

Monthly newsletter of the Challenger Society for Marine Science (CSMS)



Defra's Commonwealth Ocean education pack Defra's bespoke Our Commonwealth Ocean education pack for teachers was launched on the morning of the 9th April by Minister Thérèse Coffey, during the Our Commonwealth Ocean marine science event. at the National Oceanography Centre in Southampton. Our Commonwealth Ocean education pack was written by the Marine Biological Association (MBA) and National Marine Aquarium (NMA) and designed in collaboration with the British Council in support of the Commonwealth Heads of Government Meeting (CHOGM), taking place 16-20 April in London and Windsor. The CHOGM has four key themes: fairness, prosperity, security and sustainability. Protection of our ocean is a key theme of the sustainability pillar.

This education pack aims to encourage Commonwealth school children to understand the vital role oceans play in our environment, economy and society, and help ensure they can communicate about the ocean in a meaningful and make informed and responsible wav. decisions regarding our oceans. The pack is in two sections: ocean literacy principles and teacher resources. You can find the pack and accompanying downloadable poster on the Times Education Supplement resources section. Please contact Gemma Harper. Defra (Gemma, Harper@ defra.gsi.gov.uk) if you need any further information.

Call for applications for the 1st ODYSSEA Summer School "Operational Oceanography in the era of Blue Growth"

The call is now open, closing date 20th May 2018, for the 1st ODYSSEA Summer School. To be held at the Akontisma Hotel, Nea Karvali, Kavala, Greece from 3rd - 12th September 2018,

the overall objective of the this Summer School is to stimulate a scientific dialogue and create a learning experience about operational oceanography in the Mediterranean context. More precisely, after the end of the program, the trainees, coming from both sides of the Mediterranean Sea basin, will be able to:

- Understand the concept of operational oceanography
- Use the ODYSSEA project platform for retrieving, managing and processing oceanographic and environmental data of the Mediterranean Sea
- Explore the Copernicus Marine Environment Monitoring Service (CMEMS) products, learn the data and parameters provided, download and process these datasets
- Retrieve and use satellite datasets and explore databases on the marine environment
- Learn about the modern developments on marine instruments and sensors used in field sampling for operational oceanographic monitoring
- Get acquainted with the use of operational forecasting mathematical models e.g., hydrodynamic, wave, water quality models, etc.

Monitoring and forecasting of the marine environment is a challenge for oceanographers, as in the last few decades marine ecosystems have been subject to intense human pressure (pollution, extensive fishing and aquaculture, coastal erosion, tourism, etc.), coupled with climate change. Therefore, the protection and sustainable economic exploitation of these ecosystems requires real-time monitoring and operational prognostic modeling. In parallel, the volume of data concerning the marine environment collected both by satellites and onsite monitoring instruments is enormous and can be categorised as "Big Data". All these data need to be retrieved, processed, interpreted and then fed into numerical models for reanalysis and

forecasting.

The 1st ODYSSEA Summer School introduces trainees to all stages of operational oceanography, aiming towards the Blue Growth of the Mediterranean Sea. For full details and registration visit http://odysseaplatform.eu/ events/operational-oceanography-for-science-business-and-society/

A Call for Sessions and Workshops; Ocean sustainability for the benefit of society: Understanding, challenges, and solutions

The Integrated Marine Biosphere Research (IMBeR) project is planning its second Open Science Conference, from 17- 21 June 2019, in Brest, France. The conference will focus on themes related to:

- Understanding and quantifying the state and variability of marine ecosystems
- Improving scenarios, predictions and projections of future ocean-human systems at multiple scales
- Improving and achieving sustainable ocean governance

The marine research community is invited to contribute proposals for sessions and workshops related to the Conference themes. Workshops and topical sessions focused on the IMBeR Grand and Innovation Challenges outlined in the IMBeR Science Plan, results from IMBeR Working Groups and Regional Programmes, and IMBeR-relevant research at the interface of natural and human sciences are especially encouraged.

Session and workshop proposals should include a short description of the proposed topic, convener(s) names and affiliations, format (e.g., oral, poster, discussion with panel, world cafe), and potential number of participants. Workshop proposals should indicate whether they are intended to be a full- or half-day, and include clearly defined outputs, such as a research paper, special issue in a high impact peer- reviewed journal, or a position paper. Innovative formats that promote strategic thinking and new ideas are welcome.

