Sixth quarterly newsletter
February 2017

# EISCAT3D_PfP Project News

**Welcome to the EISCAT3D_PfP project quarterly newsletter.**

## The Huber+Suhner Ltd., UK is selected for the procurement of the Antenna Unit

The request for quotation (RfQ) for the antenna unit (AU) attracted proposals from four companies. Each of the proposals was subjected to evaluations by EISCAT staff, for technical, financial and scheduling criteria. The successful bid was from Huber+Suhner Ltd. (H+S), UK and hence, H+S was awarded the contract for the delivery of AU.

AU project kick-off meeting in Kiruna, Sweden.

AU project review meeting in Herisau, Switzerland.

The AU project with H+S started in December 2016 through a kick-off meeting at EISCAT Headquarters in Kiruna, Sweden. A review meeting, to finalize the requirements and to discuss some key design issues, was held on January 26-27 2017, at H+S premises in Herisau, Switzerland. The meeting was attended by the EISCAT3D_PfP project staff and H+S representatives. For the duration of this project, the EISCAT3D_PfP project staff and H+S will communicate primarily via the WebEx meeting tool and the vendor's project webpage. It is anticipated that the AU will be delivered to EISCAT by the end of May 2017.

## The procurement of pulse and steering control unit

The RfQ for the Pulse and Steering Control Unit (PSCU) attracted proposals from three companies. The received proposals were all substantially above the expected/budgeted funding and, hence, the PSCU contract is not awarded to any of the bidders. A limited-capability prototype version of the PSCU will instead be built in-house by the EISCAT staff.

## The First stage receiver unit project status

The first stage receiver unit (FSRU) project with National Instruments (NI), Sweden, is progressing as per the initial project plan. Currently, the system and the sub-system manager requirements have been finalized and the beamformer application programming interface (API) has been defined. Two prototype designs of the RF front end module, including the low noise amplifier (LNA), were

**EISCAT Scientific Association**
P. O. Box 812
SE-981 28 Kiruna
Sweden
Phone: +46 980 791 71
Email: Sathyaveer.Prasad@eiscat.se
https://www.eiscat.se/

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developed and tested in NI lab. One version used the design from the preparatory phase of the EISCAT_3D project and the other used an NI design. The measurement results of these prototype boards satisfy the FSRU specifications. It is anticipated that a complete FSRU system will be delivered to EISCAT by the end of June 2017.

Manufactured Prototype board

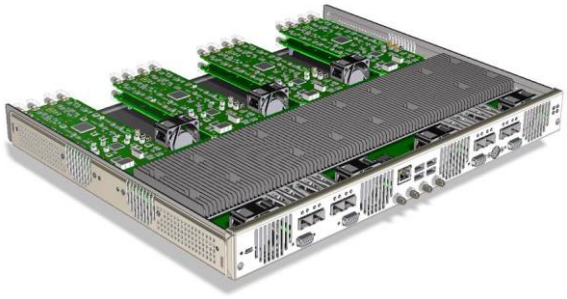

Illustration of FSRU System

## The Solid-State Power Amplifier unit project status

In December 2016 and January 2017, the National Institute of Polar Research (NIPR) Japan visited EISCAT Headquarters to discuss the progress of the solid-state power amplifier (SSPA) project. During these meetings, it was confirmed that EISCAT will receive (as in-kind contribution) 19 SSPAs and the required power supply units from NIPR in April-May 2017. As a first step towards the delivery of the 19 SSPAs, a single SSPA will be demonstrated and tested from February 28 to March 1, 2017, at the Mitsubishi factory in Osaka, Japan. This testing will be done in the presence of EISCAT staff, Mitsubishi staff and NIPR representatives. NIPR has also indicated that an additional 52 SSPAs will be delivered to EISCAT by the end of March 2018.

Manufactured Prototype SSPA IU board

The EISCAT3D_PfP project staff designed and constructed an SSPA interface unit (IU) for the control and interfacing of the SSPA. NIPR has expressed interest in buying one SSPA IU board from EISCAT for the manufactured SSPA testing.

## Other EISCAT3D_PfP project news in brief

- The first report on industry contracts of EISCAT3D_PfP project is published as Deliverable 4.1 and it is available on the project homepage[1].
- The report on the test plan for the test sub-array is underway and it will be published as Deliverable 2.2 on the project homepage in the coming days.

1 https://eiscat3d.se/content/deliverable-41-first-report-industry-contracts

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P. O. Box 812
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Email: Sathyaveer.Prasad@eiscat.se
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