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E5.01 Towards improved availability, access and use of open Earth observations in GEOSS

A1.06 Fourier Transform Spectroscopy for Atmospheric Measurements

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
560	62565	Retrieval of surface emissivity from FORUM-EE9 simulated measurements: optimization of constraints	Luca Sgheri et al.
561	64001	Feasibility Study of HDO Retrieval from FORUM-EE9 Measurements	Carlo Caligiuri et al.
562	63943	The extended All-Sky σ -IASI Forward Model for the Next Generation IASI-NG and FORUM Infrared Atmospheric Sounders: Towards the Analysis and Retrieval of	Guido Masiello et al.
563	63971	IASI-NG estimation of effective radius for ice and liquid water clouds: a regression approach based on Random Forests	Pietro Mastro et al.
564	64383	Quantification and mitigation of the airborne limb imaging FTIR GLORIA instrument effects and uncertainties	Jörn Ungermann et al.
565	64625	Adapting a spectrometer for in-situ measurements of far-infrared emissivity	Laura Warwick et al.
566	62923	Ground-based monitoring of the troposphere on the Antarctic Plateau with a synergy of FT spectroradiometer and PRN-modulated lidar	Giovanni Bianchini et al.
567	67149	The potential to detect of wildfire-related species in the infrared	Max McGillen

A1.07 Aerosols and Their Uptake in Models and Assimilation

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
569	65852	A Global Bottom-Up Approach to Estimate Fuel Consumed by Fires Using Above Ground Biomass Observations from SMOS	Francesca Di Giuseppe
570	65324	Aerosols and their source gases in the upper troposphere and stratosphere from infrared limb-emission spectroscopy: a perspective on the EE11 mission candidate	Michael Höpfner et al.
571	66836	Improved Aerosol Characterization Using Machine Learning Applied to OCO-2 O ₂ A-band Observations	Vijay Natraj et al.
572	62674	Evaluation of aerosols in the UKESM against an ensemble of satellite observations	Adam Povey et al.
573	62888	Understanding Top-of-Atmosphere Flux Bias in the AeroCom Phase III Models: A Clear-Sky Perspective	Wenyong Su et al.
574	63003	Aerosol retrieval in presence of clouds from SLSTR observations	Marta Luffarelli et al.
575	64751	Aerosol remote sensing from Sentinel-3 SYNERGY of observations: status and plans	Suman Moparthy et al.
576	64382	Benchmarking and use of improved Aerosol_cci+ data for climate monitoring	Thomas Popp et al.
577	65291	Type-discriminated aerosol concentration profile retrieval from the AOS spaceborne lidar multispectral measurements and their synergy with polarimeter	Durgesh Nandan Piyush Durgesh et al.
578	65583	Aerosol emissions estimation with POLDER and the role of overestimated relative humidity in GCMs	Athanasios Tsikerdekis et al.
579	64987	Retrieval of aerosol water fraction, insoluble fraction and dry size distribution using multi-angle polarimetry	Bastiaan van Diedenhoven et al.
580	64941	Advancing retrieval techniques for polarimetric remote sensing of atmospheric aerosols	Otto P. Hasekamp et al.
581	65272	Polar Multi-sensor Aerosol product (PMAp) version 2.2 – Toward the next generation from EPS-SG	Soheila Jafariserajehlou et al.
582	65683	Expertise support from European Near Real Time (NRT) aerosol satellite observations to assimilation services - Focus on the Optimized Simultaneous	Julien Chimot et al.

A1.10 Cloud and Precipitation Optical Properties and Microphysics

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
589	65145	Planned Improvements to EUMETSAT MTG-FCI cloud product algorithm	Philip Watts et al.

590	62886	Characterizing Rain Cells as Measured by a Ka-band Nadir Radar Altimeter: First Results and Impact on Future Altimetry Missions	Bruno Picard et al.
591	62887	An optimal interpolation solution for microwave sounding radiometers in tandem formation : application to the Convective Core Observations through MicrOwave	Ralf Bennartz et al.
592	63721	Quantifying water, ice and ash cloud properties using the Optimal Retrieval of Aerosol and Cloud (ORAC) algorithm and satellite measurements	Andrew Prata et al.
593	67297	Characteristics of ice over stratiform rain: Global statistics from the Dual-frequency Precipitation Radar and the proposed retrieval scheme	Kamil Mroz et al.
594	66756	Triple frequency radar retrieval of microphysical properties of snow	Kamil Mroz et al.
595	67268	Analysis of Coincident In-situ and Triple-Frequency Radar Airborne Measurements in the Arctic	Cuong Nguyen et al.
596	65374	Retrieval of water and ice cloud properties for TROPOMI/Sentinel-5P	Ana del Águila et al.
597	63852	The ARTS database of hydrometeor single scattering properties	Patrick Eriksson et al.
598	65006	Cloud microphysics retrievals from spectral UV-VIS-NIR data at THAAO, Thule, Greenland	Filippo Cali Quaglia et al.
599	65235	Retrieval of cloud macrophysical properties from deep space: application of OCRA/ROCINN algorithms to EPIC/DSCOVER measurements	Víctor Molina García et al.
600	65669	Passive and Active Microwave Transfer (PAMTRA): a tool to simulate observations from space, air, and ground	Mario Mech et al.
601	67102	Cloud Top Pressure Retrieval from Sentinel-3 OLCI O2 A-Band Measurements	Rene Preusker et al.

A1.11 Atmospheric Dynamics and Vertical Coupling

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
585	65084	Airborne limb-imaging, lidar and in situ observations of non-orographic gravity waves in the vicinity of the subtropical jet: a SouthTRAC case study	Wolfgang Woiwode et al.
586	65410	Towards a quantitative understanding of space weather impacts on stratospheric ozone and natural climate variability: expected contributions of Earth Explorer 11	Bernd Funke et al.
587	63742	Gravity wave refraction: Cause and consequence	Markus Geldenhuys et al.
588	63519	Water vapour monitoring from ground-based GNSS observations in the south-central Andes	Nikolaos Antonoglou et al.

A3.02 Towards a space-based Earth Observation Soil Monitoring System

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
276	63173	Retrieving Soil Physical Properties by Assimilating SMAP Brightness Temperature Observations in the Community Land Model	Hong Zhao et al.
277	62933	Mapping Luxembourg's soils with Sentinel-2	Andreas Krein et al.
278	62968	Rapid assessment of soil organic matter content based on soil color derived from the visible spectrum of a digital camera and Sentinel-2 image	Asa Gholizadeh et al.
279	63121	A long-term spatiotemporal analysis of biocrusts across a diverse arid environment: The case of the Israeli-Egyptian sandfield	Klil Noy et al.
280	63158	Development of landscape-like simulated soil spectral libraries to improve soil organic carbon (SOC) prediction models and remote sensing data correction	Robert Milewski et al.
281	63231	Improving SOC predictions from Sentinel-2 soil composites by assessing surface conditions and uncertainties	Klara Dvorakova et al.
282	63503	Estimation of Topsoil Properties from Hyperspectral PRISMA and Multispectral Landsat 8 and Sentinel-2 Data	Nada Mzid et al.
283	63567	An approach for mapping soil organic carbon and soil clay content based on Sentinel-2 data in combination to field survey	Larissa Torney et al.

284	63679	Utilization of Multi-Temporal Microwave Remote Sensing Data within a Machine Learning Approach for the Derivation of Soil Texture	Swen Meyer et al.
285	64801	Using soil reflectance composites to transfer local soil organic carbon predictions to the national scale	Simone Zepp et al.
286	65282	EO4CarbonFarming: Monitoring Soil Organic Carbon Content with Sentinel-2 imagery	Isabella Kausch et al.
287	65546	Retrieving SOC content from space at the detailed scales of small regions: purposes and first results of the EJP-STEROPES project	Emmanuelle Vaudour et al.
288	66839	Post-catastrophic assessment with RUSLE advanced modeling using Earth Observation (EO) data	Ioanna Tselka et al.
289	66886	InSAR time-series response to precipitation events observed via closure phase	Yujie Zheng et al.
290	67053	Perspective of researching climatic factors by validating the ground data of passive and active optical instruments with TRUTHS - hyperspectral satellite data.	Silviu Gurlui
291	67011	Global monitoring of soil moisture using a constellation of GNSS-R satellites	Vahid Freeman et al.
292	67240	Correlation Analysis between Soil Moisture and Radar Observables	Yan Yuan et al.

