

# Gamma-ray bursts from a close pulsar binary system

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**ABSTRACT:** The double system of neutron stars observed as radio pulsars PSR J0737-3039 A,B is discussed. Based on the observations it is shown that the wind from the pulsar 'A' distorts strongly the magnetosphere of pulsar 'B'. The shock, dividing the relativistic wind of pulsar 'A' and the co-rotating magnetosphere of pulsar 'B', is formed inside the light cylinder of 'B'. The slowly diverged tail of magnetic field of pulsar 'B' is also formed by the wind from 'A'. The magnetic field energy stored in this tail is  $10^{30}$  erg. Due to the magnetic field reconnection the energy of magnetic field in the tail can release during the short time of 0.1 sec. It will be observed on Earth as the bursts of electromagnetic radiation in the band of 100 KeV and of the flux of  $4 \cdot 10^{-11} \text{ erg/cm}^2 \text{ sec}$ . Such bursts will originate irregular similar to the magnetospheric sub-storms on Earth.