

Ice-Tethered Profiler: ITP16 Overview

Deployment Location: 9/2/2007, 23:00 UTC at 87° 50.3'N, 169° 48.2'W

Last Location: 9/5/2010, 23:01 UTC at 80° 14.8' N, 104° 51.2' W

Duration: 1099 days

Distance Travelled: 3804 km

Number of profiles: 643 in 213 days

Other instruments: Ice Beacon (Meteorological)

ITP16 was deployed from the German icebreaker *Polarstern* as part of the European Union [DAMOCLES](#) Program on an approximately 2 m thick ice floe. The ITP operated on a rapid sampling schedule of 3 one-way profiles between 7 and 760 m depth each day for nearly 4 months (365 profiles) until the mooring encountered bottom along the shallowest part of the Lomonsov Ridge north of Ellesmere Island. Afterwards the buoy was driven over the shelf, so that the profiler was largely unable to profile, except down to around 500 m for several days in February (15 profiles) and over a ten day period in mid-March (22 profiles) in the Lincoln Sea. The profiler ceased communicating on April 3, 2008 but the buoy persisted north of the Sverdrup Islands more than 2 years longer.

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The *Polarstern* provides the background to the first buoy cluster deployed on the ARKXXII-2 expedition in 2007 consisting of ITP 16 and a meteorological ice beacon. The sun became less direct as it was local midnight by the end of the deployment. (Photo by Takashi Kikuchi.)