Proposal Title: A Search for OH/IR stars in M33

ABSTRACT:

Multi-epoch Spitzer observations of the whole of M33 allow us to select for the brightest variable sources at 3.5 microns with a variability amplitude appropriate for a luminous OH/IR star. We propose to observe the 9 brightest sources from regions with Solar metallicity in the hope of detecting their 1612 MHz emission. At this point the only known extra-galactic OH/IR stars are nine in the LMC. One of the benefits of detecting OH/IR stars in M33 is its accurate distance, which will allow definitive physical parameters to be obtained for objects with Solar metallicity, something that has not been possible for Galactic objects with any precision.
Frequency Ranges Planned

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