Abstract Submitted
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Fusion of neutron-rich nuclei around the N=20 and N=28 shell closure.[1] SYLVIE HUDAN, JAMES JOHNSTONE, VARINDERJIT SINGH, REKAM GIRI, ROMUALDO DESOUZA, Indiana University, DIETER ACKERMANN, ABDELOUAHAD CHBIHI, QUENTIN HOURDILLE, GANIL, AUSTIN ABBOTT, CATHERINE BALHOFF, ANDY HANNAMAN, ALAN MCINTOSH, MAXWELL SORENSEN, ZACH TOBIN, ADI WAKHLE, SHERRY YENNELLO, Texas AM University — Fusion in neutron-rich environments is presently a topic of considerable interest. Experiments for an isotopic chain allow systematic exploration of the dependence of fusion on neutron number. To study fusion away from the closed N=20 and N=28 shells and explore the role of the unpaired proton, experiments were conducted at NSCL's ReA3 facility for ^{39,45,47}K+^{16}O, ^{28}Si and ^{36,44}Ar+^{16}O, ^{28}Si at near-barrier energies. Details of the E-TOF experimental technique utilized will be discussed. Preliminary results yielding the experimental fusion excitation functions and comparison to theoretical models will also be presented.

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