

EISCAT Norway Agenda

Friday, Nov. 10, 14:30-16:30

Attendance: Devin Huyghebaert [DH] (UiT), Norah Kwagala (UiB), Björn Gustavsson [BG] (UiT), Njål Gulbrandson (TGO), Theresa Rexer (UiT), Mahith Madhanakumar (UiT), Patrick Espy [PE] (NTNU), Andres Spicher [AS] (UiT), Karl Laundal [KL] (UiB), Lindis Bjoland (UiB), Tanja Rahim (UiT), Magnar Johnsen (TGO), Harri Hellgren [HH] (EISCAT), Thomas Ulich [TU] (EISCAT), Ingrid Mann [IM] (UiT), Andreas Kvammen (UiT), Lisa Baddeley [LB] (UNIS), Dag Lorentzen [DL] (UNIS), Juha Vierinen [JV] (UiT)

Update on EISCAT_3D from EISCAT - Harri Hellgren

Questions/Comments:

BG: Happy to contribute to 3D visualization advice due to previous experience during PhD (regarding HH presentation on 3D visualization from Umeå University)

AS: What is the visualization tool?

HH: Umeå University received money for utilization of EISCAT 3D and how to present 3d data in new ways – it is still an open question on how it will be used for us. It will be an open source library and likely good for public presentations

TU: During last radar school Juan C. Araújo attended and gave a presentation on the 3d visualization tools being developed. Hopefully they will have someone from Umeå University for the EISCAT 3d user meeting to further present and demonstrate the tools.

DH: When will we see data from the initial 7 panel setup of EISCAT_3D?

HH: The hope is to see data from the 7 panels before the end of the year.

EISCAT SAC Update - Karl Laundal

Questions/Comments:

IM: EISCAT not dual use – it has dual use capability (regarding a point of EISCAT_3D being dual use in the SAC update)

AS: 32m ESR is movable but not able to scan – Is this temporary or permanent?

TU: ESR Gearbox to be mounted in December and tested in January.

Question/comment to community from TU: What happens to associate hours if an experiment can't be run? This is something that is currently under discussions.

TU: Regarding EISCAT AB, things are progressing well.

IM: Wanted to clarify the dual use comment – the system *could* be used for tracking of objects. Dual use are software and hardware that could be used for civilian and military uses. We knew that EISCAT 3D could track satellites from the beginning – but it is not only the tracking capability – all phased array technology is considered dual use technology. EISCAT specifically says not to use the system for military purposes.

KL: What will happen to EISCAT Council in EISCAT AB?

IM: EISCAT council has formed a working group to determine how there will be a link between the research councils and the board of EISCAT AB. Mervyn Freeman is the chair. IM is in working group. The first objective is to describe how the collaboration could be structured. A suggestion how this could be is that we have a set of very similar committees that negotiate with the company board. The company can only work when there is funding. There is a report that has already been prepared. It is unclear if this can be shared.

PE: The working group can be asked if the report could be shared with the community.

IM: We want to have a discussion on the future of the EISCAT Norway group in a following meeting – This current meeting was scheduled so that it is before the Research Council of Norway research infrastructure deadline. There will be a second part of user meeting to further discuss the organizational structure.

DH: There will be a poll for selecting the follow up meeting.

TU: Some news regarding SAC: Chairman of SAC will be Lasse Clausen. Stephan Buchert will be vice chair.

DH: Question to the EISCAT Norway community: How to support ionospheric heating facility due to potential reduction in support based on SAC update?

TU: The user committee has to lobby for heating for it to continue. EISCAT can support but needs to see that there is interest in the user community.

BG: This is being looked into.

Norwegian Research Council Research Infrastructure EISCAT_3D Proposal - Ingrid Mann

Questions/Comments:

DH: Heating is in the research infrastructure proposal. Is it expected that EISCAT will provide heating?

IM: EISCAT decides what supporting instrumentation will be operational. Heating is included but not a large part of the current proposal.

AS: There are multiple stages discussed by EISCAT – There is no discussion of this in the proposal. What does this mean?

IM: It is a good point. Thank you for mentioning this. It could be included in the proposal.

EISCAT Norway Time Allocation - Lisa Baddeley

Questions/Comments:

TU: Regarding EISCAT time carry-over – It is not possible to say at the moment if people can keep their time for the next year when experiments are canceled due to radar issues. There are no promises about time being shifted.

