

**Short Report from the  
EISCAT Scientific Association**

**Video Conference Sessions, 30 April and 3-4 June 2020**

**Council:**

Finland: Prof. A. Aikio (Vice-Chairperson), Dr. K. Sulonen (delegate) and Dr. J. Virtanen  
Japan: Prof. H. Miyaoka (delegate) and Dr. S. Nozawa  
Norway: Prof. I. Mann (Chairperson), Prof. K. Ruud (delegate) and Prof. P. J. Espy  
P. R. of China: Dr. Z. Ding and Prof. J. Wu (delegate)  
Sweden: Dr. T. Andersson (delegate) and Prof. J. Gumbel  
UK: Dr. M. Freeman (delegate) and Dr. I. W. McCrea.

**Headquarters:** Dr. C. Heinselman (Director) and Mr. H. Andersson (Head of administration).

**By invitation:** Dr. Magnus Friberg (AFC Chairperson), Dr. Andrew Kavanagh (SAC Chairperson),  
Dr. Inger Solheim (AFC)

**Absent:**

Minutes by: Dr. I. Solheim

[Opening of meeting](#)

Prof. I. Mann, Chairperson, opened the meeting by thanking everyone for attending and checking delegation attendance.

[Council related](#)

**1. Adoption of the agenda**

The agenda was adopted.

**2. Approval of the minutes of the 93rd meeting**

The minutes of the 93rd meeting were approved.

**3. Matters arising from the 93rd meeting**

Council encourages the plans of the Director and HQ to prepare an EISCAT\_3D technical reference paper when the parameters of the new system are known.

The Council recommends a technical review on e-infrastructure, data products, software development: The technical review should be held in conjunction with a physical meeting, for instance the EISCAT\_3D user meeting. This is delayed due to Covid-19.

[Reporting](#)

**4. Report from the Director**

The EISCAT Director presented recent development, in particular focusing on:

- New affiliate memberships: Institute for Solar-Terrestrial Physics of the German Aerospace Center (DLR-SO) and Johns Hopkins University Applied Physics Laboratory (JHUAPL).

- Failure of one of two UHF antenna gear boxes. The main replacement option is to take one of the gear boxes from the Kiruna antenna. This will give full movement of the UHF, but limit the antenna movement in Kiruna.
- New staff recruitment on Svalbard due to resignation of one engineer.
- Decommissioning of VHF and UHF: the systems will continue to operate until EISCAT\_3D supplies data. Due to the delay in EISCAT\_3D this implies operations through 2022, unless catastrophic failures occur in the old systems.

The Council asks to be kept informed on any further delays in the EISCAT\_3D project as soon as new delays are known.

The Council notes the report from the Director.

## 5. Report from the Administrative and Finance Committee

AFC chair M. Friberg presented the report from the AFC highlighting the issues listed below.

### Report from AFC given April 30<sup>th</sup>

The AFC made recommendations on:

- AFC noted the annual report of the accounts 2019 with no objections.
- AFC recommends Council to sign the annual report of the accounts 2019.
- AFC recommends to Council that the Director Recruitment process begin imminently.

### Report from given AFC June 3<sup>rd</sup>

The AFC made recommendations on:

- AFC recommends Council to accept the 2020 financial development as presented.
- AFC recommends Council to accept the 2021 budget development as presented.
- AFC recommends Council to accept the proposed five year plan.
- Recruitment of the Director
- Financial matters and location of the data centers.
- Other issues of interest regarding operations and the EISCAT\_3D project.

The Council notes the report from the AFC.

## 6. Report from the Scientific Advisory Committee

AC Chair Andrew Kavanagh presented the report from the SAC highlighting the issues listed below.

- Dr. Anthea Coster joined SAC as the new external member as approved by Council.
- From the new affiliate DLR-SO, two observers attended, one will be nominated to Council as a representative.
- SAC Chair will invite JHUAPL to nominate a representative for Council approval.
- SAC suggests having an extra third call for peer-review time. Not all-available time has been awarded. The call will be promoted by e-mail lists.
- The EISCAT 3D User meeting has been postponed and is planned as a physical meeting in Uppsala Autumn 2020, with an on-line option/backup plan due to possible travel restrictions.
- The 2021 EISCAT symposium will be hosted by Sweden, possibly in July, and jointly with the LPMR (Layered Phenomena in the Mesopause Region) workshop.
- The Radar School in 2020 was cancelled. The 2021 radar school may be planned with IRF around the 2021 EISCAT symposium in Sweden.

The Council notes the report from the SAC.

## EISCAT\_3D related

### 7. Overall status

The EISCAT Director presented recent changes, in particular focusing on:

- The status and progress of the major subarray tenders (Antenna units, First Stage Receiver Units, Sub-array Transmitter and Pulse and Steering Control Unit). Overall, testing and deliveries are progressing well, with some expected delays in the delivery of the antenna units.
- The inspection of site preparation in Skibotn and Karesuvanto have been done locally due to the travel restrictions. Both sites appear to have settled after winter in good shape. A confirmation of level will be done.
- Overall status: the Skibotn site is planned operational for tests by the end of 2021, and the receiver sites are planned operational by the end of 2022.

