

Hinweise zu Erdbeobachtungsdaten

RESA RELOADED – hochauflösende optische Satellitendaten für deutsche Forschungsprojekte

Am Earth Observation Center (EOC) des DLR ist das RapidEye Science Archive (RESA) als Teil des Deutschen Satellitendatenarchives (D-SDA) in Betrieb gegangen. In die Datensammlung wurden die rund 60.000 hochauflösenden Satellitendatensätze der Missionen RapidEye, PlanetScope und Skysat geladen, die seit dem Jahr 2009 von Nutzern über das RESA-Projekt bestellt wurden. Zukünftig ist auch geplant, die Neuaufnahme von RESA-Daten über „calls for science“ zu ermöglichen.

Das RESA-Archiv ist über das [EOWEB GeoPortal](#) (EGP) des D-SDA kostenfrei nutzbar. Hierzu können interessierte Nutzer aus deutschen Forschungs- und Bildungseinrichtungen sowie Unternehmen und öffentliche Einrichtungen ein neues oder bestehendes selbstregistriertes EGP-Nutzerkonto über die Funktion „Permission Management“ erweitern. Dabei muss das Forschungsthema kurz beschrieben werden und die Organisation angegeben werden. Die einmalige, dauerhafte Freischaltung für den Zugriff auf das komplette Archiv erfolgt dann innerhalb weniger Tage.

Die komplette Meldung finden Sie [hier](#).

SAOCOM Daten für nicht-kommerzielle Zwecke

Ab sofort können Daten von den argentinischen L-Band RADAR-Satelliten für nicht-kommerzielle Zwecke angefordert werden. Die Datenanfrage läuft über die italienische Raumfahrtagentur (ASI), welche als Projektpartner die Konstellation zusammen mit der eigenen COSMO-SkyMed X-Band Konstellation betreibt. Die Daten sind für die „Zone of Exclusivity“ der ASI verfügbar, welche ungefähr das europäische Territorium abdeckt. Weitere Informationen zu den Daten und dem Bestellprozess finden Sie [hier](#).

Förderhinweise

Joint TerraSAR-X, TanDEM-X, PAZ Call

Die Ausschreibung soll neue wissenschaftliche Erkenntnisse aus der TerraSAR-X / TanDEM-X / PAZ Konstellation erforschen. Die Kombination der drei fast identischen Satelliten aus Deutschland und Spanien ermöglicht es größere Zeitreihen aufzubauen und die Wiederholrate von 11 Tage auf 4 bis 7 Tage zu verringern. Das Ziel ist die Entwicklung von Methoden, Algorithmen und Anwendungen für das Monitoring mit hoher zeitlicher Auflösung mit den Daten aus dieser experimentellen Konstellation. Das erarbeitete Proposal wird sowohl der DLR als auch der INTA vorgelegt und geprüft. Weitere Anforderungen entnehmen Sie aus dem [Call-Dokument](#). Proposals können noch das ganze Jahr eingesendet werden, der Einsendeschluss ist der **31. Dezember 2021**.

Weitere Informationen finden Sie [hier](#).

Ausschreibung der Europäischen Umweltagentur: Beratung für GEOSS Data Sharing und Management Principles

Die EUA beabsichtigt den Abschluss eines Dienstleistungsrahmenvertrags mit einem Dienstleister im Bereich der Erdbeobachtung und des raumbezogenen Datenaustauschs und -managements mit

Schwerpunkt auf Daten, die für Strategien und Initiativen zur Anpassung an den Klimawandel relevant sind. Diese Aktivitäten sollten im Lichte der derzeitigen Umwelt- und Klimaaktivitäten der EUA und der EU durchgeführt werden, wobei die entsprechenden Verbindungen zu den relevanten Initiativen, Leitinitiativen und Aktivitäten der Gruppe für Erdbeobachtung (GEO) zu gewährleisten sind.

