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New mass measurements of neutron rich nuclides at the NSCL. ALFREDO ESTRADE, MILAN MATOS, MATTHEW AMTHOR, NSCL, Michigan State University and Joint Institute for Nuclear Astrophysics, DANIEL BAZIN, NSCL, Michigan State University, ANA BECERRIL, THOM ELLIOT, NSCL, Michigan State University and Joint Institute for Nuclear Astrophysics, ALEXAN-DRA GADE, NSCL, Michigan State University, DANIEL GALAVIZ, GIUSEPPE LORUSSO, JORGE PEREIRA, NSCL, Michigan State University and Joint Institute for Nuclear Astrophysics, MAURICIO PORTILLO, NSCL, Michigan State University, ANDREW ROGERS, HENDRIK SCHATZ, NSCL, Michigan State University and Joint Institute for Nuclear Astrophysics, DAN SHAPIRA, Oak Ridge National Laboratory, ED SMITH, The Ohio State University and Joint Institute for Nuclear Astrophysics, ANDREAS STOLZ, NSCL, Michigan State University, MARK WALLACE, Los Alamos National Laboratory — A mass measurement of exotic isotopes in the region of 68Fe has been performed at the NSCL using the time-of-flight technique recently established. Experimental knowledge of the mass of very neutron rich nuclides is an important input for astrophysical applications, such as nucleosynthesis during the r-process and the evolution of matter in the crust of an accreting neutron star, where present calculations are mostly limited to using theoretical mass extrapolations. We present the details of the experimental set up, as well as preliminary results.

> Alfredo Estrade NSCL, Michigan State University and Joint Institute for Nuclear Astrophysics

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