

Minutes of the Joint WGCV-56 / LSI-VC-19 Meeting

Hosted by the United States Geological Survey (USGS)
USGS EROS, Sioux Falls, South Dakota, United States

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Day 1: Monday, April 20, 2026

Session J1: Opening and USGS Welcome

J1.1: Welcome and Introductions

Tom Sohre (USGS EROS Center Acting Director) welcomed WGCV and LSI-VC colleagues to the meeting.

J1.2: USGS Updates

Landsat Next Update [\[slides\]](#)

Brian Sauer (USGS) reported an update on Landsat Next, its design priorities, industry engagement, and status of development of the ground and space segment. The mission specifications have defined the critical design requirements, and include the number of spectral bands, spatial resolution, and repeat frequency.

Landsat Collection 3 [\[slides\]](#)

Christopher Crawford (USGS) reported on the history of the Landsat Collections and an update on the latest design considerations for Collection 3, citing the importance of international partnerships. Slide 9 and 10 includes a summary of the scientific and technical priorities for Collection 3, including plans to achieve CEOS-ARD compliance for Surface Reflectance and Surface Temperature.

Discussion

- Collection 3 design is taking account of Sentinel-2 conventions to try and align as much as practicable. Alignment with the NASA HLS product was questioned. It was clarified that HLS is a NASA-scoped and funded activity, and while USGS talks to the HLS team in collection planning, their specific plans are handled further downstream.

J1.3: Joint Agency Commercial Imagery Evaluation (JACIE) Report [\[slides\]](#)

Cody Anderson (USGS, WGCV Chair) reported on the annual Joint Agency Commercial Imagery Evaluation (JACIE) Workshop that took place from 13–17 April 2026. JACIE was formed to leverage resources from several Federal agencies for the characterisation of remote sensing data and to share those results across the remote sensing community. There were side meetings held on CEOS-ARD and RadCalNet.

NASA and USGS signed off on the new Optical Mission Quality Assessment Guidelines at JACIE, and ESA plans to follow soon. VH-RODA will be held from 16-20 November 2026.

Discussion

- The Quality Assessment Guidelines will be key to conducting coordinated quality assessments across CEOS agencies, and in particular, could support CEOS-ARD quality assessments. There are several elements on the JACIE assessment dashboard that should also be aligned and leveraged. A key discussion topic is how to converge all of these tools and frameworks to support the CEOS-ARD Framework, and vice versa.

Session J2: 2026-2031 CEOS-ARD Strategy

J2.1: CEOS-ARD Progress and Future of CEOS-ARD Campaign [\[slides\]](#)

Matt Steventon (CEOS-ARD Secretariat) reported on the progress of the [2026-2031 CEOS-ARD Strategy](#) and the 2025 Community Engagement Campaign. Over 100 stakeholders from the CEOS-ARD community have been engaged to support the strategy's development, which will be tabled for endorsement at the 2026 CEOS Plenary.

J2.2: 2026-2031 CEOS-ARD Strategy Introduction [\[slides\]](#)

Ferran Gascon (ESA) and Matt Adams (GA) reported on the objectives and structure of the 2026-2031 CEOS-ARD Strategy, including its six thematic pillars. The strategy is underpinned by the [CEOS Interoperability Handbook](#) conventions and informed by findings from the [Future of CEOS-ARD Consultation Paper](#).

Session J3: 2026 CEOS-ARD Strategy Pillar: Quality, Integrity & Provenance

J3.1: Introduction [\[slides\]](#)

Matt Adams (GA) reported the success criteria, potential initiatives, and outcome signals for the Quality, Integrity & Provenance strategy pillar. Through this pillar, CEOS-ARD aims to address the need for measurable, transparent, and continuously verifiable data quality.

J3.2: Interoperability Handbook 'Quality' Chapter [\[slides\]](#)

Cody Anderson (USGS) overviewed the Quality Chapter of the [CEOS Interoperability Handbook](#), which aims to provide indicators (parameters, metrics, etc.) for informing users of the trustworthiness (accuracy, uncertainty, consistency, etc.) of the data provided (measurands, measurements, observations, etc.). Trustworthiness was a key message from the JACIE meeting from commercial providers. The [Quality Chapter](#) delivers nine recommendations.

Discussion

- The relationship between QA4EO and the Interoperability Handbook was questioned, since they seem to have separate recommendations. [QA4EO](#) was constructed as a starting framework in 2010 to require any dataset to have a quality indicator and some guidance to how that might be produced. All of the following activities, including the Interoperability Handbook recommendations, are the means to make that work and are built on QA4EO principles.
- In the GEO context, QA4EO is complete and has also been endorsed by CEOS. It is not an ongoing activity.

J3.3: Overview of the ESA-NASA Joint Quality Assessment Framework [\[slides\]](#)

Valentina Boccia (ESA) reported on the ESA-NASA Quality Assessment Framework. ESA's Earthnet Data Assessment Project (EDAP) kicked off in 2022 to perform early data assessment on existing, new and future EO missions with a focus on the commercial sector.

In addition to the optical and SAR guidelines, EDAP also leverages the CEOS common practices on facility-scale methane assessment with EDAP+ expanding into the atmospheric domain, higher level products and user scenarios (e.g. NDVI). The OPT-MPC of the Copernicus Sentinel Ground Segment should be aligned with CEOS-ARD.

Within the EDAP guidelines, CEOS-ARD lies in the 'Ideal' assessment grade, although the current requirement is considered too generic. Some CCMs noted that they could use EDAP results to internally advocate for additional support to Cal/Val and data quality.

Discussion

- There was a discussion on whether data formats are in scope for the CEOS-ARD Framework. It was noted that format fit under the architecture component of the Interoperability Handbook, along with other things like grids. CEOS-ARD has historically been data format agnostic, focusing on metadata completeness and documentation rather than prescriptive formats. There are some guidelines in CSDA on data format.
- Ake Rosenqvist (JAXA) noted that in the CEOS-ARD SAR Specification, there are goal level requirements for cloud-optimised GeoTIFF and XML formats. Experience has shown that in 90% of cases, data providers who start developing CEOS-ARD products don't have specific requirements for metadata, so they are open to using XML.

J3.4: Sharing perspectives and approaches to documenting and assessing data 'quality'

GISTDA [\[slides\]](#)

Pawarin Kuha (remote) reported on GISTDA's data quality initiatives conducted for the THEOS missions. Radiometric, geometric and spatial calibration of the THEOS satellites is performed monthly against thresholds specified by the satellites' manufacturers. Metadata is adjusted to align with the CEOS-ARD PFS, and products are assessed against the CEOS Data Management and Stewardship Maturity Matrix (DDSMM) and EDAP+ guidelines.

GISTDA uses calibration sites and networks as a key mechanism to ensure ARD quality. If CEOS-ARD required the collection of data over designated sites, it would help build a distributed and collaborative calibration network and strengthen ARD quality sustainably.

