Proposal Identification No.: A2766 Date Received: 2013-Sep-03_16:40:47

Technical Page

This proposal has not been submitted before.

Proposal Type:	Regular
General Category:	Astronomy
Sub-Category:	Spectroscopy
Observation Category:	Extragalactic
Total Time Requested:	7.5 Hours
Minimum Useful Time:	2.5 hr

Proposal Title: Continued Monitoring of the Spectral Line/Continuum Outburst in NGC660.

ABSTRACT:

A radio continuum and spectral-line outburst has been serendipitously discovered by us in NGC660. From Feb. 2013, bi-monthly monitoring of this remarkable object has been started, with four observing epochs completed to date. Variability of the continuum spectrum, and of the detailed OH emission/absorption spectra at 4660, 4750, and 4765 MHz have been followed over this period. Such rapid changes in the molecular emission from the nuclear region of a galaxy are unprecedented. To delineate the physical model of this complicated starburst system further, we are supplementing these Arecibo observations with milliarcsecond-resolution HSA (VLBI) line and continuum imaging at yearly intervals (with Arecibo in the array). The VLBI images reveal a recent nuclear outburst with the OH features being associated with the outburst hotspots. The Arecibo single-dish and HSA monitoring are highly complimentary and a further year of Arecibo monitoring is requested here.

Name	Institution	E-mail	Phone	Student
Christopher J Salter	Arecibo Observatory	csalter@naic.edu	787 878 2612 X 281	no

Remote Observing Request

[X] Observer will travel to AO

[ ] Remote Observing

[ ] In Absentia (instructions to operator)

Instrument Setup

L-wide C S-low X-band S-high C-high

Atmospheric Observation Instruments:

Special Equipment or setup: We would like availability of as many of our requested receivers as possible. However the C-band receiver is essential.

RFI Considerations

Frequency Ranges Planned

1 - 10 GHz

This proposal requires Iridium RFI protection at 1612 MHz between 10pm and 6am EST.

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

This proposal requires coordination with GPS L3 at 1381 MHz.