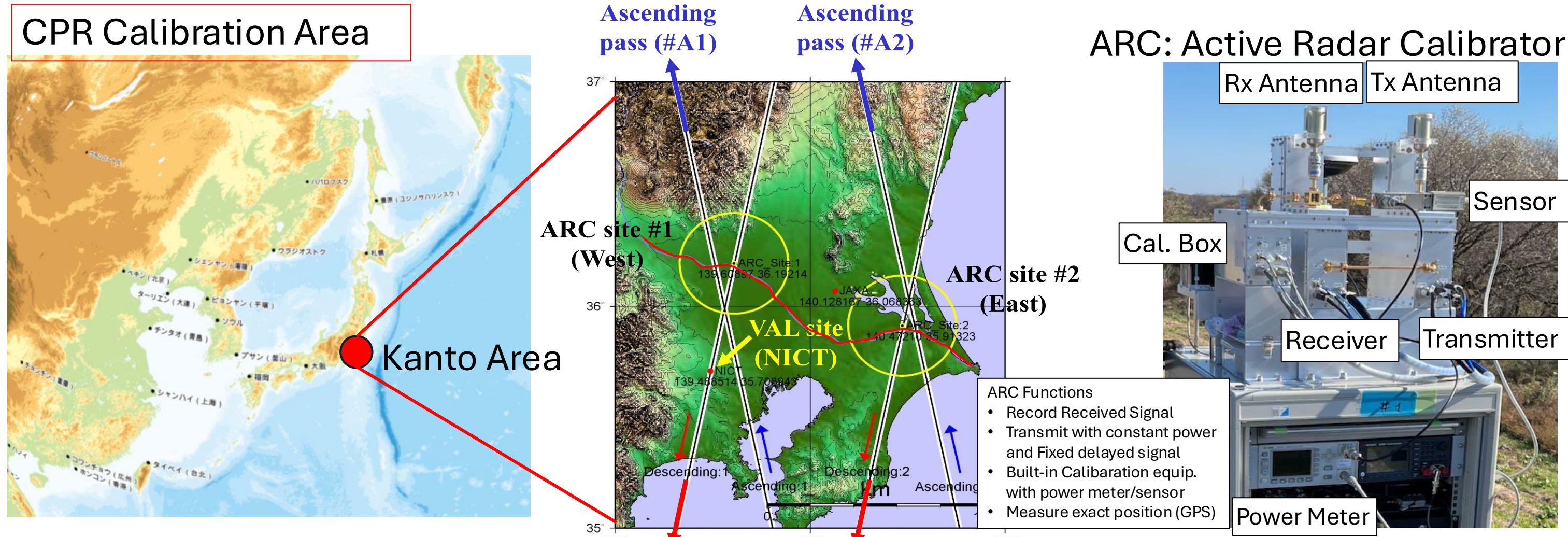


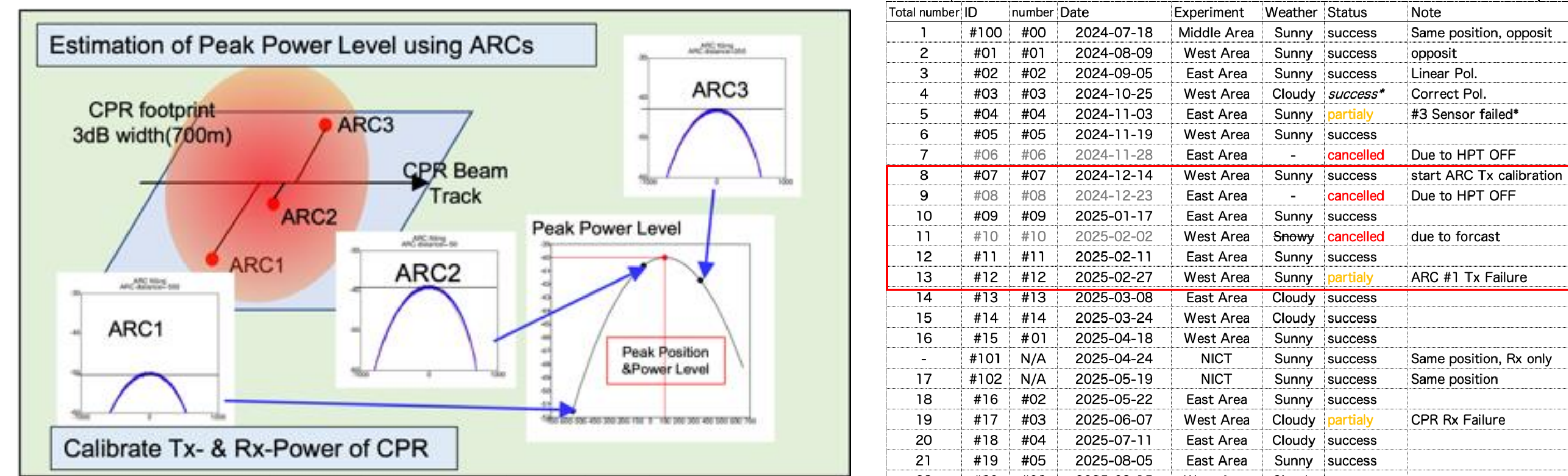
CPR Calibration Concept

- Level 1 processing using on-board parameters
- Apply Calibration Factor from External calibration result (if necessary)
- Confirm NRCS(σ^0) of naturally distributed target (ex. Sea Surface)