Weitere Informationen entnehmen Sie bitte der [vollständigen Ausschreibung](#).
(Ausschreibungsschluss: 06. September 2021)

Stellenausschreibungen

Programm-Manager/in Dateninfrastrukturen/-Plattformen Europäischer Erdbeobachtungsprogramme am DLR in Bonn

Die europäischen Erdbeobachtungsprogramme wachsen aktuell und in den kommenden Jahren signifikant und erzeugen immer größere Datenmengen. Gleichzeitig eröffnen die rasanten Entwicklungen in den Bereichen Big Data Management und Künstliche Intelligenz neue Möglichkeiten der Bereitstellung und Nutzung von Daten der Satellitenerdbeobachtung. Vor diesem Hintergrund entwickeln sich auch die Bodensegmente der europäischen Erdbeobachtungsprogramme (Copernicus, ESA, EUMETSAT, Destination Earth/Digital Twin Earth etc.) weiter. Zunehmend werden innovative Dateninfrastrukturen und Modellierungsplattformen in diesem Umfeld aufgebaut.

In diesem Rahmen würde die Stelle daran arbeiten, Programmen oder programmatischen Elementen zu Dateninfrastrukturen und Modellierungsplattformen im Rahmen der europäischen Erdbeobachtung eigenständig konzeptionelle mitzugestalten und fachlich zu steuern.

Weitere Informationen zu der Stelle und den Link zu der Online-Bewerbung finden Sie [hier](#).

(Einstellungsdatum: 01. September 2021!)

Cryosphere and hydrosphere Earth Observation Scientist

Das ESTEC in Noordwijk, Niederlande schreibt eine Stelle aus als Wissenschaftler/-in in der Earth Surfaces and Interior Section der Earth and Mission Science Division of the Science, Applications and Climate Department, Directorate of Earth Observation Programmes.

Weitere Informationen finden Sie [hier](#).

(Bewerbungsschluss: 07. September 2021)

Earth Observation Scientist

Das ESTEC in Noordwijk, Niederlande schreibt eine Stelle aus als Wissenschaftler/-in in der Earth and Mission Science Division of the Science, Applications and Climate Department, Directorate of Earth Observation Programmes.

Weitere Informationen finden Sie [hier](#).

(Bewerbungsschluss: 07. September 2021)

Informationen zum Erdbeobachtungs-Programm der ESA

ESA Konferenzen und Workshops

ATMOS-2021

Die ESA Atmospheric Science Conference wurde auf den 22.-26. November 2021 verschoben und ist derzeit als Online-Veranstaltung geplant. Die Abstract-Einreichung ist ab sofort geöffnet und endet am **15. September**: <https://atmos2021.esa.int/#submission>

ESA Φ -week 2021

Vom 11. bis 15. Oktober 2021 findet die ESA Φ -week 2021 statt. Das Hauptthema ist dieses Jahr New Space Economy und die damit verbundenen Innovationen. Das vorläufige Programm ist verfügbar unter: <https://phiweek.esa.int>. Die Einreichung von Abstracts für Side-Events, E-Poster und E-Ausstellung wurde am 15. Juni 2021 geschlossen. Die Veranstaltung wird für die Öffentlichkeit virtuell durchgeführt, für eingeladene Referenten ist auch die Teilnahme vor Ort möglich, sofern die COVID-Situation dies zulässt. Die Registrierung ist **ab sofort** geöffnet.

Open Invitations To Tender der ESA (ITTs)

Activity	Description	Budget	closing date
GDA-AID : FRAGILITY, CONFLICT, AND SECURITY 1-10902	This ITT will implement the new EO information developments that respond directly to Bank operations requirements for geospatial information in the thematic sector of Fragility, Conflict, and Security. An Agile development approach is to be adopted consisting of three sequential development cycles each of 6 months duration to accommodate evolving requirements for new geo-information to be developed and tested. This ITT forms one of the Main Activity Lines' of the Global Development Assistance (GDA) Element of the European Earth Watch Programm	> 500 K	24/09/2021 13:00 CEST
GDA ME: MONITORING EVALUATION 1-10903	his ITT will define, design and implement a Monitoring Evaluation (ME) system for assessing the impact of both the ESA Global Development Assistance (GDA) programme, and the activities of the World Bank and Asian Development Bank carried out in support of GDA under the joint initiative of Space for International Development Assistance - SpaceforIDA'. The ME system shall be applicable for the ME requirements of Official Development Assistance (ODA) activities. The Contractor shall carry out an initial State of Play' assessment of the use of EO in development assistance operations, and use the ME system to conduct a Mid-term evaluation of GDA programme and the SpaceforIDA initiative in mid-2023.	> 500 K	23/09/2021 13:00 CEST
SARWAVE-STUDY 1-10881	Develop and validate novel methods for Sea State retrieval from Sentinel-1 Interferometric Wide Swath (IWS) products. Produce experimental S-1 IWS Sea State products and demonstrate their value coastal science, operational wave-models, and selected test areas including the marginal ice zone in the Arctic. Demonstrate multi-mission EO synergies in the Mediterranean utilising ocean geophysical parameter retrieval	200-500k	24/09/2021 13:00 CEST

