

Status of RAT
Simulations for SCENE:
Varying size of Argon detector and
Argon vs. vacuum outside active Argon

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Interactions in active Ar based on 10,000 (1 MeV) neutrons

Outside Argon**	Argon Radius (cm)	% multiple scatter events
argon	1.9	17.3%
argon	3.8	19.9%
argon	7.6	26.0%
vacuum	1.9	12.9%
vacuum	3.8	18.9%
vacuum	7.6	25.5%

**There is nothing else between the beam and the active argon

Currently...

- Tagging multiple scattering events and determining where the first interaction occurred
- Now able to count coincidence events in the external neutron detector

Next Step...

- More complete study of multiple scatters as a function of argon target size and configuration
- Effect of coincidence counter information about multiple scattering events