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Photon strength function of ^{97}Zr SHEA MOSBY, AARON COUTURE, HYE YOUNG LEE, Los Alamos National Laboratory — Some of the major questions in stockpile stewardship require nuclear reaction rates on fission fragments where there are few or no experimental constraints. Theoretical calculations are an alternative, but their reliability is ultimately limited by our incomplete understanding of such physics inputs as the photon strength function. ^{96}Zr lies near the light mass peak for ^{239}Pu fission, and neutron capture on and near this nucleus is of great importance for applications. The DANCE array at LANSCE and the Apollo array coupled to HELIOS at Argonne National Laboratory offer complementary probes into the neutron capture reaction, and an experimental campaign is underway to study $^{96}\text{Zr}(n,\gamma)$ and $^{96}\text{Zr}(d,p)$ with these instruments. The status of these reaction studies will be presented.

Shea Mosby
Los Alamos National Laboratory

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