

## Technical Page

Proposal Type: Short  
 General Category: Pulsars  
 Observation Category: Galactic  
 Total Time Requested: 3 Hours

**Proposal Title:** A Search for Radio Pulsations from an Isolated Neutron Star

*ABSTRACT:*

We propose a search for radio pulsations from the neutron star candidate RBS1223 (1RXS J130848.6+212708), discovered recently as part of the ROSAT Bright Survey. Our request is for 3 hours of telescope time over two days, for observations using both the PSPM and AOFTM to obtain fast-sampled pulsar search data. No periodicity has been seen in the X-ray data, but the number of photons is small. If radio emission is detected, our search will determine the neutron star's rotation rate and, through subsequent timing, its age, magnetic field strength, and distance. The absence of any radio pulsations will also provide important (model-dependent) constraints on the emission geometry while contributing another data point to the small handful of poorly understood radio-quiet neutron stars.

| Name              | Institution                      | E-mail                       | Phone        | Student |
|-------------------|----------------------------------|------------------------------|--------------|---------|
| Zaven Arzoumanian | NASA-Goddard Space Flight Center | zaven@milkyway.gsfc.nasa.gov | 301-286-2547 | no      |

### Instrument Setup

430 G                      430 CH receiver

### Atmospheric Optical Instruments:

**Special Equipment or setup:** Will use the PSPM and AOFTM. Require one standard 8mm exabyte type for the PSPM, and one "mammoth" 8mm tape for the AOFTM.

### RFI Considerations

### Frequency Ranges Planned

425-435

This proposal requires coordination with AFTWF within the band 425-435 MHz.