

Technical Page

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Extragalactic
 Total Time Requested: 68 Hours
 Minimum Useful Time:

Proposal Title: GALFA Project: The Underlying Structure of a New Branch of the Magellanic Stream

ABSTRACT:

Our goal is to study the processes at the physical interface between the Magellanic Stream (MS) neutral gas and the hot diffuse gas of the Galactic halo in a newly-discovered filament. In modeling the MS within the Galactic system, the exact importance of hydrodynamical versus gravitational effects is not well-understood and has hampered progress. Further uncertainty has been introduced recently by the suggestion, contrary to prior assumptions, that the Magellanic Clouds are on their first orbital pass. We aim to constrain the characteristics of hydrodynamical interactions between the new filament and the surrounding hot Galactic halo as well as its deep structure and relationship to the main MS body. At a time of considerable activity and controversy in modeling the MS, constraints are urgently needed to guide theorists toward a consensus in order to better understand the MS and of the Galactic system as a whole.

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Remote Observing Request

- Observer will travel to AO
- Remote Observing
- In Absentia (instructions to operator)

Instrument Setup

ALFA

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

1418 - 1424