

January 2012

Circulation

The Quarterly NCAS Newsletter

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Welcome

I hope everyone had a relaxing break without too much rushing around or the inevitable stress of family gatherings, long distance travelling, over eating and perhaps even over drinking... Welcome back, and hello to 2012. Get yourself a cup of tea and sit down with the quarterly newsletter to ease yourself back into work.

Many in NCAS had an extremely busy start to the winter, the DIAMET team were tested to the limit, flying in intense storms that battered Scotland. And Paul Williams was interviewed for radio, television and in newspapers with his paper that looked at the representation of weather in classical music.

Other happenings of note, NERC has appointed a new Chief Executive - Duncan Wingham.

Happy New Year - Felicity

In the News

The monthly scientist profiles continue with Ian Renfrew from the University of East Anglia for December.

Representation of Weather in Classical Music. Paul Williams co-authored paper with Karen Aplin on the representation of weather in classical music received lots of media attention. In particular Paul gave interviews for The PM Programme on BBC Radio 4, The In Tune Programme, BBC Radio 3, The Other One Show, BBC Three Counties Radio. MP3's of some of the interviews can be found on Paul's Website - <http://www.met.rdg.ac.uk/~williams/media>

The paper also feature in articles in The Financial Times, New Scientist, and Paul did a TV interview for

The Weather Network in Canada. The academic article can be found : http://www.met.rdg.ac.uk/~williams/publications/wea_765.pdf

Geraint Vaughan was interviewed on BBC Wales for their welsh language science programme.

Stephen Mobbs has been interviewed on BBC Wiltshire & BBC Swindon regarding the detection of ash in the atmosphere.

Staff News

NCAS Radar. Profs. Chris Collier and Alan Blyth along with Dr Lindsay Bennett visited Selex Gematronik in Germany at the end of December to inspect the new NCAS mobile radar.



The visit included some initial training on the hardware of the system and ended with the Factory Acceptance Test, an approval by NCAS to accept the radar. The radar will be shipped over to Leeds at the end of January where a 3-week programme of training will occur. A more detailed news article will be published after the radar's arrival in Leeds next year.



**National Centre for
Atmospheric Science**
NATURAL ENVIRONMENT RESEARCH COUNCIL

Research team wins major European computing award for global climate modelling

Release Date : 07 November 2011

A significant step forward has been taken in the study of current and future climate with the award of a new grant that allows a team led by the University of Reading to use one of the world's most powerful computers.

The Partnership for Advanced Computing in Europe (PRACE) Access Committee has granted substantial computing resources to a Joint Weather & Climate Research Programme (JWCRP) team of researchers. The team comprises climate scientists at the Met Office and at the National Centre for Atmospheric Science (NCAS) Climate, and is led by Pier Luigi Vidale, Willis Professor of Climate System Science and Climate Hazards at the University of Reading's Meteorology department and Director of the Weather and Climate Hazards Laboratory.

Professor Vidale's team will use the HERMIT (a TIER-0 machine) supercomputer in Stuttgart, Germany, to conduct a series of 25-year simulations under both current climate conditions and a climate change scenario. Out of the 53 project applications submitted to PRACE, only 24 have been awarded a share of the available 610 million core-hours. The JWCRP team has been awarded 144 million core-hours computing time, the largest amount assigned to one team.

Professor Vidale said: "With our current level of resources on national TIER-1 machines, this experiment would take 33 years to complete. Access to HERMIT is a true quantum-leap for UK climate science. We are grateful to PRACE for the continued international recognition of our team's world-leading capability in climate modelling."

PRACE is an association of 21 member countries creating a pan-European research infrastructure for large-scale scientific and engineering applications at the highest performance level.

Research Partnership with NSSL

A new three-year partnership is set to support collaboration between the US National Severe Storms Laboratory (NSSL) and the UK's National

Centre for Atmospheric Science. The recent signing of a Memorandum of Agreement (MOA) between the two institutes signals the start of this partnership.

The overlap of skills and research areas between the organisations will allow both parties to gain from the collaborative agreement. Research, educational activities and events will benefit including the development, use and maintenance of observing systems, the use and development of modelling tools over very similar areas of research and the sharing of skills in many different areas.

The MOA has recently been signed by Stephen Mobbs of NCAS, and Mark Brown of NSSL, and takes effect immediately. Plans to implement this partnership include to regularly and formally exchange information, to coordinate research and education programmes and the development of joint research projects.

New Instrument

A new instrument for the measurement of N₂O fluxes has been part funded by the Manchester University Faculty of Engineering and Physical Sciences. The instrument can be used in ground based eddy correlation flux systems for field scale emission studies as well as on aircraft for national scale emission studies. It will be used initially on the FAAM aircraft to measure N₂O as part of the Methane and other greenhouse gases in the Arctic – Measurements, process studies and Modelling (MAMM) project. The instrument is currently being installed and certified ready for Arctic missions next year and will form part of a PhD student project in collaboration with FAAM.

NERC have provided technology funding for "Demonstration of an Aircraft System for Real-Time Discrimination & Reporting of Dust, Volcanic Ash, Ice and Super-cooled Water Particles." The miniature prototype instrument has been designed for routine operation on commercial Airbus aircraft. The Co-I for this project is Dr James Dorsey, NCAS-FGAM.



