

Technical Page

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Extragalactic
 Total Time Requested: 40 Hours

Proposal Title: An HI Survey of a Wide-Field Sample of LSB Galaxies, Selected from the KISS Database

ABSTRACT:

Historically, galaxy catalogs have been biased in favor of high surface brightness galaxies (HSBGs). It is now apparent that these objects represent only part of the full range of galaxian parameter space, and this under-representation of LSBGs limits our understanding of galaxian evolution. As part of the effort to fairly sample the LSB population, we are constructing a wide-field, CCD-selected catalog of galaxies with $23 \leq \mu_B^0 \leq 26$, based on the KISS¹ database. This survey is currently unique in combining digital detectors with 145 deg² of arial coverage, allowing selection of a complete, well-defined catalog sampling a statistically significant number of LSBGs across large scale structures. To address the most compelling questions of LSB space densities and environmental effects requires distances and HI masses, which we here propose to obtain. With the addition of these data, this catalog will become a valuable tool for probing the role of LSBGs in galaxy evolution.

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Instrument Setup

L-wide

Atmospheric Optical Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

1330 - 1425 MHz

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

This proposal requires coordination with GPS L3 at 1381 MHz.