CPR External Calibration using Active Radar Calibrator



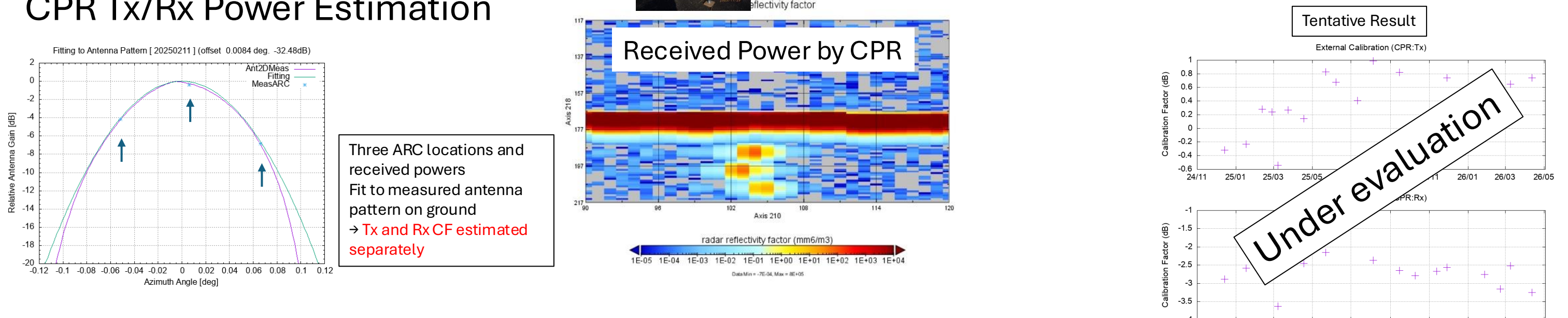
Peak Level Estimation method



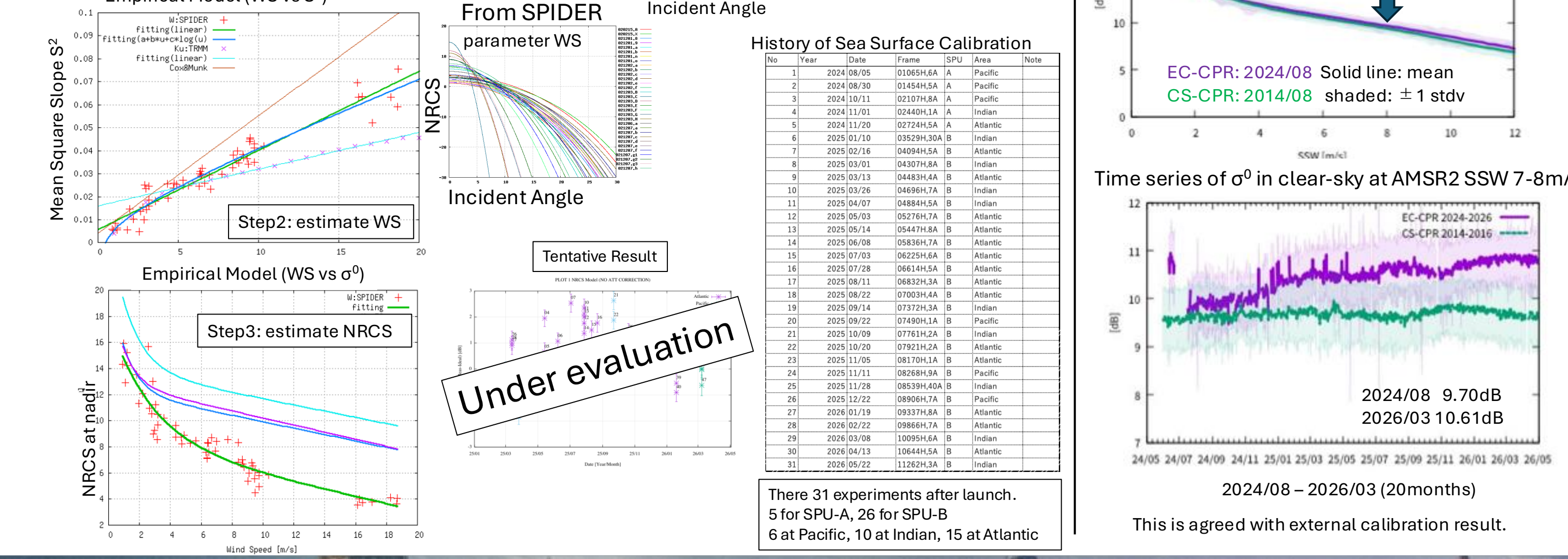
