2012 Workshop: World Day planning

Long title
World Day planning
Conveners
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Description

World Day planning session -- workshop to discuss the proposed coordinated incoherent-scatter radar observations for 2013.

The URSI Incoherent Scatter Working Group (ISWG) will have its usual planning meeting at CEDAR to discuss and coordinate the World Day experiment involving the world's upper atmospheric observatories. The procedure for scheduling world days will be posted soon, with link to a sample proposal.

Written proposals are requested for meeting specific research goals using the World Day observations. These proposals should be submitted by 01 June 2012. The planning meeting is for the ISWG and UAF staff to review all the submitted proposals and to determine how the global network of ISRs can best satisfy the approved requests. The proposer's presence during this discussion is not required but can be very helpful. Anyone is welcome, and students are encouraged to attend -- it can be an interesting lesson in campaign planning.

Summary

The workshop was attended by about 40 people.

Earlier in June, proposals were received from:

- Yvonne Dåbakk (and Jøran Moen), University of Oslo, Norway
  Cross-polar cap tracking of F-region features -- patches and flow channels
- Larisa Goncharenko, Millstone Hill, Massachusetts, USA
  Thermospheric response to sudden stratospheric warming events
- Qihou Zhou, Miami University, Ohio, USA
  Latitudinal variation of the vertical electric field in the E region

In discussing the Dåbakk proposal, we realized that the timing of the request -- between November and early February -- would conflict with the StratWarm world day request for early 2013 and would force the Dåbakk run to be November-December 2013. Additionally, it needs only the high-latitude ISRs (EISCAT mainland, ESR, Sondrestrom, RISR and PFISR). We discussed their request and it was decided to treat it as a high-latitude campaign and not as a world day run and the campaign will happen during the December 2012 synoptic world day run. This was a welcome solution instead of waiting 17 months to do the study.

We presented Larisa Goncharenko's proposal for an alert run, 10-days duration, during the period from mid-January to mid-February, similar to previous years. There were no objections.

We presented Qihou Zhou's proposal for two two-day runs to study the latitudinal variation of the vertical electric field in the E region and its relation to the F-region electric field. Qihou wants one two-day run during quiet conditions, and one two-day run during activity, both during the summer to maximize the data quality. There was some discussion about whether or not existing datasets could satisfy this study and it was agreed that the different geometry of the magnetic field lines at the various ISRs requires this new study in the modes that Qihou desires. It was decided to make this a four-day run (instead of two two-day runs) near a summer new moon since predicting activity or the lack there of is difficult.

As the session began, Shunrong Zhang of Millstone Hill asked if Wenbin Wang, National Center for Atmospheric Research, USA, could present a world day proposal. We allowed Wenbin to present his request. Bottom line was that he wants Arecibo data and possibly Jicamarca data. After some discussion, it was decided that this needed more thought and preparation.

It was agreed to keep the target number of 20 days for coordinated observations. Accounting for the 10 days of StratWarm and 4 days of E-region E field measurements, there was some discussion of how to schedule the remaining 6 days, including: - the demand for dedicated runs during wintertime new moon periods, particularly at the high-latitude ISRs, - the value of multiple-day runs (and the shortcomings of various durations), - the under-sampling of certain seasons historically, and - the value of equinoctal data. It was decided to add two three-day synoptic runs, one in April and one in November. The remaining session time was given to discuss non-world day multi-ISR campaigns, below. The resulting World Day

schedule for 2013 can be found at www.isr.sri.com/wd2013.html.

We made a brief presentation of Yvonne's proposal (campaign) and explained how the high-latitude ISRs would support it this December.

In early June, Jan Sojka, Utah State University, USA, asked if he could present a couple of slides with preliminary results of his Arecibo ISR/SDO-EVE measurements. He had originally planned to propose a world day campaign to have all the ISRs operate in concert with SDO satellite overpasses when the EVE instrument would be in an appropriate mode. Some discussion of this possible proposal happened at the AGU meeting in December 2011 and Jan realized that it would be more appropriate to request specific support from each ISR during planned overpasses. In February, Arecibo did a 12-hour test run and Jan presented very encouraging results from that. The individual ISRs should expect requests for measurements during SDO-EVE overflights with 1km (or better) resolution for Jan's study of D/E/F1-region effects of solar irradiance of the X-EUV spectrum.

At the start of the workshop on Wednesday, Cesar Valladares, Boston College, USA, asked if he could present a few slides relative to the earlier Polar Patches campaigns. Cesar had to be in a different session and left the slides with me but hoped he would return in time to talk about them, which did not happen.

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