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## Magnetars as white dwarfs pulsars

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Some of the most interesting types of astrophysical objects that have been intensively studied in the recent years are the Anomalous X-ray Pulsars (AXPs) and Soft Gamma-ray Repeaters (SGRs) seen usually as neutron stars pulsars with super strong magnetic fields, known as magnetars. However, in the last years three SGRs with low magnetic fields have been detected. Moreover, three fast and very magnetic white dwarfs have also been observed in the last years. Based on these new discoveries, massive highly magnetized rotating white dwarfs (WDs) have been proposed as an alternative explanation to the observational features of SGRs and AXPs [1], in total analogy with pulsars powered by rotating neutron stars (NSs). The steady emission and the outburst following the glitch are explained by the loss of rotational energy of the WDs, in view of the much larger moment of inertia of the WDs, as compared to that of NSs. There is no need here to invoke the concept of magnetic energy release due to the decay of overcritical magnetic fields, as assumed in the magnetar model. We also discuss the pulsar magnetic dipole moment  $m$  when this alternative model is considered. We show that the values for  $m$  obtained are in agreement with the observed range  $10^{34} \text{ emu} < m < 10^{36} \text{ emu}$  and almost spin independent, characteristics of isolated and magnetic white dwarfs [2]. This supports the possibility of SGRs and AXPs to belong to a new class of very fast and magnetic white dwarfs, in accordance to the recent astronomical observations of white dwarfs pulsars.

[1] - M. Malheiro, J. A. Rueda, and R. Ruffini, Publications of the Astronomical Society of Japan, Vol.64, No.3, Article No.56, 13 pp (2012) <http://adsabs.harvard.edu/abs/2012PASJ...64...56M>

[2] - J. G. Coelho and M. Malheiro Publications of the Astronomical Society of Japan, Volume 66, Issue 1, id.14 (2014) <http://adsabs.harvard.edu/abs/2014PASJ...66...14C>