A3.08 Peatland - Methods and Algorithms, Science, Applications

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
298	67319	The impact of climatological drivers on swamp vegetation type prevalence in the Congo basin peatland complex	Selena Georgiou et al.
299	64602	Parameter optimization for classification of ultra high-resolution UAV-images for Aapa mires in North Karelia, Finland	Franziska Wolff et al.
300	63640	Assessing the potential of semi-empirical estimates of evapotranspiration from peatlands in Bavaria by means of remote sensing	Verena Kuch et al.
301	66856	Detection of Upland Burn with Sentinel-1 Coherence Data through collaborative development within Jupyter Notebooks	Samantha Lavender et al.
302	64207	A multisensor and multitemporal approach to assess wildfire occurrence and landscape disturbance at Marsden Moor Estate, West Yorkshire.	Gail Millin-Chalabi et al.
303	65228	Modelling carbon dioxide flux applying in-situ and satellite data at peatland ecosystem	Katarzyna Dąbrowska-Zielińska et al.

A3.12 Forest Monitoring

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
305	65742	USAID REFRESH Project Towards Indian Forest Sustainability: Satellite-Based Forest and Natural Hazards Monitoring	C K Shum et al.
306	64869	Classifying deforestation alerts	Tord Sorensen et al.
307	63440	Understanding the root cause of forest cover change to drive action	Morgane Bonneau et al.
308	67346	Rubber, forests and sustainability	Yunxia Wang et al.
309	62000	Multi-scale large area fractional woody cover estimation across mountainous semi-arid forests	Elham Shafeian et al.
310	65443	Cloudy with a chance of deforestation - how probabilistic, multi-source alerts can enhance near real-time monitoring	Ian McGregor et al.
311	65739	ESA Forest Carbon Monitoring project – benchmarking of EO data, methods and estimation of uncertainty in forest inventory mapping	Oleg Antropov et al.
312	62928	Global sample-based forest loss area and driver assessment using PlanetScope and Sentinel-2 data	Alexandra Tyukavina et al.
313	62850	Sentinel-based forest disturbance alerts to map selective logging intensities in the tropics	Anne-Juul Welsink et al.

314	63170	Utilizing dense Sentinel-1 and Sentinel-2 time series for characterizing disturbances of humid tropical forests	Johannes Balling et al.
315	63305	Monitoring tropical forest disturbance using Harmonized Landsat and Sentinel-2 data	Na Chen et al.
316	64072	Characterizing tropical forest regrowth using multi-source remote sensing data	Na Chen et al.
317	64474	Towards consistent and high-frequency European forest monitoring: Combining Sentinel satellite and ground-based data streams	Sietse van der Woude et al.
318	63391	Utilizing Novel Satellite Radar and Lidar Data for Monitoring Amazon Rainforest Regrowth	Milutin Milenković et al.
319	65512	Tree Cover Change Detection in Tropical Rainforest using Sentinel-1 Time Series and Deep Learning	Alexandre Fiche et al.
320	65158	Towards Continuous Monitoring of Tropical Deforestation based on Sentinel-1 in the Congo Basin	Baptiste Delhez et al.
321	63022	A novel SAR-based Change Detector (CFAR-KerCuSum) for Monitoring Tropical Deforestation Dynamics	Javier Ruiz Ramos et al.
322	65550	Benchmark of SAR-based automated deforestation detection systems over tropical forests	Juan Doblaz et al.
323	67402	Evaluating Optical Remote Sensing Image Time Series for Mapping Deforestation in the Brazilian Cerrado Using Deep Learning	Bruno Menini Matosak et al.
324	64279	Mapping forest degradation and deforestation in Brazilian Amazon: new approaches	Polyanna da Conceição Bispo et al.
325	64521	Near-real time deforestation detection in the Brazilian Amazon with Sentinel-1 and Neural Networks	Giorgia Guerrisi et al.
326	65587	Landsat time series to assess forest edge effects in the Endangered Cerrado/Amazon Ecotone	Flávia de Souza Mendes et al.
327	63385	ARTEMIS: An Earth Observation-based service for monitoring of forest ecosystems	Thomas Katagis et al.
328	63636	Discrimination of conifer species with the use of Sentinel-2 time series and Google Earth Engine platform	Stefanos Papiordanidis et al.
329	66446	Detecting Bark Beetle Infestations with Landsat, Sentinel-2, and Sentinel-1 Data	Simon König et al.
330	64249	Using C-band and S-band Synthetic Aperture Radar for mapping bushfire scar and recovery in Australia	Catherine Ticehurst et al.
331	64634	Small-scale logging documented through remote sensing monitoring.	David Aragonés et al.
332	65351	Country-wide forest stand species classification with Sentinel-2 and Google Earth Engine	Ewa Grabska-Szwagrzyk
333	67458	The use of satellite data for identification of forests growing on arable land	Agata Hościło et al.
334	65748	Monitoring of Douglas Fir stands health status using Remote Sensing	Cozmin LUCAU DANILA et al.
335	65749	Use of Remote Sensing for selection of ash trees (Fraxinus excelsior) tolerant to ash dieback	Cozmin LUCAU DANILA et al.
336	64608	BorealScat-2: A 3D tomographic P-/L-/C-/X-band tower-based radar experiment for studying the effects of forest water dynamics on radar observations	Lars Ulander et al.
337	65136	Monitoring beaver induced flooding disturbances in forest land using Sentinel-2 data	Mihkel Kaha
338	65034	Primary forests as indicators of global change and land use effects on carbon storage and greening trends	Anders Ahlström et al.
339	63801	Annual vegetation height maps based on Sentinel-2 data – Potential applications for the Swiss National Forest Inventory	Marius Rüetschi et al.
340	64185	Forest Structure Parameters in Alpine Terrain from a Single Year of Sentinel-1 Data	Alena Dostálová et al.
341	63724	Modeling National-Scale Forest Canopy Structure For Wildfire Applications Using Inventory And Remote Sensing Data	Johannes Heisig

342	64593	Comparative Assessment of Near Real-Time Forest Disturbance Detection Algorithms	Jonas Viehweger et al.
343	66584	Planet Monitoring Power for the success of the European Forest Initiative	Rene Griesbach et al.
344	66848	Remote sensing products in forestry: Assessment of practical needs and existing use in Europe	Mitja Skudnik et al.
345	63989	Continental scale canopy height retrieval at the level of individual trees based on deep learning	Siyu Liu et al.
346	63909	Forest intelligence - The online analytical processing cube in the context of forestry	Sebastian Förtsch et al.
347	62417	Deciduous Forest Mortality Analysis in the Hainich National Park following the 2018/2019 Summer Droughts using UAV, Airborne and Sentinel-2 data	Sören Hese et al.
348	63424	Spatiotemporal patterns of forest degradation from Sentinel-2 derived vegetation indices and biophysical parameters and their relationship to forest site factors – a	Birgitta Putzenlechner et al.
349	63706	Influence of climate related tree species distribution change on Natura 2000 sites	Anne Reichmuth et al.
350	65340	Analysis of forest disturbances and possible delineation of cause of damage using satellite time-series data	Anne Reichmuth et al.
351	63859	Mapping annual forest cover fractions in northern Germany using spectral-temporal metrics from a 2017-2020 Sentinel-2 data cube and a multi-year	Vu Dong Pham et al.
352	65275	Forest vitality loss in the era of earth observation big data	Enmanuel Rodriguez et al.
353	65484	The ESA TomoSense Campaign: One of the Most Complete Dataset over Forests	Stefano Tebaldini et al.
354	63810	First insights into the national forest damage monitoring for Germany	Katja Oehmichen et al.
355	66952	Predicting fractional cover of standing deadwood at regional level based on long short-term memory networks and Sentinel-2 time series	Felix Schiefer et al.
356	65333	Automatic detection of forest canopy mortality from aerial images	Selina Schwarz et al.
357	65479	Linking forest disturbances and land-use actors to understand forest degradation pathways in the South American Gran Chaco	Teresa De Marzo et al.
358	65216	Forest disturbance and recovery due to the 2015 eruption of Calbuco volcano, Chile from optical and radar satellite remote sensing	Megan Udy et al.
359	65676	Combination of remote sensing and Artificial Intelligence to detect degraded forests - a deep learning approach and expert-labeled Sentinel-2 data in Guinea	Nicolas Delbart et al.
360	67185	Improved activity data for REDD+ using Sentinel-1 and Sentinel-2 in Uganda	Petra Miletich et al.
361	67224	Improvements in detecting biotic and abiotic forest disturbances in Central Europe using Sentinel-2 imagery	Martin Puhm et al.
362	67483	Using deep learning and newly open-access high-resolution data from PlanetScope to detect the specific drivers of deforestation in sub-Saharan Africa: opportunities	Amandine Debus et al.
363	62751	The potential of an object-based framework for spatially-explicit forest stratification	Melanie Brauchler et al.
364	64430	Using Satellite Remote Sensing to Map Fire History and Improve the Spatial Resolution of the German Forest Fire Danger Index	Henning Buddenbaum et al.
365	65613	Monitoring Deforestation and Degradation of Southern African Miombo Woodlands using Cloud Computing and Time Series Analysis	Achim Röder et al.
366	66713	Deforestation Assessment in Manongarivo Reserve, Madagascar, with Satellite Remote Sensing - What are the Trends and Drivers?	Julian Schöne et al.
367	67165	Monitoring Land Cover and Land Use to Assess Impact of Forest Changes on Water Cycle: Case study on Kenya Water Towers	Baudouin Desclée et al.
368	66742	Are protected areas in Europe effective at conserving forest structural integrity? A study based on the GEDI dataset.	Guido Ceccherini et al.
369	67382	Making the most of Earth Observation time series to identify and characterize forest disturbances	Federico Filippini

