April 2012

Circulation

The Quarterly NCAS Newsletter

4

Welcome

This month's newsletter is largely filled with current and upcoming field projects. Spring means that people are gearing up to go out to make measurements. Good luck to everyone heading out into the field.

Returning back from spring break/Easter is always harder than it should be, so as ever, get yourself a cup of something and spend 5 minutes catching up with the newsletter. I hope people continue find the newsletter useful, judging by the increasing number of content submissions it seems like we're gathering a few readers. Thanks for reading. Felicity

APPOSITE

& Arctic Predictability

By Jonny Day

As the Arctic Ocean sea ice cover reduces over time, new opportunities for frontier industries open up. One of particular note is the Northern Sea Route (NSR). Use of this route reduces haulage time (and potentially therefore cost) between some European and Asian destinations. Use of such waterways has previously been inhibited due to the presence of thick multi-year sea ice. This has reduced in recent decades and since 2007 the NSR and Northwest Passage have been temporarily free of ice in the summer allowing shipping traffic.

Prediction of both sea ice and surface condition is important for industry logistic operations in the Arctic. The **NERC funded Arctic Potential Predictability On Seasonal to Inter-annual TimE scales (APPOSITE)** project aims to address this issue by determining the mechanisms through which the Arctic climate is predictable on seasonal to inter-annual time scales. The results of this project will be useful in developing recommendations for operational forecasting groups, including the Met Office who are developing operational sea ice prediction as part of their new seasonal prediction system, GloSea4.

The APPOSITE project is an international effort comprising a multi-model inter-comparison project with 14 models and involving members from 11 institutions. The core team, based in NCAS-Climate at the University of Reading, are Ed Hawkins, Dan Hodson, Keith Haines, Rowan Sutton, Jonny Day and Steffen Tietsche. Steffen will be joining the team in May having completed his PhD at Max-Planck institute for meteorology, Hamburg. A PhD studentship is also attached to APPOSITE; the student will focus on the opening of shipping routes in the Arctic, their project will be conducted in collaboration with the engineering, science and technology consultancy, BMT Group LTD.

For regular scientific updates, please follow APPOSITE on twitter: @arcticpredict

Have your say

Got news? New NCAS staff member starting? Published a paper? Want to nominate a Scientist to be featured in a profile? Got an idea for a feature for the Newsletter? Having a meeting, seminar or talk? Please contact Felicity. The deadline is 23rd June.

National Centre for Atmospheric Science
NATURAL ENVIRONMENT RESEARCH COUNCIL

Staff News

We welcome

Ali Gane has recently started and will be working as an assistant administrator within the Operational Team at the University of Leeds.

Jon Petch recently began the role of JWCRP Manager, he is based at the Met Office. This role is 0.5FTE.

Shalini Punjabi is providing Katie Read's maternity cover at the University of York.

Other Staff News

Glen Carver is on secondment from Cambridge/NCAS, working as a consultant at ECMWF on the "OpenIFS" project. OpenIFS is a new project at ECMWF to develop an exportable, academic, version of the main IFS forecast model at ECMWF. Similar in idea to the UM though ECMWF will be focussing on climate research, more on short and medium range forecasting. It is hoped that this role will open up new possibilities for NCAS research.

ARRAN

Summer School 2012

The NCAS Atmospheric Measurement Summer School 2012 will be held on the Isle of Arran between the 9th and 21st of September.

This two-week field course is aimed at atmospheric science PhD students and early career researchers. Over the two weeks we introduce the basics of atmospheric science and teach the participants how good quality atmospheric measurements are made.

The first week of the course is based at the Kildonan Hotel where lectures are given by expert atmospheric scientists on a variety of topics including atmospheric dynamics, weather forecasting, and atmospheric chemistry and physics. For the second week we move north to the Lochranza field centre where the background knowledge gained in the first week forms the basis for the practical activities.

These activities will give participants hands-on experience of making atmospheric measurements. This is also an excellent opportunity to meet other young researchers working in the same field and network with senior scientists who are experienced in carrying out fieldwork.

The course is aimed primarily at first and second year PhD students but it is also open to early career researchers who are new to atmospheric field work. To register go to www.ncas.ac.uk/AMSS and follow the link to the application form. The course is fully funded for NERC students and for non-NERC students the fee will be around £1000. This does not include travel to and from Arran which must be covered by all students.

