

Abstract Submitted
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Time-of-Flight Mass Measurements of Neutron Rich Nuclides¹

A. ESTRADE, NSCL, Michigan State University, and Joint Institute for Nuclear Astrophysics, M. MATOS, NSCL, and Joint Institute for Nuclear Astrophysics, A.M. AMTHOR, A. BECERRIL, T. ELLIOT, G. LORUSSO, A. ROGERS, H. SCHATZ, NSCL, Michigan State University, and Joint Institute for Nuclear Astrophysics, D. BAZIN, A. GADE, M. PORTILLO, A. STOLZ, NSCL, D. GALAVIZ, J. PEREIRA, NSCL, and Joint Institute for Nuclear Astrophysics, D. SHAPIRA, ORNL, E. SMITH, The Ohio State University, and Joint Institute for Nuclear Astrophysics, M. WALLACE, LANL — Nuclear masses of neutron rich isotopes in the region of $Z \sim 20-30$ have been measured using the time-of-flight technique at the National Superconducting Cyclotron Laboratory (NSCL). The masses of 5 isotopes have been measured for the first time, and the precision of several other masses has been improved. The time-of-flight technique has shown the potential to access nuclear masses very far from stability when applied at radioactive beam facilities like the NSCL. Such measurements are important for understanding nuclear structure far from the valley of β -stability, and provide valuable information for astrophysical model calculations of processes involving very unstable nuclides.

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