370	64078	Mapping Changes In Terrestrial Ecosystems (CITE): a focus on forest fire disturbance	Federico Filipponi et al.
371	63111	Burned Area Mapping Using Multi-Temporal Sentinel-2 Data by Applying the Relative Differenced Aerosol-Free Vegetation Index (RdAFRI)	Arnon Karnieli et al.
372	63520	Methodology for burned areas delimitation and fire severity assessment using Sentinel-2 burn spectral indices in Spain wildfires.	José A. Sobrino et al.
373	63378	Detecting forest clear-cut events from Sentinel-1 time series	Joao Catalao et al.
374	64372	A new globally consistent forest management map at 100m	Myroslava Lesiv et al.
375	64121	Derivation of diameter at breast height and other forest parameters using the cast shadow of trees in UAV-based imagery	Steffen Dietenberger et al.
376	64139	Modeling boreal forest vegetation optical depth and brightness temperature at L-band	Anna Kontu et al.
377	63980	An open benchmark data set for the estimation of forest parameters from Sentinel-1 and -2 time series with Machine Learning Methods	Sarah M. Hauser et al.
378	67148	Tree high monitoring, a tri stereo approach. An analysis of the state of the art of the achievable accuracy at VHR with different commercial data providers.	Beatrice Gottardi et al.
379	65889	AVOCADO, a new algorithm for monitoring of forest change dynamics in a continuous way	Mathieu Decuyper et al.
380	64314	Temporally Coherent Analysis-Ready Optical Mosaics	Will Parkinson et al.
381	64471	Investigating ICESat-2 measurements of plant functional traits through validation of an ICESat-2 simulator	Matthew Purslow et al.
382	67452	Global mapping of Mangrove Structure, Biomass and Change from GEDI, TanDEM -X and Landsat Timeseries	Temilola Fatoyinbo et al.
383	65836	Cloud-based Forest Change and Fractional Canopy Cover Retrieval using the federated openEO Platform infrastructure	Mattia Rossi et al.
384	64607	A Self-contained Operational System Targeting Resource Constrained Environments for Mapping Tree Cover Density in Tropical Dry and Humid Forest Areas	Christoff Fourie et al.
385	64456	Retrieving floodplain forest parameters through time series analysis of satellite observations using machine learning methods	Marian Švik et al.
386	63662	Use of LiDAR Data for Design and Evaluation of Functional-Structural Tree Models	Vera Bekkers et al.

A5.01 Exploring the interface of observations and modelling

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
456	63857	Coupled land-atmosphere Earth system observations assimilation for NWP	Patricia de Rosnay et al.
457	67067	Analyzing sources of errors in ECMWF S2S temperature forecasts	Melissa Ruiz-Vásquez et al.
458	65746	An EnKF-based reconstruction of rainfall fields using opportunistic satellite MW link signal attenuation: theoretical basis and application to the July 2021 event in the	Alberto Ortolani et al.
459	63099	Recoverability of Climate-Related Mass Transport Signals in Current and Next-Generation Satellite Gravity Missions	Marius Schlaak et al.
460	67111	A FORUM simulator in the EC-EARTH climate model: implementation and verification against IASI measurements	Stefano Della Fera et al.
461	65987	Power outages detection in California after severe storm attack using VIIRS DNB night time data	haodong cui et al.
462	67392	Implementing a high-resolution land use and land cover change dataset derived from ESA-CCI LC and LUH2 into a regional climate model ensemble	Peter Hoffmann et al.
463	63537	Fusion of remote sensing and forest modeling for enhanced process understanding of forest responses to extreme events	Kim Schmidt et al.
464	64057	Multi-site Validation of Daily SCOPE-Model-Simulated Carbon and Energy Fluxes	Egor Prikaziuk et al.

465	66865	Evolution of the aerosol direct radiative efficiency during the pre-COVID-19 decade using the AERONET database	Jean-Claude Roger et al.
466	64444	Towards a joint inversion of GRACE, radar altimetry and Argo to resolve ocean bottom pressure, sea surface height, temperature and salinity	Alisa Yakhontova et al.
467	63469	Sea Surface Salinity variability inferred from satellite, in situ and ocean model simulations at global scale and in the Senegal-Mauritania region	Clovis Thouvenin-Masson et al.
468	66916	Density-based Approaches to Evaluate Biogeochemical Models by Satellite Derived Chlorophyll	Bror F. Jönsson et al.
469	64554	Evaluation of Northern Hemisphere snow water equivalent in CMIP6 models during 1982-2014	Kerttu Kouki et al.
470	64877	How to feed ice front positions detected by AI in ice sheet models?	Julia Christmann et al.
471	65514	Improving Comparability of Model and Observatory Datasets in the YOPP Supersite-Model Intercomparison Project	Siri Jodha Khalsa et al.
472	65331	Altimeter based parameter estimation of sea ice in a tidal model	Amey Vasulkar et al.

A5.03 Next generation cloud climatology

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
452	66951	3D Weather States Model as a tool to detect climate trends in a long-term Cloud Satellite Climatology data set	Andi Walther

A7.02 EO advances in water and energy cycles

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
427	67428	Introducing physical expert knowledge into AI models: An hybrid approach to close the water budget from satellite observations	Filipe Aires et al.
428	64483	Water and energy fluxes within the EUMETSAT Climate Monitoring SAF: Evapotranspiration and Latent and Sensible Heat Fluxes	William Moutier et al.
429	63657	Application of an EO-based model for the study of evaporation from water bodies	Erica Matta et al.
430	63889	ESA CCI+ Soil Moisture project - Scientific Evolution	Robin van der Schalie et al.
431	64127	Soil moisture retrieval using multistatic L-band SAR and effective roughness modelling	Emma Tronquo et al.
432	65653	A Global Soil Moisture Data Set based on GPM Satellite Precipitation Estimates	Thomas Ramsauer et al.
433	64475	Using soil moisture and land surface temperature Earth observations to optimize land surface model performance	Nina Raoult et al.
434	66737	Intercomparison of current soil moisture products from remote sensing and modeling over COSMOS field sites in Germany	Toni Schmidt et al.
435	64667	Global dynamic river masks from Landsat imagery	Omid Elmi et al.
436	67166	Land surface drought response modulated by vegetation and climate regimes	Wantong Li et al.
437	64570	Cryo-TEMPO - Inland Water monitoring	Angelica Tarpanelli et al.
438	67189	Water Level Monitoring Over Continental Areas From Fully Focused SAR Altimeter Processing	Maxime Vayre et al.
439	63095	A new method for Lake Ice Extent retrieval for Northern Hemisphere	Kirsikka Heinilä et al.
440	64577	The use of evapotranspiration maps from Copernicus data for agrivoltaic	Lorenzo Stucchi et al.
441	67029	Sources of uncertainties in remotely sensed evapotranspiration and advances in their assessment	Bich Tran et al.

442	64052	Improving evapotranspiration monitoring in complex semi-arid ecosystems through a three-source energy balance model	Vicente Burchard-Levine et al.
443	64470	Assessing the capacity of Sentinel-1 to estimate the multiannual seasonal cycle of evapotranspiration	Marlin Markus Mueller et al.