In the Field

DIAMET continues

DIAMET (DIAbatic influence on Mesoscale structures in ExTropical storms) is a NERC consortium project, funded as part of the Storm Risk Mitigation Programme. It involves the Universities of Manchester, Leeds, Reading and East Anglia and the National Centre for Earth Observation (NCEO), with the Met Office extensively involved as project partners. Its aim is to improve the forecasting of severe weather over the UK arising from mesoscale structures in cyclonic storms.

The second intensive flight campaign took place in November and December 2011. The weather was exceptional, with one of the most intense storms of recent years hitting the west coast of Scotland. The DIAMET team were there to make measurements!

Extensive wind damage, flooding and the closure of roads and schools as a result of this storm indicates just how severe it was.

The FAAM aircraft (the ARA) flew up the west coast of Scotland, and out into the Atlantic to the west, refuelled in Teeside, and then flew some low level runs over the north sea to the east of Scotland. Apparently the ride was bumpy!

The DIAMET blog is a good source of up to date information about what happened, and what is planned for the future <http://ncasweb.leeds.ac.uk/diamet/>

The DIAMET team also dealt with a great deal of media interest, with members of the team appearing on radio, tv and in the newspapers.

OPMs

It's that time of year again, the annual submission of the Output Performance Measures (OPMs). This is the information that we submit to NERC, and it consists of details about our Publications, Achievements, Awards and Prizes, Patents, Public Engagement and Science into Policy.

The NCAS database, found on the website, is where most of this information comes from. Up to date

publications information for the calendar year 2011, is the most urgent information that we require from all staff, and we would really appreciate as much information about the other categories as possible. You can upload publications in bulk using a number of formats such as endnote and bibtex. If you require more information about how to do this, or any help please contact me by e-mail felicity.perry@ncas.ac.uk

Logging onto the database.

Go to your people page and then click 'log in' found in the top right corner. If you've never logged in before then you will need to enter your email address (the one we have, this is shown on your people page) and then click 'forgotten password?', you will be sent a password via email. This also works if you've actually forgotten your password.

dates for your **Calendar**

ES4 - Earth System Science Spring School. **18th to the 30th March 2012**. Southampton. The deadline for applications to attend the summer school is 12 pm (noon) on 31st January 2012. See Page 4 for more information on the course and how to apply. Please advertise to PhD students.

A joint NCAS-Royal Meteorological Society Meeting at Imperial College, London, at 2 pm on Wednesday **18th April 2012**. The topic of the meeting is 'Chemical Meteorology: Linking weather and atmospheric composition'. This meeting is open to all.

Further details: <http://www.rmets.org/events/detail.php?ID=4659>

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 March 2012.



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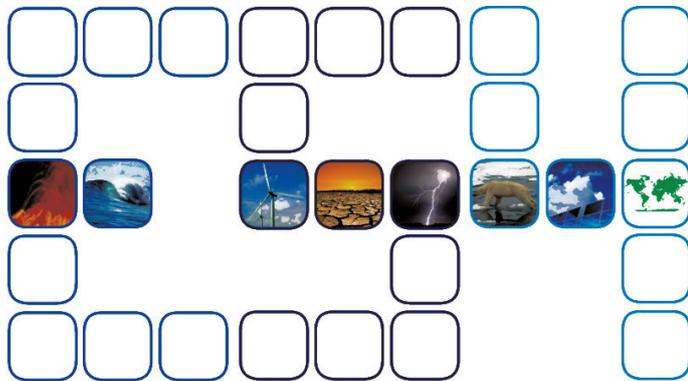
Summer Schools

For more information please see www.ncas.ac.uk/es4. To apply please visit

ES4 - The Earth System Science Spring School 2012

will take place in Southampton between 18th and 30th March. The school will be based at the National Oceanographic Centre and accommodation is provided at the Holiday Inn 15 minutes walk away on the edge of Southampton Water. ES4 will provide PhD students and early-career researchers* with a broad foundation in earth system science and its applications. The school is managed by NCAS and involves several major UK research institutes allowing access to the knowledge and expertise of renowned scientists. ES4 will deliver an intensive programme including earth, marine, terrestrial, atmospheric and polar science.

ES4 provides students with a background in Earth



systems and how they interact. A wider knowledge of the Earth's systems allows students to place their research into context and encourages collaborations across disciplines. A mixture of lectures and practical sessions are used to deliver the course content, providing both scientific knowledge and hands-on experience.

As well as formal learning, students will get experience of field work; one day will be spent on the Isle of Wight looking at how changes in the environment are recorded in the rocks; Students will get an introduction to oceanography on the NOC research vessel the RV Callista. Students also present their own work, allowing them a relaxed environment to practice presentation skills and to learn about each other's work. During the course there will be a strong emphasis on student participation and community building, with the intention to create lasting networks.

The cost of the course is £300 which includes accommodation, meals and all organised activities.

<http://www.ncas.ac.uk/onlinebooking/index.php/summer-schools>

and fill out the application form. Students will then be contacted by email and asked to provide a CV and your supervisor may be asked to provide a supporting statement. Applications must be made by 12 pm (noon) on 31st January 2012. If you have any questions or queries please contact the NCAS Education and Development Manager by email: s.moller@leeds.ac.uk.

*ES4 is open to NERC funded PhD students and researchers in the first instance.