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## **Estimating the optical/infrared magnitudes of ultra-slow radio pulsars as white dwarfs**

*Monday, 8 July 2024 17:20 (20 minutes)*

On June 9th, we received the news of the passing of Professor Manuel Malheiro. Malheiro was not only a colleague and advisor, but also a friend. This presentation covers our last work together and represents my homage to him.

The lack of isolated neutron stars-(NSs) rotating slower than 11 s led to the postulate of a maximum limit for their rotation period. However, the discovery of radio pulsars with periods around 1000 s challenges this hypothesis. To solve this seemingly problematic observations, two main path can be taken. The first is to classify them as neutron stars and modify the standard theories to fit them. The second is to model them as white dwarf-(WD) pulsars. In this second scenario, we would expect a photosphere emitting in optical/infrared ranges.

Following this idea, I estimate the optical and infrared magnitudes of GLEAM-X J1627-5235 and GPM J1839-10 as white dwarf pulsars. The model consist of a photosphere and a dusty disk. Based on these estimates, I discuss the feasibility of observations by current and future facilities.

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**Session Classification:** Massive white dwarfs and related phenomena

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