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Chemosynthesis in the Arctic margins

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In October of 2010 a group of international scientists deployed a lander above a cold seep envionrment in the Artic waters at a depth of 400m. This is the latest observatory to be deployed as part of the EU funded ESONET programme. This area has a large number of methane seeps, recognised by the hydroacoustic signatures using a Simrad EK60 system. The location for the lander deployment was verified by several video tows proving that bubbles are the cause of the hydroacoustic signatures. These areas had an associated biological community that were dominated by bacterial mats. Unusually there were no higher organisms associated with these seeps, we speculate that this is due to a lack of soft sediment. This limited biological community and lack of seafloor carbonate structures may indicate that these vent sites are young. This area was scoured by ice sheets 8-13000 years ago so these sites must be younger than this. The lander is equipped with a series of sensors to detect changes in the oceanographic environment. The lander will be serviced in 2011 and again in 2012, and will thus ensure collection of data over a very long time period.