Meteorological Observing Systems
Special Interest Group

Newsletter Issue 35
Spring 2013
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Front Cover Photo - QR Scan code for our new Facebook page

QR – link to our RMetS webpage
Introduction

Welcome everyone to the 35th edition of the Meteorological Observing Systems Special Interest Group newsletter.

Couple of items to note –

Please notice that we have opened a trial Facebook page to try and promote discussion and hopefully pull in some new members to the group. There is a link and a QR scan code for the more technical among us to help you find it. Also we have produced a new flyer for any manufacturers and institutes out there to use on their exhibition stands to help advertise the group. This flyer has been sent out with the newsletter. Thanks.

Hope you enjoy this edition!

Mark Dutton, Newsletter Editor

Group Website: Members are encouraged to regularly check the Group's pages on the RMetS website at [http://www.rmets.org/activities/groups/SIG/detail.php?ID=10](http://www.rmets.org/activities/groups/SIG/detail.php?ID=10) for details of meetings and booking information, including on-line registration for meetings. Whilst every effort is made to publicise meetings via the inserts in Weather magazine and the Newsletter the website is the quickest medium of communicating with you.

Have Your Say: This is your Group and your Officers are always happy to receive feedback about what is being done on your behalf. If you have any comments or suggestions on matters relating to the Group and our activities please do not hesitate to get in touch with any Officer. Contact details are shown on the last page of the Newsletter. Suggestions for future meetings and speakers are always very welcome.

Material for Publication: Written material must be in electronic format, preferably in MS Word or Excel, although PDF format can be accepted. Digital image format should be JPEG (preferable) TIFF or BITMAP. Short news items as email are acceptable. Material can be sent as email attachments to mark@emltd.net, or on floppy disk, CD or DVD to Environmental Measurements Limited, 7 Jupiter Court, Orion Business Park, North Shields. NE29 7SE. Please say if you would like disks returning. In all cases please include your name, address and email or telephone number with submissions. Publication deadlines are 1st March for Spring Newsletters and 1st October for Autumn Newsletters.

Whilst every effort is taken to ensure accuracy, responsibility for the accuracy of material published and opinions expressed lies with individual authors. The Editor is always pleased to receive correspondence on published items which provides correction, clarification or additional detail. This may be included in future editions of the Newsletter. The copyright of photographs and written contributions in this Newsletter remains with individual authors and no reproduction by any means, including electronically, is allowed without permission. Where authorship is not stated copyright rests with the Observing Systems SIG. Permission is hereby granted for unrestricted reproduction and distribution of details of forthcoming meetings.
Chilterns Observatory Trust request

- Do you know of meteorological instruments surplus to requirements and looking for a good home?

One of the principal functions of the Chilterns Observatory Trust is to be able to lend meteorological instruments (at a nominal, one-off rental) to amateur observers, schools, and students. The Trust already has several raingauges, a Campbell Stokes sunshine recorder and a selection of mercury-in-glass thermometers, but it is important to be able to develop a wide-ranging store of instruments, both traditional and electronic.

We have a limited income, so the Trust also needs the goodwill of private companies and institutions to augment our stock of instruments and to help us to replace parts and carry out repairs, and we will be very happy to accept any meteorological equipment that is, for whatever reason, surplus to requirements. The same is true of books and periodicals which are no longer needed.

Contact details as follows:

Philip Eden
Chilterns Observatory Trust
Observatory Lodge
(next to Dell Farm)
The Green,
Whipsnade, DUNSTABLE, LU6 2LG
Tel: 01582 872 226
E-mail: philip@weather-uk.com
The Royal Meteorological Society special interest group for Meteorological Observing System is happy to announce its new Facebook page. In 2013 we will be running a Facebook page on a trail period for member to contribute comment and discussions to the group. Please ‘Like’ the page and join in…! Thanks you!

Forthcoming Meetings

RMetS Meteorological Observing Systems Special Interest Group
AGM 2013

The groups AGM will take place on Thursday 12th Sept. 1515 – 1615 at Reading University. Please email suzy.bingham@metoffice.gov.uk if you will be attending.

