

Day 1: Monday, 18th November 2019

Day 1: Monday, 18th November 2019 – Room Big Hall			
12:30 – 13:30		Introduction	
12:30 – 12:40		Welcome	Josef Aschbacher (ESA)
12:40 – 12:50		Introduction, Objectives & Logistics	Philippe Goryl (ESA)
12:50 – 13:10		Presentation of ESA Earthnet Data Assessment Pilot	Clement Albinet (ESA)
13:10 – 13:30		Presentation of NASA/Small Satellites Commercial Data Buy Programme	Kevin Murphy (NASA)
13:30 – 15:20		Institutional / Commercial panel #1	Chair: Giuseppe Ottavianelli (ESA) / Patrice Henry (CNES)
13:30 – 13:50	1A1	Airbus Optical Constellation	Hervè Foch (Airbus Defence and Space)
13:50 – 14:10	1A2	Next generation EO satellites and Direct Access: challenges and opportunities	Pascal Schichor (European Space Imaging), Ian MacInness (Maxar)
14:10 - 14:30	1A3	Imaging the entire Earth every day and striving for continuous improvements	Ignacio Zuleta (Planet Labs)
14:30 - 14:50	1A4	Understanding current and upcoming Earth Observation data from Deimos Imaging	Mónica Díez (DEIMOS Imaging)
14:50 – 15:20	1A5	Discussion	ALL
15:20 – 15:40		Coffee Break	
15:40 – 18:10		Institutional / Commercial panel #2	Chair: Philippe Goryl (ESA) / Nigel Fox (NPL)
15:40 - 16:00	1B1	The ASI Prisma Mission Status and Perspectives	Ettore Lopinto (ASI)
16:00 – 16:20	1B2	Sentinel-2 Mission overview and Quality Performance	Valentina Boccia (ESA)
16:20 – 16:40	1B3	CNES Experience in Image Quality and Illustration with Pleiades Very High Resolution Data	Patrice Henry (CNES)
16:40 – 17:00	1B4	NASA experience and lessons learnt in data quality and cal/val for optical missions	Kurtis Thome (NASA/GSFC)
17:00 – 17:20	1B5	KARI's Satellites and the Introduction of Calibration and Validation of them	DongHan Lee (KARI)
17:20 – 17:40	1B6	JACIE: A Brief History, Achievements, and Lessons Learned	Jon Christopherson (USGS)
17:40 – 18:10	1B7	Discussion	ALL