Proposals should be sent to IMBeR@imr.no by Friday 23 April 2018. Proposals will be evaluated

VIEWS

JMSE 2018 Travel Awards – 2nd reminder

Two travel awards sponsored by the Journal of Marine Science and Engineering (http://www.mdpi.com/journal/jmse/awards) for postdoctoral researchers and PhD. students are available to attend marine science and engineering related conferences in 2018. The award will be 800 CHF (Swiss Francs) for each winner; the application deadline is the **20th April 2018**.

We are currently accepting nominations and applications for the award. Please find additional details and apply here: http://www.mdpi.com/ journal/jmse/awards. - Dr. Anthony S. Clare, School of Natural and Environmental Sciences, Newcastle University.

EMBRIC supports your research – 2nd advertisement for a new Transnational Access Call launched

The second EMBRIC Transnational Access Call opens on the 15th of February 2018. Project leaders of innovative projects in the field of marine biotechnology can apply for funded access to high-quality facilities and pioneering technology platforms from five European Research Infrastructures. Included are: laboratory fees, technical, scientific and administrative support as well as travel and subsistence costs. The call closes on the 30th of April 2018.

The European Marine Biological Research Infrastructure Cluster (EMBRIC) is designed to accelerate the pace of scientific discovery and innovation from marine Bio-Resources. EMBRIC aims to promote new applications derived from marine organisms in fields such as drug discovery, novel foods and food ingredients, aquaculture selective breeding and cosmetics. EMBRIC began in June 2015 and will run until May 2019 and is coordinated by the Université Pierre et Marie Curie, Paris, France. Scientists from academia and industry are invited to apply with innovative projects in the marine biotechnology sector. To develop their research projects, applicants can choose between 21 Access Providers, which are all institutions affiliated with the European Research Infrastructures AQUAEXCEL, ELIXIR, EMBRC, EU-OPENSCREEN and MIRRI. When selected, two researchers per project can benefit for up to 30 days from the free-of-charge use of laboratories and support from associated expert personnel. It is mportant to highlight that the access must be transnational, the home institution of the project leader cannot be situated in the same country as the access providers. Before submitting the project proposal, the project leader should get in touch with the selected Access Providers to verify the technical feasibility of the research. The contact details of each Access Provider are listed on the EMBRIC website. Once submitted, the project proposals are reviewed by a User Selection Panel. This panel consists of international experts from the marine biotechnology field and evaluates the proposals according to three criteria: scientific excellence, benefit of the access to different Research Infrastructures and the expected impact

Within the first Transnational Access Call (TA). ten different research projects were funded. The Institute Pasteur recently organized a workshop in which Users, Access Providers and Research Infrastructures provided feedback. Christian Galasso from the Stazione Zoologica Anton Dohrn (SZN) in Naples highlighted "EMBRIC gave me the chance to use state-of-the-art aquaculture and bioassay facilities. I obtained and results established excellent new collaborations with colleagues at the Access Providers for further papers and projects".

Isabel Cunha from the Interdisciplinary Centre of Marine and Environmental Research (CIIMAR) in Porto stated that the project "gave me the chance access transcriptomic and proteomic to equipment, not available in my institute. Results of experiments will help me to determine the composition of adhesive proteins produced by marine barnacles." Overall, users were very impressed by the state-of-the-art equipment of the accessed facilities and the help received from its associated personnel. Most of the work done at EMBRIC facilities leads to publications in peerreviewed journals. Davide Di Cioccio, who coordinates the TA call, is hoping for as many

exciting and diverse proposals for the second Transnational Access Call as were submitted for the first one. For more information visit: www.embric.eu/access/TA.



No news from sea this month I'm afraid

I know that this is a favourite section for many readers, where we get the inside information about life at sea, its thrills and spills. So please the next time you are at sea or carrying out any fieldwork, please remember that a simple paragraph or two will get you published here. – Ed

CALENDAR

8th-9th May 2018: Arctic Circle Forum Tórshavn. Faroe Islands

The Arctic Circle Secretariat announces that registration is now open for the Arctic Circle Forum to be held in Torshavn, organized in cooperation with the Government of the Faroe Islands. Governments, universities, companies, research institutions, organizations and associations are welcome.



In order to ensure that Arctic Circle participants will have hotel rooms in close proximity to the Nordic House, we have blocked rooms at Tórshavn hotels, which can be booked by contacting thorbjorgf@icelandtravel.is. In order to secure such rooms, it is necessary to register early. Participants registering at the last minute might face the possibility that only hotel rooms at a greater distance from the venue will be available.