GISTDA personnel share different perspectives and understanding of the definition of data quality, affecting the quality of products and services across the agency. During THEOS ARD development, it was found that the different characteristics of the THEOS-1 and THEOS-2 sensors made it difficult to process data to the same quality standard.

Discussion

- Nigel Fox (NPL) noted that observations of pseudo invariant calibration sites (PICS) can be linked to existing observations, RadCalNet and other sensors, within the range of desired uncertainties.

WGCV-LSI-01	WGCV Secretariat to connect Pawarin (GISTDA) and Rob Rosenberg (JPL) regarding the availability of historical data to support THEOS-1 atmospheric correction and radiometric calibration from 2008. The availability of Railroad Valley data that preceded RadCalNet (from 2009) was noted.	COMPLETE <i>Data available via JAXA here and here.</i>
WGCV-LSI-02	WGCV Secretariat to connect Nigel Fox and Pawarin (GISTDA) regarding integration of THEOS data to the CEOS WGCV Product Validation Platform (PVP) and to share information on PICS data that can support historical THEOS-1 data processing.	ASAP

USGS [\[slides\]](#)

Jeff Clauson reported on the activities of the EROS Cal/Val Centre of Excellence ([ECCOE](#)), a global leader in improving the accuracy, precision, and quality of remote sensing data. ECCOE is primarily responsible for assessing and reporting Landsat Cal/Val activities. USGS is currently using the Optical Guidelines from the EDAP EO Mission Quality Assessment Framework, and is assessing Landsat TOA data under the EDAP+ criteria. JACIE Partner

Analysis methodologies include a USGS Initial Look, before being referred to the NASA CSDA Full Look and EDAP+ assessments.

Discussion

- Confirmed that the JACIE assessments are one-off, apart from follow up meetings and discussions to update analyses following major changes to processing, etc. There has been some discussion on continuous monitoring and analysis in the CSDA framework.
- There is no particular ranking/categorisation of the importance of JACIE assessment steps. From a USGS perspective, there is no fitness for purpose measure assigned, in favour of providing an objective assessment of specific parameters. EDAP+ does however have more focus on fitness assessment.
- It may be that CEOS-ARD only adopts a subset of the full quality assessment steps, and so it would be useful to have some sort of categorisation of importance. It is likely worth looking at the tiered analysis employed by the CSDA program.
- The JACIE partnership on quality assessment is a group of six agencies which have encouraged ESA joining. There are opportunities to augment and expand partnership within the confines of sensitivities agencies might have.

NASA CSDA Program [\[slides\]](#)

Dana Ostrenga (remote) reported on NASA's Commercial Satellite Data Acquisition (CSDA) Program, including its tiers of end user license agreements, evaluation portfolio, and interagency and international partnerships. The Cal/Val Maturity Matrix is the central part of the quality assessment guidelines.

NPL Uncertainty Metadata Convention [\[slides\]](#)

Sam Hunt (remote) reported on NPL's Uncertainty metadata Naming Conventions (UNC), aiming to provide a standardised metadata format for uncertainty information both human and machine-readable and suitable for integration into CF conventions. A beta testing phase is about to begin and following this, addition to CF will be proposed and results summarised in a publication.

J3.6: WGCV Cal/Val Networks – Overview, status and future developments

RadCalNet [\[slides\]](#)

Marc Bouvet (ESA, remote) reported on the status of the Radiometric Calibration Network (RadCalNet), which provides over 7000+ days of data from five sites across the U.S., China, France, and Namibia over 13 years. Three new sites that have submitted applications to

RadCalNet include the USGS EROS Center (U.S.), HYPERNETS Gobabeb (Namibia), and Golmud (China).

Golmud site data has been reviewed by the RadCalNet Working Group and passed the acceptance stage, and was presented to WGCV for endorsement. Technical details on the presented site are available in the given slides.

SARCalNet [[slides](#)]

Dirk Geudtner (ESA, remote) reported recent updates to SARCalNet, including updates from the 2025 SAR Subgroup Workshop.

SARCalNet is currently conducting reviews of submitted sites, consolidating the curation forms and interactions with site operators. The CEOS Analytics Lab was recently introduced as a complementary platform to SARCalNet, as an advancement in the availability of accurate data and resources for joint SAR calibration analysis.

Discussion

- SARCalNet also provides ancillary data to support calibration, such as a wetland mask for the Amazon Basin, which is used for antenna calibration. The data is used to mask wetland areas and their disruptions to backscatter. Another mask is in development for the Congo Basin. There have been some challenges with the Amazon site and Sentinel-1D due to inhomogeneities.
- It is a challenge for agencies to justify maintaining calibration infrastructure after their mission's Cal/Val campaign. Permanent infrastructure such as the Australian Queensland Corner Reflector Array is extremely valuable.

TIRCalNet [[slides](#)]

Steffen Dransfeld (ESA, remote) shared the objectives, background and development progress of the Thermal Infrared Calibration Network (TIRCalNet). It aims to collect surface temperature, emissivity, and atmospheric data to simulate observations by TIR optical sensors and verify their radiometric calibration. The RadCalNet site in La Crau, France has deployed TIR instrumentation to form a TIRCalNet pilot site.

The network will include water sites with well-known emissivity and land sites for their wide radiometric range, both providing homogeneity across the target satellite footprint. An international Working Group has been set up within WGCV IVOS to advance the network's development, including agencies NASA-JPL, CNES, ESA, CSIRO, and INGV.

Discussion

- Dave Borges (SEO) noted that the CEOS communications team would welcome the opportunity to increase the presence of TIRCalNet and other calibration networks on the CEOS website.
- There were discussions on high temperature calibration targets at the SIT-41 meeting, particularly in the context of wildfires. Gobabeb and Pinnacles are two potentially upcoming hot thermal target sites, but not at the temperatures relevant to wildfires. Hot thermal is defined in the context of standard land surface temperature. Missions like Ororatech have strong interest in a calibration facility like this. The field of view of their sensors means that targets need to be quite large, which isn't really feasible at wildfire-scale temperatures.
- It was confirmed that mid-wave infrared (MWIR) is not on the roadmap for TIRCalNet at this point. Regarding access and involvement of the commercial sector, the network is still in the process of harmonising data, deciding on web portal content, and finalising its protocol. There are quite a few steps left meaning that engagement will not happen this year, but hopefully by the time TRISHNA launches. Some commercial missions already acquire over the La Crau site, such as Constellr.

WGCV-LSI-03	Libby Rose to add a campaign on the WGCV calibration networks to the CEOS comms schedule and consider opportunities to better represent them on the CEOS website.	ASAP
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HYPERNETS [\[slides\]](#)

Pieter de Vis (NPL, remote) overviewed HYPERNETS, which aims to validate all VIS/NIR spectral bands for all satellite missions measuring land or water surface reflectance with a network of hyperspectral instruments deployed worldwide.