18:10 – 19:00		Ice Breaker	
19:00		Bus to Frascati	
19:00		End of Day 1	

Day 2: Tuesday, 19th November 2019

Day 2: Tuesday, 19th November 2019 – Room Big Hall			
08:30 – 10:40		Institutional / Commercial panel #3	Chair: Bruce Chapman (NASA/JPL) / Albrecht Von Bargaen (DLR)
08.30 – 08.40		Introduction	Bruce Chapman (NASA/JPL)
08:40 – 09:00	2A1	The COSMO-SkyMed program: VHR modes in the first and second generation	Axel Oddone (E-GEOS)
09:00 – 09:20	2A2	ICEYE and the Sentinels: Complementary Constellations	Andrea Radius (ICEYE)
09:20 – 09:40	2A3	RADARSAT-2 Image Quality and Calibration Overview	Dan Williams (MDA)
09:40 – 10:00	2A4	Airbus SAR Constellation	Juergen Janoth (AIRBUS DEFENCE & SPACE)
10:00 – 10:20	2A5	A Decade of TerraSAR-X and TanDEM-X Operation: A Retrospective on the Performance of the SAR System and an Outlook to the Future	Allan Bojarski (DLR)
10:20 – 10:40	2A6	Discussion	ALL
10:40 – 11:00		Coffee Break	
11:00 – 13:00		Institutional / Commercial panel #4	Chair: Nuno Miranda (ESA) / Alessandro Coletta (ASI)
11:00 – 11:20	2B1	PAZ Status After First Year of Operation	Juan Manuel Cuerda Munoz (INTA)
11:20 – 11:40	2B2	RADARSAT Constellation Mission: Image Quality and Calibration Status	Melanie Lapointe (Canadian Space Agency)
11:40 – 12:00	2B3	Sentinel-1 A/B mission status: 2019 update	Nuno Miranda (ESA)
12:00 – 12:20	2B4	Summary of Calibration and Research Activities of ALOS-2	Takeo Tadono (JAXA)
12:20 – 12:40	2B5	SAOCOM Mission Overview	Laura Frulla (CONAE)
12:40 – 13:00	2B6	Discussion	ALL
13:00 – 14:00		Lunch Break	
VH-RODA Optical Sensors Sessions – Room Big Hall			
14:00 – 18:20		Radiometric Calibration – Radiometric Validation	Chair: Kurtis Thome (NASA/GSFC) / Sebastien Clerc (ACRI-ST)
14:00 – 14:20	2X1	Radiometric validation of Sentinel-2	Sebastien Clerc (ESA/MPC S2, ACRI-ST)
14:20 – 14:40	2X2	On-orbit star-based radiometric calibration and MTF measurements for PLEIADES HR optical sensors	Aime Meygret (CNES)

14:40 – 15:00	2X3	Absolute calibration and validation of SkySat constellation	Adrian Gonzalez (PLANET)
15:00 – 15:20	2X4	Proba-1: Current Status and Calibration Assessment	Samantha Lavender (Telespazio VEGA UK)
15:20 – 15:40	2X5	Validation of the Maxar Surface Reflectance Product	Fabio Pacifici (Maxar)
15:40 – 16:00		Coffee Break	
16:00 – 16:20	2Y1	Spatial Quality from Edge target imaged by KOMPSAT-3	DongHan Lee (KARI)
16:20 – 16:40	2Y2	DEIMOS-2 Post-launch Radiometric Calibration	Jorge Gil (DEIMOS IMAGING)
16:40 – 17:00	2Y3	Inter-satellite characterization methods used at USGS	Jon B. Christopherson (USGS)
17:00 – 17:20	2Y4	Copernicus Ground-Based Observations for Validation (GBOV): a dedicated webservice providing EO Land Products validation data	Christophe Lerebourg (ACRI-ST)
17:20 – 17:40	2Y5	DIMITRI :Database for Imaging Multispectral Instruments and Tool for Radiometric Intercomparison	Marc Bouvet (ESA)
17:40 – 18:20	2Y6	Discussion and Conclusions	ALL
18:30		Bus to Frascati	
18:30		End of Day 2	

CEOS WGCV SAR Sessions – Room Magellan			
14:00 – 15:40		Calibration Techniques #1	Chair: Laura Frulla (CONAE) / Takeo Tadono (JAXA)
14:00 – 14:20	2C1	SAOCOM Calibration and Validation Activities Results and Way Forward	Juan Pablo Cuesta Gonzalez (CONAE)
14:20 – 14:40	2C2	SAOCOM-1A Internal Calibration Results	Alon Wengierko (CONAE)
14:40 – 15:00	2C3	Results of the SAOCOM Commissioning Phase independent calibration and validation activities	Andrea Recchia (Aresys)
15:00 – 15:20	2C4	Polarimetric Calibration of Spaceborne SAR Data under Faraday Rotation by Means of Sub-bands Analyses	Jun Su Kim (German Aerospace Center, DLR)
15:20 – 15:40	2C5	KOMPSAT-5 Geolocation Accuracy Analysis with Mongolia and CEOS Calibration Site	H. Jeong (Korea Aerospace Research Institute)
15:40 – 16:00		Coffee Break	
16:00 – 18:20		Calibration Techniques #2	Chair: Nuno Miranda (ESA) / Melanie Lapointe (CSA-ASC)
16:00 – 16:20	2D1	Sentinel-1 Radiometric and Geometric Calibration	Peter Meadows (BAE Systems Applied Intelligence)
16:20 – 16:40	2D2	Mutual interferences between C-Band SAR: Prediction of occurrences identification of sources	Hajdudh Guillaume (CLS)
16:40 – 17:00	2D3	Radar Interference between C-band SAR missions	Berthyl Duesmann (ESA)
17:00 – 17:20	2D4	Cross-Sensor Calibration of Sentinel-1 Noise Level	Niccolo' Franceschi (Aresys)
17:20 – 18:20	2D5	Discussion	ALL
18:30		Bus to Frascati	
18:30		End of Day 2	