Also taking place in Reading that week are:

- **13th EMS Annual Meeting & 11th European Conference and Exhibition on Applications of Meteorology (ECAM)**
  
  Date: 09 – 13 September 2013  
  Location: University of Reading  
  

Followed immediately by…

- **Royal Meteorological Society's Second Amateur Meteorologists' Conference**
  
  Date: Friday 13 September 2013 - Sunday 15 September 2013  
  Location: University of Reading  
  Email: Sue.brown@rmets.org  
  
Introduction:
The world’s second largest geosciences conference took place in Vienna between 7th and 12th April and was this year attended by around 11,000 delegates from 95 countries, producing in excess of 13,000 oral and poster presentations. This conference differed from previous years however, with the novelties of 452 “PICO” (Presenting Interactive COntent) making this year’s symposium the most innovative to date. This new type of presentation brought together the advantages of orals and posters, allowing academic discussions to be as rich and stimulating as ever.

The scope of the European Geosciences Union
At such a vast international conference like the EGU General Assembly there is a substantial variety of science on offer, both in terms of breadth and depth. The enormous scope of earth sciences was evident throughout the week, as each poster, PICO or presentation was divided into one of twenty-three categories ranging from “Nonlinear Processes in Geophysics” to “Planetary and Solar System Sciences”. For those with a keen interest in all things weather-related, perhaps the three most relevant sub-categories were “Climate: Past, Present, Future”, “Hydrological Sciences” and “Atmospheric Sciences”. A complete list of categories, along with a large number of abstracts from oral presentations, can be found at: www.egu2013.eu
Any special mention for meteorological observing systems…?
The oral presentations tended to vary in complexity. Some extremely interesting sessions within the Hydrological Sciences category focused the attention of the listener on the importance of engaging and involving stakeholders and the public with research orientated science. In contrast, the modelling and mathematics involved in some presentations within the “Climate: Past, Present, Future” sub-category were well beyond the understanding of this writer. However, it was sessions of tolerable complexity which resonated and these were to be the most engaging for the meteorological observations enthusiast. For instance, only when listening to such talks as “high-speed photography to study undercatch in tipping-bucket rain gauges” could one truly appreciate the importance of our networks of observational instruments. At a time when predicting the earth’s future climate is so important, all the highly complex and indubitably impressive mathematics in the world will not produce a correct climate prediction model if there is a lack of observation-based instrumentation, and no real measure of the accuracy of the input data. To sum up, whilst posters and presentations on meteorological observing systems were not as plentiful and prominent as the readers of this newsletter might hope, there remained a small contingent of ardent supporters remonstrating against the decline of our surface observation networks in favour of remote sensing alternatives. Furthermore, there were also a notable few championing the importance of an increase in quantity and spatial coverage of ground-based observational networks of instruments. To echo the sentiments of one pre-eminent Professor Emeritus in the introduction to his stimulating presentation…: “Save the rain gauges!”

Life outside of academia at EGU2013
In addition to the academic contingent attending the conference, there was also an exhibition hall where companies sponsoring the event could display their products and services. Some companies exhibited atmospheric monitoring equipment, such as Campbell Scientific who unveiled their new eddy covariance system. There were also a range of publishing companies selling a sizeable assortment of literature mostly covering the broad field of geosciences, some of which would undoubtedly be of great interest to a meteorological observing systems enthusiast. A full list of those companies who were exhibiting can be found at: http://www.egu2013.eu/exhibition/list_of_exhibitors.html

Technology and social media usage at EGU2013
With such an enormous convention centre to negotiate, and thousands of posters and presentations being churned out every day, technology proved to be somewhat of a navigational dream for delegates desiring to dash from a presentation on high-resolution precipitation measurements to a discourse on Saharan Climate, via a revitalising cup of coffee in one of the many poster rooms. For those fortunate enough to be equipped with smart phones, the new ‘EGU2013’ application could be tailored to provide a personalised timetable for any delegate not wishing to turn their EGU Diary Planner into an ink-splattered replica of the Christmas edition of the Radio Times. EGU’s presence on Twitter, Facebook and “the blogosphere” hit unheralded levels for the duration of the event, with over 3,800 tweets being branded with the EGU hashtag (#EGU2013). As a result of the event the official EGU Twitter account gained over 170
new followers and some 130 new people ‘liked’ the EGU’s page on Facebook. Having skinned through a number of conference-related “network blogs” the prevailing view among social-media savvy participants seems to be that the blogs are one of the best things that the EGU does for young scientists as it gives them a venue and a platform to promote their research.