Discussion

- The linearity of the instruments was discussed, which has been verified with small uncertainties. Some sites have to be excluded due to inhomogeneities, and are judged by variability in NDVI.

J3.5: WGCV Product Validation Platform [\[slides\]](#)

Nigel Fox (NPL) shared background on the CEOS PVP, which was initiated following a commercial sector request for CEOS Agencies to make available interoperable global satellite imagery. Over a set of pseudo-invariant calibration sites (PICS), the PVP enables satellite operators to evidence the quality of their data over community-agreed references.

An API is available to make the process of ingesting data into the PVP as easy and seamless as possible.

CEOS Agencies were invited to contribute historic, current, and planned imagery to the CEOS-PVP Comparison Imagery Database (CID). The commercial sector will also be actively engaged to encourage the delivery of imagery over reference sites.

Near-term updates planned for the PVP website include information on participating sensors, methodologies, and user feedback. The 'virtual reference' concept will be further refined to provide increased uncertainty information, while prototyping TIR and access to appropriate references.

JAXA SAR Quality Assessments [\[slides\]](#)

Takeo Tadono reported on JAXA's calibration for the ALOS-4 and ALOS-2 missions, including assessment using cross-calibration, tropical forest polarimetric calibration, noise evaluations and InSAR comparisons. During the solar cycle, changes in total electron count in the ionosphere induce Faraday rotation which affects measurements from spaceborne L-band SAR.

Discussion

- Ake Rosenqvist discussed JAXA's use of quad-pol data for tropical forest polarimetric calibration.

J3.7: Discussion

Moderators: Ferran Gascon (ESA), Matt Adams (GA)

- Observations from the session were shared, including leveraging the recommendations of the Interoperability Handbook, the growing use of the EDAP Framework, the potential for multi-class CEOS-ARD, the importance of provenance, traceability, and reference data.
- The potential for requiring CEOS-ARD providers to submit representative imagery over a selection of PVP sites was discussed. Medhavy Thankappan (GA) noted potential mission restrictions to acquiring this imagery, so suggested it be provided as a Goal requirement.

WGCV-LSI-04	CEOS-ARD Secretariat to add a CEOS-ARD Strategy initiative regarding adoption of the CEOS PVP as part of the requirements for CEOS-ARD assessment, specifically that sample data should be over a PVP site.	June 2026
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- Melissa Martin (NASA) noted one takeaway from the recent CSDA Workshop was the commercial sector’s “make us do it” perspective; they need an incentive to meet requirements. It won’t be difficult to get providers to image over sites, but it will be to have them release it publicly. The PVP could potentially be written into CSDA requirements. It would be beneficial to have different agencies sign onto the EDAP framework expansion, including CEOS. Having USGS recently onboarded has really strengthened the initiative. The potential to have WGCV endorse the initiative was discussed.
- There was discussion regarding leveraging the ESA-NASA QAF for the data quality aspects of CEOS-ARD requirements. CEOS-ARD provides a means for documenting what is necessary to be considered ‘ARD’, and that certain quality measures should be provided, but not the specific methods nor objective quantities for those assessments. Data quality aspects of the PFS should point to the QAF for the specific processes, assessment criteria, and classification of quality level. This creates a clear delineation of roles between the CEOS-ARD specifications and the QAF that need to be connected.

WGCV-LSI-05	Matt Steventon and Dave Borges to work with the SIT Chair team to see if CEOS could be used as a forum to encourage adoption of the ESA-NASA Joint Quality Assessment Framework across other global space agencies.	2026 SIT Technical Workshop
WGCV-LSI-06	CEOS-ARD Secretariat to add a CEOS-ARD Strategy initiative regarding adoption of the ESA-NASA Joint Quality Assessment Framework for the data quality aspect of the CEOS-ARD Framework.	June 2026

Session J4: 2026 CEOS-ARD Strategy Pillar: Fitness for Purpose

J4.1: Introduction

Matt Adams (GA) shared an overview, background, and objectives of the Fitness for Purpose CEOS-ARD Strategy Pillar.

J4.2: Stability Parameter Discussion [[slides](#)]

Libby Rose (WGClimate Secretariat, remote) reported on the recent work in WGClimate to define requirements for stability. Using the CEOS EO Glossary definition as a basis, a Goal requirement for stability was proposed for all CEOS-ARD Product Family Specifications.

Item	Threshold	Goal
Stability	Not required.	Provide indicative metrics on stability, via stability uncertainty expressed as a stability standard uncertainty (with a 66% confidence level) or stability expanded uncertainty (with a 95% confidence level), alongside the time scale and space scale the stability uncertainty is evaluated against. Include considerations of: (a) temporal drift of individual sensors, (b) inter-sensor biases as instruments are replaced, and (c) changes in the spatial and/or temporal sampling regime, and the impacts on aliasing with, e.g., diurnal and seasonal cycles and spatial patterns.

Next steps for this requirement include the finalisation of definitions and development of 2-3 test cases of climate data records that meet the proposed requirement. WGCV Members were invited to contribute to the requirement's development.

WGCV-LSI-07	Libby Rose to engage WGCV members in the WGClimate CEOS-ARD stability requirement definition group. The proposal is open for further refinement here and definitions for stability terms can be found here . The next step is to demonstrate how the draft requirement would be met in practice via a test with a couple of CDRs.	LSI-VC-20
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Discussion

- The time period of the requirement was discussed, with agreement to keep it open ended.
- Nigel questioned how the requirement would be evaluated, assuming the result would be a single number e.g. 10% or 20% with no requirement on stability other than providing a value. He suggested adding it at the threshold level as no datasets are currently meeting goal requirements. It would also be useful to see how the test case assessments are being done as examples.
- The problem with Goal right now is that the evaluation of CEOS-ARD is that if you do threshold only, you get a simplified evaluation compared to goal. It's either all Threshold or all Goal, and no data provider can achieve all Goal requirements. All Threshold requirements should be met, but for Goal we could indicate how many requirements are achieved.

J4.3: Discussion

Moderators: Cody Anderson (USGS), Chris Barnes (KBR/USGS)

- Matt Adams (GA) shared an analysis of CEOS-ARD Surface Reflectance datasets and a strawman visual representation of a 'means to distinguish' utilising the PFS for specific applications.
- Links to fitness for purpose and potential CEOS-ARD grading systems were discussed. CEOS-ARD assessment requires metrics which users can assess for their own applications. Fitness for purpose assessment could be an addendum built on CEOS-ARD. The strategy aims to consider ways to assess it building on the existing framework. The purpose should be phrased in the language of the users, not provider metrics.
- Identifying requirements for fitness for purpose assessment could be a role of the CEOS Virtual Constellations. Melissa suggested establishing minimum requirements for each case. With commercial companies developing their roadmaps, use cases that meet certain requirements would be very useful to them. They are asking for this feedback.
- Rob Waterman (Esri) noted that a lot of the GIS community would benefit from this. It would bring a whole new audience in, if they can find out what their data is capable of. The potential for CEOS-ARD to be plugged into Esri Living Atlas was discussed, particularly if we more comprehensively cover the quality checks in future. They are keen to work with us to promote CEOS-ARD.
- Dave Borges (SEO) highlighted the foundation of CEOS-ARD, which was made for users unfamiliar to remote sensing. To address fitness for purpose across the PFS and observing modalities, the addition of higher-level ARD beyond L2 was discussed.

