

Origin of the broad band emission from gamma-ray binaries with a radio pulsar

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Gamma-ray binaries are a relatively new subclass of High Mass X-ray binaries visible from radio up to very high (TeV) energies. At the moment only a handful such sources (less than 10) are regularly observed at TeV and GeV energies. Only in two of these systems, PSR B1259-63 and PSR J2032+4127 we are sure on the nature of the compact objects, as these systems are wide enough to detect pulsations far from periastron (they have 3.4 and ~50 years orbital periods correspondingly). Broad band emission from these systems have common features, but also lots of differences. In particular they have a drastically different behaviour at GeV band, where we observe a huge GeV flare around the periastron in the case of PSR B1259-63, and only stable pulsed magnetospheric emission in the case of PSR J2032+4127. In my talk I will compare broadband emission (from radio to VHE) of these two systems and propose a theoretical model which explain the observed similarities and differences.

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