**14th Meeting of the CEOS Virtual Constellation for Land Surface Imaging (LSI-VC)**

**10-12 October 2023**

**ESA/ESRIN, Frascati, Italy**

**Meeting Objectives**

1. **Review agencies’ ongoing CEOS Analysis Ready Data (CEOS-ARD) self-assessments**. Obtain progress reports from agencies, work through any issues, and solicit feedback on the Product Family Specifications (PFS). We will seek to accelerate any pending CEOS-ARD self-assessments towards peer review.
2. In the process of data providers undertaking CEOS-ARD self-assessments, various feedback is received on the PFS parameters and requirements. We will use the meeting to **take stock of the latest feedback / issues and discuss whether any adjustments are needed to the PFS**.
3. **Consider endorsement of the new *Combined Synthetic Aperture Radar PFS*.** LSI-VC will discuss the technical details of this new PFS and consider the implications on the existing portfolio of SAR CEOS-ARD products.
4. **Review progress on the new Ocean Reflectance PFS**, which is an evolution of the existing Aquatic Reflectance PFS. LSI-VC needs to discuss consistency with the existing Aquatic Reflectance PFS, compatibility with existing Aquatic Reflectance CEOS-ARD products, and to agree the major considerations and process for the eventual endorsement of this new PFS, which is being led by OCR-VC but is built on the foundation of and will supersede an LSI-VC PFS.
5. Advance an **LSI-VC response to the Land Surface Temperature (LST) Climate Data Record (CDR) concerns highlighted by WGClimate**, as input to the Essential Climate Variable (ECV) Inventory gap analysis.
6. Hold a **working session on LSI-VC inputs to the Space Agency Response to the GCOS Implementation Plan (IP)** being coordinated by WGClimate, primarily seeking to address actions C5, F1, and F2.
7. **Advance the Surface Reflectance Quality, Equivalency and Consistency project.** Review progress and membership of the team, confirm the target output (potentially: Integration with the CEOS-ARD Framework; Standalone guidance document; Surface Reflectance metadata specifications; or a journal paper), and consider links to the CEOS ‘New Space’ effort and best practices for New Space.
8. **Reflect on progress of the definition of Analysis Ready Data (ARD) standards** via the Open Geospatial Consortium (OGC) ARD Standards Working Group (SWG), including team processes. Discuss headline issues and key topics that have emerged in the standards writing process so far. Discuss and agree any LSI-VC positions to be communicated to the SWG.
9. Confirm the process and questions for the **survey of CEOS agencies that seeks to shed light on their ambitions with respect to CEOS-ARD**. The results will inform priorities for further engagement with the commercial sector (including ‘New Space‘) and will serve as a key input for an update of the **CEOS-ARD Industry Engagement Strategy**.
10. Forests and Biomass Subgroup:
    1. Review progress on the **CEOS Agriculture, Forestry and Other Land Use (AFOLU) Roadmap** and consider our expected LSI-VC response (i.e., 2035 observational scenario and LSI needs, agency response and planning).
    2. Follow up the CSA-ESA interoperability pilot using RADARSAT-2 and Sentinel-1 for forests.
11. **Finalise LSI-VC input for the CEOS Interoperability Framework Roadmap** to be discussed at the 2023 SIT Technical Workshop.
12. Discuss and provide input to the CEOS System Engineering Office’s plans for an **ARD interoperability test using the CEOS Analytics Lab (CAL)** as a ‘New Space’ demonstration.
13. Consider if CEOS / LSI-VC might be able to provide **guidance to the EO community on how to best use drone data in combination with satellite data for LSI applications**.
14. Discuss the **POLINSAR Workshop Requirements regarding quad-pol and multi-frequency SAR acquisitions**, hear updates from agencies regarding the extent to which current observation plans satisfy these requests, and consider actions that could be taken to address the requirements.
15. Determine the utility and feasibility of constructing an **ALOS and NISAR long-term L-band time series** and agree on any next steps.
16. **Exchange CEOS agency updates related to land surface imaging.** All agencies will be given an opportunity to present the latest activities in their agencies and raise any issues that would benefit from discussion and coordination.