Day 2: Thursday, April 23, 2026

Session J5: Commercial Engagement Session

J5.1: Welcome and Introductions

- Matt Steventon (CEOS-ARD Secretariat) introduced the session, aiming to further explore areas identified in the Future of CEOS-ARD Survey's 'Commercial Relevance' theme, and aspects that CEOS-ARD, WGCV, and LSI-VC can support.

J5.2: Vantor [\[slides\]](#)

Michele Kuester (remote) reported Vantor's plans for developing Surface Reflectance CEOS-ARD, with focus on traceability, transparency and quantification. Calibration inputs include an AERONET sensor, following the WGCV IVOS TSIS solar irradiance recommendation, and stability monitoring over PICS and RadCalNet sites.

Questions were raised regarding how to standardise radiometric performance metrics, including whether the Radiometric Error 90th Percentile ([RE90](#)) metric is the right direction.

Discussion

- Nigel Fox (NPL) encouraged Vantor to utilise the CEOS Product Validation Platform (ceos.org/pvp). The RadVAL tool provides a means for evidencing uncertainty on a common platform with consistent representation. Providing imagery over multiple sites would facilitate the creation of a merged, common benchmark 'virtual reference.' Tina noted that many commercial companies are willing to provide this evidence but may not know how.
- Ways of presenting solar irradiation information was discussed, including the value of low solar and sensor elevation aspects as a fitness for purpose metric.
- Chris Durell (Labsphere) encouraged review of the RE90 metric, which builds on a combination of achievable and understood commercially-minded aspects of how to evaluate a sensor. Feedback would receive an agile response from the commercial sector.

WGCV-LSI-08	CEOS-ARD Oversight Group and Strategy development team to consider how the RE90 framework might fit into the CEOS-ARD Strategy data quality pillar.	July 2026
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J5.3: SatVu [\[slides\]](#)

Jamie McMillan (remote) reported updates from SatVu's HotSat MWIR tasked constellation and product offering, which includes surface brightness temperature ARD. SatVu has gone through the EDAP process, in an assessment undertaken by Telespazio, and is currently undergoing an evaluation for the Copernicus Contributing Missions Programme. SatVu is currently contributing to the development of the CEOS-ARD Surface Temperature PFS v6.0.

Discussion

- SatVu's product is largely compliant with the in-development ST PFS as it stands, with the majority of issues around technical requirements such as acquisition start date, cloud shadow, and emissivity.

J5.4: Ororatech [\[slides\]](#)

Anastasia Sarelli (remote) reported updates from Ororatech's Thermal Infrared Constellation, which is placed in strategic orbits to close the morning and afternoon data gap for satellite-based wildfire monitoring. Ororatech is part of the CCM and MPC Programmes, and is also contributing to the CEOS-ARD Surface Temperature PFS development effort. The performance and validation of Oroatech's product offering was overviewed.

Discussion

- Discussions on the ST PFS development have been helpful for Ororatech, and have provided clarity on the meaning of certain metadata requirements. The company does not have a defined product yet, but is flexible to determine what metadata is useful for users, with initial interest to develop CEOS-ARD for land surface temperature.
- Peter Strobl (EC) opened a discussion on whether LST and SST can be treated under one surface temperature specification, noting the wide range in resolution scales between sensors. While Ororatech currently focuses on LST, other missions like Landsat and ECOSTRESS treat LST and SST together. Jamie proposed continuing the PFS development as is (separate measurands), and deciding whether to split or merge the PFS once requirements have been developed.

J5.5: Constellr [\[slides\]](#)

Andreas Brunn reported updates from Constellr's HiVE Constellation and TIR product offering, including Level 2 LST, Surface Reflectance, and ARD. A self-assessment has been submitted against the ST PFS v5.0, with plans to also assess against surface reflectance. LST data is validated using RadCalNet and HYPENETS sites, with in-orbit cross calibration from

high temporal resolution meteorological satellites and atmospheric information simulating TOA radiance. HiVE has also been evaluated by the optical MPC.

Discussion

- The main challenges with Constellr's recently launched mission, SkyBee-2, have not been calibration, but operations. Customers are not asking for uncertainty information, although ensuring confidence in ST measurements could bring more value.

J5.6: Planet [\[slides\]](#)

Jessica Bobeck (remote) reported an overview of the Analysis-Ready PlanetScope (ARPS) product, radiometric and geometric validation, and conformance to the CEOS-ARD framework. ARPS Surface Reflectance is aligned with FORCE-derived Sentinel-2 and Landsat-8/9 for spectral consistency. Radiometric validation is conducted over four RadCalNet sites. ARPS prioritises temporal co-registration above absolute geolocation.

Getting all of the different processes documented via UML, STAC, DOI, etc. has been a challenge that Planet is still working through before CEOS-ARD assessment can proceed. The ARPS CEOS-ARD product QA layer includes pixel flags for cloud parameters and traceability metadata for all pixels. ARPS 1.1.0 addresses CEOS-ARD Goal requirements for radiometric accuracy and measurement uncertainty, and now meets the threshold for auxiliary data. ARPS currently meets 14/17 General Metadata Goal requirements and all six Goal requirements for Radiometric and Atmospheric Corrections.

Discussion

- Planet received approval to provide two years of ARPS over all RadCalNet sites, openly available. Nigel encouraged Planet to provide this information to the CEOS-PVP.
- PlanetScope Surface Reflectance is calculated using MODIS AOD values. ARPS aims to harmonise across all satellites using images from multiple satellites together, e.g. six different images from Gobabeb from different sensors harmonised. ARPS is more of a Level 3 product, taking radiometric and geometric alignment a step further.
- The achievement of Goal level CEOS-ARD would be a product differentiator for Planet, which recognises the importance of information valued by scientists. The more transparent you are, the less questions you receive. CEOS-ARD has been helpful to strive towards and communicate the importance of meeting community requirements.
- Peter Strobl (EC) noted that users won't ask for uncertainty but always consider it, otherwise they wouldn't touch the data. By providing uncertainty, you cover your back on a product's suitability and fitness for purpose.

