

# Model dependence of spin removal in fission fragments

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Prompt fission gamma-ray observables depend on the angular momenta of fission fragments (FFs). However, as neutron emission is much faster than gamma emission, extraction of FF spin properties can be subject to uncertainties due to the corrections for neutron emission. For example, in FREYA and CGMF, two simulation codes modeling the prompt neutron and gamma emissions from FFs, the neutron removal of angular momentum is considerably different, even though they obtain similar results for a large number of prompt neutron and gamma ray properties. In CGMF, the removal of angular momentum by neutron emission has a wide distribution, in contrast with FREYA where very little spin is removed by neutrons. In addition, significant angular momentum is removed by the statistical gamma-rays in the current implementation of CGMF. In this talk, I will concentrate on discussing the model dependence on the spin distribution, and how microscopic calculations can guide the phenomenological models.

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