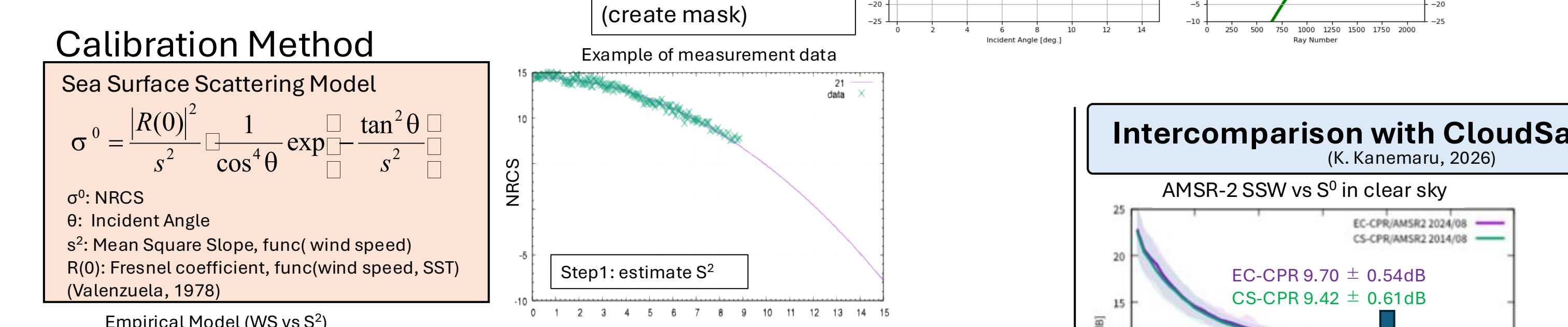
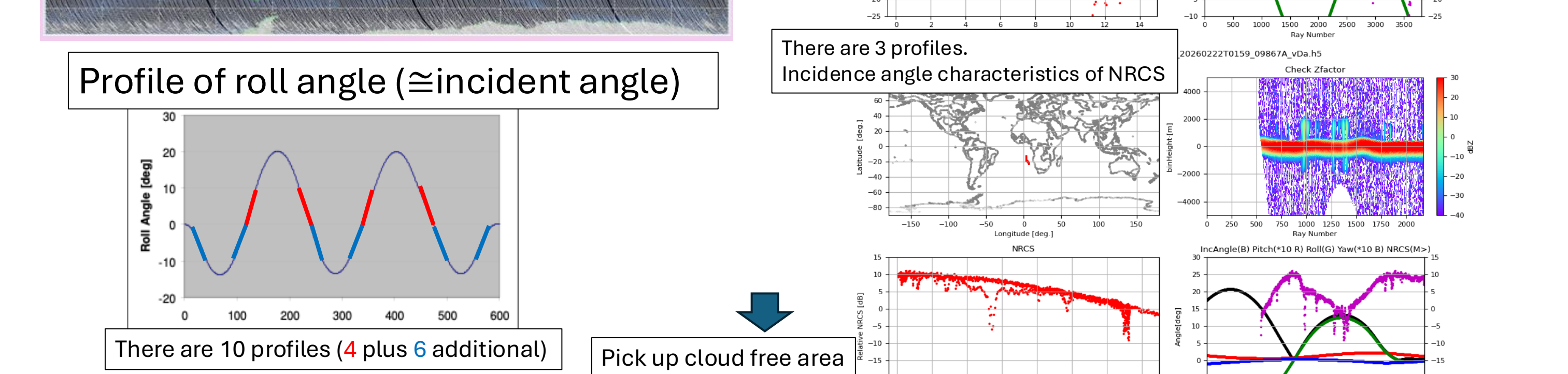
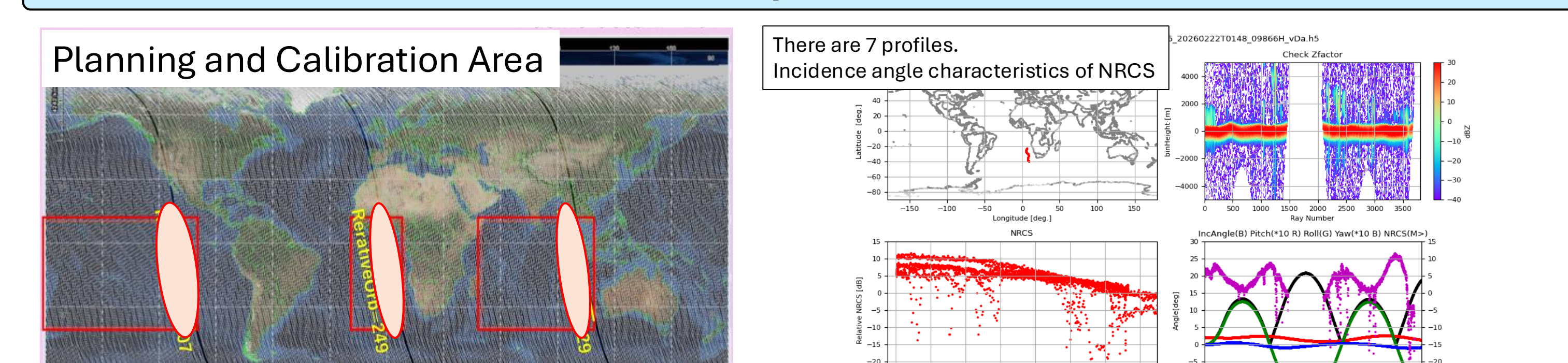
Experiment Locations



