Plan Overview

A Data Management Plan created using HKUL DMPTool

DMP ID: PF21-61327

Title: Radio study of Pulsar wind nebulae at different stages

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Template: HKU Template

Project abstract:

This thesis presents a radio study accompany by X-ray comparison of pulsar wind nebulae (PWNe) across different evolutionary stages. We utilize radio interferometers—the Australian Telescope Compact Array (ATCA) and the Very Large Array (VLA)—to observe a sample of PWNe. These radio interferometer can provide us useful polarization information about these PWNe and we further compare and study the results by X-ray data from the Chandra X-ray Observatory. To date, the detailed observation on PWNe in radio band is still not enough comparing to the number of discovered PWNe. The research aims to observe more PWNe with high resolution to investigate the morphological evolution, magnetic field structure, and spectral

properties of PWNe from their youth within supernova remnants (SNRs) to their old age as bow-shock nebulae traversing the interstellar medium so that we can further complete the radio observation at different wavebands from the list of known PWN at different stages.

Start date: 08-01-2022

End date: 07-31-2026

Last modified: 05-12-2026

Copyright information:

Radio study of Pulsar wind nebulae at different stages

Data Collection

What data will you collect or create?

The data are observed from our observation proposal or from public archive.

How will the data be collected or created?

Download the data from the archive of Very large telescope (VLA) and australia telescope compact array (ATCA) websites.

Documentation and Metadata

What documentation and metadata will accompany the data?

We dont's use that

Ethics and Legal Compliance

How will you manage any ethical issues?

There is no such issue. All the data are only observed astronomy data for science purpose.

How will you manage copyright and Intellectual Property Rights (IP/IPR) issues?

There is no such issue. All the data are either public or own by us.

Storage and Backup

How will the data be stored and backed up during the research? i. e. until stored in the final location (e.g. on your password protected laptop)?

Data that were downloaded are in supervisor's server.

How will you manage access and security?

Through university internal nework

Selection and Preservation

Which data are of long-term value and should be retained, shared, and/or preserved?

Question not answered.

What is the long-term preservation plan for the dataset?

Question not answered.

Data Sharing

How will you share the data?

As the time goes, the data that own by us will automatically become public in data archive.

Are any restrictions on data sharing? If yes, Why?

No

Responsibilities and Resources

Who will be responsible for data management?

Question not answered.

What resources will you require to deliver your plan?

Question not answered.