A7.03 Towards and integrated high resolution reconstruction of the water cycle: advances in observations and hyper-resolution modelling

Board	ID	Title	Author
403	66570	Remote sensing of soil and vegetation canopy water content: An interference scattering model for nonzero INSAR phase closure	Howard Zebker et al.
404	64497	Data combination strategies for water detection in SAR image	Nicolas GASNIER
405	63061	Technical realization of a transient PCR-GLOBWB-MODFLOW global groundwater model on a 1 km resolution using high performance computing	Jarno Verkaik et al.
406	67131	Assessing change in volume and inflows of more than 3000 headwater reservoirs	Pieter Hazenberg et al.
407	62773	Pix2Streams: High-resolution dynamic stream mapping with Machine Learning	Gonzalo Mateo-García et al.
408	67314	The Use of Remote Sensing Data in Building a Hydrological Model and Conducting Water Accounting Analysis	Leila Karroumi et al.
409	64338	Connecting Earth Observations and hydrological models using the 'FAIR by Design' eWaterCycle platform for comparison studies	Rolf W. Hut et al.
410	63123	A first satellite-based mapping of river discharge over the Amazon	VICTOR PELLET et al.
411	65050	An evaluation of high resolution soil moisture maps in the framework of the ESA CCI	Rémi Madelon et al.
412	64518	Optimal soil moisture resolution and retrieval method for Sentinel-1 data	Theresa C. van Hateren et al.
413	63966	Two-Stage Modelling Approach for Mapping Urban Evapotranspiration at High-Temporal- and High-Spatial-Resolution	Alby Duarte Rocha et al.
414	66626	An operational system for high-resolution and near-real time evaporation data using the GLEAM-HR model	Jaap Schellekens et al.
415	64655	Sentinel-1 Soil Moisture Product at 1 km resolution	Anna Balenzano et al.
416	65092	Continuous two-source hydrological modelling of heterogeneous agricultural areas	Nicola Paciolla et al.
417	65172	Classification of Irrigation types at field-scale from very high resolution remotely sensed data	Giovanni Paolini et al.
418	65656	SEGMENTATION OF RAINFALL REGIMES BY MACHINE LEARNING ON A COLOCALIZED NEXRAD/SENTINEL-1 DATASET	Aurélien Colin et al.
420	63425	Towards field-scale reconstruction of the diurnal temperature cycle and its integration in continental-wide models.	Thomas Holmes et al.
421	64844	A comprehensive analysis of the global water budget.	Jonathan Bamber et al.
422	64903	Advances in high resolution hydrological modelling using the Community Water Model (CWatM)	Jens de Bruijn et al.

A7.07 Global and regional water cycle in the integrated human-Earth system

Board	ID	Title	Author
444	65314	Reprocessed LSA SAF Evapotranspiration (ET) and surface energy fluxes (SF): Methodology, validation and products examples	Alirio Arboleda Rodallega et al.
445	65720	The effect of drought on groundwater resources and groundwater level (case study: East of Lorestan, Iran)	Abdolnabi Abdeh Kolahchi
446	65731	Global seasonal dynamics of inland water and ice	Amy Pickens et al.

447	64427	A Consistent Estimate of the Arctic Water Cycle	Susanna Winkelbauer et al.
448	64988	Spatial and temporal influences of infrastructure on seasonal snowmelt timing, vegetation productivity and early season surface water cover in the Prudhoe Bay	Helena Bergstedt et al.
449	65098	Towards an operationally capable error-characterized 0-100 cm soil moisture dataset from C3S	Adam Pasik et al.
450	65283	Large and small water bodies monitoring exploiting the ExtractEO, processing chain: case of the Lake Fitri (Chad) and of the ponds in the Grand Est Region	Hervé Yésou et al.
451	62988	Detecting the Fingerprints of Climate Modes in the Global Water Cycle	Julia Pfeffer et al.

A8.02 Upper-Layer Ocean Circulation from Space

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
473	66768	Observations of Lagrangian transport using a synergy of satellite and in-situ surface drifters in the Baltic Sea for the period 2011-2018	Nicole Delpeche Ellmann et al.
474	65181	Impact of high-frequency motions on oceanic surface dispersion	Laura Gomez-Navarro et al.
475	63134	How advanced IA analysis on high-resolution SST images combined with altimetry products can improve mesoscale eddy detection in the Mediterranean Sea ?	Alexandre Stegner et al.
476	67353	Nearshore ocean colour remote sensing over an intermittent upwelling shelf	Paulo Oliveira et al.
477	64442	Exploiting Multi-Sensor Synergy to Monitor Upper Ocean Dynamical Structures	Lucile Gaultier et al.
478	66286	Surface and Upper Ocean Circulation from the combined use of in situ and space borne observations	Sandrine Mulet et al.
479	63895	Improved global sea surface height and currents maps from remote sensing and in situ observations	Maxime Ballarotta et al.
480	64932	4DVarNet: a generic neural formulation of variational interpolation schemes applied to satellite-derived SSH data	Maxime Beauchamp et al.
481	64728	Vertical Motions in the Upper Ocean from Drifter Observations	Daniel Rodriguez Tarry et al.
482	64015	The ESA-CIRCOL project: Ocean Currents Reconstruction from the synergy of Altimeter and Ocean Colour Observations	Daniele Ciani et al.
483	64061	Understanding and parametrizing downscaling and mixing analyses from altimeter-derived oceanic currents	Valentin Resseguier et al.
484	66353	Improving geodetic MDTs through XGM gravity field models	Philipp Zingerle et al.
485	64596	Satellite sensor synergy: data acquisition with GeoSPaaS-Tool from NERSC for eddy detection in Lofoten Basin – An exemplary work flow	Jonna Lauther et al.
486	64862	Eddy-induced mixed layer depth anomaly diagnosis from space	CNRS Barboni et al.
487	64919	Monitoring the mesoscale eddies interactions with the altimetry constellation	Cori Pegliasco et al.
488	67040	Ocean surface currents derived from Automatic Information System (AIS) data	yann guichoux et al.
489	65206	Super-resolving ocean dynamics from space with computer vision algorithms	Bruno Buongiorno Nardelli et al.
490	65638	ERA* high resolution ocean forcing product development and application	Marcos Portabella et al.

A8.09 Observing small-scale ocean dynamics at the interfaces of the Earth System

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
491	66038	Ice-ocean interactions in Antarctica, from 2010 to 2021	Anna E. Hogg et al.

492	66609	Detecting Antarctic Bottom Water formation with satellite altimetry	Jennifer Cocks et al.
493	63044	ULTRA HIGH-RESOLUTION SST FROM NASA ECOSTRESS RESOLVES FINE STRUCTURE OF UPWELLING ZONES	Nico Weidberg et al.
494	64467	Introducing the ISRO-CNES TRISHNA mission for high resolution SST observations in coastal ocean and continental waters	Emmanuelle Autret et al.
495	63227	Tracing the green-tide outbreaks using in situ, AUV, satellite and model data in Shinyang Bay, Korea	Young Baek Son
496	63992	SO FRESH: The relevance of satellite SSS for the study of freshwater fluxes in the Southern Ocean	Antonio Turiel et al.
497	64644	Sentinel-6 SAR altimetry and Jason-3 synergy cases: Internal Solitary Wave observations and effects on radar backscatter and SWH	Ian de Grisi - Lapa et al.
498	64042	Surface wave breaking owing to large-amplitude Internal Solitary Waves: a MULTISENSOR approach to observe effects on SWH and radar altimeter	Adriana Santos-Ferreira et al.
499	64965	LEARNABLE VARIATIONAL MODELS FOR THE RECONSTRUCTION OF SEA SURFACE CURRENTS USING AIS DATA STREAMS : A CASE STUDY ON THE SICILY CHANNEL	Simon Benaïchouche et al.
500	65622	Sporadic Wind-Driven Upwelling/Downwelling and Associated Cooling/Warming Along the North-West Mediterranean Coastlines	Vincent Rossi et al.
501	64259	Satellite Oceanography and DNA Methods for Ocean Monitoring	Georgia Parks et al.
502	63038	Toward an improved understanding of frontal dynamics north of the Gulf Stream	Christian Buckingham et al.
503	65658	Frontal identification using satellite data	Daniel Rodriguez Tarry et al.

