

## PHAROS Conference 2019: the multi-messenger physics and astrophysics of neutron stars



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### **The asymmetric double neutron star system PSR J1913+1102**

PSR J1913+1102 is a double neutron star system (DNS) discovered with the Arecibo radio telescope in the PALFA survey. With previous observing campaigns, we have determined that with its short orbital period of less than 5 hours, it is one of the most relativistic DNSs known. We have precisely determined the individual masses, which are the most asymmetric among compact DNS binaries. In this talk, we address the potential impact of its evolutionary history on the interpretation of observed DNS mergers such as GW170817, and the unique constraints it can provide on alternative gravitational theories.

**Primary author(s) :** Dr FERDMAN, Robert (University of East Anglia)

**Presenter(s) :** Dr FERDMAN, Robert (University of East Anglia)