The deadline for registration is 31st May 2012. For more information email s.moller@leeds.ac.uk or visit www.ncas.ac.uk/AMSS. There is also a poster/flyer available for download from this website for you to publicise this event in your department.

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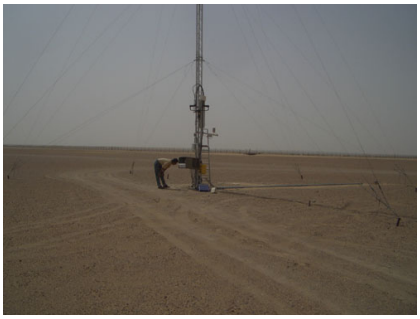
In the Field

FENNEC

The FENNEC supersite is located in Bordj-Badji Mokhtar, SW Algeria, central Sahara. Measurements being made during the Extended Observation Period (EOP) include near-surface meteorology using a 15m mast, i.e. temperature (air), humidity, pressure, radiative and ground fluxes, winds (10 & 15 m, using sonics so fluxes).



Pictures above - from left to right. Surface flux measurments at the supersite, the 15m met tower and the central control centre.

For the Intensive Observation Period (June 2011), measurements include all of the above, supplemented with radiosondes, doppler lidar, sodar, inverse nephelometer + reflectometer, sun photometer, and dust sampler.

The site was set up in May 2011 and will be running indefinitely. Local staff from the Office National de Météorologie, Algeria will be managing the site and have been trained in operating the instruments.

SAMBBA

The South AMerican Biomass Burning Analysis (SAMBBA) is a project investigating the effect of biomass burning on the climate.

Biomass burning aerosols have a significant influence on climate – both directly as they scatter and absorb solar radiation – and indirectly as they influence cloud optical properties and lifetime through their ability to act as sites for cloud droplet formation. SAMBBA aims to improve our ability to: quantify and predict biomass burning and biogenic aerosol, their precursors and key processes; assess their influence on the radiative budget; and improve our knowledge of their influence on clouds through a major airborne study in Amazonia.

Flights for this project take place in September 2012. NCAS staff involved include, Hugh Coe, Paul Williams, James Dorsey (Manchester), Jim Hopkins (York) and David Oram (UEA).

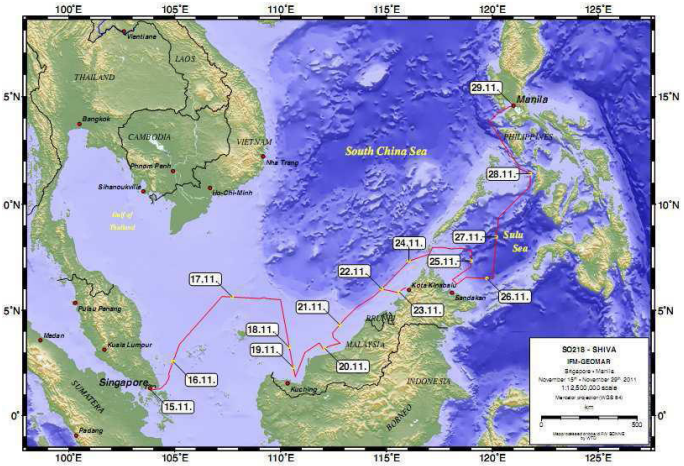
SHIVA

Stratospheric ozone: Halogen Impacts in a Varying Atmosphere (SHIVA) is a three year project to investigating the influence of short-lived halocarbons on present day and future levels of stratospheric ozone. SHIVA is an EU-funded project involving ground, ship, aircraft and satellite measurements.

NCAS staff involved include David Oram and Trevor Ingham. There was a large fieldwork campaign in Borneo last November and December (2011).

The co-ordinated campaign consisted of (i) a cruise on the German research vessel Sonne between Singapore and Manila (Figure 1, below); (ii) an aircraft campaign with the DLR Falcon based at Miri, Sarawak; (iii) a ground-based campaign at Bohey Dulang island, Sabah; (iv) four local ship cruises organised by our Malaysian colleagues; and (v) laboratory-based and in situ measurements examining the fluxes of halocarbons from tropical marine biota.

Visit the SHIVA website for more information



about this project.

http://shiva.iup.uni-heidelberg.de/index.html

Figure 1 - above - cruise of the German research

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