Measuring the Properties of Dwarf Streams

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Orbit Request	Prime	Parallel
Cycle 21	8	0

Abstract

We propose to measure the metallicity and ionization conditions of a gaseous stream trailing behind a pair of dwarf galaxies in the local universe. The NGC 4532/DDO 137 system is a clear analog to the Milky Way's massive satellite galaxies, the Large and Small Magellanic Clouds; however, this system is not in close proximity to a massive spiral galaxy. Furthermore, it is the only other dwarf stream for which the metallicity and ionization conditions can be directly measured due to the fortuitous alignment of a bright background QSO with the HI stream. We will use the data to examine the properties and formation mechanisms of such streams and how they differ with environment. Such information can be used to develop a method to discriminate between cold accreting filaments and streams stripped from low mass galaxies at all redshifts.