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A Neutron Imaging Diagnostic for Z and ZR D. FITTINGHOFF, M.J. MAY, D. BOWER, B. GUIDRY, B. JACOBY, J. SAIN, R. SHEPHERD, T. PERRY, LLNL, P. WARGO, NSTEC, C. RUIZ, R. LEEPER, SNL, A. NELSON, UNM, J. FRANKLIN, KTECH — The Sandia pulsed power machine Z produces both gammas and neutrons during Deuterium gas puff shots. Currently, the time history of the gamma and neutron emission is measured during these experiments. Significant interest exists in imaging these neutrons. A prototype pinhole neutron imaging system has been fielded on Z with some success. Plans exist to field an imaging system on the upgraded ZR. Both the design and some results from Z will be presented. This work was performed by the University of California LLNL under the auspices of the DOE under contract W-7405-ENG-48.

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