Contribution ID: **204** Type: **Talk (25 + 5 min)**

ISIS-II: the future development of the ISIS Neutron and Muon Source

Tuesday, 21 March 2023 14:00 (30 minutes)

ISIS-II is a project to explore and advance a successor facility to the ISIS Neutron and Muon Source. ISIS-II is expected to complement the international neutron landscape foreseen for the second half of the 21st Century. It will be a short pulse neutron and muon source covering a wide range of science areas consistent with ISIS user community's interests. The facility requirements will be optimised around delivering the most impactful science in an efficient manner. This requires not only a reliable, sustainable source but also state-of-the-art supporting instrumentation, computing and infrastructure.

ISIS-II has received preliminary research and development (R&D) funding from the UKRI Infrastructure fund. In its early phases the focus is on understanding the key design drivers, choices and constraints. The key design drivers include both science and engineering considerations, such as background reduction, energy efficiency and lifetime carbon footprint. Key design considerations include the optimal match of accelerator, target and moderator technologies to meet the science requirements. The project is also identifying the areas where long term R&D and prototyping is needed to achieve the project aims.

We present initial concepts and the outline time scale for the different project phases.

Primary authors: Dr THOMASON, John (ISIS Neutron and Muon Source); LANGRIDGE, Sean; Mr LILLEY, Steven (ISIS Neutron and Muon Source)

Presenter: LANGRIDGE, Sean

Session Classification: Neutron Sources: Developments and Foresight

Track Classification: Neutron Sources and Facilities