DH: Is there more information on the EISCAT Norway December 15th deadline for experiment requests?

LB: If you want time in January, send application as soon as possible. The experiment needs to be scheduled with EISCAT before December 10. February/March experiments will be determined for December 15th deadline.

TU: There is an effort to push for earlier release of information for the timing budget so that groups can plan earlier. Do Lisa or Dag have any ideas on electricity prices on Svalbard?

LB: Still no insight on power costs for Svalbard.

DL: The price of electricity will follow the prices of diesel.

LB: Need to know the hours so that we can plan and distribute time to users.

Norwegian Research Council Research Infrastructure Future of Svalbard ISR Proposal - Lisa Baddeley

Questions/Comments:

TU: 10 years ago there was MAISR system proposal – Moveable Antarctica Incoherent Scatter Radar – there should be some knowledge left from that proposal with regards to remote ISR power and operations needs.

LB: There have been communications with researchers and operators of the AMISR system which will help. An objective is to avoid having to run a small power company and/or own diesel generators for ISR operations. It is better if the ISR can be included in the main island power systems.

EISCAT Symposium 2024 - Devin Huyghebaert

Questions/Comments:

IM: Regarding the EISCAT radar school. The Skibotn field station won't work for the student school. What about the Finland site that was used this year?

TU: The Kilpisjärvi Biological Field Station is commonly booked. There is a possibility to have it there if there is space available.

BG: If EISCAT_3D isn't operational, do we shift the school to the next year?

LB: There was talk of having a basic and advanced user school. There is the possibility to have a shorter advanced school when EISCAT_3D comes online? Maybe in 2025? This would get some momentum going for the EISCAT community.

TU: A basic radar school can be run at any time. The basic ISR school doesn't really depend on E3D. Having the school either the week before or after the Symposium could cut down on travel costs. Regarding an advanced school, there could be some online teaching for expert users.

DH: Teaching how to teach to use EISCAT 3D would be good.

TU: EISCAT is not required to organize schools. There is no EISCAT mandate for organizing radar schools. If this is wanted: users should request EISCAT to have a more active role in teaching how to use the system.

BG: We may need to change the perspective of what EISCAT is and does. Looking back to when people first started using auroral radars. It is now streamlined with the current systems, but now we are getting a new start. EISCAT 3D is new. Experiments will also be changed from what we have previously been doing.

JV: I would like the opportunity for users to be able to participate in radar measurements. What mechanisms will there exist for users to develop experiments and do more radar signal processing?

IM: This is good to bring up at the next meeting with the RCN representative.

HH: Developing experiments comes down to security. EISCAT is still determining the limit where users can contribute.

TU: A lot of EISCAT development has come from the user community. Eg., GUIDAP. EISCAT relies on these user contributions. This development needs to come from somewhere. The working group for future relations knows this and will consider this for future setups. Security and user flexibility are top priorities.

PE: The ethos of the working group is to make it as transparent to the users as possible. Everything should be the same except for the security review. There will be a cleansing process of the data. Everyone is trying to find a solution for the user interface. The goal is to not make a huge impact on users.

AS: Is there a plan or road map for when the EISCAT 3D data is available? Is there priority for some users?

IM: The SAC has started to make a plan for the data availability. They also started defining the first data products. Yasunobu Ogawa has prepared a draft of a document.

TU: The common programme document. It is in its last draft. It will hopefully be presented at the EISCAT 3D user meeting at the end of the month (Nov. 30-Dec. 1). For data availability – The 7 panel array will be the first to record data. The security relevant portion is the tri-static data. There may also be limitations on the monostatic system data. The current plan is for the gradual expansion of the system.

HH: The user meeting at the end of November will have discussions on data formats and how users can interface with the data and EISCAT 3D.

TU: The user meeting is good time for people to say what they expect. What is the most urgent thing needed?

HH: One project for user access that has been advanced is having MATLAB licenses running through Jupyter notebooks.

DH: Something that should be done: synthetic data at raw voltage scale for planning of experiments for users.

HH: That is an ongoing discussion. Users need data for experiment design – EISCAT needs experiment to generate data.

Open Discussion

EISCAT 3D User meeting end of the month on Nov. 30 – Dec. 1, 2023.