1st ESA ADVANCED TRAINING COURSE
ON REMOTE SENSING OF THE CRYOSPHERE

12–16 September 2016 | University of Leeds | Leeds, UK
**BACKGROUND**

As part of the Scientific Exploitation of Operational Missions (SEOM) programme element, the European Space Agency (ESA) is organising a new advanced Cryosphere Training Course devoted to train the next generation of Earth Observation (EO) scientists to exploit data from ESA and operational EO Missions (e.g. the Sentinels) for science and applications development.

Post graduate, PhD students, post–doctoral research scientists and users from European countries and Canada interested in Cryosphere Remote Sensing and its applications are invited to apply to the 5 day course which will be held at the University of Leeds, UK from 12 to 16 September 2016.

Research scientists and students from all other countries are also welcome to apply and participate to the course subject to space availability.

**OBJECTIVES**

The Advanced Cryosphere Training Course aims at:

- Training the next generation of European and Canadian Principal Investigators (PIs);
- Explaining theoretical principles, processing algorithms, data products and their use in applications;
- Introducing tools and methods for the exploitation of EO satellite data, in particular from the Sentinels and Cryosat2;
- Stimulating and supporting the exploitation of ESA EO and Third Party Mission data for remote sensing science and its applications to the Cryosphere.

**LECTURERS**

The team of lecturers will be composed of Principal Investigators and Professors from leading universities and research institutions in Europe and Canada.

**CONTENTS**

The course will provide advanced scientific knowledge on theory and applications for cryosphere remote sensing. It will be organised around five main components:

- Presentation of the CryoSat-2, Sentinel-1, -2 and -3 missions;
- Theoretical fundamentals of space-borne optical, SAR, gravimeter and altimeter remote sensing;
- EO lectures on the Cryosphere, with a focus on Sea Ice, Mountain Glaciers, Snow and the Polar Ice Sheets;
- Practicals using ESA toolboxes and commercial software for scientific exploitation of EO data;
- EO data processing and product demonstration for monitoring the cryosphere.

The training course will include formal lectures by leading scientists as well as hands-on computing exercises exploiting real and simulated data for science and application.