**Agenda**

**Tuesday October 10**

**Location**: James Cook Room, 1123

**There will not be a bus to ESRIN on the first day (half day). There will be a return bus in the evening.**

**Reminder: Please bring your passport to receive your badge for access to ESRIN.**

|  |  |  |
| --- | --- | --- |
| **Session 1: Welcome and Introductions**  *Session Lead / Moderator: Matt Steventon*  *Specific Objectives:*   * *Review and aim to close all past open actions* | | |
| **13:00** | **1.1**: Welcome   * Review of meeting objectives * Day 1 overview | LSI-VC Leads |
| **13:10** | **1.2**: Action Review  [LSI-VC-13 Actions & Decisions](https://docs.google.com/document/d/1wJd5Zku44QuhHE8L9DM10WNAlo_tEHKGXuD4dcE9yus/edit?usp=sharing) | Matt Steventon |
| **Session 2: Agency LSI Updates and CEOS-ARD Assessments**  *Session Lead / Moderator: Andreia Siqueira*  *Specific Objectives:*   * *Hear CEOS-ARD self-assessment progress reports.* * *Identify and work through any blockers, feedback on PFS; provide recommendations, guidance, facilitate Q&A.* * *Accelerate pending CEOS-ARD self-assessments towards peer review.* * *Understand agency plans for CEOS-ARD access and discoverability, interoperability, cloud access, etc.* * *Exchange updates related to land surface imaging.* | | |
| **13:40** | **2.1:** ISRO [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/2.1_HariPriya_ISRO_EOS04_CARDSAR_v2.pptx)]   * EOS-04 (C-band Radar) data products * CEOS-ARD self-assessment and peer review * ISRO EO Data Hub Bhoonidhi | Manju Sarma, Hari Priya |
| **14:10** | **2.2**: Resourcesat-2/2a Surface reflectance validation over RADCALNET sites [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/2.2_RADHIKA-ISRO-PPT-RS2-2A-SR-VALIDATION-OVER-RADCALANET-LSI-VC-14-10OCT2023.PDF.pdf)] | Radhika |
| **14:40** | **2.3:** KARI [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/2.3_KANG_KARI%20Works%20on%20ARD_v1.pptx)] | Chiho Kang |
| **15:05 – Break (20 mins)** | | |
| **15:25** | **2.4:** Status Report on the Black Marble Nightlight Occlusion Analysis and Thoughts on Additional ARD Testing [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/2.4_Occlusion_Analysis_LSI_VC14_Oct2023.pptx)] | Brian Killough (SEO team) |
| **15:45** | **2.5:** UK EO Data Hub [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/2.5_Cheesbrough_UKEODataHub_v1.pptx)] | Sarah Cheesbrough (UK Catapult) |
| **16:05** | **2.6:** CSA [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/2.6_CSA_Yves.pdf)]   * Digital Earth Canada * Environment Canada and Natural Resources Canada use cases * CEOS-ARD assessments * Inland water monitoring use case * Radarsat archive R&D Challenge (LSI-VC-13-22) * CSA-ESA interoperability activity, with the RADARSAT-2 and Sentinel-1 pilot on forests (LSI-VC-13-11) | Yves Crevier, Paul Briand |
| **16:35** | *Buffer time* |  |
| **Session 3: Closing**  *Session Lead / Moderator: Matt Steventon*  *Specific Objectives:*   * *Confirm Day 1 actions, decisions, and summarise headline outcomes* | | |
| **16:55** | **3.1**: Day 1 Wrap-up | LSI-VC Leads / Sec |
| **17:00 – Adjourn** | | |

**Bus**

17:15: ESRIN to [Piazza Marconi](https://maps.app.goo.gl/ZUe2kNc6pF3GpXxZ9) Frascati (30 seats)

**Wednesday October 11**

**Bus**

08:15: [Piazza Marconi](https://maps.app.goo.gl/ZUe2kNc6pF3GpXxZ9) Frascati to ESRIN (30 seats)

