Aerial Campaigns for Cal/Val purposes in the Context of Copernicus
Survey Results of the H2020 Project “Copernicus Cal/Val Solution (CCVS)”
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Scope of the CCVS project
❖ Objective of the H2020 Copernicus Cal/Val Solution project:
To define a holistic solution for all Copernicus Sentinel missions (either operational or planned) to overcome current limitations of Calibration and Validation (Cal/Val) activities.
❖ Work plan / Deliverables:
1. Updated specifications of Cal/Val requirements
2. Overview of existing Cal/Val sources and means
3. Gap analysis identifying missing elements
4. Provision of Copernicus Cal/Val solution
5. Roadmap for implementation
❖ Project duration: Dec. 2020 to Nov. 2022
❖ 14 partners
❖ Website: https://ccvs.eu
❖ Contact: contact@ccvs.eu

Survey
Compilation of existing campaigns considering
❖ Different domains
  ❖ Optical missions (27 campaigns)
  ❖ Altimetry missions (3)
  ❖ Radar and microwave missions (12)
  ❖ Atmospheric composition missions (29)
❖ Different mission phases
  ❖ pre-launch, commissioning, operational
❖ Different Cal/Val data
e.g. BOA reflectance, soil moisture, trace gas columns
❖ Different platforms
  aircraft, balloon, drone, vessel, ground

Conclusions
❖ Pre-launch campaigns
  ❖ to define spaceborne sensor requirements
  ❖ to prepare satellite product validation strategies
  ❖ to test new measurement processes
  ❖ to prepare data products
❖ Campaigns during commissioning phase
  ❖ to validate system calibration
❖ Campaigns during operational phase
  ❖ to validate requirements of the product, e.g. in terms of systematic and random uncertainty
  ❖ to assess the impact of different geophysical parameters on the product retrievals

KuROS antennae on-board the SAFIRE AT42: especially designed to validate the CFOSAT instruments
F-SAR system: SAR image data in five different frequency bands and fully polarimetric measurement modes in all of these bands
SSPVAL: Emphasize on strongly polluted urban/industrial areas