Day 3: Wednesday, 20th November 2019

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VH-RODA Optical Sensors Sessions – Room Big Hall			
08:30 – 10:50		Analysis Ready Data	Chair: Stephen Hosford (CNES) / Eric Vermote (NASA/GSFC)
08:30 – 08:50	3X1	Analysis Ready Data as addressed by the Committee on Earth Observation Satellites: CARD4L	Stephen Hosford (CNES)
08:50 – 09:10	3X2	Open source tools for VHR processing and ARD generation	Mickaël Savinaud (CS Systèmes d'Information)
09:10 – 09:30	3X3	Field-based Validation of the Digital Earth Australia Sentinel-2 Surface Reflectance Product	Medhavy Thankappan (Geoscience Australia)
09:30 – 09:50	3X4	Production of CEOS Analysis Ready Data for Land (CARD4L): Geoscience Australia's Experience with Optical Data from Landsat and Sentinel-2	Medhavy Thankappan (Geoscience Australia)
09:50 – 10:10	3X5	On Demand Vicarious Calibration for Analysis Ready Data	Christopher Durell (Labsphere)
10:10 – 10:30	3X6	Cloud Masking and Atmospheric Correction Inter-comparison Exercises	Georgia Doxani (ESA / Serco Italia SPA)
10:30 – 10:50	3X7	Towards A Virtual Ocean Colour Geostationary Satellite Using Ocean Colour Constellation Data	Marco Bracaglia (ISMAR-CNR)
10:50 – 11:10		Coffee Break	
11:10 – 13:00		AI for Cal/Val	Chair: John Mrziglod (ESA) / Andreia Siqueira (Geoscience Australia)
11:10 – 11:30	3Y1	Sensor-Independent Deep Learning for Cloud Masking	Alistair Francis (University College London)
11:30 – 11:50	3Y2	Applying Artificial Intelligence Techniques to Earth Observation Data Quality Control Activities	Andrea Melchiorre, Telespazio Vega-UK
11:50 – 12:10	3Y3	The new and increasing contribution of High Resolution SmallSat Optical Constellations fuelling advanced Artificial Intelligence and Machine Learning Analytics	Andrew Hanna (BlackSky)
12:10 – 12:30	3Y4	MATCH - Methods for calibrating compact hyperspectral systems	Marco Esposito (Cosine)
12:30 – 13:00	3Y5	Discussion	ALL
13:00 – 14:00		Lunch Break	
14:00 – 15:40		Geometric aspects (spatial resolution, abs. geoloc., relative. geoloc., orthorectification meth.)	Chair: Valentina Boccia (ESA) / Jon Christopherson (USGS)