The Forum's themes are:

Innovations for sustainable economic development

Prospects for new and existing businesses in the Arctic, focusing on IT, digitalization, fishing, shipping, maritime services, energy, tourism, food.

Transport, investment and infrastructure

Exploring priorities for infrastructure and investments to promote advancement and growth: maritime transport, telecommunications, education and research.

Dynamic communities

Meeting demographic and societal challenges in Arctic societies: gender equality, e-health, community food and energy sustainability.

For more information, and the latest draft programme, visit : www.arcticcircle.org/forums/ faroeislands.

24th May 2018: 61st Marine Measurement Forum

Teddington, UK

The Steering Group for the non-profit making Marine Measurement Forum (MMF) series of twice yearly, one day networking seminars is delighted to announce details for the forthcoming MMF61. The event will be hosted by the National Physical Laboratory (NPL) in Teddington, Middlesex. Detailed information on the day's proceedings, including a call for presentations and event registration, can be found at http://www.npl.co.uk/events/24-may-2018-the-61st-marine-measurement-forum-mmf

28th May to 1st June 2018: 50th International Liege Colloquium on Ocean Dynamics: Longterm studies in oceanography – a celebration of 50 years of science at the Liege Colloquium *Liège, Belgium* In 2018 we arrive at the 50th edition of the Colloquium of International Liège Ocean Dynamics, a perfect reason to celebrate and review the advances made in studying the oceans during the last several decades. In particular, this edition will be dedicated to long-term studies in oceanography. Our knowledge about the ocean has changed dramatically over these past 50 years, as has the availability and quality of data and tools to study the ocean. The ocean plays a crucial role in the regulation of the Earth's climate. As climate change poses an unprecedented threat to the Earth environment, studies that focus on the long-term variation of the ocean and its response to climate change have therefore become essential to understand and monitor the Earth climate.

Sessions:

Ocean dynamics & climate change

- Studies addressing the impact of climate change on ocean dynamics, and the influence of the ocean on climate.
- Oceanic climate records (datasets, methods and comparisons)
- Generic studies about model-based and observation-based datasets (reanalyses, reconstructions), their validation and intercomparisons. and studies about methods specific for multidecadal reanalyses and reconstructions (assimilation, bias corrections and drift corrections). Reprocessing and intercallibration of multi-mission datasets.

Coastal and regional processes

Studies focusing on long-term variability and local trends of specific regions, including downscaling of large scale climatic processes.

Trends in polar regions

Abstracts on the trends of ocean and sea ice dynamics of polar regions, influence of climate on their variability and the impact of these regions on the global climate system.

Biogeochemical processes

- Studies about oceanic long-term ecosystem changes induced by climate variability.
- Long-term trends in oceanography (open session)
- An open session for all studies on the multidecadal study of the ocean. Abstracts that do not fit in other session can be submitted here.

Further details are available at: <u>http://labos.ulg.ac.</u> be/gher/home/colloquium/colloquium-2018/.

We are looking forward to welcoming you in Liège in the name of the Organizing Committee: Aida Alvera Azcarate, ULG, Belgium Jean-Marie Beckers, ULG, Belgium Hugues Goosse, UCL, Belgium

4th-8th June 2018: 4th International Symposium on The Effects of Climate Change on The World's Oceans

Washington D.C., USA * REGISTER: On-line http://meetings.pices.int/meetings/international/20 18/climate-change/registration

Check sessions:

http://meetings.pices.int/meetings/international/20 18/climate-change/Program

A good IMBeR relevant session is S13: Multiple stressors at multiple scales: ecosystem based management in the face of changing ocean conditions

* APPLY: Financial Support http://meetings.pices.int/meetings/international/20 18/climate-change/support

We look forward to seeing you in Washington D.C. - ECCWO Symposium Convenors

12th-14th June 2018: ESSAS Annual Science meeting

Fairbanks, Alaska, USA

IMBeR

Integrated Marine Biosphere Research

IMBeR events that you should attend in 2018!

 ESSAS Annual Science meeting focusing on remote sensing applications in the study of climate change impacts on high-latitude ecosystems will be held in Fairbanks, Alaska, USA from 12-14 June 2018. Registration and abstract submission is now open. Submit abstracts before 15 April!

