Using Chemical Compositions of Kinematically Selected Stars to Trace Galactic Mergers DYLAN GREGERSEN, INESE IVANS, The University of Utah, CLAIRE LACKNER, Princeton University, CHRISTINE ALLEN, Universidad Nacional Autonoma de Mexico — Low α-element chemical abundances discriminate rare stars from their place among the rest of the halo population of our Milky Way. The unusual chemical nature is thought to distinguish them as remnants of a now merged extragalactic system. Until now, these stars have only been found serendipitously, on the order of a few in a thousand. In this talk, we report stars with low enhancements of α-elements found within two kinematically distinct candidate moving clusters. Stars within these candidate moving clusters were distinguished from common halo stars by shared stellar characteristics in orbital energy, angular momentum, and overall chemical enrichment (Allen et al, 2007, Proc. IAU, 2: 405-413). Using high-resolution spectra, we employed multi-line analysis code with stellar models to determine their chemical compositions. This study is part of a larger chemical composition investigation of these and other stars to search for other low-α star tracers of the dynamic formation of our Galaxy.

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