Example of CPR Tx/Rx Power Estimation

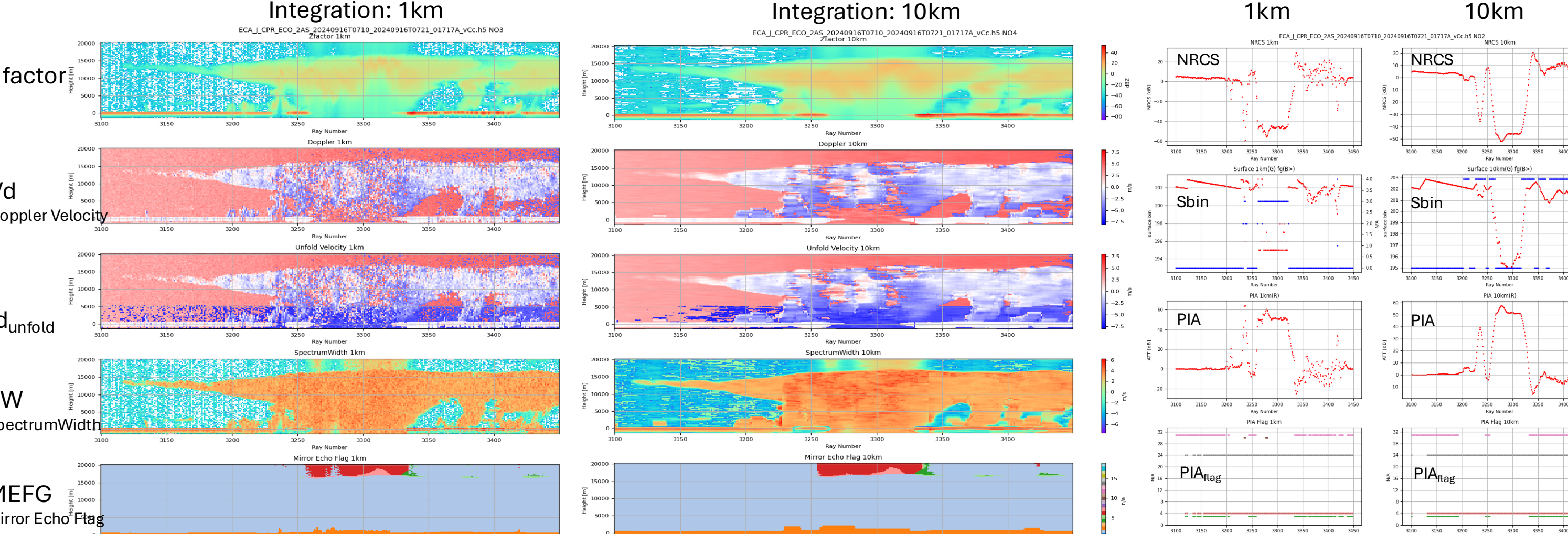


Sea Surface Calibration by Roll Manoeuvre



CPR L2a ECO product summary

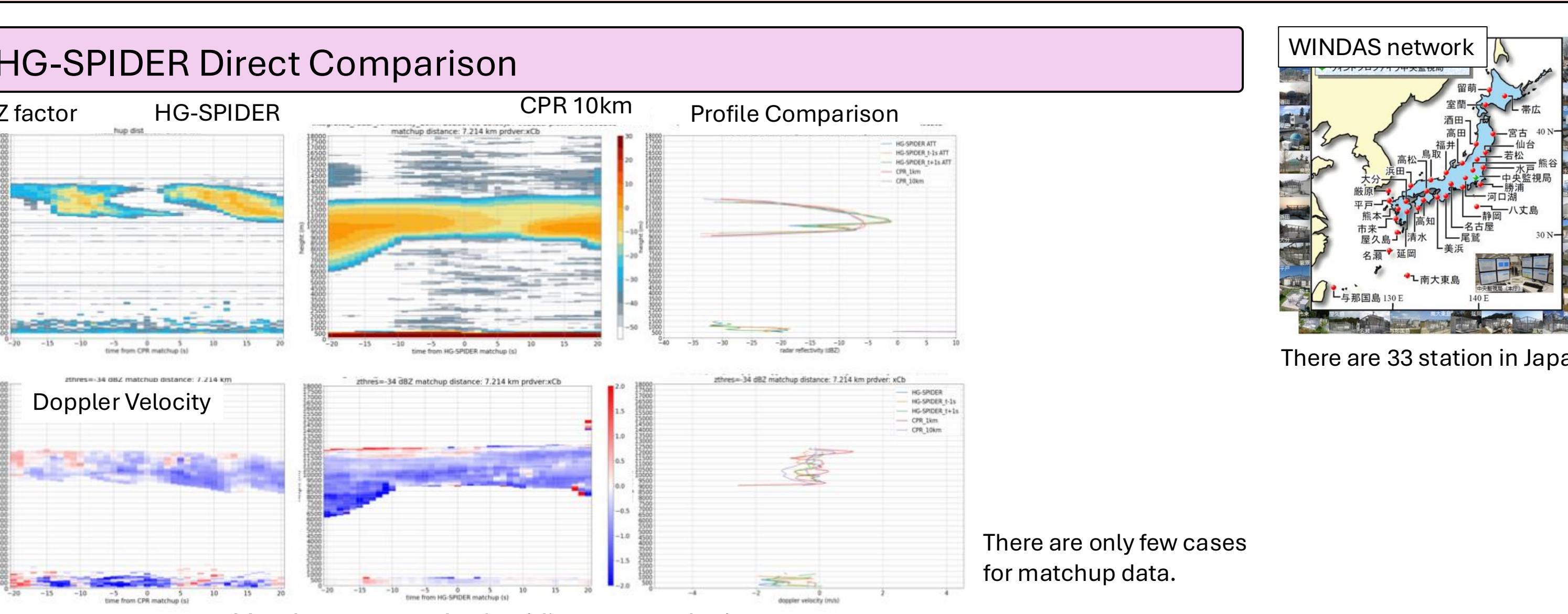
- Integration 1km/10km (1km step) Z factor/Doppler Velocity/Spectrum Width
- Correction (gaseous attenuation, velocity bias, unfolding) and Mirror Echo Flag
- Surface Product (NRCS, PIA, clutter free bottom)