15th-26th June 2018: POLAR2018 - Where the Poles come together, a SCAR/IASC Conference

imber@imr.no

Davos, Switzerland

The Scientific Committee on Antarctic Research SCAR and the International Arctic Science Committee IASC invite the international polar and high altitude community to their joint meeting POLAR2018, hosted by WSL and SLF. 15 - 18 June 2018: SCAR and IASC/ASSW
Business & Satellite Meetings
19 - 23 June 2018: SCAR/IASC Open Science
Conference, including the COMNAP Symposium
24 - 26 June 2018 SCAR Delegates Meeting &
2018 Arctic Observing Summit

The goal of POLAR2018 is to bring together excellent research from both poles, as well as from high altitude areas, focusing on the similar challenges those regions face. The program features 65 different sessions, structured into 12 categories. In addition to the parallel sessions, central elements of the Open Science Conference (OSC) will be keynote presentations, minisymposia, extended poster sessions. and exhibitions. The annual COMNAP symposium will be held during the OSC, as well as a plenary lecture from the 2018 Arctic Observing Summit as an opening to this biennial summit immediately after the OSC. A range of excursions and trips will allow participants to make the most of coming to the Swiss Alps and enjoy science, nature, culture, and sports.

Davos

POLAR2018 will be held in the Swiss mountain town of Davos, which can easily be reached by train from Zurich Airport. Davos, Europe's highest city, is situated in the Eastern part of the Swiss Alps at 1560 meters above sea level. It offers an advanced congress infrastructure and a wide range of accommodation for all budgets. The stunning alpine environment will ensure your visit is an enjoyable experience. We are looking forward to welcoming you in Davos in June 2018.

3rd - 12th September 2018: 1st ODYSSEA Summer School, Operational Oceanography in the era of Blue Growth

Kavala, Greece

The call for applications for the 1st ODYSSEA Summer School "Operational Oceanography in the era of Blue Growth" is now open (closing date: 20th May 2018). The Summer school will be held at the Akontisma Hotel, Nea Karvali, Kavala, Greece.

The overall objective of the 1st ODYSSEA Summer School is to stimulate a scientific dialogue and create a learning experience about operational oceanography in the Mediterranean context. More precisely, after the end of the program, the trainees, coming from both sides of the Mediterranean Sea basin, will be able to:

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The 1st ODYSSEA Summer School introduces trainees to all stages of operational oceanography, aiming towards the Blue Growth of the Mediterranean Sea. Full details and registration: http://odysseaplatform.eu/events/ope rational-oceanography-for-science-business-and-society/

10th-13th September 2018: 18th Biennial Conference of the Challenger Society Newcastle upon Tyne, UK

Registration is now open for the 18th Biennial Conference of the Challenger Society for Marine Science: conferences.ncl.ac.uk/challenger-2018/ registration/. For a list of available sessions, to submit an abstract or check for details and news please visit our website conferences.ncl.ac.uk/ challenger-2018/. We look forward to seeing you in Newcastle upon Tyne in September - Dr Alan Jamieson, Challenger Conference 2018: Organising committee chair.

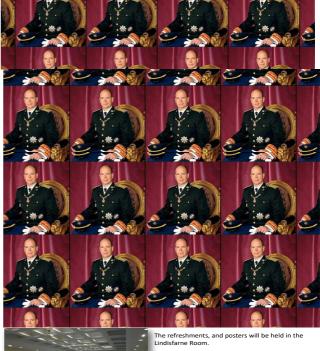


This year we are privileged to welcome as special keynote speaker, His Serene Highness Albert II, Sovereign Prince of Monaco - The Prince Albert II of Monaco Foundation who will be present on the final day.



The mini-expo will run over 3 days (10th,11th and 13th) The conference normally rotates between the major UK marine research establishments, but 2018 sees the first visit to the University of Newcastle. The Venue is impressive and the exhibition space for sponsors is large, and colocated with the refreshments and close to posters and lecture rooms with good access for exhibitors.

The society is now the adhering body for the Scientific Committee on Oceanic Research (SCOR) providing yet more exposure for participating companies.





Stand positions are taken on a first come first served basis, preference will be accommodated if possible.



17th -19th September 2018: 8th China - Japan - Korea IMBeR Symposium

Shanghai, China

This symposium will be hosted by the State Key Laboratory of Estuarine and Coastal Research http://english.sklec.ecnu.edu.cn/ (SKLEC), East China Normal University http://english.ecnu.edu. cn/ (ECNU).

