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## **Radio frequency system, power converters and cryomodule installation and tests as a Polish in-kind contribution to the European Spallation Source (ESS)**

*Monday, 8 May 2023 16:30 (2 hours)*

The European Spallation Source (ESS) project currently enters the final stage of installation. Since 2017, a group of engineers and technicians from The Henryk Niewodniczanski Institute of Nuclear Physics Polish Academy of Science (IFJ PAN) are involved in the project. The contribution to the project can be divided into three main tasks: Radio Frequency Distribution System (RFDS), RF (Radio Frequency) Power Stations and Cryomodules.

The RFDS in ESS project is one of the largest installations of this type consisting of 155 RF high power systems. Engineers and technicians from IFJ PAN were responsible for preparation, installation and RF measurements of the above mentioned system. The team is also involved in preparation and conducting low and high power tests of the RF stations.

The IFJ PAN team is also responsible for the preparation as well as vacuum and cryogenic tests for 9 Medium and 21 High Beta Cryomodules, before they are installed in the tunnel.

The advanced quality control and quality assurance were mandatory for this work because the costs of failures, as well as potential delays, would have a huge impact in the project realisation. Therefore dedicated methods and approaches have been adapted to this work using experience gained by the IFJ PAN team on previous projects like LHC, XFEL and W7X.

### **Funding Agency**

### **Footnotes**

### **I have read and accept the Privacy Policy Statement**

Yes

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