Technical Page

This proposal has not been submitted before.

Proposal Type: Urgent
General Category: Pulsars
Observation Category: Galactic
Total Time Requested: 3 Hours
Minimum Useful Time: 90 minutes

Proposal Title: Superior-Conjunction Observations of the wide-binary PSR J2016+1947

ABSTRACT:
We request to observe the bright wide-binary pulsar J2016+1947 during its passage through superior conjunction during early February 2019, in two 1.5-hr observations that each use the 430-MHz and 1400-MHz receivers. These observations will help in measuring higher-order timing effects that can be used to constrain the mass and geometry of the system. Moreover, the next superior-conjunction event will not occur until one full orbit is completed, or early 2021. We will submit proposals in March 2019 to enact a two-year observing program of PSR J2016+1947, with the goal of constraining the pulsar and companion masses. Such estimates from wide-binary pulsars are crucial for testing binary-evolution models as well as placing constraints on the nuclear equations of state for neutron stars.

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<tr>
<th>Name</th>
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Remote Observing Request

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

Instrument Setup

430 G L-wide

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations
Frequency Ranges Planned

This proposal requires coordination with Punta Salinas radar within the band 1222-1381 MHz.
This proposal requires coordination with GPS L3 at 1381 MHz.