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Development of the re-emit technique for ICF foot symmetry tuning for indirect drive ignition on NIF¹ EDUARD DEWALD, JOSE MILOVICH, JOHN EDWARDS, CLIFF THOMAS, DAN KALANTAR, DON MEEKER, OGDEN JONES, LLNS — Tuning of the the symmetry of the hohlraum radiation drive for the first 2 ns of the ICF pulse on NIF will be assessed by the re-emit technique [1] which measures the instantaneous x-ray drive asymmetry based on soft x-ray imaging of the re-emission of a high-Z sphere surrogate capsule. We will discuss the design of re-emit foot symmetry tuning measurements planned on NIF and their surrogacy for ignition experiments, including assessing the residual radiation asymmetry of the patches required for soft x-ray imaging. We will present the tuning strategy and expected accuracies based on calculations, analytical estimates and first results from scaled experiments performed at the Omega laser facility.

[1] N. Delamater, G. Magelssen, A. Hauer, Phys. Rev. E 53, 5241 (1996.)

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