14:00 – 14:20	3K1	Geometric validation of Sentinel-2 products	Sebastien Clerc (ESA/MPC S2, ACRI-ST)
14:20 – 14:40	3K2	Geo-locational Accuracy of Orthorectified Vision-1 HR data products	Lisa Haskell (Airbus Defence and Space Intelligence UK)
14:40 – 15:00	3K3	Spatial Quality from Landsat-8 OLI Lunar data (Edge Slope, RER, FWHM, MTF)	GongHan Lee (KARI)
15:00 – 15:20	3K4	Analysis on Refinement of Spatial quality Estimation by Edge target	GongHan Lee (KARI)
15:20 – 15:40	3K5	Geo-locational Accuracy of Orthorectified DMC+ MR constellation data products: Considering the use of Sentinel-2 vs Landsat-8 as Reference	Lisa Haskell (Airbus Defence and Space Intelligence UK)
15:40 – 16:00		Coffee Break	
16:00 – 18:40		Quality Control	Chair: John Swinton (Telespazio-VEGA) / Sam Hunt (NPL)
16:00 – 16:20	3Z1	EDAP Framework for the geometric validation of high resolution optical data	Sebastien Saunier (ESA/EDAP, Telespazio)
16:20 – 16:40	3Z2	Automated Calibration and Data Quality control	Stephen Mackin (EOSense Ltd)
16:40 – 17:00	3Z3	Quarterly Image Quality Reports at Planet	Sara Bahloul (Planet Labs Germany GmbH)
17:00 – 17:20	3Z4	The Most Important Factors Influencing the Overall Quality of Optical Images	Luca Cenci (Serco Italia SPA)
17:20 – 17:40	3Z5	Sentinel-2 Quality Control Plan	Sebastien Clerc (ESA/MPC S-2, ACRI-ST)
17:40 – 18:00	3Z6	Landsat Quality Control	Jon Christopherson (USGS)
18:00 – 18:40	3Z7	Discussion	ALL
18:40		Bus to Frascati	
18:40		End of Day 3	

Day 3: Wednesday, 20th November 2019			
CEOS WGCV SAR Sessions – Room Magellan			
08:30 – 10:50		Calibration of Future Missions #1	Chair: Paul Rosen (NASA/JPL) / Martin Suess (ESA)
08:30 – 08:50	3A1	The 2019 NISAR Ecosystem Cal/Val Exercise in the SE USA	Bruce Chapman (NASA/JPL)
08:50 – 09:10	3A2	NISAR Radar Antenna Pointing and Antenna Pattern Verifications	Yuhshyen Shen (NASA/JPL)
09:10 – 09:30	3A3	Filling the Gaps in SweepSAR Data	Brian Hawkins (NASA/JPL)
09:30 – 09:50	3A4	Contingency Mitigation Strategies for Reflector Based SAR Systems	Patrick Klenk (German Aerospace Center, DLR)
09:50 – 10:10	3A5	Verification of Pointing Calibration Methods for Kompsat-6	Dochun Yang (Korea Aerospace Research Institute)
10:10 – 10:30	3A6	Elements towards a Cal/Val strategy for ESA's BIOMASS mission	Bjorn Rommen (ESA)
10:30 – 10:50	3A7	Discussion	ALL
10:50 – 11:10			Coffee Break
11:10 – 13:00		Calibration of Future Missions #2	Chair: Dirk Geudtner (ESA) / Stephane Coté (CSA-ASC)
11:10 – 11:30	3B1	SAR Pointing Calibration for Ocean Surface Radial Velocity Estimation: Challenges and Alternatives	Dirk Geudtner (ESA)
11:30 – 11:50	3B2	Sentinel-1C/D Instrument: Improvements on internal calibration and preliminary verification results	Francisco Ceba Vega (ESA)
11:50 – 12:10	3B3	Sentinel-1 C Model insertion into the current A/B constellation: options	Berthul Duesmann (ESA)
12:10 – 12:30	3B4	An Internal Calibration System Model For The Estimation of SAR Instrument Errors	Jan Paul Kroll (German Aerospace Center, DLR)
12:30 – 12:50	3B5	Copernicus ROSE-L mission	Malcom Davidson (ESA)
12:50 – 13:00	3B6	Discussion	ALL
13:00 – 14:00			Lunch Break
14:00 – 15:40		Calibration Techniques	Chair: Jens Reimann (DLR) / Medhavy Thankappan (Geoscience Australia)
14:00 – 14:20	3C1	Accurate Passive Targets for Radiometric and Polarimetric SAR Calibration	Jens Reimann (German Aerospace Center, DLR)

