

Abstract Submitted
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On FRBs from a magnetar¹ MIKHAIL MEDVEDEV, Univ of Kansas
— Fast radio bursts (FRBs) remains an enigmatic phenomenon for over a decade. FRBs are short radio pulses of tens of milliseconds duration (de-dispersed) in the frequency range around a Gigahertz. Their very large dispersion measure indicate their extragalactic origin and thus their exceptional brightness. Some FRB sources were found to be repeaters. Recently, a connection of a galactic underluminous FRB to a magnetar has been firmly established. Conventionally, FRBs are attributed to the cyclotron/synchrotron maser instability operating at a shock outside the magnetosphere driven by a magnetar flare. Such a maser would excite an X-mode observed as an FRB. Such a model seems problematic at explaining the observed periodicities of FRB repeaters. Here we will critically address viability of the shock scenario. We propose a scenario in which an FRBs can originate from within magnetar's magnetosphere.

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