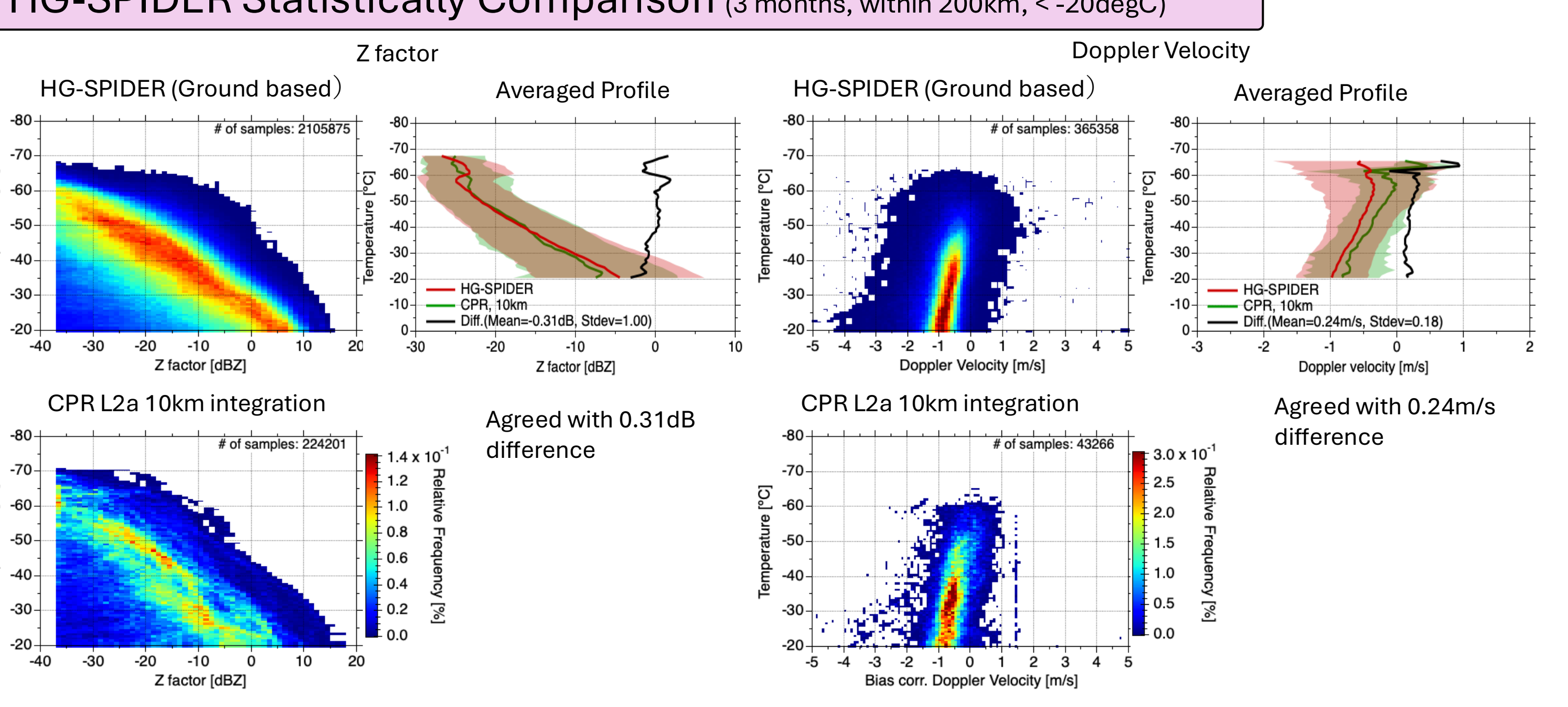
Mirror Echo Flag contains 1) mirror image, 2) multiple-scattering (MS) tail, 3) satellite mirror image (SMI), and 4) clutter echo.

