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ISIS upgrade: 40 years of the ISIS Neutron and Muon Source

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The ISIS Neutron and Muon Source celebrates its 40th year of operation in December 2024. At one time the world's most powerful pulsed neutron source, ISIS still has a global impact producing neutrons and muons for condensed matter research, owing in-part to the wide range of instrumentation at its disposal across two target stations. This talk will cover the current status and planned upgrades at the ISIS facility, such as the MEBT upgrade to the ISIS injector; the overall landscape of neutron production facilities around the world, wherein the closure of reactor-based sources poses the risk of a "neutron drought"; and the progress of the ISIS II upgrade design effort, which encompasses both traditional driver designs such as the RCS, as well as a novel FFA option.

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