Looking to the future
Many of this year’s attendees of Europe’s largest geosciences conference will have been delighted to learn that the European Geosciences Union General Assembly will be remaining at the Austria Centre Vienna (ACV) for a further 6 years until 2019. Whilst this conference may not be for everybody, there will certainly be at least a handful of posters, presentations or PICOs to suit the budding meteorological observations enthusiast. As one young researcher put it on his network blog, the EGU “provides context for how your small slice of the atmospheric pie fits into the whole Earth system”.

Michael Pollock – Newcastle University
and
Mark Dutton – Environmental Measurements Limited
Research News

Update on the Weather Observations Website (WOW)
Jim Trice, Met Office Land Networks Manager, April 2013.

Background
In June 2011, the Met Office, supported by the Royal Meteorological Society and the Department for Education, launched the new Weather Observations Website (WOW): http://wow.metoffice.gov.uk/

Huge success
Since its launch, its success has exceeded all expectations, as the following statistics demonstrate:
- More than 100 million observations have been received via WOW;
- Over 2800 separate observation sites created;
- Over 520,000 visits to the website, from 173 different countries;

This number of additional observations provides forecasters with a very useful extra source of information, particularly during severe weather events and their onset.

Figure 1: Screenshot of the new Weather Impacts Reports map. The popup box gives the scale definitions for the 5 different “snow impact” levels.
Recent improvements to WOW
Those of you who use WOW will have probably noticed that some significant changes were introduced during March. This included the introduction of some new functionality, as well as some fine-tuning of existing features based on very welcome user feedback. The changes to the site include:

- Reporting of weather impacts, including scale, and associated photos (figure 1);
- New capability to display snow reports tweeted using #uksnow alongside WOW reports of snow (figure 2);
- Display of forecast data alongside WOW observations (figure 2);
- Improvements to data input and display functionality based on user feedback;
- Improved photo display and site-search functionality;
- The routine ingestion of all global WOW data into Met Office databases to enable NWP data assimilation trials and forecaster workstation display development;

Figure 2: Screenshot of WOW snow observations (dark blue boxes) alongside #uksnow tweets (pale blue boxes) for the period 09:00-10:00 GMT on 23/03/2013. The popup box is one of the tweets (which included a photo) and the Met Office 5-day forecast for the location.
Connecting automatic weather stations to WOW
Many people still ask us what automatic weather stations can be connected to WOW, and how to set this up. Details can be found online, within the WOW Support pages: http://wow.metoffice.gov.uk/support/dataformats#automatic
If this link does not provide you with all of the information that you require, or if you experience any problems, please contact the WOW support team at wow@metoffice.gov.uk

WOW @ Royal Meteorological Society’s 2nd Amateur Conference
http://www.rmets.org/events/royal-meteorological-societys-2nd-amateur-conference
We are very excited to be attending the Society's 2nd Amateur Conference, since it was at the inaugural event that we announced plans for WOW and canvassed the thoughts and opinions of attendees.
A talk will be given at the conference which demonstrates and describes the various features of WOW, and gives some examples of how WOW data helps forecasters in their duties.
We will also, unashamedly, canvassing again for further feedback on what you like about WOW, what you don’t, and any ideas you have for improving the website.

And finally....
If you are already submitting your weather observations to WOW, thank you for sharing this information with others. If you haven't tried out the site yet – come on, give it a go – join the social Metwork!
News from the Manufacturers

Vaisala DigiCORA® Sounding System MW41 - New Level of Operational Experience

The new Vaisala MW41 sounding system is an excellent choice for both synoptic and research upper air applications. It supports the Vaisala Radiosonde RS92-SGP radiosonde, and the web-based user interface offers new possibilities for a more flexible operation of the system. There are also a variety of possibilities for different data outputs. The user interface and usability of the system has been developed together with the customers to make it intuitive and easy to use.

