

# Space Weather Activities in Europe

Daniela Banyś

German Aerospace Center (DLR)  
Institute for Solar-Terrestrial Physics  
Space Weather Observations

E-Mail: [daniela.banys@dlr.de](mailto:daniela.banys@dlr.de)

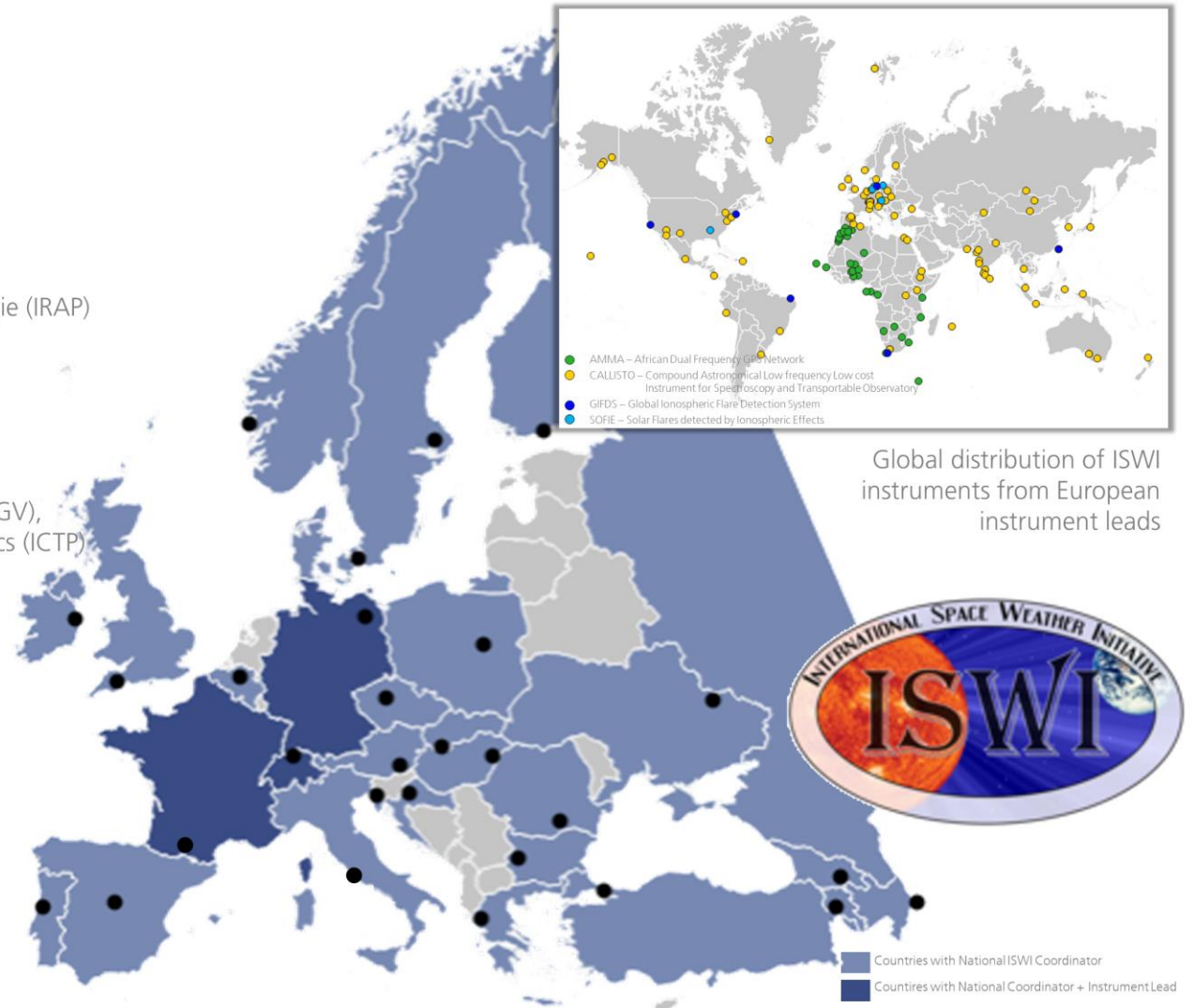


Knowledge for Tomorrow



# European ISWI coordinators and ISWI instruments

<b>Austria</b>	Manuela Temmer, University of Graz
<b>Azerbaijan</b>	Elchin S. Babayev, Shemakha Astrophysical Observatory
<b>Belgium</b>	Giovanni Lapenta, Katholieke Universiteit Leuven
<b>Bulgaria</b>	Simeon Asenovski, Space Research and Technology Institute
<b>Croatia</b>	Dragan Roša, Observatory in Zagreb
<b>Czech Republic</b>	Dalia Buresova, Czech Academy of Sciences
<b>Denmark</b>	Klaus Galsgaard, Niels Bohr Institute
<b>Finland</b>	Ilja Honkonen, Finnish Meteorological Institute
<b>France</b>	Frederic Pitout, Institut de Recherche en Astrophysique et Planétologie (IRAP)
<b>Georgia</b>	Bidzina Shergelashvili, Ilia State University
<b>Germany</b>	Daniela Banyś, German Aerospace Center (DLR)
<b>Greece</b>	Alexander Nindos, University of Ioannina
<b>Hungary</b>	Judit Muraközy, Hungarian Academy of Sciences
<b>Ireland</b>	Peter Gallagher, Trinity College Dublin
<b>Italy</b>	Vincenzo Romano, Istituto Nazionale di Geofisica e Vulcanologia (INGV), Yenca Olivia Migoya Orué, International Centre for Theoretical Physics (ICTP)
<b>Norway</b>	Kjellmar Oksavik, University of Bergen (UiB)
<b>Poland</b>	Marek Stęślicki, Polish Academy of Sciences
<b>Portugal</b>	Teresa Barata, Instituto de Astrofísica e Ciências do Espaço
<b>Romania</b>	Diana Besliu-Ionescu, Romanian Academy
<b>Serbia</b>	Nikola Veselinovic, Low Background Laboratory for Nuclear Physics
<b>Slovakia</b>	Ivan Dorotovič, Slovak Central Observatory
<b>Spain</b>	Consuelo Cid, Universidad de Alcala
<b>Sweden</b>	Hermann Opgenoorth, Swedish Institute of Space Physics
<b>Switzerland</b>	André Csillaghy, University of Applied Sciences Northwestern Switzerland (FHNW),
<b>Turkey</b>	Ali Kilcik, Akdeniz University
<b>United Kingdom</b>	Claire Foullon, University of Exeter
<b>Ukraine</b>	Oleg Litvinenko, Institute of Radio Astronomy NASU