14:20 – 14:40	3C2	Special considerations for TwinSAR-L baseline calibration method with known heights of point targets or reference DEM	Qi Yang (Aerospace Information Research Institute Chinese Academy of Sciences)
14:40 – 15:00	3C3	Updates to the Australian corner reflector array coordinates and resulting improvements in absolute location error of SAR products	Medhavy Thankappan (Geoscience Australia)
15:00 – 15:20	3C4	A bar-shaped permanent target for image resolution assessment of high resolution microwave sensor	Xinghong Wang (Academy of Opto-Electronics, Chinese Academy of Sciences)
15:20 – 15:40	3C5	Discussion	ALL
15:40 – 16:00			Coffee Break
16:00 – 18:30		Analysis Ready Data #1	Chair: Ake Rosenqvist (JAXA/soloEO) / Andreia Siqueira (Geoscience Australia)
16:00 – 16:20	3D1	CEOS Analysis-Ready Data for Land (CARD4L) SAR product specifications – Status update	Ake Rosenqvist (JAXA / soloEO)
16:20 – 16:40	3D2	Proposed CARD4L Specifications for Differential Interferometric Products	Medhavy Thankappan (Geoscience Australia)
16:40 – 17:00	3D3	Recent progress on Product Family Specifications of CEOS Analysis Ready Data for Land – Normalised Radar Polarimetric Covariance Matrix and Polarimetric Radar Decomposition	Marco Lvalle (NASA/JPL)
17:00 – 17:20	3D4	Updates to the CARD4L specification for a Geocoded Single Look Complex SAR data product	Bruce Chapman (NASA/JPL)
17:20 – 17:40	3D5	Multi-sensor Wide-area Level-3 Radar Backscatter Time Series	David Small (Remote Sensing Laboratories, University of Zurich)
17:40 – 18:30	3D6	Discussion	ALL
18:30		Bus to Villa Grazioli	
21:30		Bus from Villa Grazioli to Frascati	

Day 4: Thursday, 21st November 2019

Day 4: Thursday, 21st November 2019			
VH-RODA Optical Sensors Sessions – Room Big Hall			
08:30 – 10:50		In-situ measurements / FRM	Chair: Cindy Ong (CSIRO) / Joanne Nightingale (NPL)
08:30 – 08:50	4X1	A framework for Fiducial Reference Measurements (FRM) for Vegetation: results and experiences from phase one of the FRM4VEG project	Joanne Nightingale (NPL)
08:50 – 09:10	4X2	Radiometric calibration network for vicarious calibration of Earth observing imagers in the reflected solar	Kurt Thome (NASA/GSFC)
09:10 – 09:30	4X3	Libya-4 Rayference Calibration reference: application to S3A/calibration verification	Yves Govaerts (Rayference)
09:30 – 09:50	4X4	PICSCAR	Beatrice Berthelot (Magellium)
09:50 – 10:10	4X5	A community approach to the standardised validation of surface reflectance data	Cindy Ong (CSIRO)
10:10 – 10:30	4X6	Validation of Space-based Global Albedo Products by upscaling from Ground-based Measurements	Rui Song (University College London)
10:30 – 10:50	4X7	On-orbit calibration and performance assessment of Chinese high resolution satellites based on the Baotou site	Xinhong Wang (Chinese Academy of Sciences)
10:50 - 11:10		Coffee Break	
11:10 - 13:00		Inter-Satellites Comparison : Methodology & Results	Chair: Sebastien Saunier (Telespazio-VEGA) / Marc Bouvet (ESA)
11:10 – 11:30	4Y1	DEIMOS-1 Cross-calibration with Landsat and Sentinel-2	Jorge Gil (DEIMOS IMAGING)
11:30 – 11:50	4Y2	The EDAP Framework to Assess Commercial Satellite Mission Quality	Sam Hunt, Nigel Fox (ESA/EDAP, NPL)
11:50 – 12:10	4Y3	Toward a Consistent Climate Data Record Surface Reflectance Product	Eric Vermote (NASA/GSFC)
12:10 – 12:30	4Y4	Data Harmonization Methodology Based On Simultaneous Nadir Overpasses	Jorge Gil (DEIMOS Imaging)
12:30 – 13:00	4Y5	Discussion	ALL
13:00 – 14:00		Lunch Break	
14:00 – 15:40		Calibration of Future Missions	Chair: Amanda Regan (ESA) / Takeo Tadono (JAXA)

