Technical Meeting on the Compilation of Nuclear Data Experiments for Radiation Characterization

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Comment on the preparation of a new benchmark based on ASP foil irradiation campaigns

Tuesday, 11 October 2022 10:00 (30 minutes)

In this presentation I will show some early work to create a fusion-relevant nuclear data benchmark based on a series of experimental campaigns performed at the ASP DT accelerator in the UK. The experiments involved the irradiation of thin foils samples in a near mono-energetic 14 MeV neutron source. High-resolution gamma spectroscopy was then performed with time evolution to produce activity decay curves for each gamma signal (corresponding to different nuclear reactions) produced. To date, the analysis has only looked a few of the several 100 experiments performed in those campaigns, which could become a useful, scriptable, and rapid test suite for many key reactions that produce short-term gamma activation in materials.

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