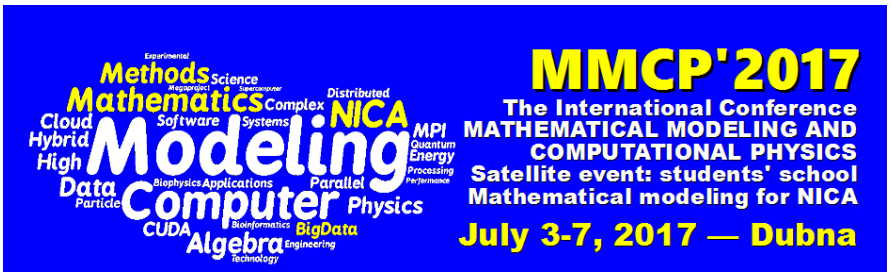

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MINIMUM PERIOD OF ROTATION OF MILLISECOND PULSARS AND EQUATIONS OF PULSAR MATTER STATE

Tuesday, 4 July 2017 13:45 (15 minutes)

The astrophysical data is indicative of the presence of a minimum period of rotation of millisecond pulsars. Now this period is 1.396648 ms.At that, the indicated value is reached long before pulsar destruction under the influence of centrifugal forces. This phenomenon is easily explained by the fast growth of angular momentum losses near the bifurcation point of pulsar configuration due to intense pulsar gravitational radiation.
Based on the findings of our previous studies of fast-rotating Newtonian magnetized polytropies, we found the relation between a minimum pulsar rotation period, a value of pulsar central density, and a polytropy index. Due to this relation we drawn a conclusion that a value of minimum central density of a pulsar with a peak period was 2.5088·1014 g/cm3.

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