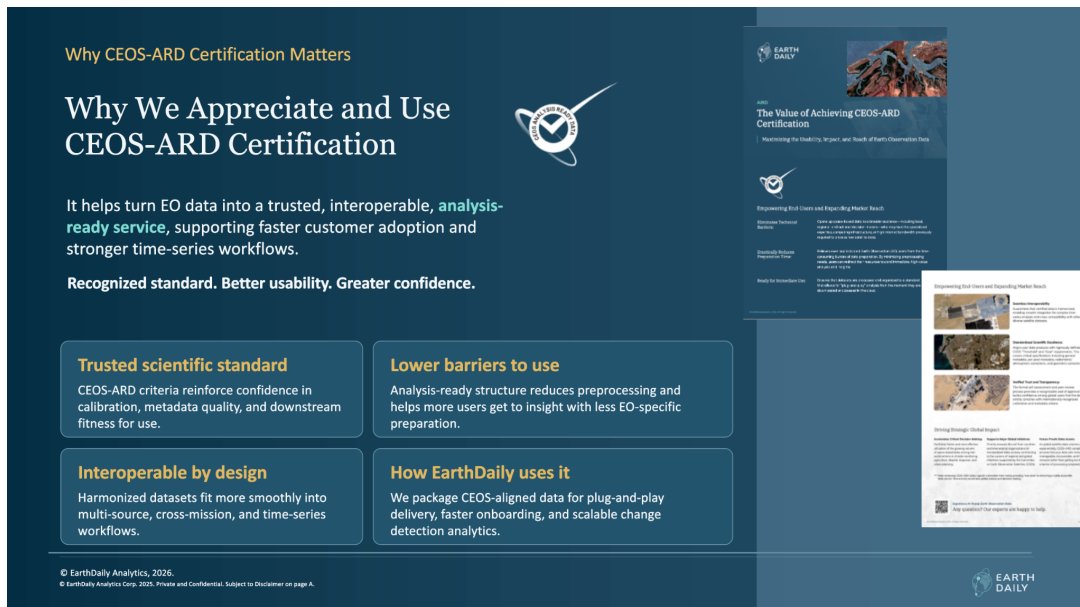
WGCV-LSI-09	CEOS-ARD Secretariat to share the latest on the CEOS-ARD STAC Extension with Jessica Bobeck.	ASAP
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J5.7: EarthDaily [\[slides\]](#)

Tim Chan reported updates on the EarthDaily Constellation, which provides imagery products for 'AiRD,' maritime, and science applications. AiRD is a VIS/NIR surface reflectance product providing geometric and atmospheric correction. It is important for users to trust the quality of data, provide lower barriers to use and indications of fitness for use in the metadata. Interoperability is of increasing importance, as downstream users are gathering inputs from multiple sources.

EarthDaily achieved CEOS-ARD compliance for SR last year, and toward the end of this year plans to update its sample products and begin assessing against the ST and AR PFS. An assessment at the CEOS-ARD Goal level is being developed, including measurement normalisation, radiometric accuracy metrics, and inclusion of the EarthDaily constellation in the CEOS MIM Database.

SR validation is conducted over AERONET and RadCalNet sites, measuring atmospheric retrieval and surface reflectance noise and consistency. There is interest in developing reference sites, and anticipation to provide variations of SR datasets with additional bands and format updates.



Why CEOS-ARD Certification Matters

Why We Appreciate and Use CEOS-ARD Certification

It helps turn EO data into a trusted, interoperable, **analysis-ready service**, supporting faster customer adoption and stronger time-series workflows.

Recognized standard. Better usability. Greater confidence.

Trusted scientific standard

CEOS-ARD criteria reinforce confidence in calibration, metadata quality, and downstream fitness for use.

Lower barriers to use

Analysis-ready structure reduces preprocessing and helps more users get to insight with less EO-specific preparation.

Interoperable by design

Harmonized datasets fit more smoothly into multi-source, cross-mission, and time-series workflows.

How EarthDaily uses it

We package CEOS-aligned data for plug-and-play delivery, faster onboarding, and scalable change detection analytics.

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The Value of Achieving CEOS-ARD Certification
Maximizing the Usability, Impact, and Reach of Earth Observation Data

Empowering End Users and Expanding Market Reach

Driving Stronger Global Impact

Discussion

- Norvik Voskanian Kordi (NASA) noted the potential need for best practices on weighing the geometric and radiometric performance of different instruments within constellations. The goal would be for data from different satellites to be treated in an equivalent way. Per-pixel metadata might be able to communicate radiometric differences from camera to camera. WGCV could consider developing guidance for validating uncertainties from constellation-derived products.
- Constellations are not covered in the CEOS-ARD PFS, but are definitely something to consider in an effort to increase commercial relevance. Jamie McMillan (SatVu) noted that when weighting across the constellation, the per-satellite uncertainty would be the driving factor.
- Chris Durell reported that with Labsphere’s FLARE system mirrors, a huge variety of performance can be seen across a constellation. A tiered product line could be developed that sells data according to their accuracy and performance. Chris Rampersad noted that EarthDaily has a 5% radiometric error threshold for every sensor. Information on all sensors could be provided for CEOS-ARD review, but it may be too much to evaluate.

WGCV-LSI-10	CEOS-ARD Secretariat to add a CEOS-ARD Strategy initiative regarding an update to the CEOS-ARD Framework to accommodate, in a generalised fashion, constellations and composite/mosaic products.	July 2026
WGCV-LSI-11	WGCV to consider developing best practices for validating uncertainties from constellation-derived products. <i>Note: Ultimately it is up to the data provider to determine the weightings for how a product is constructed from different instruments’ observations (expectation would be that the per-satellite uncertainty is used to drive this weighting). The harmonisation process should be declared and defined.</i>	WGCV-57

J5.8: New Space Intelligence [\[slides\]](#)

Masahiko Nagai reported updates on the ‘Calibration as a Service’ development of New Space Intelligence, through pointable mirror arrays and atmospheric measurements published to SKYNET. The International Charter on Disasters uses their equipment to improve the Cal/Val and QA of the many products it distributes,

The importance of data harmonisation for interoperability, time series, science insights, and AI/ML ready data was discussed.

NSI has patented an X-band trihedral corner reflector which is being deployed along coastal lines to estimate precise coastal line changes from multiple SAR polarisations.

Discussion

- CEOS-ARD is discussing the OGC standardisation process, including the creation of an OGC Domain Working Group on ARD. If the group formed, CEOS would like to flag the opportunity to have membership from both public and private space agencies.

WGCV-LSI-12	Welcome nominations from commercial sector participants to serve as a co-chair of a new OGC ARD Domain Working Group (DWG) if it eventuates. It will be important to have a diverse leadership representation of space agencies, the commercial sector, and others.	OGC Connect Helsinki (1-4 June 2026)
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J5.10: Unlocking Commercial Archives for Public Good [\[slides\]](#)

Medhavy Thankappan (GA) reported a concept for LSI-VC to establish and maintain a catalogue of archive and buy-out opportunities for CEOS Agency data, encouraging consistency, collaboration and transparency. Existing mechanisms include the WGISS EO Data collection appraisal procedure and Purge Alert, as well as ESA Third Party Missions.