	from Sentinel-1, Sentinel-2 and SAR altimeters		
<p>EO SUPPLY CHAIN QUALITY ASSURANCE, MANAGEMENT AND FACILITIES 1-10872</p>	<p>O supply chain quality assurance, management and facilitiesThe present invitation to tender is responding to the request from the European Earth Observation Industry for ESA to take a more direct involvement in reinforcing Quality Management as part of the end-to-end EO supply chain. The work shall include the following key elements:an analysis of EO satellite meta data for a set of EO service use cases, establishing future requirements for how these EO data sets will be produced and distributed and the need for a dedicated Quality Assurance FacilityA pre-operational implementation the EARSC Quality Certification scheme, involving candidate certification and accreditation actors in certification of EO Value chains for a at least 10 EO Value add companies.an analysis ofvarious schemes for VA information product certification, with recommendations for implementation.f the outcome of this activity is deemed successful by the Agency, a follow-on activity aimed at fully implementing activities in an operational setting will be considered.</p>	200-500k	03/09/2021 13:00 CEST
<p>CCI+ PHASE 2 NEW ECVS: VEGETATION PARAMETERS 1-10864</p>	<p>The objective of this activity is the development of two vegetation Essential Climate Variables : Leaf Area Index and the Fraction of photosynthetically active radiation absorbed by vegetation (LAI and FAPAR) according to the GCOS requirements along with a feasibility study for Solar-Induced chlorophyll Fluorescence (SIF) Climate Data Record. In addressing these ECVs the emphasis will be on performing the necessary RD required for the generation of high quality, global, long-term, multi-mission time series, maximising the consistency between products from different satellite missions and between different ECVs. Demonstration and validation of the successful achievement of this RD will require the delivery of sufficiently long global ECV time series and their assessment by climate users as part of the CCI project. A comprehensive inter-comparison of products bringing together the key algorithms for each ECV and dedicated effort on uncertainty characterisation from the input data through to the product will be critical components</p>	> 500 K€	10/09/2021 13:00 CEST
<p>ATMOSPHERE SCIENCE CLUSTER - RESEARCH OPPORTUNITIES 2 - 1-10877</p>	<p>This AtmosRO-2 call represents a number of research opportunities in relation to the ESA Atmosphere Science Cluster. Two types of actions will be supported: 1) Collaborative research activities proposed by the community to undertake collaborative research and joint science activities across projects, building on top of existing ongoing ESA, EC and nationally funded Atmospheric science projects. 2) Targeted Research Actions on three thematic areas will be funded: 2.1) Research on Methane (CH4) in the Arctic supporting the joint NASA and ESA Arctic Methane and Permafrost Challenge, AMPAC. One highlight is the development of improved algorithms for the retrieval of CH4 at high latitudes. 2.2) Research on Nitrous acid (HONO), with a specific focus on the development of algorithms for the retrieval of HONO global observations from different satellite platforms 2.3) Research on cloud products used for cloud correction in Copernicus Sentinel-4, Sentinel-5 and Sentinel-5p trace gas retrieval schemes on datasets in which true cloud properties including their 3D structure and vertical distribution are known</p>	> 500 KEURO	30/09/2021 13:00 CEST

Planned Invitations To Tender der ESA (ITTs)

