



Department of Physics and Astronomy  
FALL 2022 Colloquium Series

# “Galactic Archaeology: Unraveling the Complex Assembly Histories of Galaxies with Chemical Abundances of Metal-Poor Stars”

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Although most stars are made primarily of hydrogen and helium, metal-poor stars have even fewer heavy elements (elements heavier than helium) than stars like the Sun. This chemical difference occurs because metal-poor stars form in relatively pristine environments, which have not been enriched by many generations of stars. Metal-poor stars therefore provide important tracers of the early Universe and can be used to understand the assembly histories of large galaxies like the Milky Way, a process commonly referred to as galactic archaeology. In this talk I will highlight some of the exciting galactic archaeology work my students and I are doing at SFSU, including work with stars in the Milky Way field, stars in Milky Way globular clusters, and globular clusters in the Andromeda Galaxy. I will also talk about our efforts to understand the rapid (r-) neutron capture process, which is responsible for creating the heaviest elements in the periodic table (e.g., europium).

**Thursday, November 3, 2022**

**4:00 - 5:20PM**

**MND1015**

*Open & Free to all students, faculty and public*