Opportunities and acquisitions could be compiled regularly, exposing archives under open license and leveraging existing frameworks (e.g. EDAP, CSDA, CEOS-ARD).

Discussion

- Ake Rosenqvist (JAXA) noted that very high resolution satellites tend to acquire data over limited sites, so the potential value of archive data is small. We should encourage commercial providers to establish a background measurement programme, depending on their capabilities.
- The value of an archive would be in systematic acquisitions. Proposing the dissemination of low-priority, background information to the commercial sector could encourage them to boost the value of archive data.
- Melissa Martin (NASA CSDA) noted concerns around vendors not maintaining archives due to cost, and potential plans for CSDA to include a licensing term that after five years, data is made free and open.
- Cody Anderson (USGS) noted the JACIE database, which characterises commercial datasets under restriction. Datasets are given by providers for evaluation with no license agreement. USGS has the first right of refusal clause of licensing. There is

terminology in that most providers should not delete data but are obliged to offer it to EROS beforehand.

- The potential for CEOS to support standardised licensing was discussed, noting the SPOT World Heritage (SWH) initiative as an example. Licensing becomes complex between countries and agencies. We could try to develop guidelines for the licensing, but not create a license itself. Providing guidance on how catalogues can be developed with licensing restrictions in mind, including the inclusion of ‘sunset clauses.’
- A CEOS survey was proposed, to collect thoughts on potential use cases and limitations for archive opportunities.
- Commercial data acquired over calibration sites is often proprietary. Since the data has already been funded through CSDA, it could be possible to procure archived data over calibration sites through their license.

WGCV-LSI-13	Cody Anderson to provide more details (including a POC) regarding the USGS EROS ‘first right of refusal’ for commercial archive data before deletion.	LSI-VC-20
WGCV-LSI-14	LSI-VC to consider a survey to gather feedback on the concepts detailed in the <i>Unlocking Commercial Archives for Public Good</i> , regarding things like background observation scenarios, old archive buyouts, sunset clauses in procurement contracts, etc.	LSI-VC-20

J5.9 & 5.11: Discussion: Barriers to commercial sector uptake of CEOS-ARD & Data assessment & procurement

Moderators: Matt Adams (GA)

Inputs from CEOS Session at JACIE

The 2026 JACIE Workshop was held from April 13–17, 2026 at USGS Headquarters, in Reston, USA, where 30-40 participants attended a dedicated CEOS session, which included CEOS-PVP, RadCalNet, and the CEOS-ARD Strategy.

Barriers to commercial sector uptake of CEOS-ARD

- The first commercial sector self-assessment for the SAR PFS was recently sent in by Synspec, which is setting up a production pipeline for CEOS-ARD NRB for their StriX constellation. For X-band SAR, the main user has been defence. Providing data more easy to understand and ingestible through CEOS-ARD, Synspec hopes to reach different user groups, such as those involved in disaster monitoring.

WGCV-LSI-15	CEOS-ARD Secretariat to add a CEOS-ARD Strategy initiative regarding new CEOS comms materials to sell the business case for CEOS-ARD.	June 2026
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- Tina Ochoa (Vantor) noted that although Vantor is progressing CEOS-ARD self-assessments, there is no demand signal from the business side. It would be useful if agencies could provide some sort of incentive or push for commercial relevance.
- Melissa Martin (NASA CSDA) noted the disconnect between technical and leadership personnel in commercial companies. CSDA recognises the value of internal self-assessment, similar to those recommended by EDAP, whereby statements of CEOS-ARD alignment could be added to proposals for new CSDA vendors. She encouraged the broader adoption of the ESA-NASA quality assessment framework to strengthen the initiative, potentially through CEOS Agencies.
- Further discussion reflected the same issues coming from CEOS Agencies, and the importance of not just getting the stamp of CEOS-ARD approval but showing the benefits it brings.
- Cody Anderson noted that USGS is preparing to confirm the next Landsat archive, and it is not targeting CEOS-ARD compliance. Some of the Goal requirements, including BRDF and Terrain Illumination, are not viewed as beneficial for Landsat.
- Regarding past issues related to the provision of proprietary information in CEOS-ARD, CSDA has started requiring ATBDs only for private assessment. Nigel Fox (NPL) advocated for CEOS-ARD adopting a similar approach for CEOS-ARD, noting that without evidence, you have nothing.
- Matt Steventon suggested a CEOS-ARD initiative to prepare new promotional materials on the business case for CEOS-ARD, building off the example shown by EarthDaily.

WGCV-LSI-16	Referring back to action WGCV-LSI-05 , the ESA team will check with their colleagues regarding the prospect of having other space agencies sign on to adopt the ESA-NASA(-USGS) Joint Quality Assessment Framework, through a CEOS-led effort. The CSDA team supported the idea in principle.	July 2026
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Session J6: SIT Chair Priority: Water Planet – Seeing Earth's Water from Space

J6.1: Overview of NASA SIT Chair Priority: Water Planet – Seeing Earth's Water from Space [\[slides\]](#)

Dave Borges (SIT Chair Team) reported on the SIT Chair water priority, which aims to provide coordinated water observations, accessible and interoperable water data products, user-centred solutions for water challenges, and an assessment of benefits and impacts. The priority will also contribute a thematic water section to the CEOS-ARD Strategy and conduct self-assessments against the CEOS-ARD PFS.

J6.2: SWOT [\[slides\]](#)

Matthew Bonnema (NASA/JPL) shared an overview of the SWOT mission and its products, and a preliminary self-assessment of the L1B low-rate interferogram product against the CEOS-ARD InSAR PFS. There is also interest to assess against the ocean radar backscatter (ORB) PFS.

SWOT does not currently meet the InSAR PFS requirements, but the team is working to determine the delta. There is interest in higher level ARD water products, such as river, lake, and raster products.

Discussion

- Ake Rosenqvist (JAXA) suggested that the team also considers a self-assessment against the geocoded single-look complex (GSLC) PFS.
- Dave Borges (NASA) shared that the NASA Earth Science Division GIS team is building pipelines to instantaneously get river shape files into Esri Living Atlas for NISAR, which could decrease the time to ARD.
- There was discussion regarding the provision of shapefiles and raster images in ARD, and their value for non-expert users.

J6.3: PACE [\[slides\]](#)

Jeremy Werdell and Sean Bailey (NASA) shared an overview of the PACE hyperspectral mission and its products, including aquatic and terrestrial surface reflectance, biogeochemistry, ecology, as well as aerosol, atmospheric and trace gas properties. The PACE aquatic spectral surface reflectance product is currently being self-assessed against the CEOS-ARD Aquatic Reflectance PFS, with anticipation to meet the threshold level.

Discussion

- Getting from top-of-atmosphere to aquatic reflectance has to be considered and assessed, with many moving parts. Some aspects will be challenging, e.g. acquisition time.