A9.06 Sea Ice Remote Sensing

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
504	63767	Retrieval of sea ice type and deformation from Sentinel-1 SAR and assimilation into a sea ice model	Anton Korosov et al.
505	64064	Using modelling to understand the processes behind the observed changes to Arctic multiyear sea ice	Heather Regan et al.
506	61944	Detection and modelling of deformation features in first-year ice from Sentinel-1 images	Denis Demchev et al.
507	62859	Partial Shape Recognition for Sea Ice Motion Retrieval in the Marginal Ice Zone from Sentinel-1 and Sentinel-2	Mingfeng Wang
508	67430	Mutiyear evolution of radar backscatter and surface roughness of the Nansen Sound sea ice plug, 2016-1019	Mara Neudert et al.
509	63837	Long-term Observational Sea Ice Thickness Products from SMOS and CryoSat-2	Xiangshan Tian-Kunze et al.
510	63781	Satellite based sea ice products from the viewpoint of winter navigation operation planning	Eero Rinne et al.
511	66338	A merged multi-sensor product for sea-ice motion	Petra Heil et al.
512	63384	A new sea ice classification algorithm based on moderate-resolution optical and thermal satellite imagery	Toby Benham et al.
513	65191	Synergetic Fusion of Satellite SAR and Passive Microwave Radiometer Observations for Automatic Sea Ice Charting using Convolutional Neural Networks	Tore Wulf et al.
514	65496	A deep semi-supervised learning architecture for SAR-based sea ice classification with limited training data	Salman Khaleghian et al.
515	63100	Winter sub-weekly time series of sea ice classification on TerraSAR-X ScanSAR data for the MOSAiC expedition considering per-class incident angle dependency and	Wenkai Guo et al.
516	64994	Semi-automated classification of sea ice types using multimodal remote sensing data	Catherine Taelman et al.
517	63613	Can operational Ice Charts help to train AI for Sea Ice properties retrieval?	Suman Singha et al.

518	66748	Landsat 8 Sea Ice Classification using Deep Neural Networks	Egbert Schwarz et al.
519	63763	Sea Ice Classification with Sentinel-1 and Sentinel-3 data – first results from the EisKlass2 project	Stefan Wiehle et al.
520	65734	Sea-Ice Permittivity Estimation using GNSS Reflectometry data of the MOSAiC Expedition	Maximilian Semmling et al.
521	63122	Modelling the brightness temperature of ice and snow in preparation for the CIMR mission	Ida Birgitte Lundtorp Olsen et al.
522	63930	SOUTHERN SEA ICE AND SNOW COVER CHARACTERIZATION FROM COMBINED PASSIVE MICROWAVE, SCATTEROMETERS AND ALTIMETERS OBSERVATION AND	Clément Soriot et al.
523	65393	Coordinated SAR satellite observations, airborne and ground surveys over Arctic sea ice and snow for different seasons	Sebastian Gerland et al.
524	67239	A pan-Arctic enhanced view of Melt Ponds through AI-based multisensory data fusion	Sara Aparício
525	65271	Towards automatic detection of newly formed sea ice and lookalikes in the Barents Sea using Wide-Swath Synthetic Aperture Radar	Anca Cristea et al.
526	67446	Leveraging the dual-view capabilities of the Sentinel-3 satellites to discriminate between sea ice and cloud	Simon Proud
527	63162	Copernicus Sentinel-3 Sea (and sea-Ice) Surface Temperature: product status, evolutions and projects	Anne O'Carroll et al.
528	65310	Sea Ice Drift from Satellite Passive Microwave Missions : from Climate Monitoring to CIMR	Emily Jane Down et al.
529	65447	Mapping sea ice type with satellite passive microwave and scatterometer missions - from near-real-time conditions to climate scale	Signe Aaboe et al.
530	64695	Assessment of SAR Capabilities for Deriving Arctic Sea Ice Concentration	Jozef Rusin et al.
531	63334	Monitoring Arctic thin ice: A comparison between Cryosat-2 SAR altimetry data and MODIS thermal-infrared imagery	Felix L. Müller et al.
532	65366	Sea Ice Freeboard and Sea Level Anomaly improvements in the context of Cryo-TEMPO project	Sara Fleury et al.
533	67117	Sentinel-3 Land STM MPC: Performance of the S3A and S3B Surface Topography Mission over sea-ice	Sara Fleury et al.
534	63471	Combining High-Resolution ESA and NASA Satellite Altimetry to Advance Understanding of Arctic Sea Ice Topography	Rachel Tilling et al.
535	64709	A sea ice thickness proxy-product from Canadian ice charts	Isolde Glissenaar et al.
536	64508	Advancements and Challenges for Automatic Sea Ice Charting using Standalone Sentinel-1 SAR	Andreas Stokholm et al.
537	65116	Reference measurements to support evaluation of sea ice altimetry missions – An overview from ESA CCI and future needs	Henriette Skourup et al.
538	65315	Comparing MOSAiC and ICESat-2 data – thermal signatures and topography over sea ice features driven by convergence and divergence	Renée Mie Fredensborg Hansen et al.
539	64819	Antarctic snow on sea ice studied with GPR/In situ and Airborne multi-frequency Altimetry	Sine M. Hvidegaard et al.
540	63094	The critical role of Arctic and Antarctic sea ice for the global snow and ice albedo feedback	Aku Riihelä et al.
541	63581	Baltic Sea Ice Concentration Estimation Based on C-Band SAR and Microwave Radiometer by Convolutional Neural Networks	Juha Karvonen
542	63718	Estimation of Sea Ice Topography over Snow-covered Young Ice from TanDEM-X	Lanqing Huang et al.
543	63080	Effects of winter snow properties on L-band satellite observations in the Weddell Sea	Lu Zhou et al.
544	62879	Monitoring the time-variability of Drygalski ice tongue using Sentinel-1 SAR data	Mozhgan Zahriban Hesari et al.
545	64744	Automated Polynya Identification Tool (APIT)	James Hickson et al.

546	63555	Sea Ice Thickness Retrieval in 2018 Greenland Polynya - A Study with CryoSat-2 and SMOS	Shiming Xu
547	62802	SWIM: a new potential for sea ice remote sensing	Charles Peureux et al.
548	63669	Using CFOSAT for sea ice application	Fanny Girard-Arduin et al.
549	65356	Adapted Bayesian sea ice detection with CFOSAT scatterometer	Zhen Li et al.
550	63335	ARIEL L-band radiometer on the MOSAIC Arctic Expedition	Carolina Gabarró Prats et al.
551	65631	Effect of warm air intrusions on satellite-based sea ice concentration retrievals: A case study of the April 2020 events during the MOSAIC expedition	Janna E. Rückert et al.
552	64856	ICESat-2 Altimeter Sea Ice Roughness Analysis on a Pan-Arctic Scale	Alexander Mchedlishvili et al.
553	67333	Mapping Arctic sea ice surface roughness with Multi-angle Imaging Spectro-radiometer.	Thomas Johnson et al.
554	63478	New ice detection from C- and L-band synthetic aperture radar	Mallik Mahmud et al.
555	66760	COMPARISONS OF SEA ICE EXTRACTION BETWEEN QUAD-POLARIZATION AND COMPACT-POLARIZATION SAR IMAGES	Haiyan Li et al.
556	65528	Dynamic and thermodynamic sea ice growth derived from multi-sensor satellite remote sensing	Robert Ricker et al.
557	64451	Regional trends in Arctic sea ice thickness	Amy Swiggs et al.

B1.07 Analysis Ready Data: are we there yet?

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
72	61920	CEOS Analysis Ready Data for Aquatic Reflectance - for Inland, near-Coastal and Coral Reef Waters	Arnold Dekker et al.
73	66332	Pairing earth observation and ground based data in an analysis ready framework: ecophysiological data cubes	Jacob Nelson et al.
74	65024	Planet Fusion: High Resolution ARD via Sensor Data Fusion	Rasmus Houborg
75	62986	Innovative semantics-enriched Analysis Ready Data (ARD) product-pair and process baseline as reference standard of the Copernicus Harmonized ARD (HARD) initiative	Andrea Baraldi et al.
76	67431	On-Demand Analysis Ready Data	Carsten Brockmann et al.
77	63460	Backscatter Data Cubes: Progress in Radiometric Terrain Correction	David Small et al.
78	65089	ARD value chain in OGC Disaster pilot	Marie-Francoise Voidrot-Martinez et al.
79	65490	How can we make Polarimetry Analysis Ready?	Birgit Wessel et al.
80	66881	Sentinel-1 Analysis Ready Data – A Convenient and Easy to Use System Producing Common-coordinate Timeseries	Howard Zebker
81	67082	Gamma Naught RTC : An open source application based on DiapOTB	fabien contival et al.
82	63582	S1Tiling : an open-source project to build your Sentinel-1 time series	Thierry Koleck et al.
83	65168	QA4SM - An Online Validation Service for EO Soil Moisture Data Users and Producers	Wolfgang Preimesberger et al.
84	63956	Fiducial Reference Measurements for Soil Moisture (FRM4SM): From ground measurement to a fully traceable satellite validation service	Irene Himmelbauer et al.
85	63917	FRM4SM: SMOS validation strategy and uncertainty mapping	François Gibon et al.

