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Population of Neutron-Unbound States from Direct Fragmentation¹ GREGORY CHRISTIAN, DANIEL BAZIN, NATHAN FRANK, ALEXANDRA GADE, BRAGE GOLDING, WILLIAM PETERS, ANDREW RATKIEWICZ, ANDREW STUMP, ANDREAS STOLTZ, MICHAEL THOENNESSEN, Michigan State University, MATTHEW KLEBER, JASON MILLER, Concordia College, JIM BROWN, TED WILLIAMS, Wabash College, JOSEPH FINK, Central Michigan University, PAUL DEYOUNG, JERRY HINNEFELD, Indiana University South Bend, MONA COLLABORATION - Fragmentation of a Calcium 48 beam was used to directly populate neutronunbound states of nuclei located near the dripline. Neutron-rich fragments were detected with position sensitive detectors following a focusing quadruple triplet and a dipole magnet. The setup allowed for good isotopic separation and identification. Neutrons were detected in coincidence with the Modular Neutron Array (MoNA) located at zero degrees. Fragments from Z = 6 to Z = 12 with A/Z ranging from 2.0 to 2.7 were detected. From the relative velocity spectra of the neutrons and fragments information of the population of excited states in the different isotopes was extracted and will be presented.

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Gregory Christian Michigan State University

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