Following the presentation, there were questions and discussions on the following topics:

- On-site and off-site data storage and data processing. Council notes that this is a central part of the project
- Skibotn test operations and possibilities of establish a test-user-crew for this phase.

Council encourages the technical review on technical issues and data centre questions.

Council asks for an updated project plan.

Council notes the report on the EISCAT\_3D status.

### 8. Financial situation

The Head of Administration presented the overall financial situation of the EISCAT\_3D project. The total budget up to 2022 is 550M SEK. The estimates includes 3MW transmission power.

Japan informed that extra cash funding of 30 M SEK from Japan is secured. The commitment is reserved for purchasing amplifiers.

The Council notes the report on the EISCAT\_3D financial situation.

## Regular financial matters

### 9. Closing of the Annual Financial Report 2019 (approval and signing)

**April 30<sup>th</sup>**

The Head of Administration presented slides with the main items of the annual report. In summary, operating costs were below budget and income was much as expected.

Council approves the Annual Financial Report 2019 and closes the accounts.

The document is signed by the delegates.

### 10. Financial development 2020

The Head of Administration presented the financial development for 2020.

Due to the pandemic situation operational spending for travel is expected to be low.

Council notes the financial development.

## 11. Budget 2021

The Head of Administration presented the budget for 2021. Norway, Sweden and Finland will double the annual contribution for operations.

Council notes the 2021 Budget.

## 12. Five Year plan

The Head of Administration presented the five-year budget. The additional funding from Norway, Sweden and Finland, secures operations of EISCAT\_3D, Heating and the Svalbard radar. The plan includes a staff increase from 15 to 25.

Council notes the five-year plan.

## Other matters

### 13. Recruitment of a new Director

The Council Chair presented the outcome of the restricted section.

Council will form a draft job announcement, and discuss in closed session on Monday 29 June.

Council asks HQ to draft the appendix for the Blue Book on the recruitment process for the next Council meeting.

### 14. Timeshare formula options and membership conditions

The EISCAT Director presented three models for revision of the time-share formula:

Model 1 – Unmodified timeshare formula. Associates share and Affiliates share are calculated based only on the contribution in the present year. All affiliate funding is treated identically.

Model 2 – Unmodified timeshare formula, but funding from Affiliates is accounted with thresholds. Under 1 MSEK is counted toward affiliates share. Between 1 MSEK and 2 MSEK in a given year is counted as 50% affiliates share and 50% associates share. Over 2 MSEK is counted as 100% associates share.

Model 3 – Unmodified timeshare formula, but funding from Associates and Affiliates are counted as in model 2 and the portion of the Affiliate's "associates share" includes a backward-looking 5-year commitment.

Council discussed the models and favoured model 3 due to that it is an incentive to go in as associate early. It is advisable to establish the new time-share model before new affiliates join.

Council asks the working group to propose text to update the Blue Book appendix on the time share formula with the aim of implementation next year.

### 15. Mandate and members in the Strategy group

Prof. A. Aikio presented the work on finding members for the Strategy group.

The composition and mandate of the strategy group is partially defined by the Blue Book. The expected outcome is a 5-year strategic plan. A 5-year plan will cover the start-up phase of EISCAT\_3D. It is therefore desirable that the strategy group has a longer time perspective.

The Council concluded: Ian McCrea is asked to chair the strategy group and to approach the suggested group of members. He can also considering the other names if necessary and consult with the working group when needed.

## 16. Science presentation:

John White presented the tasks and deliverables of the NEIC EISCAT\_3D project that has now been completed after 5 years.

Council thanks NEIC for their work and contribution to the EISCAT\_3D project.

## Council related

### 17. Restricted Session

Council met in restricted session.

### 18. Any other business

#### **April 30<sup>th</sup> Information on recent development**

The delegates informed about national implications of the COVID-19 lock-downs.

Japan's additional contribution of cash 30 MSEK this year will allow for extra transmitters.

Sweden informed that they are looking into capacity building within Nordic countries, NORDFORSK proposal.

The EISCAT Director informed that:

- HQ more or less minimal effected by COVID. There is an impact on contractors and travel, but no stops and work is proceeding fairly smooth.
- ESR operations were suspended in March due to COVID.

#### **Any other business June 4<sup>rd</sup>**

AFC and SAC are both considering having one regular meeting as a digital meeting annually and one as a physical meeting. All delegates are encouraged to discuss if some of the regular Council meetings can be digital.

The Chinses delegate informed that newly tri-static phased array ISR based on the Sanya radar is being approved and will put into operation in end of 2023. The Sanya radar will be expanded to 4MW and 8192 antennas from its current 2MW and 4096 antennas. For each of the two receiving sites, the antenna array size is 4096 antennas.

The In-kind contribution by Japan was presented by the Japanese Delegate.

### 19. Next meeting

Finland will host the 2020 fall meeting on November 24<sup>th</sup> and 25<sup>th</sup>, 2020.

UK will host the 2021 Spring meeting.

### 20. Summary of decisions and recommendations

The agreed decisions and recommendation are as presented in the agenda items above.

## Closing of meeting

The Chair thanks HQ for preparing the meeting, and for attendance.