

Autosub Under Ice Webconference and Educator Workshop 18 Sept - 6 Oct 2006

This three week long webconference and educator workshop will focus on the science, technology and engineering of the Autosub Under Ice programme from 2000 to 2006.

This is your opportunity to learn more about the Poles from scientists from the U.K. Natural Environment Research Council, British Antarctic Survey, Cambridge University, U.K., University of East Anglia, U.K., University of Southampton National Oceanography Centre, U.K., and Clarkson University U.S.A. They will be online during the workshop to answer your questions. Participation is a hallmark of our workshops. These three weeks are for educators of all ages to learn about this cutting edge science and technology directly from the scientists and engineers.

In June 2006 scientists and engineers presented the results of their Polar science work at the Royal Geographical Society in London, England. The College of Exploration team was there to video record their presentations.

Register now at <http://www.coexploration.org/autosub>

New discoveries will be shared, including unique pictures of the underside of sea ice, details of the rate of thinning of the ice, and the composition of water collected from under the ice to name just a few.

International Polar Year begins in March 2007. This programme will provide a great foundation for learning during IPY. Resources and lesson plans will be included in the workshop.

Autosub is a long range, deep diving, autonomous underwater vehicle (AUV). It can carry a wide variety of physical, biological and chemical sensors to provide scientists with the capability to monitor the oceans in ways not possible with conventional research ships.

The United Kingdom's Natural Environment Research Council has funded the development and operation of the Autosub at the University of Southampton National Oceanography Centre. It is a world-leading combination of environmental science and technology. Autosub Under Ice (2000-2006) tackled

science questions of global importance and relevance, using innovative technology to obtain information from beneath floating ice in some of the most hostile parts of the world's oceans.

Today the Autosub autonomous underwater vehicle is the acknowledged world leader for civil marine science: to quote Dr Peter Betzer, Dean of Marine Science at University of South Florida, "You can certainly be proud of the amazing record of scientific advances that have been derived from Autosub. In fact, your team has really opened a whole new realm for oceanographic science ... future generations of ocean going scientists will look back and recognize the emergence of Autosub as a true watershed" and from Robert Wernli, a senior US Navy engineer, "... vehicles, which are used for scientific missions, are amassing impressive track records. The leader in this area appears to be the Southampton Oceanography Centre's Autosub, which continues to complete successful science missions under the funding of the Natural Environment Research Council".

Using information gathered from the Autosub autonomous underwater vehicle (AUV) in innovative ways young scientists at early stages in their careers have produced important results that have led to papers in Nature, Science and other high impact journals. Their results established the strategically important accuracy of acoustic fish stock surveys from noise-reduced survey vessels (Fernandes et al., 2000: Nature); brought new understanding to the long-standing debate over the relationship of krill to the sea ice margin (Brierley et al., 2002: Science); and demonstrated how AUV technology can measure deep overflows (Stansfield et al., 2001: Geophysical Research Letters).

The presentations will be available in a variety of formats. All the presentations have been transcribed and the will be offered as webpage-based text and pictures. If you would like to watch the presentations as they were given you can watch the video and synchronised slides as a webcast. The presentations will also be available as downloadable audio and video podcasts. They video versions will also be offered as streaming video. So whatever your computer and internet capabilities, or preferred learning technology, it should be available.

Meet the scientists and learn about this exciting British scientific exploration programme.

Week One: 18 - 22 September

Welcome from Prof. Alan Thorpe Chief Executive U.K. Natural Environment Research Council

Why NERC supports such ground breaking science?

Prof. Steve Ackley, Clarkson University USA

Introduction to the Autosub Under Ice programme and international perspective

Prof. Chris Rapley Director, British Antarctic Survey

Why study the polar regions?

Mr. Pete Stevenson, Southampton University UK

Tour of the Autosub

Mr. Nick Millard, Southampton University UK

Autosub technological development

Professor Gwyn Griffiths, Southampton University UK

Of Ice and Echoes

Week Two: 25 - 29 September

Prof. Karen Heywood, University of East Anglia, UK

Ocean and Ice

Prof. Julian Dowdeswell, Cambridge University, UK

Geophysics: looking back in time and the overlap with disturbance biology

Week Three: 2 - 6 October

Prof. Peter Wadhams, Cambridge University, UK

Sea Ice

Dr Keith Nicholls, British Antarctic Survey.

Ice sheets

Dr. Ken Collins, Southampton University UK

Building Models for School Projects

<http://www.coexploration.org/autosub>

Peter D. Tuddenham

College of Exploration

USA Address:

230 Markwood Dr.

Potomac Falls
VA 20165 USA

t: +1 703 433 5760
f: +1 703 406 2192
e: peter@coexploration.net
w: <http://www.coexploration.org>

UK Address:

24 Seaway Ave
Christchurch
Dorset BH234EX UK

t: +44 (0)207 870 5760
f: +44 (0)142 527 6236