**Location**: James Cook Room, 1123

**Reminder: Please bring your passport to receive your badge for access to ESRIN.**

|  |  |  |
| --- | --- | --- |
| **Session 4: Welcome**  *Session Lead / Moderator: Matt Steventon*  *Specific Objectives:*   * *Recap Day 1 headlines, actions, and decisions.* | | |
| **09:00** | **4.1**: Welcome   * Day 2 overview * Recap of Day 1 actions and decisions | LSI-VC Leads |
| **Session 2 (Cont.): Agency LSI Updates and CEOS-ARD Assessments**  *Session Lead / Moderator: Matt Steventon* | | |
| **09:10** | **2.7**: CSIRO [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/2.7_Zhou_CSIRO_NovaSAR-1_ARDanddemo.pdf)] | Zheng-Shu Zhou |
| **Session 5: CEOS-ARD Framework – Peer Reviews and New Specifications**  *Session Lead / Moderator: Chris Barnes*  *Specific Objectives:*   * *Review the status of ongoing peer reviews.* * *Take stock of the latest feedback on the PFS and discuss whether any adjustments are needed to address issues.* * *Consider endorsement of the new Combined Synthetic Aperture Radar (SAR) PFS.* * *Clarify the process for endorsement of the Ocean Reflectance PFS and the implications on existing Aquatic Reflectance CEOS-ARD products.* | | |
| **09:40** | **5.1**: CEOS-ARD Peer Reviews [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/5.1%20LSI-VC%2014%20CEOS-ARD%20Assessments%20MT-PH.pptx)]   * Peer review progress and future outlook. * Discussion on any issues/feedback on the PFS. | Medhavy Thankappan / Peter Harrison |
| **10:10** | **5.2**: Combined SAR PFS [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/5.2_LSI-VC-14_CARD4SAR-GSLC_Ake-Takeo.pptx)]   * Background and overview.   + Geocoded SLC   + Combined “CEOS-ARD for SAR” * Implications on the existing portfolio of SAR CEOS-ARD products. * Discussion and potential endorsement.   Supporting documents:  [CEOS-ARD for SAR PFS](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Documents/CARD-SAR_PFS_v0.4.pdf) (GSLC embedded)  [Metadata specification](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Documents/CARD-SAR_METADATA-spec_v0.4.xlsx)  [PFS Annexes](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Documents/Annex_CARD-SAR_PFS_v0.4.pdf) | Ake Rosenqvist / Takeo Tadono |
| **11:10 – Break (20 mins)** | | |
| **Session 2 (Cont.): Agency LSI Updates and CEOS-ARD Assessments**  *Session Lead / Moderator: Matt Steventon* | | |
| **11:40** | **2.8**: ESA [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/2.8_CEOS%20LSI-VC%20-%202.8%20CEOS-ARD%20at%20ESA.pptx)]   * Sentinel-3 CEOS-ARD | Ferran Gascon, Silvia Scifoni |
| **12:10** | **2.9**: ESA S-1 ARD implementation [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/2.9_Albinet_ESA%20S-1%20ARD%20implementation%20_V1.pptx)] | Clément Albinet |
| **12:30** | **2.10**: JAXA [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/2.10_JAXA_Tadono_Rosenqvist_v01.pdf)] | Takeo Tadono |
| **13:00 – Lunch (60 mins)** | | |
| **Session 6: LSI Interoperability, Validation, and Data Access Topics**  *Session Lead / Moderator: Peter Strobl*  *Specific Objectives:*   * *Finalise identification of LSI-VC related items for the CEOS Interoperability Framework, ahead of the SIT Technical Workshop.* | | |
| **14:00** | **6.1:** CEOS Interoperability Framework Discussion Session [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/6.1_Interoperability_LSI-VC-14_Sohre.pptx)]   * Overview of vision and progress * Review of identified related LSI-VC work plan items * Finalise LSI-VC input for the roadmap – to be discussed at the 2023 SIT Technical Workshop. | Makoto Natsuisaka, Tom Sohre |