Cost Efficient Integration

MW41 uses the same hardware as the previous Vaisala Sounding System MW31: SPS311G for receiving and processing the radiosonde telemetry signal, UHF and GPS antennas and ground check set GC25. There is an upgrade package available for different Vaisala DigiCORA sounding systems, depending on the hardware of the existing system.

The software can be installed to any PC meeting the minimum requirements, providing better compatibility with the organizations’ IT infrastructure.

MW41 connects with all Vaisala Automatic Weather Stations to provide automatic surface observations for the soundings. For the transmission of meteorological messages MW41 offers the options of using FTP or e-mail transmission, creation of messages as files, transmitting the data to a serial port or to parallel printer port.

Increased Flexibility

The real innovation in MW41 is the separation of the user interface and other software functionalities. The system can be operated from anywhere within the customer’s network using a supported web browser connection and secure HTTPS connection. For example, sounding operations can be transferred from the sounding station to another network location after the balloon has been released. The control of the sounding is with one user at the time, but there can be several users viewing the received data simultaneously. After a sounding, the data can be accessed remotely using a web browser.

MW41 supports different data formats for flexible data output. In addition to standard WMO TEMP, PILOT and BUFR messages the system can create configurable column-based text outputs with new report generator functionality. In case there is a need to perform more complex calculations or create free format ASCII outputs there is an option to use Python scripting.

Operational Easiness
The MW41 automatically follows the radiosonde preparation process, and a minimum of user clicking and input is needed. Clear status indicators and animations are shown on the screen. A context-sensitive help function is also available to guide the operator. With its highly intuitive operation, the interface also speeds up the training process. The available configuration options are designed to provide a simple and straightforward way of performing sounding while at the same time offering a wide range of customization options for operation.

**Efficient Maintenance**

MW41 can be also configured remotely within the network. The system parameters, for example those affecting the WMO messages, have been grouped into logical sections to make them easier to be managed. The initial configuration of the system when taking it into use has been made as easy as possible. MW41 also implements different user groups and privileges, to allow different users to access or modify the system features and settings. New users with passwords and set privileges can be added to control the access to the system.
Minutes of the Meeting

Committee Meeting
held from 12.30 to 16.10 on Wednesday 13th March 2013
at 104 Oxford Road, Reading.

Those present:
Suzy Bingham, Secretary                      Keri Nicoll
Mark Dutton, Newsletter Editor               Ian Strangeways
Michael Pollock

Item 1. Apologies
Apologies were received from Steve Colwell, Mike Brettle, Stephen Burt & Dave Bullock. Michael Pollock from Newcastle University attended the meeting prior to the committee evening visit to Culham Centre for Fusion Energy.

Item 2. Agreement of agenda
The agenda was agreed.

Item 3. Minutes of last meeting
The minutes of the Committee Meeting & AGM held on 19th October 2012 were agreed as being correct.

Item 4. Items arising
Actions from the previous committee meeting & AGM were considered and the following matters were discussed:

SIG on Facebook – MD showed the Facebook page he’d created for the SIG. It currently has the same information as is found on the SIG webpage. The Facebook page is to promote the SIG (particularly to students) & to be a means of discussion between members. MD has raised the question with RMS as to whether the RMS logo can be used. It was suggested that MB could send an email to members to publicise the page once MD had determined whether the logo could be used. RMS Yorkshire Centre & the Aviation Met SIG are on Facebook. A Facebook page was thought to be a better means of discussing matters than a blog site because a blog site would cost money & also because people often already had Facebook open on their computers.
Action: MD to find out if the RMS logo can be used, to enquire whether there is an RMS webpage (& if not, any particular reason why not), to send MB details to send to members & to send to SBi for inclusion on SIG webpage.

