

The researcher and satellite bringing polar science into the classroom

Institution / company (Norwegian name): NAROM, Nasjonalt senter for romrelatert opplæring

Project manager: Birgit Strømsholm

Phone + 47 91745002

E-mail birgit@rocketrange.no

Principal objective

The PolarEduSpace project want to encourage the youth, students and teachers to join in IPY events and share the global enthusiasm during this extraordinary opportunity.

The overall aim is to inspire and stimulate an increased interest and understanding in polar research among young people aged 13-18. An overview of science around specific themes (e.g. sea ice, weather situations, ocean currents, atmosphere) related to relevant accepted IPY projects will be provided to show how the natural fascination with extreme environments can be used to introduce on-going research to the classroom from multiple disciplines. Remote sensing, use of fresh satellite images and thematic data will be integrated tools. There will be provided on-line classroom resources and activities (in Norwegian and English) related to the International Polar Year in the space educational website sarepta.org.

Project summary

The PolarEduSpace will provide opportunities for the classroom teachers and the students at teacher Colleges to attend training courses with content/activities focusing on polar science both on-line and e.g. at Andøya Rocketrange (ARR) and in Longyearbyen. The teachers will be provided with content knowledge and ideas for activities related to current Curricula.

During the IPY periode a number of exercises/activities using the current satellite images (radar and optical data) together with thematic data and other results from research IPY projects, will be developed and available for the schools.

Using communication through Internet/satellite will make it possible with live broadcasts from research vessels and stations at the poles, and bring real science in the classroom. For selected areas, case studies will be produced focusing on different subjects related to the polar regions. These case studies will be supplemented with downloadable satellite image data together with input of observations from different IPY projects. Each case study will be designed with a short introduction, needed background information, exercises and external links. There will be exercises where the satellite imagery will be analyzed using the image processing software LEOWorks and other exercises in which the images are analyzed directly on the screen or on paper. In addition some results (satellite and thematic data) will be presented in a GIS (Geographical Information System).

We plan to conduct a competition for Norwegian secondary students related to polar science using satellite images as a tool. The winner prize will be a visit out in the field working together with the IPY researcher.

After the IPY periode the published content related to PolarEduSpace in sarepta.org will be maintained and further developed, and the teacher training courses will be offered. We will also secure a continuation of access to fresh satellite images delivered from Kongsberg Satellite Services and ESA.