| **Session 7: ARD Community Engagement**  *Session Lead / Moderator: Andreia Siqueira*  *Specific Objectives:*   * *Confirm the process and questions for the survey of CEOS agencies that seeks to shed light on their ambitions with respect to CEOS-ARD.* * *Reflect on progress of the definition of Analysis Ready Data (ARD) standards via the Open Geospatial Consortium (OGC) ARD Standards Working Group (SWG).* * *Agree any LSI-VC positions to be communicated to the OGC ARD SWG.* | | |
| **14:30** | **7.1**: ISO/OGC Analysis Ready Data Standards Working Group [slides]   * Progress, team processes, open issues * Discussion and decision on any LSI-VC positions to be communicated to the OGC ARD SWG | Patrick Quinn |
| **15:00** | **7.2**: CEOS-ARD Industry Engagement Strategy Update [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/7.2_Siqueira_CEOS-ARD%20Industry%20Engagement%20Strategy%20Update_v3.pptx)]   * Discussion: ARD priorities of CEOS agencies. * Lessons learned via ARD23, OGC ARD SWG, JACIE, VH-RODA, CEOS New Space Task Team, etc. * Decision: Process and questions for further survey of CEOS agencies. * Discussion: Future CEOS-ARD Industry Engagement Strategy update and workshop   Past paper for reference: [*CEOS Analysis Ready Data – Involving the Private Sector*](https://ceos.org/document_management/Meetings/Plenary/34/Documents/4.2_CEOS_Analysis_Ready_Data_Involving_the_Private_Sector_V1.pdf) | Andreia Siqueira |
| **Session 8: Land Surface Observation Continuity, Gap Analyses, Applications**  *Session Lead / Moderator: Andreia Siqueira*  *Specific Objectives:*   * *Advance an LSI-VC response to the Land Surface Temperature (LST) Climate Data Record (CDR) concerns highlighted by WGClimate, as input to the Essential Climate Variable (ECV) Inventory gap analysis.* * *Hold a working session on LSI-VC inputs to the Space Agency Response to the GCOS Implementation Plan (IP) being coordinated by WGClimate, primarily seeking to address actions C5, F1, and F2.* * *Advance the Surface Reflectance Quality, Equivalency and Consistency project.* | | |
| **15:30** | **8.1**: ECV Inventory Gap Analysis and LSI-VC Input on Land Surface Temperature CDRs & GCOS Implementation Plan (IP) Response Inputs from LSI-VC [[slides1](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/8.1_LSI-VC-Leads_Background_v2.pptx)] [[slides2](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/8.1_Ghent_LST_CDRs_v1.pptx)]   * [Background: LST ECV & LSI-VC.pptx](https://docs.google.com/presentation/d/16SRc21oTadsjJBAxjDTobenVqd4SKjj4/edit?usp=sharing&ouid=117023330514006103074&rtpof=true&sd=true) * [Land Surface Temperature ECV CDR Questions from WGClimate](https://docs.google.com/document/d/1VENwZQTTDl7ZL_6blET4o_V_t9_w7W8Goy5JhXlReXU/edit?usp=sharing) * [ECV Inventory Case Study: Precipitation Data Sets.pptx](https://docs.google.com/presentation/d/1nPfBI9a3E-d6js8VrgGArVEcDLk2hjDb/edit?usp=drive_link&ouid=117023330514006103074&rtpof=true&sd=true) | LSI-VC Leads |
| **16:00 – Break (15 mins)** | | |
| **16:15** | **8.2:** Surface Reflectance Quality, Equivalency and Consistency Project Working Session [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/8.2%20CEOS%20LSI%20VC%2011%20October%202023.pptx)]   * [Proposal: Surface Reflectance Quality, Equivalency and/ Consistency](https://docs.google.com/document/d/1eJvWxIliGaf4D4qBVIStTtfvNxfiJlIe6A8fDuaOFkA/edit?usp=sharing) * Overall approach * Confirm the target output (potentially: Integration with the CEOS-ARD Framework; Standalone guidance document; Surface Reflectance metadata specifications; or a journal paper) * Membership of the team * Links to the CEOS ‘New Space’ effort and best practices for New Space | Simon Oliver |
| **Session 9: Closing**  *Session Lead / Moderator: Matt Steventon*  *Specific Objectives:*   * *Confirm Day 2 actions, decisions, and summarise headline outcomes* | | |
| **16:55** | **9.1**: Day 2 Wrap-up | LSI-VC Leads / Sec |
| **17:00 – Adjourn** | | |

