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Uranium spallation neutron targets for UNF transmutation

Tuesday 3 June 2025 16:00 (2 hours)

Muons, Inc. and its collaborators propose to improve solid uranium spallation targets to provide more neutrons per incident proton, longer lifetime, and corrosion control for:

The design of Muons Subcritical Technology Advanced Reactor (Mu*STAR) combines two remarkable ORNL accomplishments: the 1 GeV Superconducting Proton Linac of the Spallation Neutron Source (SNS) and the 1965-1969 Molten Salt Reactor Experiment (MSRE).
Combining these two technologies is a spallation neutron target in the middle of each Small Modular Reactor that produces neutrons that initiate transmutation decay chains that produce heat as they die out in the subcritical molten salt core.

Footnotes

Paper preparation format

Word

Region represented

Asia

Funding Agency

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