Antarctic Treaty

Electronic Information Exchange System

Party: Sweden
2014/2015 Annual Information

Operational Information – National Expeditions - Stations

Name:	**MARA, repair of antennas**
Type:	Wintering
Location:	**Site Name:** Maitri **Lat:** 70°45´56´´S **Long:** 11°44´8´´E
Maximum Population:	1
Medical Facilities:	
Remarks / Description:	One person is given permission to visit Antarctica Januari-Februari 2015 to repair broken antennas within the MARA Project. MARA, the Moveable Atmospheric Radar for Antarctica, is used to study winds, turbulence and layering in the atmosphere. After two complete years of observations at Troll, MARA was moved to the Indian station Maitri in January-February 2014. At Maitri, MARA observes meteorology over flat terrain near the coast, while at Troll conditions were dominated by mountains. In the upper atmosphere, conditions during the declining phase of the solar cycle are observed.Previously, minimum and increasing phases were covered. At the end of October 2014, a powerful storm caused widespread damage to the antenna field. Replacement parts were prepared and shipped to Maitri, and a repair team flew from Cape Town in January 2015. The antenna field was repaired and observations resumed on 22 January. MARA continues to operate, watched over by Indian colleagues on site. Data are streamed in real-time via India and displayed on a web page. So far we have seen some similar and some quite different meteorology compared to Troll, with particularly strong wave structures affecting stable layers low in the atmosphere at Maitri.

Operational Information – National Expeditions - Vessels

Name:	**Nathaniel B. Palmer**
Country of Registry:	U.S.
Number of Voyages:	0
Remarks:	This project is a collaboration between S.L. Greenwood (Stockholm University), L.M. Simkins and J.B. Anderson (Rice University), with partners in the U.S. and Poland. With the U.S. icebreaker and research vessel Nathaniel B. Palmer between January 23 to March 20 the science project "RECONSTRUCTING ICE SHEET DYNAMICS IN THE WESTERN ROSS SEA DURING THE LAST GLACIAL PERIOD" took place. Significant changes in the behaviour of West Antarctic ice sheet catchments are delivering increased ice volumes to the ocean. To assess future trajectories of such change it is paramount to examine the longer-term stability and variability of such catchments. Geological reconstructions from the continental shelves of Antarctica suggest that outlets of the WAIS and EAIS have experienced episodic changes in the past, with abrupt collapse phases as well as periods of resilience and recovery. This project is concerned with palaeo-ice dynamics in the western Ross Sea. Since the Ross Sea discharges ice from both East and West Antarctica, this region is valuable in unravelling the long-term behaviour of their respective outlets, and the dynamics and stability of retreat.

Operational Information – National Expeditions - Aircraft

Type:	**IL76**
Category:	Intercontinental flights
Period From:	24/02/2015
Period To:	25/02/2015
Remarks:	Sweden conducted an Aviation Safety inspection on the airline used within DROMLAN.

Operational Information – Non Governmental Expeditions - Vessel-Based Operations

No new information have been provided during the reported period.

Operational Information – Non Governmental Expeditions - Land-Based Operations

No new information have been provided during the reported period.

Environmental Information - Area Protection and Management (Permit, Visit and Activities)

No new information have been provided during the reported period.

Environmental Information - Area Protection and Management (Change or Damage)

No change or damage was observed during this reporting period.

Other Information - Relevant National Legislation

No new information have been provided during the reported period.