86	66744	External evaluations of CryoSat-2 Thematic Data Products from ESA Cryo-TEMPO	Eero Rinne et al.
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B7.05 GNSS Radio Occultation and Reflectometry in the NewSpace context

Board	ID	Title	Author
48	63506	FSSCat Mission Description and Scientific Results of the FMPL-2 Payload	Adriano Camps et al.
49	63870	From physics to data-driven methods in NewSpace context: GNSS Reflectometry for novel and higher quality ocean products	Milad Asgarimehr et al.
50	64215	Spire Operational GNSS-RO Constellation: Status and Plans	Vu Nguyen et al.
51	64542	Using ensemble spread as a measure of GNSS-RO impact	Katrin Lonitz et al.
52	65079	Freeze and thaw detection with satellite GNSS-R data	Kimmo Rautiainen et al.
53	63056	Monitoring lake ice phenology from CYGNSS: Algorithm development and assessment using Qinghai Lake, Tibet Plateau, as a case study	Yusof Ghiasi et al.
54	64203	SYNERGY OF SAR AND GNSS REFLECTOMETRY FOR ANALYSIS OF WETLANDS DYNAMICS	Ilaria Mara Russo et al.
55	64859	REAL-TIME DETECTION OF COHERENT COMPONENTS IN GNSS LAND REFLECTOMETRY	Carmela Galdi et al.
56	63953	Neural Networks applications for global retrievals of Soil Moisture and Forest Biomass in view of HydroGNSS	Emanuele Santi et al.
57	65456	Sea state dependent Doppler spread as a limit of coherent GNSS reflectometry from an airborne platform.	Mario Moreno et al.
58	66802	High Precision, High Rate Coastal GNSS-R Altimetry Using Carrier-Phase Data Fusion	Hatchouelou Kant Williams KOUASSI et al.
59	65732	Calibration of GNSS-R Sensors and Signal Sensitivity to Ocean and Atmosphere Geophysical Parameters	Matthew Lee Hammond et al.

C1.01 Trusted Machine Learning - security, privacy and confidentiality in EO data ecosystems

Board	ID	Title	Author
89	65557	EOs and ground-truths: the issue of data property rights' protection, and solutions of From conventional EO data analysis methods to Big Data analytics using	François-Régis Martin-Lauzer et al.
90	67236	Merging and Analyzing Fishing data for Science and Management Whilst Remaining Secure and Confidential	Amos Barkai et al.
91	64290	Automatic Training Data Detection using Strict Rules and Deep Learning in MLS data	Zhenyu Ma

C1.03 Training data for AI in EO

Board	ID	Title	Author
98	64584	Multi-source semantic segmentation and scene classification dataset for remote sensing applications.	Anne Puissant et al.
99	67210	Semi-automated labelling of remote sensing with a continuous learning human/model feedback loop	Clément Maliet et al.
100	65194	LabelCooker: an efficient and scalable approach to AI training labels generation from geospatial vector data	Pierre Lassalle et al.
101	67343	Deep Learning based 2D and 3D change detection: preparation and feature of a new dataset	Virginia Coletta et al.
102	63936	Can simulated data help when dealing with EO data? An illustration with 3D point cloud change detection	Iris de Gélis et al.
103	64291	A review of active learning methods for large hyperspectral datasets	Romain Thoreau
104	63902	SCAN: a Satellite Collaborative ANnotation Tool	Juan Bautista Pedro Costa et al.

105	63734	Community-based open in-situ data repository for global crop mapping	Hendrik Boogaard et al.
106	65025	AI4Boundaries : an open AI-ready dataset to map field boundaries with Sentinel-2 and aerial photography	Raphael d'Andrimont et al.
107	65714	Deep Neural Networks and Citizen Science data synergies for plant species mapping	Salim Soltani et al.
108	64606	The ExtremeEarth project: A Solution for Generating Reliable Semantically Annotated Data	Corneliu Octavian Dumitru et al.
109	63643	SyntEO: Generating Synthetic Earth Observation Data for Offshore Wind Turbine Detection with Deep Learning	Thorsten Hoerer et al.
110	67093	Creating High-dimensional Training Data using the Smart Sampling Technique	Diego Loyola
111	67405	Artificial Intelligence with Satellite data and Multi-Source Geodata for Monitoring of Trees and Forests	Birgit Kleinschmit et al.
112	64764	Ship-iceberg Sentinel-1 SAR dataset and classification using deep neural networks	Kristian Aalling Sørensen et al.
113	67231	Creating and Evaluating a Sentinel-1/2 SAR and MSI Dataset for Wildfire Detection with Deep Learning	Puzhao Zhang et al.
114	63673	A calibration database for Land Surface Temperature Retrieval	Sofia L. Ermida et al.
115	64309	AI-based Cloud Mask Processor for Sentinel-2	Olga Wold et al.
116	65383	Training Dataset Requirements for Cloud Masking	Jan Wevers et al.
117	66991	A Dataset of Cloud Masks in Hyperspectral PRISMA Imagery	Alistair Francis et al.
118	64108	Detection and Characterisation of Unidentified Aerial Phenomena through Geospatial Analysis of Satellite Data	Philippe Ailleris

C1.06 Data assimilation and machine learning for the Earth system

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
120	62706	A Spectral Transfer Function (TF) to Harmonize Existing Soil Spectral Libraries from Different Origins	Nicolas Francos et al.
121	67109	Supervised learning to estimate local dynamical instabilities in chaotic systems: computation of local Lyapunov exponents	Daniel Ayers et al.
122	64955	Light use efficiency model selection and parameter upscaling	Shanning Bao et al.
123	64699	Assimilating visible satellite reflectances at ECMWF	Liam Steele et al.
124	64758	Artificial Intelligence Revolutionises Weather Forecast, Climate Monitoring and Decadal Prediction	Steven Dewitte et al.
125	65450	Change Detection on GPUs	Dmitry Serykh
126	65460	Global Vector Maps of River Discharge Distribution From Neural Network Ensembles for 1D Applications	Maximilien Soviche et al.
127	63704	A two-stage machine learning framework using global satellite data of cloud classes for process-oriented model evaluation	Arndt Kaps et al.
128	64936	Machine learning based modelling of tropospheric parameters with GNSS enhanced by meteorological data	Laura Crocetti et al.
129	65620	Assessment of Temporal Stability in Real-time Climate Change Monitoring Enabled by Remote Sensing and In-situ Soil Moisture Estimation	Jiang Zhou et al.
130	63577	An ensemble-based parallel data assimilation and data analytics framework for the development of continental-scale high-resolution soil moisture reanalysis	Bibi Sarwat Naz et al.
131	64123	Additional value of considering lateral flow processes for assimilating SMAP data into a land surface model	Haojin Zhao et al.

132	63572	Building a physics-constrained, fast and stable machine learning-based radiation emulator	Guillaume Bertoli et al.
133	64349	Characterizing the Earth complex dynamical system through spectral decomposition of kernel transfer operators	Jose E. Adsuara et al.
134	66424	Unsupervised Deep Learning for Spatio-Temporal Earth Data Interpolation and Gap Filling	Maria Gonzalez-Calabuig et al.
135	67376	Assimilation of remote sensing data into agro-ecosystem model for a real-time prediction of grassland productivity	Bahareh Kamali et al.
136	64130	Eddy identification from along track altimeter data using deep learning: EDDY project	Adili Abulaitijiang et al.
137	66776	A deep learning framework for three dimensional reconstructions of global ocean state variables using satellite and in-situ measurements	Kristian Aalling Sørensen et al.
138	66993	24 Years Sea Level Trend of Baltic Sea Using Resampled Machine Learning Satellite Altimetry Data	Majid Mostafavi et al.

C1.08 Advanced Solutions for SAR processing and analytics

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
152	67480	Marine litter signatures in synthetic aperture radar images, an automatic pixel-based approach.	Iván Cester et al.
153	63558	A deep learning methodology to retrieve high resolution wind direction from SAR images	Andrea Zanchetta et al.
154	65945	A fully automated operational SAR-AIS Vessel Detection system based on an advanced GLRT SAR multi-frequency ship detector	Andrea Minchella et al.
155	62784	Compressive Sensing applied on monostatic/bistatic SAR processors	Adrian Focsa et al.
156	62816	Towards Bulk EO Processing via Parallel Computing	Russell Gibson et al.
157	67366	Resolving the time-shift between InSAR and Numerical Weather Prediction	Gert Mulder et al.
158	66694	Large scale mapping of Mopane forest degradation factors with AI and Sentinel-1	Tristan Williams et al.
159	66771	Image-to-image Translation as a Unique Source of Knowledge	Alejandro Mousist
160	67325	Use of deep neural networks for image reconstruction from a microwave interferometer	Richard Faucheron et al.
161	66795	Objective analysis of DInSAR historical deformation data based on time series clustering algorithm	Jaime Sanchez et al.
162	67230	Titan4 High Performance Cloud Architecture for Persistent Scatterer Interferometry using Sentinel-1	Pia Addabbo et al.
163	67324	Machine learning for unsupervised detection and characterisation of ground motions from Persistent Scatterer Interferometry time series	Nicolas Jakob Wagener et al.
165	66577	Evolution of SNAPPING Persistent Scatterers Interferometry service on Geohazards Exploitation Platform	Michael Foumelis et al.
166	67226	Investigating ground deformation with InSAR methods in the Euregio Meuse-Rhine transborder region	Romy Schlögel et al.