CPR L2a ECO product validation (Z factor, Doppler Velocity)

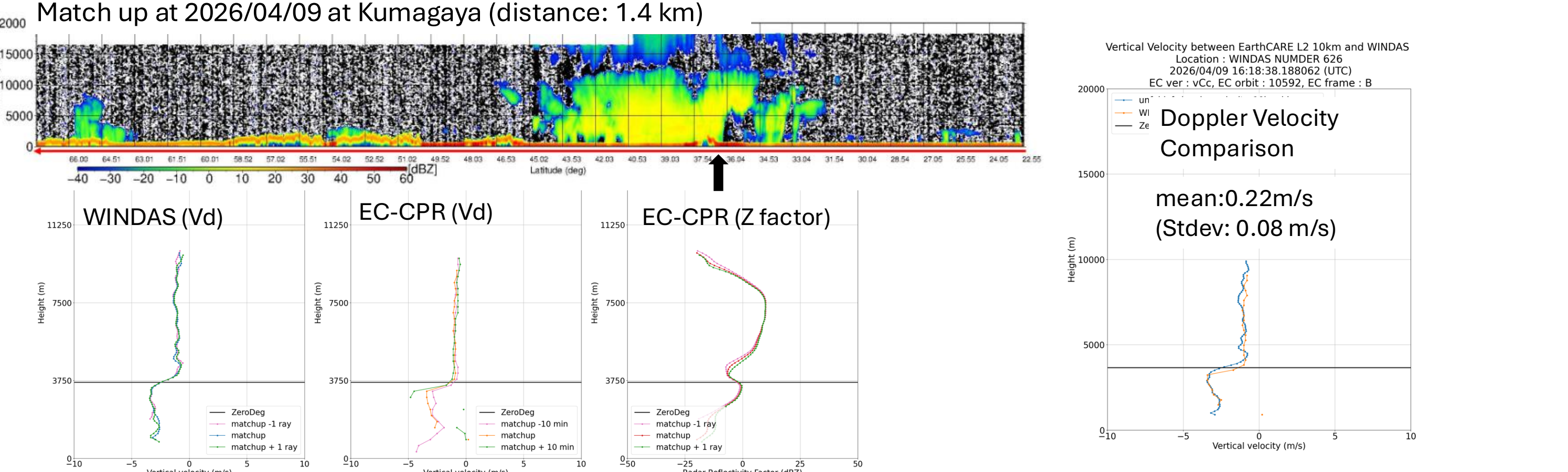
- HG-SPIDER (NICT Ground-based Radar) direct/statistically comparison
- WINDAS (wind profiler network) direct/statistically comparison



HG-SPIDER Statistically Comparison (3 months, within 200km, <-20degC)



WINDAS direct comparison (Doppler Velocity only)



WINDAS statistically comparison

Planned (analyze under the collaboration with JAXA/EORC)

Summary

- Introduce CPR External Calibration which decides Calibration Factor
- Feature of increasing σ^0 slightly (it is agreed ARC experiment result)
- Introduce L2a CPR ECO product and validation using ground-based radar
- Current status of product validation (Z and Vd) are agreed (within threshold).

Acknowledgment

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