**Bus**

17:15: ESRIN to [Piazza Marconi](https://maps.app.goo.gl/ZUe2kNc6pF3GpXxZ9) Frascati (30 seats)

**Thursday October 12**

**Bus**

08:15: [Piazza Marconi](https://maps.app.goo.gl/ZUe2kNc6pF3GpXxZ9) Frascati to ESRIN (30 seats)

**Location**: James Cook Room, 1123

**Reminder: Please bring your passport to receive your badge for access to ESRIN.**

|  |  |  |
| --- | --- | --- |
| **Session 10: Welcome**  *Session Lead / Moderator: Matt Steventon*  *Specific Objectives:*   * *Recap Day 1 headlines, actions, and decisions.* | | |
| **09:00** | **10.1**: Welcome   * Day 3 overview. * Recap of Day 2 actions and decisions. | LSI-VC Leads |
| **Session 6 (Cont.): LSI Interoperability, Validation and Data Access Topics**  *Session Lead / Moderator: Peter Strobl*  *Specific Objectives:*   * *Discuss and provide input to the CEOS System Engineering Office’s plans for an ARD interoperability test using the CEOS Analytics Lab (CAL) as a ‘New Space’ demonstration.* * *Consider if CEOS / LSI-VC might be able to provide guidance to the EO community on how to best use drone data in combination with satellite data for LSI applications.* | | |
| **09:10** | **6.2:** CEOS SEO Plans for an ARD Interoperability Test Using the CEOS Analytics Lab (CAL) as a ‘New Space’ Demonstration [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/6.2_New_Space_LSI_VC14_Oct2023.pptx)]   * Maxar, Planet, Sentinel-2, and Landsat to test ARD interoperability in a cloud environment. * Evaluation of indexing, metadata, georegistration, and spectral content of commercial data vs. common moderate resolution data. | Brian Killough (CEOS SEO) |
| **09:30** | **6.3:** Drone Mapping for Detailed ARD Validation Testing [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/6.3_DroneMapping_LSI_VC14__Oct2023.pptx)]   * Discussion: CEOS / LSI-VC may be able to provide support to the EO community on how to best use drone data in combination with satellite data for LSI applications. Identify the key issues associated with indexing and georegistration. | Brian Killough (CEOS SEO) |
| **Session 2 (cont.): Agency LSI Updates and CEOS-ARD Assessments**  *Session Lead / Moderator: Andreia Siqueira* | | |
| **09:50** | **2.11**: USGS [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/2.11_Stryker_Covington_USGS%20Update.pdf)] | Tim Stryker |
| **10:20** | **5.3**: Aquatic Reflectance/Ocean Colour PFS Update [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/5.3_Barnes_Aquatic_Reflectance_Ocean_Colour_PFS_v1.pptx)]   * Consistency with existing Aquatic Reflectance PFS * Endorsement process and considerations, noting this new PFS is being led by OCR-VC but is built on the foundation of and will supersede an LSI-VC PFS. | Chris Barnes |
| **10:50 – Break (10 mins)** | | |
| **Session 11: Forests and Biomass Subgroup**  *Session Lead / Moderator: Steve Labahn* | | |
| **11:00** | **11.1**: CEOS Agriculture, Forestry and Other Land Use (AFOLU) Roadmap [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/11.1_poulter_ceos_lsivc13_2023.pptx)]   * Approach, draft actions, LSI-VC response | Frank Martin Seifert (ESA), Osamu Ochiai (JAXA), Ben Poulter (NASA), Stephen Ward |
| **Session 12: AOB**  *Session Lead / Moderator: Andreia Siqueira* | | |
| **11:45** | **12.1**: CEOS-ARD Communications Activities [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/12.1_CEOS-ARD%20Comms_Rose_Barnes.pptx)]   * CEOS IGARSS Booth Content * GEO Week 2023 | Libby Rose / Chris Barnes |
| **12:00** | **ARD Levels, CEOS-ARD Architecture**  *Objective: Need a decision on LSI-VC-13-07 to unstick S3 self-assessment* | Peter Strobl |