D1.02 Satellite EO for Monitoring Infrastructures

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
169	63676	INFRASTRUCTURE MAPPING AND PLANNING: VALIDATION ACTIVITIES IN GERMANY IN THE FRAMEWORK OF EO4INFRASTRUCTURE	Salvatore Lorelli et al.
170	64461	INFRASTRUCTURE MAPPING AND PLANNING: SATELLITE EO IN THE RAILWAY SECTOR AND VALIDATION ACTIVITIES OVER ITALIAN AOIS	Sergio Proietti et al.
171	63938	CAMEO: Corridor and Asset Monitoring using Earth Observation	Edo Loenen

172	64114	Sub-pixel deformation monitoring with Electronic Corner Reflector in Sentinel-1 SAR data	Roland Horváth et al.
173	67056	Determining the validity of sibling pixels used in time series InSAR	Jacob Connolly et al.
174	67079	On Statistical Classification of InSAR Timeseries in Urban Areas based on Their Kinematic Behavior	Zahra Manafi et al.
175	64126	Infrastructure monitoring using Persistent Scatterer Interferometry	Michele Crosetto et al.
176	64295	Integration of InSAR ground motion products with subsurface geotechnical data	Niels Broge et al.
177	64641	Detection of Building Stability in Central Sulawesi, Indonesia Using Persistent Scatterer Interferometry (PSI)	Chathumal Weththasinghe Arachchige et al.
178	64692	Comparing InSAR with in situ ground movement data along railway embankments	Sarah Douglas et al.
179	65048	Automatic railway assets extraction from multispectral satellite images to support a railway digital twin	Davide Fabbri Castagni et al.
180	64806	InSAR to monitor ground deformation: an effective approach in infrastructure monitoring	Nuria Devanthery et al.
181	64881	Sentinel-1 Persistent Scatterer Interferometry for Deformation Monitoring of the Moehne gravity dam in Germany	Jannik Jaenichen et al.
182	64831	Advanced characterization of infrastructure and human impact along Arctic coasts based on Sentinel-2 data and Deep Learning	Barbara Widhalm et al.
183	64990	Facing the Challenges of Future Downstreaming Services for Infrastructure Monitoring	Alexander Kläser et al.
184	66977	SAR4Infra - traffic infrastructure monitoring using Sentinel-1 InSAR	Andreas Piter et al.
185	65498	The ESA SCIRES Demonstration Project	Angelo Amodio et al.
186	63407	Monitoring oil spills in the Russian sub-Arctic with high resolution satellite imagery	Graham Sadler et al.
187	65848	DRIPIN – Determining Risk of Pipe failure using InSAR	Tom Ingleby et al.
188	62857	Automated Vegetation Risk Management at Country-Scale using Multiple Satellite Data Sources	Sven Przywarra

D1.06 Satellite EO and Machine Learning for monitoring Natural Hazards: Opportunities and Challenges Ahead

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
197	64171	Oil Spills Detection from Full-Resolution SAR Images based on Deep Learning Semantic Segmentation	Rogelio Hasimoto-Beltrán et al.
198	62557	Deep Learning Methods for Daily Wildfire Danger Forecasting	Spyros Kondylatos et al.
199	67215	An integrated methodology for fire risk assessment management planning in peri-urban areas. Linking ML/GIS modeling with in-situ research	Stella Girtsou et al.
200	62715	Development of a novel burned area mapping service using Machine Learning and Copernicus Sentinel-2 data	Clive Farquhar et al.
201	67034	A Machine Learning approach for mapping burned areas using Copernicus Sentinel-2 imagery	Ioanna Tselka et al.
202	66809	Integrating AI into EO Wildfire Monitoring – the SAFERS Services	Conrad Bielski et al.
203	67008	Deep learning for burn severity assessment with Sentinel-2 MSI data	Xikun Hu et al.
204	67417	VIIRS Time-series for Wildfire Progression Mapping Using Transformer Network	Yu Zhao et al.
205	65556	Flood Detection and Mapping using customized Unet architectures based on Sentinel-1 SAR imagery	Ritu Ritu

206	63648	Using managed Apache Beam pipelines with geospatial open source standards to scale up convolutional network deployment to map floods and improve disaster	Nikoo Ekhtiari et al.
207	64425	Flood extent segmentation and cloud screening on Sentinel-2 images for emergency response services	Gonzalo Mateo-García et al.
208	64887	Inland excess water delineation using machine learning on medium resolution data	Balázs Kajári et al.
209	66637	UNOSAT FloodAI	Edoardo Nemni
210	66728	Urban Informed Neural Networks: Towards urban flood mapping with multi-temporal SAR intensity and InSAR coherence	Yu Li et al.
211	67393	Towards global flood mapping with machine learning based on the Landsat 8 and Sentinel 2 time-series	Mirela Tulbure et al.
212	64116	Improving landslide mapping by multi-temporal SAR data analysis and Deep Learning	Wandi Wang et al.
213	63415	Offline-Online Change Detection for Sentinel-1 InSAR Time Series	Ekbal Hussain et al.
214	67140	Earthquake prediction using wavelet transform and machine learning algorithms on space-borne measurements	Delphine NOBILEAU et al.
215	65438	Lava Flow Hazard Monitoring from Space combining Artificial Intelligence and Cloud Computing	Eleonora Amato et al.
216	66718	A combination of Radiative Transfer Model simulation and Neural Network modeling for the retrieval of volcanic ash parameters by means of Copernicus	Matteo Picchaini et al.
217	64779	The EO-ALERT Contribution to Rapid Crisis Response: Real-Time Nowcasting	Robert Hinz et al.
218	62766	The hazard of locust outbreaks - Examples from EO to support locust management	Igor Klein et al.
219	66717	Satellite EO in support for Anticipatory Action: novel approaches to forecast drought conditions	Pedram Rowhani et al.

D2.01 Resilient cities

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
221	65284	TreeCop – evaluating the feasibility of Sentinel-2 data for drought stress detection in urban trees as an input for a data-driven small-scale irrigation management	Max Gerhards et al.
222	65063	MUSE - A multi-sensor service for multi-hazard monitoring of urban and extra-urban infrastructure	Giorgia D'Agostinis et al.
223	66732	Walloon experience in synergetic use of EO and field data for flood mapping	Christophe Schenke et al.
224	66992	Enhancing disaster risk resilience using greenspace in urbanising Quito, Ecuador	Scott Watson et al.
225	66988	Multi-sensor 4D city mapping for updating exposure to inform seismic risk in Bishkek, Kyrgyzstan	Scott Watson et al.
226	67284	The ratio of rural/urban people killed and injured in earthquakes	Max Wyss
227	67258	Combining population grids with settlement locations	Michel Speiser et al.
228	62771	Exploring the potential of using Sentinel-1 SAR imagery on Google Earth Engine for polycentric urban development	Xu Zhang et al.
229	62815	Synergetic use of optical and radar data for a climate change adapted urban planning in Bangladesh	Lukas Wimmer et al.
230	62873	National-scale mapping of building height using Sentinel-1 and Sentinel-2 time series	David Frantz et al.
231	63728	The usage of satellite data in the management of urban greenery	Maciej Jurzyk
232	63840	Fine-grained population mapping using coarse census data and satellite imagery	John Edgar Vargas-Muñoz et al.