# European ISWI coordinators and ISWI instruments

**Europe (11+3 presentations)**

Daniela Banys

February 5

16h25-17h25 CET

Time

Austria

Armenia

Czech Republic

France

Germany

Italia

Norway

Romania

Serbia

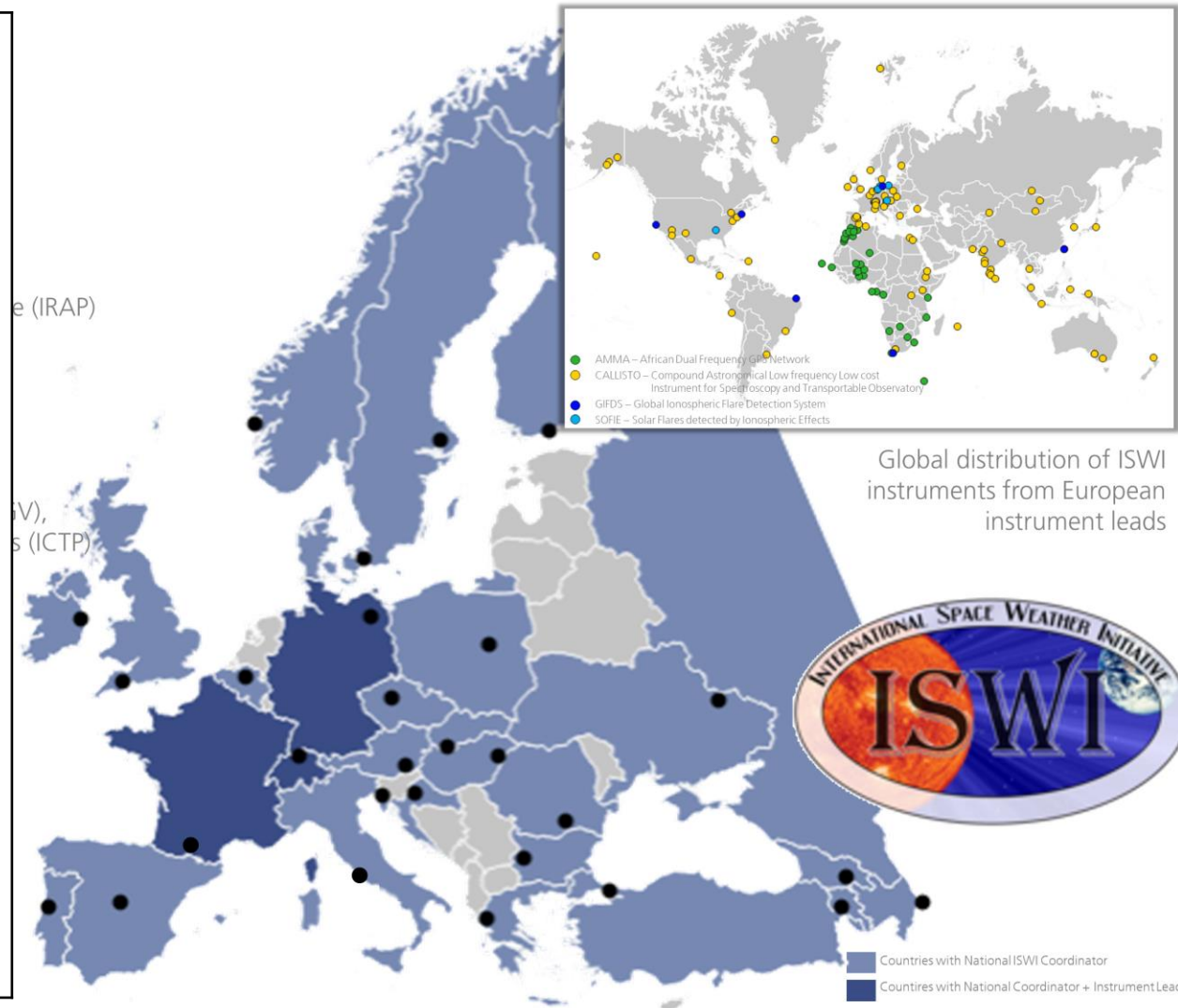
Slovakia

Spain

Switzerland

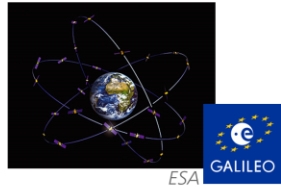
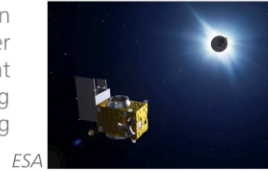
Turkey

United Kingdom



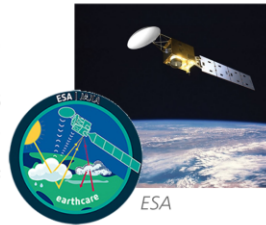
# Missions

**ESA's PROBA-3 Mission**, a high precision formation flying of two small satellites, shall be launched in Summer 2024. The pair of satellites will study the Sun's faint corona and surrounding atmosphere, as well as using innovative technologies to measure the precise positioning of the two spacecraft.



**GALILEO** is the world's most precise satellite navigation system, serving general public under civilian control. As of December 2023, there are 23 launched satellites that operate in the constellation, five are not available. The first launch is planned for April, with the second launch anticipated in July/September, with two satellites carried per launch.

**EarthCARE** (Cloud, Aerosol and Radiation Explorer) is a joint venture between ESA and the Japan Aerospace Exploration Agency (JAXA) and expected to be launched in May. The satellite will investigate the role that clouds and aerosols play in reflecting incident solar radiation back into space and trapping the infrared radiation emitted from Earth's surface to better understand the evolution of Earth's temperature.



# Project Highlights



**PECASUS for ICAO**, the Pan-European Consortium for Aviation Space weather User Services has been operating an ICAO global space weather center. <https://pecasus.eu/>

**ESA Space Safety Programme** actively addresses user communities that are sensitive to space weather, such as spacecraft operations, power systems operations or airlines. The ESA SWE Service Portal provides access to a total of 29 user-tailored services that build on more than 300 individual products and tools! <https://swesnet.busoc.be/>



**T-FORS** aims to develop a Travelling Ionospheric Disturbances