| **13:00 – Lunch (60 mins)** | | |
| **Session 2 (cont.): Agency LSI Updates and CEOS-ARD Assessments**  *Session Lead / Moderator: Andreia Siqueira* | | |
| **14:00** | **2.13**: CONAE [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/2.13_Dadamia_ARD(SAOCOM)_v2.pptx)] | Danilo Dadamia |
| **Session 13: Synthetic Aperture Radar LSI Acquisition Planning, Optimisation of Assets – Quad-pol and Multi-frequency Acquisitions; L-band Time Series**  *Session Lead / Moderator: Ake Rosenqvist (for JAXA) & Laura Frulla (CONAE)*  *Specific Objectives:*   * Discuss the [POLINSAR Requirements](https://drive.google.com/file/d/1FBwDtvnmRYpBVuGFoH7MCRdSWYdeiY7x/view?usp=drive_link)and hear updates from agencies regarding the extent to which current observation plans satisfy POLINSAR and multi-frequency requests. * Consider actions that could be taken to address the requirements. * Determine the utility and feasibility of constructing an ALOS and NISAR Long-term L-band Time Series (Ref: Action [LSI-VC-13-14](https://docs.google.com/document/d/1wJd5Zku44QuhHE8L9DM10WNAlo_tEHKGXuD4dcE9yus/edit#bookmark=id.58ajs5sbmtah)) and if so, agree on next steps. | | |
| **14:20** | **13.1**: Quad-pol and Multi-frequency Requests from the POLINSAR Workshop [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/13.1_Sarti_RecommendationsPOLINSAR_v1.pptx)]   * [POLINSAR Requirements](https://drive.google.com/file/d/1FBwDtvnmRYpBVuGFoH7MCRdSWYdeiY7x/view?usp=drive_link) | Magdalena Fitrzyk / Francesco Sarti (ESA) |
| **14:35** | **13.2**: Current or Near-future CEOS Agency plans for Quad-pol SAR Observations (5 mins each)   * ESA: BIOMASS, ROSE-L, S1-NG [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/13.2.1%20CEOS_LSI_VC_20231012.pptx)] * CONAE: SAOCOM-1A/B [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/13.2_Frulla_QP-Observations_v1.pptx)] * JAXA: ALOS-4 [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/13.2-4_JAXA_QP.pptx)] * NASA: NISAR-L [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/13.2-5_NISAR.pptx)] * ISRO: NISAR-S [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/13.2-Ramanujam-ISRO-NISAR-SBand-QP-v1.pptx)] * CSA: RCM [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/13.2_CSA_Quad-pol.pdf)] * ASI: SAOCOM-Europe & CSK [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/13.2-8_ASI_v2.pdf)] | Björn Rommen (online)  Laura Frulla (online)  Ake Rosenqvist  Dave Borges  Ramanujam (online)  Paul Briand (online)  Ake R. (for ASI) |
| **15:10** | **13.3**: Discussion   * To what extent do current observation plans satisfy POLINSAR and multi-frequency requests? * Action: Develop recommendations |  |
| **15:30 – Break (10 mins)** | | |
| **Session 8 (cont.): Land Surface Observation Continuity, Gap Analyses, Applications**  *Session Lead / Moderator: Steve Labahn* | | |
| **15:40** | **8.3**: Observation Requirements Analysis, USGS RCA-EO & EORES, GEOGLAM Requirements, MIM (Discussion) [[slides](https://ceos.org/document_management/Virtual_Constellations/LSI/Meetings/LSI-VC-14/Presentations/8.3%20GEOGLAM%20Requirements%20MARCE%20Analysis_20230912.pptx)] |  |
| **Session 14: Closing Business**  *Session Lead / Moderator: Andreia Siqueira*  *Specific Objectives:*   * *Confirm Day 3 actions, decisions, and summarise headline outcomes* | | |
| **16:40** | **14.1**: Wrap-up   * LSI-VC-15 confirmation * Review of LSI-VC-14 actions and decisions * Upcoming meetings, IGARSS abstract | LSI-VC Leads / Sec |
| **17:00 – Adjourn** | | |

**Bus:** 17:15: ESRIN to [Piazza Marconi](https://maps.app.goo.gl/ZUe2kNc6pF3GpXxZ9) Frascati (30 seats)