Update of SIG membership PDF for manufacturer members to display at exhibitions – MD had produced a PDF including a symbol to take mobile phone users directly to the SIG webpage.
Action: MD to check whether it’s OK to use the Facebook logo, & to include Facebook link on PDF. MD to send out to all members who are manufacturers for use on any stands they may have at exhibitions. MD to include PDF in Newsletter.
Paul Fransioli asked about SIG committee/members sitting on the ISO committee but they'd need to be approved by BSI. He's also looking for individuals who may be able to review new ISO documents. MD reminded the committee of the discussion at the previous committee meeting. It was suggested that MB may be able to write a paragraph to be included in the Newsletter

**Action:** MB (if he thinks it's a good idea) to write a paragraph to include in the Spring Newsletter.

*How can we attract more members?* - SC suggested this subject be discussed at this meeting. It was agreed that the following could increase membership numbers: (1) finding a new committee member working in academia in the north, (2) hold joint meetings with northern SIGs/centres, (3) invite any northern SIG/centre committee members who will be attending RMS/EMS conference in Sept. to a tour of the Reading observatory (on the same day as the SIG AGM) to have an informal chat about holding joint meetings, (4) make use of teleconferencing/skype/webcasting for AGMs/committee meetings/meetings to attract more members from further afield, (5) have a stand at the RMS/EMS conference & continuing into the Amateur weekend offering the chance to win a prize (rain gauge from EML, cost price paid by SIG) if they sign up to be members (free membership for first year) (6) offer a monetary prize for a student/school essay, (7) promote the SIG through USB stick/mug printed with SIG details.

**Action:** MD to ask Dr Mark Wilkinson if he would like to be a committee member (possibly using skype for committee meetings).

**Action:** KN to arrange observatory tour at Reading.

**Action:** MD to arrange stand at RMS/EMS/Amateur weekend.

**Action:** SBi to send email to members of other SIG/centres to tell them of observatory tour where we can have an informal chat about joint meetings.

**Item 5. Treasurer’s report**
MB tabled a statement of the SIG’s accounts, showing the net assets to be £4313.79. MB’s report covering the period 19/10/2012 to 13/3/2013 stated that the SIG’s overall financial position remained healthy. Membership is 56 (noting that this is the time of year when membership fees are being collected & members are found to have left). MB had proposed, & it was accepted, that membership fees remained at the current level. MB had noted that the SIG could pay reasonable expenses if required to allow meeting organisers to invite speakers who otherwise may not attend.

**Item 6. Newsletter Editor’s report**
Mark Dutton presented a draft copy of the Spring 2013 Newsletter & asked for any material to be submitted before 1st April. The committee discussed the material required & the following points were actioned.

**Action:** SBi to email MD the details of the Weather on other Planets meeting.

**Action:** SBi to email relevant people at the Met Office for any material.

**Action:** MD to include Facebook page & ask for new committee members in Newsletter.

**Action:** MB (if he would like & has chance) to write a report from AMS 2013.

**Item 7. Past meetings**
KN jointly organised the Weather & Sport meeting with the IOP at Stratford Town Hall on Saturday 20th October 2012. Around 40 people attended. Talks included 2 Met Office speakers, a glider pilot, a sports engineer & a Wimbledon forecaster. A guided tour of the outside of the Olympic Stadium was given. A report will be in the Spring Newsletter.
Item 8: Future Meetings

- **Culham Centre for Fusion Energy**, Oxfordshire, evening visit for committee members, Wed. 13th March 2013.
- **Summer visit jointly with SE Centre**, Culham Centre for Fusion Energy, Oxfordshire, 1815 Wed. 12th June 2013.
- **AGM (& committee meeting)**, Thurs. 12th Sept 2013, to be held at the RMS national conference/EMS.

**Action**: SBi to book room, ask about a day pass for RMS stands & to enquire about car parking.

**Action**: MB to email members about the suggested date to ensure no conflicts.

- **Weather on other planets**, Wednesday 6th November 2013, British Interplanetary Society, London. IS & SBi have arranged with BIS to hold this meeting jointly. Piers Sellers (astronaut) has accepted to either talk live from NASA or to send a pre-recording. Topics of talks were discussed & it was decided that a talk on the use of radiosondes on other planets didn’t fit in with the other topics. Speakers have been recommended. The charge for the meeting is under discussion with BIS.