14:00 – 14:20	4K1	Calibration and Validation Plan of the Advanced Optical Satellite (ALOS-3)	Takeo Tadono (JAXA)
14:20 – 14:40	4K2	Traceable Radiometry Underpinning Terrestrial- and Helio- Studies (TRUTHS): Enabling a Space-based Climate and Calibration Observatory – A proposed ESA Earth Watch mission	Nigel Fox (National Physical Laboratory)
14:40 – 15:00	4K3	A survey of in-flight radiometric calibration methods and their applicability to Nanosatellites	Ruiloba Quecedo Rosario (Agenium Space)
15:00 – 15:20	4K4	Direct Tasking of VHR Optical Satellites	Ellis George (European Space Imaging GmbH)
15:20 – 15:40	4K5	Discussion	ALL
15:40 – 16:00		Coffee Break	
16:00 – 18:00		VHR DEM for Optical data / Harmonization	Chair: Peter Strobl (JRC) / Ferran Gascon (ESA)
16:00 – 16:20	4Z1	Shifts in surface, speed or shadows? What do we measure with different time-of-day overpasses of Sentinel-2	Bas Altena (University of Oslo)
16:20 – 16:40	4Z2	Assessment of DEM quality and applications	Serge Riazanoff (ESA/EDAP, VisioTerra)
16:40 – 17:00	4Z3	Euro-Maps 3D – DSM generation and procedures for validation and product finalisation	Lars Uschmann (GAF)
17:00 – 17:20	4Z4	DEMIX : Digital Elevation Model Intercomparison	Peter Strobl (JRC)
17:20 - 18:00	4Z5	Discussion	ALL
18:00		Bus to Frascati	
18:00		End of Day 4	

Day 4: Thursday, 21st November 2019			
CEOS WGCV SAR Sessions – Room Magellan			
08:30 – 10:30		Analysis Ready Data #2	Chair: David Small (University of Zurich) / Franz Meyer (University of Alaska Fairbanks)
08:30 – 08:50	4A1	CEOS Analysis-Ready Data for Land (CARD4L) SAR product specifications JAXA plans for Analysis-Ready Data (CARD4L) standards for PALSAR and PALSAR-2 products– Status update	Ake Rosenqvist (JAXA / soloEO)
08:50 – 09:10	4A2	Capella’s VHR SAR constellation for multi-temporal change detection	Davide Castelletti (CapellaSpace)
09:10 – 09:30	4A3	A Copernicus DEM from WorldDEM Data	Vera Leister (Airbus Defence and Space)
09:30 – 09:50	4A4	On-the-fly orthorectification, calibration, RCS equalisation and terrain flattening of Sentinel-1 data	Serge Riazanoff (VisioTerra)
09:50 – 10:10	4A5	Time-Series and Applications of Advanced Sentinel-1 Analysis Ready Data for Africa (SAR-4-Africa)	Jorg Haarpaintner (NORCE - Norwegian Research Centre AS)
10:10 – 10:30	4A6	ARD Services and other User Support-related Activities at the NASA Alaska Satellite Facility DAAC	Franz Meyer (University of Alaska Fairbanks)
10:30 - 10:50		Coffee Break	
10:50 - 13:00		Processing and Algorithm	Chair: Marc Rodriguez-Cassola (DLR) / Riccardo Piantanida (Aresys)
10:50 – 11:10	4B1	A General SAR Processing algorithm for multi beams and multi modes SAR system	Dong hyun Kim (KARI)
11:10 – 11:30	4B2	A Proposal for Interferometric Time Series Product with Reduced Stochastic and Systematic Phase Errors	Homa Ansari (German Aerospace Center, DLR)
11:30 – 11:50	4B3	Implementation and validation of a new SAR data imaging processor based on efficient time-domain focusing core	Francesco Tataranni (INNOVA Consorzio)
11:50 – 12:10	4B4	Towards Operational SAR Imaging Geodesy: An Extended Time Annotation Dataset for Sentinel-1 Image Products	Christoph Gisinger (German Aerospace Center, DLR)
12:10 – 12:30	4B5	Airbus Automatic derived Ground Control Points	Wolfgang Koppe (Airbus Defence and Space)
12:30 – 13:00	4B6	Discussion	ALL
13:00 – 14:00		Lunch Break	