233	64221	The global built-up area extent and gain from 2000 to 2020.	Andres Hernandez-Serna et al.
234	63435	User-oriented sustainable territorial management, based on EU remote&in-situ simplified monitoring (CbM) and digital geographic information standard	Kristian Milenov
235	63488	The livability of relocation sites of villages in coal mining collapse areas on the Loess Plateau based on Geo-detector	Jingya Tang
236	63619	High-resolution mapping of 33 years of material stock and population growth in Germany using Earth Observation data	Franz Schug et al.
237	63680	Future Urban Growth Modelling for Vietnam based on SLEUTH and EO-products	Zhiyuan Wang et al.
238	63908	Tracking progress towards the green energy transition: Nationwide mapping of roof-top photovoltaic installations	Benjamin Leutner et al.
239	66796	Fostering Air Pollution Health Risk Assessment in Urban Areas by means of the World Settlement Footprint	Lorenza Gilardi et al.
240	65131	CFD simulation in a high-rise building area of Madrid (Spain) based on data from the Copernicus Land Monitoring Service	ROBERTO SAN JOSE et al.
241	65471	Modelling the socio-spatial impact of regional planning and climate change prevention strategies on land consumption in Western Germany 1985-2030	Andreas Rienow et al.
242	65599	Mapping Local Climate Zones for Urban Resilience	Benjamin Bechtel et al.
243	65655	Space4Cities – The relevance of space-based data in the implementation of measures improving the quality of life in urban cities: feedback from the Eurisy's	Marco Tomassetti et al.
244	65665	Copernicus for Urban Resilience in Europe: Results from the First Phase of CURE Project	Nektarios Chrysoulakis et al.
245	65684	The Italian Airborne Multiband Interferometric and Polarimetric SAR (MIPS) System	Antonio Natale et al.
246	65875	Fast and robust urban mapping using Sentinel-1 and Sentinel-2 data	Naomi Petrushevsky et al.
247	66738	Satellite-based monitoring of big urban infrastructure projects and deep excavations	Regula Frauenfelder et al.
248	67100	Spatio-temporal patterns of urban expansion among main biomes in Ecuador using LULC data from 1990-2018	Alexandra Belen Villacis Chiluisa
249	67217	Temporal surface-material analysis of all football pitches in Europe	Philipp Gärtner
250	67310	Delineating and understanding urban structures through a multi-data source approach	Barbara Riedler et al.
251	64082	Air quality changes during pandemic lockdowns and pre-pandemic in Germany and the Netherlands	Lixia Chu et al.
252	63409	"HARMONIA" - Development of a Support System for Improved Resilience and Sustainable Urban areas to cope with Climate Change and Extreme Events based on	Vasiliki(Betty) Charalampopoulou et al.
253	64533	CCI Medium Resolution Land Cover: The challenges of using observations to derive morphology parameters for urban weather and climate models	Andrew Hartley et al.
254	63452	The CoKLIMAx project – Climate-resilient urban planning through the development of climate data integration strategies and tools based on information from the	Michael Bühler et al.
255	64574	ClimateLynx - Generating global climatic linkages	Clemens Rendl et al.
256	64754	Prioritizing the implementation of regional climate change adaptation measures through an EU-wide, uncertainty-aware, climate change “hot-spots” remote-	Dionysios Nikolopoulos et al.
257	67113	Cooling Effect of Urban Green Infrastructure in Urban Areas: A Study using Land Surface Temperature	Gulam Mohiuddin et al.
258	67375	Ecosystem Services and Urban Forest and Green areas monitoring in the framework of the ESA Multiple Actors Forest Information System – MAFIS project.	Matteo Picchaini et al.
259	62415	Mapping roof materials using WV3 imagery and a state-of-the-art OBIA processing chain: application over Liège, Belgium	Coraline Wyard et al.
260	64109	Green, red or grey? Mapping vegetated roofs from space	Katja Kuhwald et al.

E1.02 Strengthening Industrial Competitiveness Exploiting Novel Systems and Capabilities

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
263	65468	Accelerating innovation in space through strategic partnerships for people-planet-prosperity	Rita Rinaldo et al.
264	65602	MESSAG-EO – A voice-assisted gateway to EO-derived information	Gunter Zeug et al.
265	66736	“As close as possible to the users”: material from the collaboration between Wallonia and Brittany with support of EARSC EO evangelists	Marie Jagaille et al.

E2.01 EO Supporting Law Enforcement

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
269	63576	Earth Observations as a tool for environmental law enforcement. A workflow for monitoring forested areas. The case study of the mining areas of Cholomontas	MARIA TASSOPOULOU et al.
270	63806	Open-water RFI monitoring in C-band SAR imagery for warship detection	Kristian Aalling Sørensen et al.
271	65426	Earth Observation and GNSS data fusion to improve navigation risk assessment	Chiara Brighenti et al.
272	65621	Earth Observation and Social Media in the context of law enforcement and security applications	Kristin Fleischer et al.
273	66567	Video and Fast Revisit Earth Observation for Civilian Security Applications	Chetan Pradhan et al.

E3.05 Atlantic Regional Applications and Science

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
390	67234	The Atlantic Regional Initiative	Sara Aparício et al.
391	67229	Getting involved in the Atlantic Regional Initiative - The Atlantic Data Handbook and other resources	Sara Aparício et al.
392	67291	ESA Atlantic Regional Initiative - How can EO based services support the needs of the offshore wind energy sector?	Pedro Ribeiro et al.
393	66708	SMART - Distributed AI system for marine plastic debris monitoring	Leonardo Azevedo et al.
394	67427	Tracking wastewater plumes in the Solent region using Sentinel2 and Planet data	Liliana Aranos et al.
395	65405	Monitoring the Good Environmental Status of Marine Atlantic Areas using EO data	Raquel Silva et al.
396	67163	Beach litter monitoring in Atlantic region with the use of UAVs and AI: Portugal Case Study	Konstantinos Topouzelis et al.
397	66990	Charting a course to enhance Earth Observation uptake in the Atlantic Blue Economy, with Technological Innovation Clusters	Rory G. Scarrott et al.

E4.01 Space-Education for tomorrow – from school to lifelong learning

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
16	62759	The Zero Hunger MOOC: A Massive Open Online Course for promoting EO approaches to tackle world hunger	Nesrin Salepci et al.
17	63116	Land in Focus - Remote Sensing Theory and Applications across Land Surfaces	Kai Heckel et al.
18	63268	Testing the Efficiency of Learning Videos for conveying Basic Knowledge of Earth Observation.	Henryk Hodam et al.
19	64320	Space education in Germany - how to use authentic locations and equipment for inspiring and challenging learning settings	Tobias Schüttler
20	67000	She Space International – a remote sensing educational program for girls, its successful implementation in the constraints of the Covid-19 pandemic and the	Elisabeth Langer et al.

21	64676	InnEO'Space PhD: Preparing Young Researchers for a successful career on Earth Observation applications	Josiane Mothe et al.
22	63381	Everyone can understand satellite remote sensing. SAPIENS - a knowledge transfer project for external target groups	Nora Meyer zu Erpen
23	63140	An interactive approach for people learning Earth's movements from orbiting radars	Dinh HO TONG MINH
24	63547	An Overview of Multiple Capacity Building Approaches Employed by the Synthetic Aperture Radar Capacity Building Center (SAR-CBC) Project	Franz J. Meyer et al.
25	63952	Earth observation data science programs in NTUU "KPI"	Nataliia Kussul et al.
26	64968	Communicating Climate Change	Philip Eales et al.
27	64433	EOCare: a Cloud-based solution to support EO training activities	ERIC GUZZONATO et al.
28	64545	Fostering user-driven learning communities in-person and virtually: Examples from Earth Engine meetups	Sabrina H. Szeto
29	64855	Positive Experience Gained by Converting ESA Academy's Earth Observation Satellite System Design Training Course into an Online Format under the Covid-19	Chung-Chi Lin et al.
30	65214	Researcher Access Pathways to Planet Labs High Spatial and Temporal Resolution Earth Observation Imagery	Joe Mascaro et al.
31	65619	GIS4SCHOOLS - Improving STEAM Education in Secondary Schools through the development and co-creation of new methodologies for teaching to and	Marco Tomassetti et al.
32	66459	GEO4Schools - Bringing Geospatial and Earth Observation data to the classroom	Alina Vizireanu et al.
33	65695	HYPERedu online learning initiative for imaging spectroscopy: Concept, current status, lessons learned and future perspectives	Saskia Foerster et al.
34	67039	REMOTE SENSING AS AN EFFECTIVE TOOL OF SCIENCE EDUCATION AND CLIMATE LITERACY DEVELOPMENT	Natalia Kobliuk et al.
35	67387	Earth Observation and Open Schooling – PULCHRA project approach	Premysl Stych et al.

E5.01 Towards improved availability, access and use of open Earth observations in GEOSS

<i>Board</i>	<i>ID</i>	<i>Title</i>	<i>Author</i>
453	63905	50 years of international coordination for meteorological satellites.	Paolo Ruti et al.