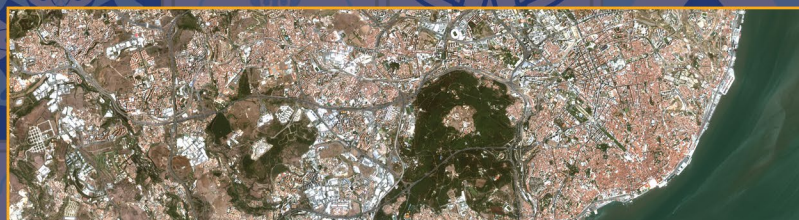


2024 DRAGON SYMPOSIUM

DRAGON 5 FINAL RESULTS REPORTING

24-26 JUNE 2024

<<CAL/VAL>>





RESULT HIGHLIGHTS ON CAL/VAL

- Five presentations were given on the 25th and three on the 26th of June, covering cal/val topics on:
 - Radar Satellite altimetry
 - CSES/SWARM magnetic data
 - CO2 measuring sensors
 - High resolution optical satellite
 - UAV and optical satellites
 - Lidar observations from Space (Aeolos / ACDL)
 - Ocean color from OLCI/Sentinel-3 and COCTS/Haiyang-1
 - All-weather Land Surface Temperature products



RESULT HIGHLIGHTS ON CAL/VAL

- **Key results:**
 - There has been development of some infrastructure to calibrate satellite observations to meet climate modelling requirements, operational monitoring, objectivity of observation, and global scalability.
 - Modelling scalability of ground measurements have shown promise to overcome scale mismatch between ground and satellite observations.
 - All cal/val presentations aimed at attaining the FRM strategy, diversity of instruments, different field conditions, settings and measurement protocols
 - All uncertainty constituents in cal/val process need to be defined & understood
 - Concerns were expressed about inconsistencies between reflectances and AOT derived from MODIS and in-situ measurements compared to OLCI / COCTS



Remaining issues concerning the exploitation of current mission data:

- Lack of permanent cal/val infrastructure and continuous support to maintain them
- Permanent infrastructure necessary for intercalibrating different missions and to built up product confidence and ensure FRM standards.
- Greater collaboration between Cal/Val data providers and agencies
- Open data policy and ease of accessibility to EO data from other missions



New science findings in the cal/val domain:

- All Cal/Val acknowledge the need for FRM requirements

General performance and limitations of geophysical parameters retrieval:

- Most evaluated products showed good agreement with ground reference measurements
- Lack of global distribution of cal/val sites continues to be a limitation



Scope for data synergy and required EO missions/sensors:

- Not necessary for the direct physical quantity, but useful for spatial upscaling

Validation: Have the necessary validation data been collected and shared?

- Within the presented Dragon 5 Cal/Val projects data have been collected and shared
- This could be an example to follow for data sharing internationally



New domains for further research:

- Cal/val infrastructure should be planned and ready before launch of a mission
- Requires trained people to operate the cal/val infrastructure

Synergies between Europe and China new missions to be exploited:

- In-situ (and EO) data sharing agreements between China and Europe

Complementarity / improvements in operational use of current / future missions to allow better data exploitation:

- Good communication between agencies and Cal/Val data providers and users
- Joint field campaigns
- Mutual access to operational data and protocols

Scientific Recommendations

<<*Thematic Area*>>

