

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Extragalactic
 Total Time Requested: 95 Hours
 Minimum Useful Time: 75 minutes

Proposal Title: The connection between disk kinematics and the atomic gas reservoir of nearby galaxies

ABSTRACT:

Theoretical work has recognised the key role played by the turbulence of the interstellar medium in regulating the efficiency of star formation in galaxies. Unfortunately, the physical mechanism driving turbulence is still unknown because existing datasets do not allow us to test competing theories. Intriguingly, the two most popular scenarios for the origin of turbulence provide remarkably different predictions for its dependence on cold gas content. Thus, only the combination of optical integral field spectroscopy (IFS, needed to quantify the amount of turbulence in the ISM) and 21cm data will allow us to make progress in this field. The goal of this proposal is to measure HI masses for a representative sample of star-forming galaxies extracted from the SAMI Galaxy survey, the state-of-the-art IFS survey of local galaxies. These data will be critical for delivering the constraints needed to reveal the physical processes driving turbulence in galaxies.

Name	Institution	E-mail	Phone	Student
Luca Cortese	ICRAR/University of Western Australia	luca.cortese@uwa.edu.au	+61 (0)8 6488 3663	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

1365-1402 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.