

# 11th International Meeting of the Union for Compact Accelerator-driven Neutron Sources (UCANS11)

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## **ARGITU, the Spanish High-Current Accelerator-Driven Neutron Source**

*Tuesday, 25 February 2025 09:00 (40 minutes)*

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ARGITU is the Spanish initiative framed within the joint European strategy to develop the next generation of high-current accelerator-driven neutron sources (HiCANS). The source consists of a pulsed medium power proton beam accelerator (~ 45 kW), with an energy of 31.5 MeV and a period of 30 Hz. This proton beam hits a beryllium target, producing neutrons moderated at the desired thermal and cold energy ranges to feed a suite of neutron instruments. A modular design allows the integration of up to four instruments per target station. The development of the ARGITU project has been planned in a staggered manner, based on the implementation of accelerator components to increase the power of the source. The future provision of neutrons for the first stages of ARGITU will allow the possibility of testing new neutron instrumentation, as well as to validate the neutron source at every stage.

After initial demonstrations of the technology and validation of neutron instrumentation at every step, the final layout at full power will allow the implementation of neutron scattering instruments. In this sense, new concepts for diffractometers, large-scale structure instruments, spectrometers and even non-scattering techniques are being proposed and will be described in this presentation.

### **Email Address**

### **Presenter if not the submitter of this abstract**

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### **Abstract classification - track type**

Future of CANS

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