J6.4: Landsat Aquatic Reflectance Product Status [\[slides\]](#)

Ben Page (USGS/ESTS) reported an update on the USGS Landsat L2 Provisional AR product status. The product is derived from L1 VNIR bands over inland water bodies and nearshore coastal regions at 30 m for the Landsat-8/9 OLI archive. USGS is working to align the AR package with CEOS-ARD, with 80% of specifications currently being met at the Threshold level. Some Goal level requirements carry significant implications on data volume and computation, and some requirements may be more appropriately left to the users.

Ben shared some considerations for the CEOS-ARD team regarding the way PFS are developed:

- Engage production team representatives from data providers in future updates to ensure requirements are technically feasible and scalable and identify where requirements may prove difficult to meet in practice.
- Recognize the balance between meeting user needs and maintaining operational viability. Seek context for data size implications among PFS levels and products. High processing and storage demands risk pricing out data providers from compliance.
- Add context and justification for specifications that tie to user needs and anticipated use, especially for per-pixel metadata.
- Encourage open dialogue on aligning AR PFS expectations with current technical capabilities, particularly for agencies still trying to adapt to AR v2 requirements. Incorporate feedback into a v3.0 update.

Discussion

- Chris Barnes (USGS) added that CEOS-ARD PFS development currently lacks a balance between user expectations and what providers can adhere to. A subject matter expert in product data volumes would be critical to involve as we develop PFS. The AR PFS does not currently have any compliant providers; when baselining a new PFS we need to ensure it is achievable.
- Jeremy Werdell (NASA) suggested that the PACE and Landsat teams meet with the CEOS SIT Chair Team after their self-assessments of the AR PFS to identify any snagging areas.

	/ producers in CEOS-ARD PFS development to ensure CEOS-ARD is attainable for providers. The OG should consider adding guidance to the CEOS-ARD Governance Framework about the constituency of PFS development teams to ensure resulting specifications are achievable.	
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J6.5: Surface Reflectance Quality and Consistency Project [\[slides\]](#)

Medhavy Thankappan reported on the SRQC project under CEOS WGCV, which seeks to formulate clear, practical recommendations and guidance on improving the consistency of surface reflectance products with the aim of enhancing interoperable use. Despite products meeting the CEOS-ARD criteria, the data might not be consistent or comparable for time series analyses. This project is exploring what is needed to make them more harmonised.

Discussion

- Ferran Gascon (ESA) noted that between SR algorithms, there are discrepancies in their definitions of surface reflectance and what corrections it should include e.g., ideally, BRDF and topographic corrections. He noted the project's value for Sentinel-2 Collection-2. Medhavy clarified that the SR definition was the starting point of the project – to characterise what SR means to us in the CEOS-ARD context.
- Peter Strobl (EC) noted that from a user perspective (e.g. CLMS), they want as many optical properties of the surface as possible – the pure signal of the surface with reduced uncertainty.

J6.6: Best Practice Guidance for Integrating Multiplatform/Multisensor Data for Water Science and Applications [\[slides\]](#)

John Bolten (NASA) reported on the SIT Chair initiative, which builds off the [2015 CEOS Strategy for Water Observations from Space](#). There has been an explosion in water relevant Earth observations across the intergovernmental and private space since 2015, and the resulting data is larger than ever and spans multiple formats and specifications. There is a critical need for updated guidance on combining, processing, and applying these data to water management needs. The Best Practice document aims to fill that gap—providing practitioners with use cases and best practices for optimally combining sensors to significantly advance water science and decision-making impact.

What This Document Is	What It Is Not	Who It Serves
- A community-driven best practice guide for combining optical, SAR, passive microwave, and gravity satellite data to derive water variables, with a strong emphasis on decision-making impact, not just methods. - A living document hosted on GitHub which can be updated as missions evolve, contributable by all CEOS agencies.	- This document reflects established data frameworks but is not prescriptive of any specific methodology. - Not a comprehensive review of every possible sensor or application. - Not intended to be a rewrite of the <i>2015 CEOS Strategy for Water Observations from Space</i>. Instead, it builds on it with an integration and decision-making first lens.	- Scientists and practitioners already working with satellite data who need step-by-step guidance on multi-sensor/spectral integration. - CEOS entities seeking a shared integration guidance for science innovation and applications impact. - Researchers writing proposals who need to know what best practice looks like.

Discussion

- Peter Strobl questioned the basis for interoperability between optical and SAR data, suggesting that we compare higher level data instead of focusing on cross-sensor interoperability. John supported this approach, noting higher level aspects that could be more valuable, e.g. masked areas of high vegetation and topography that have significant complementary value. These examples should be shared in case studies.
- Ake suggested a ‘cookbook’ for different types of applications and sensor information, providing data resilience with multi-sensor redundancy. Indications could be given to users as to what information different sensors can provide, when used together and in CEOS-ARD format.
- A common phrase at NASA is that “NASA data is free but expensive,” because it takes a lot of computational time, understanding, and teamwork to process and interpret it.

J6.7: Discussion: NASA SIT Chair Priority: Water Planet – Seeing Earth's Water from Space

Moderators: Dave Borges (NASA SIT Chair Team) and Matt Steventon (CEOS-ARD Secretariat)

- The CEOS SIT Chair Team observed that there is little aquatic representation in WGCV, representing a gap with an emerging need to fill. The LPV Subgroup covers soil moisture, but does not have the capacity to cover all aquatic domains.
- IVOS addresses several water products, including SST and OC. Most of the activity is done by other groups, e.g. the CEOS Virtual Constellations and international science teams/coordination groups.

- Peter noted the issue of different areas being covered by many isolated fragments across CEOS. He suggested an evaluation of competencies and capacities related to water across CEOS, to see who sits where and what topics they could cover.

J6.8: Discrete Global Grid System (DGGs) ESA Perspectives [\[slides\]](#)

Ferran Gascon (ESA) reported on the Discrete Global Grid System (DGGs), a globally consistent framework providing a common spatial reference with minimal distortion and granularity for Big Data analysis.

The GRID4EARTH project promotes DGGs to improve ARD interoperability, with HEALPix as a strong DGGs candidate due to its equal area property, hierarchical structure and widespread use in global modelling and analyses. Strong institutional interest was reported in DGGs from OGC, CNES, and ESA.

ESA is developing a demonstrator project to compare the effects of DGGs on Sentinel-2 image quality degradation, with no radiometric and geometric shift identified.

Discussion:

- It is too early to tell if ESA will continue to prototype the framework for adoption into Collection 2 processing. The main concrete project is DestinE, which if successful would go to Copernicus and then Collection 2 – likely to be adopted in the 2030s.
- Peter noted ongoing discussions with OGC on how to best address the terminology of grids. The GRGIX exercise aims to bring CEOS-wide experts together to compare grids in a transparent way across options, including DestinE.