Activity	Description	Budget	Note
Advancing EO Methods and Techniques			
Aeolus+ Aerosols	The ITT will include two components: one dedicated to develop a novel multisession aerosols products incorporating Aeolus data; second a scientific study on the impact of Aeolus to better describe and characterize atmosphere dynamics and processes.	750 K€	Planned ITT Q3 2021
SMOS10 Land	Exploitation of the 10 years of SMOS data to enhance the characterization of the links between the water and vegetation carbon by using SMOS VOD in synergy with other observations.	500 K€	Planned ITT Q3 2021
Toolboxes			
SNAP Toolboxes Maintenance and Evolution	Further maintenance and evolution of the SNAP toolbox platform and the main constituent toolboxes S1TBX/S2TBX/S3TBX. Community support for SNAP toolboxes users and 3rd party developers. Evolutions in platform architecture.	1.6 M€	Planned ITT Q3 2021
Earth System Science - Grand Science challenges			
Climatic Extremes	This activity will represent a contribution to the ESA- EC Flagship action on Climate Adaptation and Extremes. This activity aims at exploring the potential of multi-mission and multivariate EO data and products for the detection and attribution of extreme events such as heatwaves, droughts, extreme precipitation and the associated hazards such as fires or floods, especially with respect to understanding and characterizing their impact on society.	1000 K€	Planned ITT Q3 2021
Polar Science Cluster	This activity will represent a contribution to the ESA-EC Flagship action on Polar Science. This ITT represent a response to some of the recommendations of the European Polar Science Week, It will address three main themes addressing major community efforts: 1) Sea Ice inter-comparison exercise; 2) ESA-NASA AMPAC Coordination and 3) Glacier mass change inter-comparison exercise	1500 K€	Planned ITT Q3 2021
Expanding Public Sector benefits			
WorldPeatland	The project will prototype an improved mapping and monitoring of intact, degraded and cultivated peatlands for conservation, management and restoration in the tropics.	500 k€	Planned ITT Q3 2021
GFOI R&D Coordination Support	This project represents ESA's contribution to the international Global Forest Observations initiative (GFOI), which is an informal partnership to help coordinate international support to developing countries on forest monitoring and greenhouse gas accounting for REDD+ and related activities.	300 k€	Planned ITT Q3 2021
EO Africa			
Incubators	Incubators facilitate the adoption of EO for sustainable agricultural practices and drought monitoring with national R&D partners in selected African countries. Develop, demonstrate and validate algorithms and EO products at national scale in close collaboration with African experts.	3 x 500 k€	Planned ITT Q3/4 2021
Explorers	Test experimental techniques and new EO data sources such as airborne P-band SAR, high resolution thermal ECOSTRESS observations and innovative multi-mission's data sets for water resources management. Develop & transfer algorithms, perform scientific experiments & campaigns, publish results.	3 x 300 k €	Planned ITT Q3/4 2021

EO solutions for a Resilient Society EO for SDGs			
SDG Pathfinder: Land Degradation Monitoring at HR	This activity will develop and showcase new methodologies to increase the spatial details of national assessments of land degradation and restoration and help countries setting their Land Degradation Neutrality (LDN) targets and reporting on their progress at appropriate scales.	400 k€	Planned ITT Q3 2021 (in a unique ITT on SDGs)
SDG Pathfinder: Informal Settlement Mapping	This activity will develop advanced AI-based models to automatically identify, delineate and characterize the spatial extent of slums, and support countries monitoring progress on the proportion of urban population living in informal settlements.	300 k€	Planned ITT Q3 2021 (in a unique ITT on SDGs)
SDG Pathfinder: EO for Sustainable Forest Management	In partnership with FAO, this activity will develop innovative EO approaches for the production of indicators on the sustainable management of natural, semi-natural and planted forests, addressing the changes in extent and conditions for use in national and global forest assessment.	400 k€	Planned ITT Q3 2021 (in a unique ITT on SDGs)
SDG Engines: EO Platform Solutions for SDG monitoring	This activity will integrate EO data processing and analytics engines on existing EO exploitation platforms for seamless integration into national SDG monitoring systems and processes.	3x 150 k€	Planned ITT Q3 2021 (in a unique ITT on SDGs)
SDG Scaling Up: Global Wetland Inventory	In partnership with UNEP and Ramsar, this activity will scale up EO best practices on wetland mapping using a participatory and platform-based approach and deliver EO solutions for a global monitoring of vegetated wetlands that can support countries in the production of national data on the changes in spatial extent of water related ecosystems.	500 k€	Planned ITT Q4 2021
Enabling Industry Growth			
Video Analytics	This ITT will be released in 2020 to develop and demonstrate prototype data analytics and machine learning capabilities linked to the combined exploitation of satellite video data with other satellite and in-situ (including other video) data sets.	800 k€	Q3/4 2021
Best Practices for Utilizing EO in the Shipping Industry	This ITT is issued under the Best Practices line and is intended to support the elaboration and specification of agreed methodologies for using EO derived information in different sectors of the shipping industry. This includes naval architecture/vessel design, operations management, autonomous vessels, environmental protection, marine safety and end- of-life disposal	500 k€	Q3/4 2021
EO4Resilience	An ITT is in preparation for release in Q4 to develop and demonstrate pre-operational capabilities to combine EO, non-EO and integration of customized models to characterize the resilience against perturbations such as climate change, environmental degradation, etc. Three contracts will be started, one in each of the following domains: health, Ecosystems and urban management	3 X 700k€	Q4 2021
NoR Platform Services	Onboard European platform services	~3000 K€	Permanently open with rolling evaluation
Regional resources	Onboard resources for regional initiatives: Atlantic, Alpine, Black Sea/Danube, Baltic	~1000 K€ per region	Planned Q4 2021