**Action**: IS to email BIS the intended list of speakers & then to email an invite to speakers individually.

- **Weather measurements for renewable energy sources**, Spring 2014. MB, SB & KN. It was acknowledged that there was some difficulty in finding a venue for this meeting as almost all the companies in the field are based in Scotland. KN offered to become involved with organising particularly to involve northern centres/SIGs. The observatory tour to be organised by KN at RMS/EMS in Sept. was thought to be a good place to discuss the organising of the meeting with northern groups however initial organising would have to begin sooner.

- **Future measurements for climate monitoring**, Autumn 2014. IS & SC. An example is the US Climate Reference Network.

- **Advances in precipitation detection & measurement**, Spring 2015. As SPICE (Solid Precipitation Intercomparison Experiment) will end in Nov. 2014 the date for a meeting was set for 2015. MB, MD, SB.

- **Summer visit**, Oxford, 2015. Joint visit/meeting possibly joint with History Group. SB is organising a meeting for RMS to be held at the Radcliffe Observatory to commemorate 200 years of continuous met obs & so the SIG visit could be held in conjunction. SB

- **Lightning detection**. As a follow up to the meeting held in 2002.

- **Air pollution monitoring**.

- **Rothamstead for a summer visit/AGM**.
**Item 9. Any other business**

The SIG committee congratulated Steve Colwell who was awarded the polar medal in the Queen's New Year's Honours. The Queen approved the award for outstanding achievement & service to the UK in the field of polar research.

The SIG committee congratulated Ian Strangeways who was awarded the RMS's 2012 Vaisala award in recognition of contributions to the field of observation & instrumentation. The award is given to those whose work does not naturally lend itself necessarily to publication in the scientific journal literature but is of significant value to the science of meteorology. It is also given to recognize those making outstanding contributions to the work of national & international meteorological field campaigns.

**Item 10. Date of Next Meeting**

The next AGM & committee meeting will be held on Thursday 12th September in a room at Reading University during the week of RMS/EMS conference.

**Action:** SBi to book a room through RMS HQ, to ask for RMS/EMS passes, to ask about car parking.  
**Action:** MB to send email to members notifying of AGM & asking if this date is OK.

The meeting closed at 1610.

Suzy Bingham, Secretary  
21 March 2013
Group Officers

**Chairman**
Steve Colwell
British Antarctic Survey
Madingley Road
Cambridge
CB3 0ET
Tel: 01223 221483
Email: src@bas.ac.uk

**Meetings Secretary**
Suzy Bingham
Met Office
FitzRoy Road
Exeter
Devon EX1 3PB
01392 885639
suzy.bingham@metoffice.gov.uk

**Treasurer & Membership Secretary**
Mike Brettle
70 Church Street
Gamlingay
Sandy
 Beds
SG19 3JJ
Tel: 07896304584
Fax: 01638 576240
Email: brettle@btinternet.com

**Newsletter Editor**
Mark Dutton
Environmental Measurements Limited
7 Jupiter Court
Orion Business Park
North Shields
NE29 7SE
Tel: 07810448726
Email: mark@emltd.net

**Committee Members**
Dave Bullock
Vaisala
Elm House
351 Bristol Street
Birmingham
West Midlands
B5 7SW
david.bullock@vaisala.com

Dick Saffell
*Retired from the Committee 2012*

WE NEED YOU...!

NEW COMMITTEE MEMBER NEEDED!

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NEW COMMITTEE MEMBER NEEDED!

Steve Burt
FRMetS
6 Church Farm Barns
Stratfield Mortimer
Berkshire RG7 3LQ
Stephen.Burt01@gmail.com

Ian Strangeways
Terradata Ltd.
7 Cherwell Close
Thames St
Wallingford
Oxfordshire OX10 0HF
01491 839398
ian.strangeways@ntlworld.com

Keri Nicoll
Department of Meteorology
University of Reading
Earley Gate
PO Box 243
Reading, RG6 6BB
0118 378 8957
k.a.nicoll@reading.ac.uk