Appendix A: List of Participants

In person		Virtual	
Agency	Full Name	Agency	Full Name
BIRA-IASB	Jean-Christopher Lambert	ASI	Giovanni Blasone
CEOS-ARD Secretariat	Harvey Jones	BIS India	Sumit Sen
CEOS-ARD Secretariat	Matt Steventon	CSA	Stéphane Côté
Constellr	Andreas Brunn	EarthDaily	Chris Hardy
EC-JRC	Peter Strobl	EarthDaily	Miriam Cabero
ESA	Fabrizio Niro	EarthDaily	Rick Chern
ESA	Ferran Gascon	EarthDaily	Tim Chan
ESA	Paolo Castracane	ESA	Dirk Geudtner
ESA	Valentina Boccia	ESA	Steffen Dransfeld
Esri	Robert Waterman	GISTDA	Pawarin Kuha
GA	Matt Adams	ISRO	P.V. Jayasri
IEEE	Siri Jodha Khalsa	ISRO	Raghavender N
JAXA	Ake Rosenqvist	JAXA	Kazuhisa Tanada
JAXA	Takeo Tadono	MYSA	Wayne Ng
MYSA	Adhwa Amir Tan	NASA	Dana Ostrenga
NASA	Dave Borges	NASA	Frederick Policelli
NASA	Kurt Thome	NASA	John Bolten
NASA	Margaret Wooten	NASA	Nick Parazoo
NASA	Norvik Voskanian Kordi	NPL	Pieter De Vis
NASA	Rodrigo Vieira Leite	NPL	Sam Hunt
NASA CSDA	Melissa Martin	NRCan	Mark De Jong
NASA JPL	Rob Rosenberg	Ororatech	Anastasia Sarelli
NPL	Nigel Fox	Planet	Jessica Bobeck
SEO	Brian Terry	SatVu	Jamie McMillan

USGS	Brian Sauer	SEO	Matthias Mohr
USGS	Cody Anderson	USGS	Ben Page
USGS	Danika Wellington	USGS	Chase Mueller
USGS	Esad Micijevic	Vantor	Michele Kuester
USGS	Evan Neuwirth	Vantor	Tina Ochoa
USGS	Jeff Clauson	WGClimate Secretariat	Libby Rose
USGS	Todd Taylor		
USGS	Tom Maersperger		
USGS	Tom Sohre		
USGS	Vaughn Ihlen		
USGS/KBR	Chris Barnes		
USGS/KBR	Megan Rush		

Appendix B: Actions

WGCV-LSI-01	WGCV Secretariat to connect Pawarin (GISTDA) and Rob Rosenberg (JPL) regarding the availability of historical data to support THEOS-1 atmospheric correction and radiometric calibration from 2008. The availability of Railroad Valley data that preceded RadCalNet (from 2009) was noted.	COMPLETE <i>Data available via JAXA here and here.</i>
WGCV-LSI-02	WGCV Secretariat to connect Nigel Fox and Pawarin (GISTDA) regarding integration of THEOS data to the CEOS WGCV Product Validation Platform (PVP) and to share information on PICS data that can support historical THEOS-1 data processing.	COMPLETE
WGCV-LSI-03	Libby Rose to add a campaign on the WGCV calibration networks to the CEOS comms schedule and consider opportunities to better represent them on the CEOS website.	In progress
WGCV-LSI-04	CEOS-ARD Secretariat to add a CEOS-ARD Strategy initiative regarding adoption of the CEOS PVP as part of the requirements for CEOS-ARD assessment, specifically that sample data should be over a PVP site.	COMPLETE
WGCV-LSI-05	Matt Steventon and Dave Borges to work with the SIT Chair team to see if CEOS could be used as a forum to encourage adoption of the ESA-NASA Joint Quality Assessment Framework across other global space agencies.	2026 SIT Technical Workshop
WGCV-LSI-06	CEOS-ARD Secretariat to add a CEOS-ARD Strategy initiative regarding adoption of the ESA-NASA Joint Quality Assessment Framework for the data quality aspect of the CEOS-ARD Framework.	COMPLETE
WGCV-LSI-07	Libby Rose to engage WGCV members in the WGClimate CEOS-ARD stability requirement definition group. The proposal is open for further refinement here and definitions for stability terms can be found here . The next step is to demonstrate how the draft requirement would be met in practice via a test with a couple of CDRs.	LSI-VC-20
WGCV-LSI-08	CEOS-ARD Oversight Group and Strategy development team to consider how the RE90 framework might fit into the CEOS-ARD Strategy data quality pillar.	COMPLETE <i>Added to CEOS-ARD Strategy Initiatives Table</i>
WGCV-LSI-09	CEOS-ARD Secretariat to share the latest on the CEOS-ARD STAC Extension with Jessica Bobeck.	ASAP
WGCV-LSI-10	CEOS-ARD Secretariat to add a CEOS-ARD Strategy initiative	COMPLETE

	regarding an update to the CEOS-ARD Framework to accommodate, in a generalised fashion, constellations and composite/mosaic products.	
WGCV-LSI-11	WGCV to consider developing best practices for validating uncertainties from constellation-derived products. <i>Note: Ultimately it is up to the data provider to determine the weightings for how a product is constructed from different instruments' observations (expectation would be that the per-satellite uncertainty is used to drive this weighting). The harmonisation process should be declared and defined.</i>	WGCV-57
WGCV-LSI-12	Welcome nominations from commercial sector participants to serve as a co-chair of a new OGC ARD Domain Working Group (DWG) if it eventuates. It will be important to have a diverse leadership representation of space agencies, the commercial sector, and others.	OGC Connect Helsinki (1-4 June 2026)
WGCV-LSI-13	Cody Anderson to provide more details (including a POC) regarding the USGS EROS 'first right of refusal' for commercial archive data before deletion.	LSI-VC-20
WGCV-LSI-14	LSI-VC to consider a survey to gather feedback on the concepts detailed in the <i>Unlocking Commercial Archives for Public Good</i> , regarding things like background observation scenarios, old archive buyouts, sunset clauses in procurement contracts, etc.	LSI-VC-20
WGCV-LSI-15	CEOS-ARD Secretariat to add a CEOS-ARD Strategy initiative regarding new CEOS comms materials to sell the business case for CEOS-ARD.	COMPLETE
WGCV-LSI-16	Referring back to action WGCV-LSI-05 , the ESA team will check with their colleagues regarding the prospect of having other space agencies sign on to adopt the ESA-NASA(-USGS) Joint Quality Assessment Framework, through a CEOS-led effort. The CSDA team supported the idea in principle.	July 2026
WGCV-LSI-17	CEOS-ARD Oversight Group to explore including data scientists / producers in CEOS-ARD PFS development to ensure CEOS-ARD is attainable for providers. The OG should consider adding guidance to the CEOS-ARD Governance Framework about the constituency of PFS development teams to ensure resulting specifications are achievable.	LSI-VC-20