Evolving Shared Technical Capabilities			
Near Realtime Exploitation Platform	Procurement of extra consortium partners in the areas of: - New Missions - New Platform capabilities - New Regional services	~1000K€	Planned Q4/2021
AI4EO			
AI-03 MOOC – EO 4 Computer Scientists	Following the Φ-Week 2019, this activity aims to introduce the computer scientists & IT specialists to characteristics of the EO data, typical problems in handling Earth Observations at different spatio- temporal scales, as well as providing basic training in geospatial analysis and EO.	150 K€	Planned ITT Q3/4 2021
AI-06: AI4EO Challenge -	Following the Φ-week community recommendations, this activity aims to define and implement a suite of AI4EO challenges and research sprints addressing a variety of applications, such as data fusion, super resolution, classification and detection, applied to scientific and societal issues, by bringing together AI practitioners and EO data scientists.	250 K€	Planned ITT Q3 2021
AI-12: Datacube extension with AI capabilities	create new partnerships with the operational data cube facility in best practice open competition to enhance and demonstrate benefit AI capabilities	~500 K€	Planned ITT Q4 2021
AI-13 TEP extension with AI capabilities	Create new partnerships in best practice open competition to create and demonstrate AI platform capabilities for thematic communities	[budget tbc]	Planned ITT Q4 2021
AI-14 Theory-guided and explainable AI4EO.	One of the key issues in adoption of AI is the lack of trust in the “black box”. This activity aims to develop some tools and methodology to enhance confidence in the results and better quantify uncertainties, and be demonstrated through a suite of explainable AI4EO use cases. This activity will also address how to merge physics with the statistical approach of AI to build “physics-aware” Machine Learning and emulators.	250 K€	Planned ITT Q3 2021
AI-15 European Network of AI4EO labs	This activity aims to foster the development of a European network of AI4EO labs coordinated via the “Φ-lab philosophy”, which will capitalize on national capabilities in AI (leading AI centers and universities) to tackle a suite of AI4EO societal and scientific challenges.	~600 K€	Planned ITT Q3 2021
AI-16 Demonstrator Digital Assistant interface for DTE	This activity will address how to integrate principles of Natural Language Processing (NLP) in the search and discovery of EO and other data, in order to develop a kind of digital assistant which enables to interrogate and identify the right information in big data.	300K €	Planned ITT Q4 2021
AI-17 Call for AI4EO Fellowship and Visiting Profs	This activity capitalizing on the Living Planet scheme aims to attract AI talents to ESA, perform research and help shape future AI4EO strategy.	300K €	Planned ITT Q3 2021
AI-18 AI4DTE software stack	Expand the set of AI activities responding to the recommendations of the phi-week 2020, with special focus on the applications of AI to DTE.	350K €	Planned ITT Q4 2021
AI-19 AI training dataset platform implementation	Training data curation mechanism and dedicated processing services, fully compliant to sound data principles, address the lack training of high-quality training datasets for AI, considered a major obstacle preventing the step-change impact that can be expected from AI in EO.	[budget tbc]	Planned ITT Q4 2021
Global Development Assistance (GDA)			
ITTs are in preparation for issue in Q3 for Agile EO Information Developments in the sectors of Marine Environment and Blue Economy, followed by Agriculture			Planned ITT Q3/4 2021