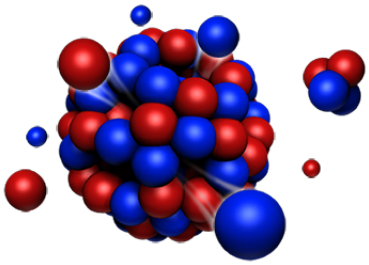

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Shielding development for VENUS instrument

Thursday, 17 October 2019 15:30 (30 minutes)

VENUS is an imaging instrument that will have a broad range of neutron wavelengths, from epithermal to cold, and enhanced contrast mechanisms, and will offer novel energy-selective imaging techniques that directly connect the structures, properties, and function of complex engineering materials and systems to reveal practical and fundamental answers about their real-world performance. The instrument is to be built on SNS beam line 10 and will face the decoupled poisoned hydrogen moderator. The driving cost for the instrument is the beam line and enclosure shielding. Initial scoping analyses were performed to estimate thickness of possible shielding materials for the enclosure and the beam line. In light of the upcoming Proton Power Upgrade (PPU) project, these transport analyses were performed for proton beam on target at 1.3 GeV and 2 MW.

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