14:00 – 15:40		Cross-Calibration and Validation	Chair: Bjorn Rommen (ESA), Yuhsyen Shen (NASA/JPL)
14:00 – 14:20	4C1	GNSS-based clock synchronisation: a performance assessment	Marc Rodriguez-Cassola (German Aerospace Center, DLR)
14:20 – 14:40	4C2	Cal/Val approach for DInSAR Deformation Rates Products using GNSS data	Alessandro Parrizzi (German Aerospace Center, DLR)
14:40 – 15:00	4C3	SAR cross-calibration using natural targets	M ingkuan Yi (Academy of Opto-Electronics, Chinese Academy of Sciences)
15:00 – 15:20	4C4	Extending the Ice Watch system as a citizen science project for the collection of in-situ sea ice observations	Ole Jakob Hegelund (Norwegian Ice Service)
15:20 – 15:40	4C5	Discussion	ALL
15:40 – 16:00			Coffee Break
16:00 – 18:00		Discussion	Chair: Bruce Chapman (NASA/JPL) / Dirk Geudtner (ESA)
16:00 – 16:20	4D1	CEOS WGCV 45 Plenary	Medhavy Thankappan (Geoscience Australia)
16:20 – 16:40	4D2	Discussion	ALL
16:40 – 17:00	4D3	CEOS Work Plan 2018 - 2020	B. Chapman (NASA/JPL), D. Geudtner (ESA)
17:00 - 18:00	4D4	Discussion	ALL
18:00		Bus to Frascati	
18:00		End of Day 4	

Day 5: Friday, 22nd November 2019

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Room - Big Hall	
08:30 – 13:00	Summary Chair: Clement Albinet (ESA) / Valentina Boccia (ESA)
08:30 – 09:45	Summary Optical Sessions Reporting <ul style="list-style-type: none"> Optical sessions reporting and future perspectives (5 minutes per sessions- chairs)
09:45 – 11:00	Summary SAR Sessions Reporting <ul style="list-style-type: none"> SAR sessions reporting and future perspectives (5 minutes per sessions- chairs)
11:00 – 11:15	Coffee Break
11:15 – 12:45	Panel Discussion: Cal/Val Best Practises and common Reference: towards harmonised approaches for New Space and Institutions
	<ul style="list-style-type: none"> Jon Christopherson (USGS) Nigel Fox (NPL) Kurt Thome (NASA/GSFC) Bruce Chapmann (NASA/JPL) Jens Reimann (DLR) Dirk Geudtner (ESA) Ignacio Zuleta (PLANET) Marco Esposito (Cosine) Andrew Hanna (BlackSky) Andrea Radius (ICEYE) Fabio Pacifici (MAXAR) Laura Frulla (CONAE)
12:45 - 13:00	Conclusion
13:00	End Workshop