Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
General Category: Pulsars
Observation Category: Galactic
Total Time Requested: 8 Hours
Minimum Useful Time: 45 minutes

Proposal Title: A C-band pilot search for pulsars in steep spectrum radio sources

ABSTRACT:

We propose a C-band pilot search for pulsars in a sample of 43 steep spectrum sources in the Galactic plane. Recent imaging surveys have confirmed an excess of steep spectrum and compact sources in the galactic plane. While the spectral properties of these point sources indicate a large fraction of these to be galactic radio pulsars, recent and earlier pulsation searches around and below 1 GHz suggest otherwise. Unless these sources form a new galactic population, the most plausible explanation is that these are highly scattered pulsars with high dispersion measures. We request for a moderately small 8 hours of telescope time to search for radio pulsations from the above sample at 5 GHz (where effects of interstellar scattering will be minuscule) to potentially uncover a new population of pulsars that is not detectable at conventionally used observing frequencies.

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>E-mail</th>
<th>Phone</th>
<th>Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yogesh Maan</td>
<td>ASTRON</td>
<td><a href="mailto:maan@astron.nl">maan@astron.nl</a></td>
<td>+31 521 595 782</td>
<td>no</td>
</tr>
</tbody>
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Remote Observing Request

X Observer will travel to AO

Remote Observing

In Absentia (instructions to operator)

Instrument Setup

C

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations
Frequency Ranges Planned

4300 - 5300