Forecasting System complementary to the ESA Space Weather services. <https://t-fors.eu/>

**PITHIA-NRF**, Plasmasphere Ionosphere Thermosphere Integrated Research Environment and Access services: a Network of Research Facilities, involves 12 nodes providing organized access to experimental facilities, FAIR data, standardized data products, training and innovation services. The 2nd PITHIA-NRF Training School will be held in KU Leuven, Belgium, from 5 to 9 February 2024. <https://pithia-nrf.eu/>



# Get Together

**ESWW** bringing together the diverse groups in Europe working on different aspects of Space Weather and Space Climate: such as scientists, engineers, satellite operators, power grid technicians, communication and navigation specialists, people working in aviation, space weather service providers, STEM\* practitioners. After a successful conference in Toulouse, ESWW 2024 will take place in Coimbra, Portugal. <https://esww2024.org/>



**E-SWAN** focuses on the organisation and/or co-organisation of conferences (e.g. ESWW) in Europe, and supports editorial/publication activities related to SWSC (e.g. journal, press releases). 18-19 November 2023, the first E-SWAN school on Space Weather Data, Models and Services took place at IRAP in Toulouse. <https://www.eswan.eu/>



**URSI**, the International Union of Radio Science, a non-governmental and non-profit organisation under the International Council for Science, is encouraging and coordinating international activities in the fields of radio science. The 4th URSI Atlantic Radio Science Meeting (ATRASC) will take place from 19-24 May 2024 in Gran Canaria, Spain. <https://www.ursi.org/>



**ISWI**, ISWI has established a platform that takes a bottom-up approach in order to produce space weather-literate communities, in particular in developing countries, enabling those communities to work together as a network to share ideas, information and data and to develop joint projects. The United Nations / Germany Workshop on ISWI 2024 shall take place in Neustrelitz, Germany from 10 to 14 June. The next ISWI school is being planned for September 2024 in Nepal.