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psrqpy: a python interface for querying the ATNF pulsar catalogue

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Software

- Review
- Repository
- Archive

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Summary

This Python module provides an interface for querying the Australia Telescope National Facility (ATNF) pulsar catalogue (Manchester et al. 2005). The intended users are astronomers wanting to extract data from the catalogue through a script rather than having to download and parse text tables output using the standard web interface. It allows users to access information, such as pulsar frequencies and sky locations, on all pulsars in the catalogue. Querying of the catalogue can easily be incorporated into Python scripts.

The module can also be used to create plots of pulsar period against period derivative (P vs. $\dot{P}$ plots) using `matplotlib` (Hunter 2007) as shown below.

If requested the module can also return references for parameter values for pulsars using the `ads` Python module (Sudilovsky et al. 2017).

Development of *psrqpy* happens on Github (Pitkin 2017) and the documentation is provided here.

References

Hunter, John D. 2007. "Matplotlib: A 2D Graphics Environment." *Computing in Science and Engineering* 9 (3):90–95. https://doi.org/10.1109/MCSE.2007.55.

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Pitkin, Matthew. 2017. "Psrqpy on Github." 2017. https://github.com/mattpitkin/psrqpy.

Sudilovsky, V., A. Casey, G. Barentsen, D. Foreman-Mackey, de Val-Borro. M., and J. Elliott. 2017. "The Ads Python Package." 2017. https://ads.readthedocs.io/.

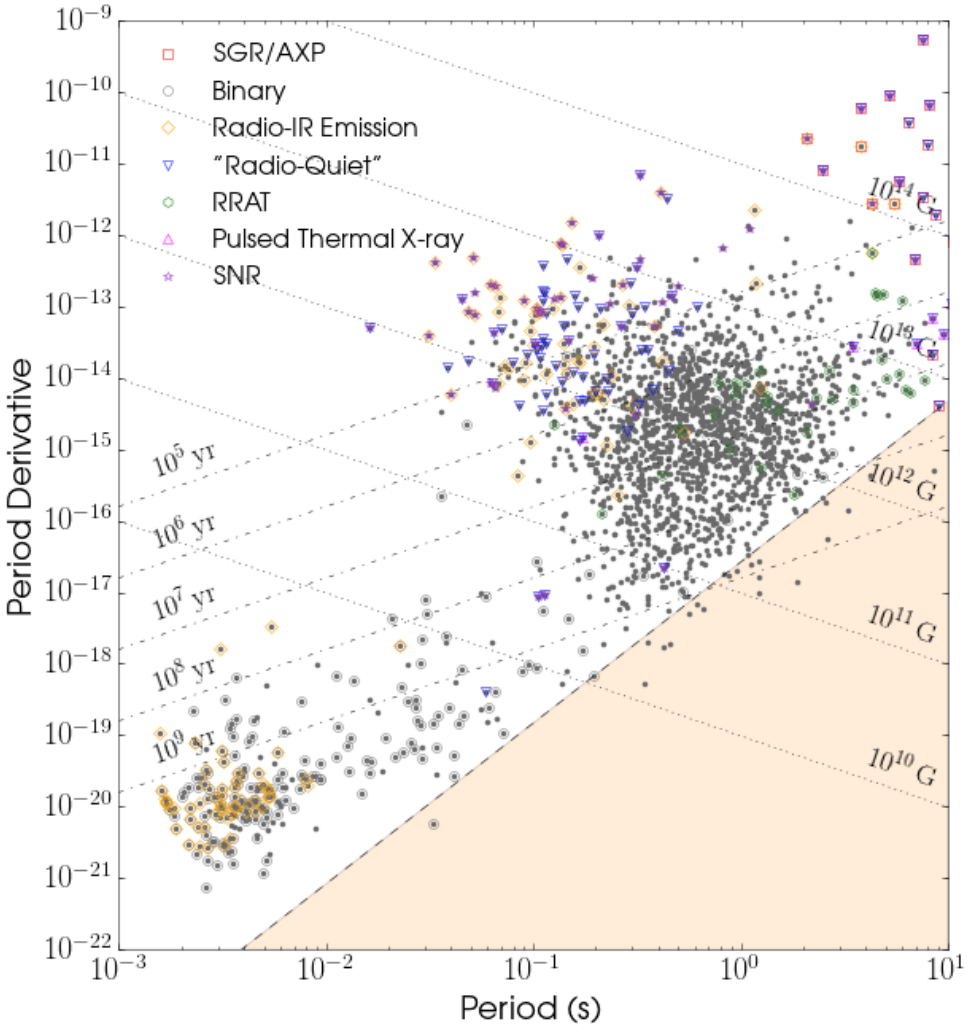

Figure 1: A plot of pulsar period vs. period derivative as produced using *psrqpy*