

Committee on Earth Observation Satellites (CEOS)
Working Group on Calibration and Validation (WGCV)
Synthetic Aperture Radar (SAR) Subgroup

Terms of Reference

June 2026

The Synthetic Aperture Radar Subgroup Mission is to foster high-quality synthetic aperture radar data from airborne and space-borne systems through precision calibration in radiometry, phase and geometry, and validation of higher level products.

The objectives of the Synthetic Aperture Radar subgroup, beyond those of the WGCV, are to:

- Act as a forum for international technical interchange on the evolving methodologies, techniques, and equipment of SAR calibration and validation
- Determine standard definitions and calibration/validation requirements for synthetic aperture radar imaging systems
- Support harmonisation of user products and formats as appropriate
- Facilitate international cooperative programmes in the calibration and validation of SAR systems
- Educate the SAR community

Action Plan

There are a number of recently-launched new SAR missions and several missions being prepared for launch in the future. These missions, primarily based on active phase array antenna technology, reveal a clear trend toward higher resolution and increased radiometric and geometric performance with an increasing interest and focus on novel calibration concepts and techniques. Future systems, featuring digital beam forming techniques based on multi-channel architectures, will require even further sophistication of calibration techniques and procedures.

This Subgroup will continue identifying and characterizing calibration and validation reference sites (to include both natural and man-made targets) to provide easily accessible sources of reference calibration data to data providers and meet annually to discuss results and new developments.

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