

## Technical Page

This proposal has been submitted before.

The previous proposal number is 2030.

Proposal Type: Long-term  
 General Category: Pulsars  
 Observation Category: Extragalactic  
 Total Time Requested: 94 (188/2) Hours  
 Minimum Useful Time: 1.25h

**Proposal Title:** Completing the PALFA Galactic Plane Survey to  $-4 < b < 4$  deg

*ABSTRACT:*

We propose to continue the PALFA survey of the Arecibo-visible Galactic Plane. The most sensitive pulsar survey ever done, PALFA is yielding high-impact science in a variety of astrophysical fields, including: Fast Radio Bursts (FRBs), high-precision tests of relativistic gravity theories, constraints on the equation-of-state of supra-nuclear matter, detectability of gravitational waves, unification of the neutron star zoo, and fundamental properties of the neutron-star population. PALFA has already discovered 190 pulsars, roughly doubling the number known in the survey region. Among our discoveries are 17 rotating radio transients (RRATs), 37 millisecond pulsars (MSPs), three double neutron star systems (DNS) and two FRBs, including the first repeating source. For the coming year, we request a total of 188 hr of inner Galaxy time, as well as to be commensal partners with ongoing surveys of the outer Galactic Plane.

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### Remote Observing Request

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

### Instrument Setup

ALFA

**Atmospheric Observation Instruments:**

**Special Equipment or setup:** none

## **RFI Considerations**

## **Frequency Ranges Planned**

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.