

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Extragalactic
 Total Time Requested: 15.0 Hours
 Minimum Useful Time:

Proposal Title: The Tully-Fisher Relation of Polar Ring Galaxies

ABSTRACT:

The dynamical mass, which probes the dark matter content of the halo, of early-type galaxies is difficult to measure because they lack easily accessible kinematic tracers at large radii. The unique configuration of a polar ring galaxy (PRG), a central early-type galaxy encircled by a ring of young stars and gas, provides an important dynamic tracer of the system through the rotation velocity of the gaseous ring, which is detectable in H I. Very few PRGs have been studied to date. The existing data suggest that PRGs deviate from the Tully-Fisher relation of normal spiral galaxies. We propose to obtain deep H I observations of 11 PRGs, the largest and most comprehensive sample to date, to study their Tully-Fisher relation and dark matter halos. These observations are scientifically exciting and provide an supplement of H I science of PRGs.

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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:

Spectrophotometer

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

1280–1470

This proposal requires coordination with Punta Salinas radar within the band 1222-1381 MHz..

This proposal requires coordination with GPS L3 at 1381 MHz.