

→ POLINSAR 2013

The 6th International Workshop on Science and Applications of SAR Polarimetry and Polarimetric Interferometry

Closing session

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2 long “polarimetric” weeks



- The ESRIN establishment has become for two weeks a center of excellence in Radar Polarimetry
- Some 60 PhD students from 26 countries attended the ESA 2nd **Advanced Course on Radar Polarimetry** from 21 to 25 January.

<http://earth.esa.int/polarimetrycourse2013>

- ESA **POLinSAR 2013**, on 28 January – 1 February 2013, was attended by nearly 170 scientists from all over the world

<https://earth.esa.int/polinsar2013>

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ESRIN News



SEOM Radar Polarimetry course and workshop at ESRIN

28 January 2013



SEOM Advanced Radar Polarimetry Course 2013

Since 21 January, for two weeks, the ESRIN establishment has become a centre of excellence in the scientific exploitation of Radar Polarimetry imagery from Operational Missions. Some 60 Ph.D. students from 26 countries are attending the ESA Advanced Course on Radar Polarimetry from 21 to 25 January 2013.

This course will be followed from 28 January to 1 February by the ESA POLInSAR 2013 Workshop on the Science and Applications of SAR Polarimetry and Polarimetric Interferometry. This year we will also celebrate the 10th anniversary of the POLINSAR workshop series initiated by the EO exploitation team at ESRIN.

Both events are organised within the framework of the new Scientific Exploitation of Operational Missions (SEOM) element of the Earth Observation Envelope Program 4.

What is polarimetry?

Radar Polarimetry (Polar: polarisation, Metry: measure) is the science of acquiring,

More information

- EOEP4 SEOM element
- ESA Advanced Course on Radar Polarimetry
- ESA POLInSAR 2013 Workshop

Celebrating 10 years of POLINSAR



→ POLINSAR 2013

10th anniversary of POLinSAR

→ POLINSAR 2013

28 January - 1 February 2013 | ESA-ESRIN | Frascati (Rome), Italy

European Space Agency

- Provide a forum for **scientific exchange**
- Present exploitation results from fully polarimetric airborne and spaceborne systems
- Present **latest studies** in the field and ESA POLSARAP results
- Report on progress/status of **POLinSAR 2011 recommendations**
- Demonstrate **benefits of fully polarimetric systems** (vs. dual or single polarization)
- Present **future missions** in preparation
- Present final PI results from **ESA/CSA SOAR EU** initiative

1. Theoretical Modelling
2. SAR Polarimetric Interferometry (Pol-InSAR)
3. Polarimetry and DInSAR, Persistent Scatterer Interferometry (PSI)
4. Polarimetry and Tomography
5. Applications of SAR Polarimetry
 - Land: Forest, Agriculture, Environment and Wetlands
 - Ocean: Pollution Monitoring, Ship detection, Ocean Parameters Retrieval, Sea Features
 - Cryosphere: Snow, Land Ice and Sea Ice Monitoring
 - Hazards: Fire Monitoring, Volcanoes, Flooding, Earthquake
 - Other applications
6. Past, Current and Future SAR Missions
7. Airborne and Spaceborne campaigns

10 Thematic Sessions with **72** oral presentations

- 20 minute oral presentation
- Round-table discussions with seed questions

Free Poster Session with **65** posters

- Wednesday afternoon

Summary Sessions (last day of the workshop)

- Session Chairpersons presenting Summary and Recommendations

- Strict deadline for full paper submission: **15 February 2013**
- Papers are to be delivered by mail to: esapub@gmail.com
- The Proceedings of the Workshop will be published by ESA as Special Publication SP-713 on CD-ROM
- Further info at: <https://earth.esa.int/web/guest/polinsar-2013/author-instructions>
- Workshop presentations (pdf format) will be published by February
- Group (and other) pictures will be available from the website

What are the applications with a high maturity based on PolSAR?



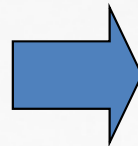
PolSAR-Ap: Exploitation of Fully Polarimetric SAR Data for Application Demonstration

- On-line survey to get feedback available soon on the workshop website

Domain	Application / Product	Application Maturity (Polarimetry)
Forestry	Above Ground Biomass	Medium
	Stand Height	High
	Vertical Structure	Medium
	Thematic Maps	High
	Change Detection	High
Agriculture	Crop Type Mapping	Medium
	Soil Moisture	High
	Phenology Determination	Medium
	Wetland Delineation	Medium
	Flooding Mapping	Medium
Cryosphere	Snow Volume	Medium
	Land Ice Extinction	Low
	Sea Ice Surface Char.	Low
Urban	Mapping / Classification	Medium
	3D Rendering	Medium
	Subsidence	Medium
Ocean	Oil Slick Detection	Medium
	Metallic Targets	Medium

POLinSAR2013 WORKSHOP

<https://earth.esa.int/polinsar2013>

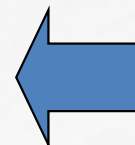


RECOMMENDATIONS



ACTION

Campaign
Training
Toolbox
Algorithms



scientific exploitation
of operational missions

Workplan 2013-2014

<http://seom.esa.int>

The SEOM element workplan is prepared annually for approval at ESA-PB-EO and includes :

- **RESEARCH and DEVELOPMENT**

Stimulating the development and validation of advanced EO methods and observation strategies that will enable scientific exploitation of the continued observations and innovative features of operational EO missions

- **SCIENTIFIC TOOLBOXES**

Developing, validating and maintaining open-source, multi-mission, scientific software toolboxes that will apply leading-edge, advanced EO retrieval techniques to new data coming from future operational EO systems, and make these tools freely available to scientists

- **USERS CONSULTATIONS and FEEDBACK**

POLINSAR at ESA ESRIN 28 January 1st February 2013

ESA Living Planet Symposium 2013, Edinburgh, United Kingdom 9 to 13 September 2013

- **TRAINING NEXT GENERATION SCIENTISTS**

Advanced Course on Radar Polarimetry ESRIN, Frascati, Italy 21-25 January 2013.

Advanced training on Land Remote Sensing at Harokopio University of Athens Greece 1-5 July 2013

Advanced training on Ocean Remote Sensing at University of Cork, Ireland, July or September 2013

- **PROMOTING SCIENCE DATA USE AND RESULTS**

Promoting widespread scientific use of data freely available from forthcoming European (ESA and non-ESA) operational EO missions, by the international science community .

Ensuring a responsive ESA channel through which EO scientists can make regular, timely, high-quality scientific publications.

Upcoming Events



The poster features a central image of a globe with a satellite map overlay. The text is arranged in a clean, modern layout. The ESA logo is in the top right corner. The main title 'living planet symposium 2013' is in large, bold, white letters on a dark grey background. The location and date 'EDINBURGH 09.13 september' are in smaller white text. Below the title, it says 'FIRST ANNOUNCEMENT AND CALL FOR PAPER'. The ESA logo is repeated in a smaller size at the bottom right of the poster area.

living planet
symposium | EDINBURGH
09.13 september
2013

FIRST ANNOUNCEMENT AND CALL FOR PAPER

European Space Agency

- Strict deadline for on-line abstract submission: **15 February 2013**

<http://www.esa.int/LivingPlanet2013>

Special thanks to:

- Carmen, Anne, Maura, Claudia (ESA Conference Bureau)
- EOGB Team
- Travel Office, Site Services, IT Support, Print Room, ESA Publications, Canteen, Guards



...Looking forward to seeing you in 2 years for

POLinSAR 2015

THANKS FOR YOUR ATTENTION

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