Marine science researchers from China, Japan, and Korea have been working actively at the frontier in the areas of Global Ocean Ecosystem Dynamics (GLOBEC) and Integrated Marine Biogeochemistry and Ecosystem Research (IMBER) since the early 1990s. Various scientific workshops and/or training activities have taken place among the three neighbouring countries since then. Starting in 2002, the China-Japan-Korea GLOBEC/IMBER symposia have been an important venue for scientific exchange across focused marine science disciplines in the West Pacific region. IMBER became the core project under Future Earth in 2016 and changed its name "IMBeR (Integrated Marine Biosphere to Research)", IMBeR has focussed on interdisciplinary research in the ocean. atmosphere. and continental shelf. This interdisciplinary approach contributes to the combination of natural sciences and social sciences in order to achieve the greatest effect of ocean management and policy development and to achieve sustainable development of the ocean.

The 8th China-Japan-Korea IMBeR Symposium will focus on analyzing the impact of climate change and anthropogenic forcing on physical processes and biogeochemical cycles, ecosystem structure and functions, and fisheries in the West Pacific region; particularly how these complex interactions in combination, influence marine ecosystems and human society.

The following topics will be included in this symposium:

1. Advances in observation and modelling of physical and biogeochemical processes in the West Pacific region

2. The response of marine ecosystems to natural and anthropogenic forcing: past, present and future

3. The Response of Society to global change in marine systems: ways forward

The Scientific Program Committee invite all

experts, young scientists and students working on the West Pacific region to the forum. For online Registration and Abstract Submission visit: http://mform.imr.no/view.php?id=78294. The deadline for abstracts is the 15th June 2018.

17th-21st September 2018: 53rd European Marine Biology Symposium

Ostend, Belgium

The Flanders Marine Institute (VLIZ) and LifeWatch Belgium are organizing the 53rd edition of the European Marine Biology Symposium The EMBS53 Organizing (EMBS53). and Scientific Committee are pleased to welcome your abstract submissions for oral papers and scientific posters. We particularly welcome papers on 'Marine Biology from a Historical Perspective', 'Science in a Modern Era', 'Marine and Coastal Citizen Science' and 'Science in the North Sea'. The deadline for abstract submissions is the 15th April 2018.

Please note that no extensions to the deadline will be granted and that presenting authors are responsible for registration, travel and accommodation costs. Presenters who are unable to attend should arrange for another qualified individual to present the paper or poster in question (with notification to the Organizing Committee). All abstract submissions should be submitted via our abstract submission form http://www.embs53.org/submit.

We are glad to announce that the Journal of the Marine Biological Association (JMBA) kindly offers to publishing a special issue of the EMBS53 conference (scheduled for October 2019). Everyone who contributes a poster or an oral presentation at the EMBS53 is invited to submit a manuscript by 7th December, 2018. All manuscripts will go through a peer-review process.

Important dates:

-Deadline abstract submission (there will be NO extension of the deadlines): 15th April 2018 -Notification of abstract acceptance: 15th May 2018

-Deadline early bird registration: 31st May 2018 -Deadline late registration: 31st August 2018

For more information: http://www.embs53.org/.

- Leen Vandepitte, on behalf of the EMBS53 Organizing Committee.

15th-19th October 2018: 4th CLIOTOP Symposium, Oceanic biodiversity under climate change Keelung, Taiwan



19th-21st October 2018: 6th Arctic Circle assembly

Reykjavik, Iceland



2018 ASSEMBLY BREAKOUT SESSIONS

Proposals are now being accepted for Breakout Sessions at the Sixth Arctic Circle Assembly to be held October 19 - 21, 2018 in Reykjavík, Iceland.

Participation will be granted based on session topic, area of focus, goals, and room availability at the Harpa Reykjavík Concert Hall and Conference Center. When proposals are submitted, 50% of speakers need to be confirmed.

SUBMISSION DEADLINE: MAY 15th, 2018

Submit proposals to Secretariat@ArcticCircle.org

Over 120 sessions were held at the 2017 Arctic Circle Assembly, with more than 600 speakers. Programs from previous Assemblies, which list all past breakout sessions, may be found at <u>www.arcticcircle.org</u>. The Arctic Circle provides an open, democratic forum for discussion and cooperation on Arctic Affairs.

