

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
 General Category: Astronomy
 Observation Category:
 Total Time Requested: 36.7 Hours
 Minimum Useful Time: 45 minutes

Proposal Title: Atomic Gas Content of JINGLE Galaxies

ABSTRACT:

Large surveys of atomic gas, molecular gas (via CO) and dust in nearby galaxies now exist, however, little overlap exists between large CO surveys (e.g., COLD GASS) and measurements of cold dust from Herschel. The JINGLE survey aims to fill this gap by observing Herschel detected galaxies with SCUBA-2 at $850\mu m$ and the CO($J = 2 - 1$) with RxA. Of our 192 galaxies currently only 69 have ALFALFA detections. We propose to observe the HI line in a further 61 JINGLE galaxies. These observations are crucial as it will extend the atomic gas detection in our sample to galaxies with low gas masses ($< 10^{9.6} M_{\odot}$) and small gas fractions. Potential studies by combining all phases of the interstellar medium include calibrating the gas-to-dust ratio for a range of galaxy sizes, metallicities and gas fractions and relating the ISM to optical IFU data.

Name	Institution	E-mail	Phone	Student
Matthew W L Smith	Cardiff University	Matthew.Smith@astro.cf.ac.uk	+442920875106	no

Remote Observing Request

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

Instrument Setup

L-wide

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

1406.9-1353.3

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

This proposal requires coordination with GPS L3 at 1381 MHz.