31st October-2nd November 2018: MASTS 8th Annual Science Meeting 2018, "Challenges and innovative solutions for sustainable seas" *Glasgow, UK*

The 2018 ASM will examine the modern challenges that face our marine waters, and identify ways and means to conserve and sustainably use the oceans, seas and marine resources for sustainable development. This

cross-disciplinary meeting brings together members of the marine science community, with the aim of promoting and communicating research excellence and forging new scientific collaborations. The cross-disciplinary nature of the event as well as the high calibre of the selected talks means that scientists can broaden their knowledge in marine science as well as benefit from expertise and ideas gained in a range of fields other than their own.

Science presentations and e-poster sessions will take place on the first two days (Wednesday 31st October and Thursday 1st November), together with Plenary Speakers and opportunities to network. A call for abstracts will be issued in late April. Please get in touch if you would like to host a special session on one of the first two days.

On the third day of the MASTS Annual Science meeting (Friday 2nd November 2018), MASTS provide the facilities for people to run workshops or meetings. We have a variety of rooms of differing sizes that can be set up as you need, and you would be responsible for the content and running of the workshop itself. Previous workshops have included invited talks, the provision of training, proposal writing, project meetings, discussion groups etc - the choice is yours. **Please get in touch if you would like to host a workshop on day three.**

Anyone interested in exhibiting at the 2018 event, or anyone wishing to showcase or demonstrate a piece of kit/equipment should also get in touch.

We are delighted that IMarEST is sponsoring the student prizes for the 2018 ASM. Best Presentation - £200 first prize and a £100 second prize & Best Poster - £130 first prize and a £70 second prize.

5th-7th November 2018: International Conference on Marine Data and Information Systems *Barcelona, Spain*



21st November 2018: Joint meeting of the Challenger Society History SIG and the Royal Met Soc History Group

NOC, Southampton, UK

A meeting is being planned, sponsored jointly by the Challenger Society History SIG and the Royal Met Soc History Group. It will focus on how our ability to collect ocean temperature and salinity profiles has developed from the era of the Challenger Expedition (1870s) to the present day when the Argo array of profiling floats now provides global coverage. It will also highlight the products derived from these data and will look towards future developments. More information will be circulated as it becomes available.

17th – 21st June 2019: IMBER 2nd Open Science Conference *Brest. France*



The CSMS email address is info@challenger-society.org.uk. Contributions for next month's edition of Challenger Wave should be sent to: john@vectisenvironmental.com by the 30th April.

We continue to send printed copies of Challenger Wave to members of the CSMS without email addresses. However it is in everybody's interest to send your email address to Jennifer Jones, jxj@noc.ac.uk, as soon as possible



PhD studentship in Antarctic physical oceanography: School of Environmental Sciences, UEA

Observing the Antarctic Slope Undercurrent using ocean gliders

A fully funded (3.5 years) PhD studentship is available on the COMPASS ERC project working with Professor Karen Heywood at the Centre for Ocean and Atmospheric Sciences, School of Environmental Sciences, University of East Anglia.

Physical processes on the continental shelf and slope around Antarctica are crucially important for determining future sea level rise, for setting the properties and volume of dense bottom water exported globally, and for regulating the carbon cycle. Yet our ability to model and predict these processes over future decades is still rudimentary. This lack of understanding originates from a paucity of observations in this inaccessible region. This PhD is part of the ERC-funded COMPASS project, in which we will use new technology – autonomous underwater vehicles called gliders – to observe and understand processes on the Antarctic shelf and slope.

The boundary between shelf waters and those offshore is marked by the Antarctic Slope Front, associated with a westward surface current. Beneath this, an eastward undercurrent, located on the continental slope, has been revealed by the limited observations in this region. The dynamics of the undercurrent are hypothesised though not yet demonstrated. It is believed to be almost circumpolar, and may play an important role in bringing warm water onto the continental shelf.

You will deploy profiling ocean gliders to characterise the slope undercurrent at various locations around Antarctica, supplemented by existing current meter records. You will use the data to assess the dynamics of the undercurrent, and will also determine its presence (or otherwise) in our cutting-edge ocean models.

You will be trained in physical oceanography, science communication, data analysis and programming in Matlab. You will learn oceanographic observational techniques through participation in research cruises and glider campaigns, and join the UEA glider science group (http://avf.uea.ac.uk/sea/).

You will have a physical science degree and enthusiasm to observe and understand ocean processes. Experience of a programming language such as Matlab would be helpful.

The studentship funding, including fees and stipend, is available for EU (including UK) students.

https://www.findaphd.com/search/ProjectDetails.aspx?PJID=91389

Deadline for applications 30th April.

There are jobs on the IMBER web site

http://www.imber.info

