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## How can a neutron star avoid the Ejector stage?

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Recently discovered high-mass X-ray binary (HMXB) in the supernova remnant MCSNR J0513-6724 (Maitra et al., 2019) is a puzzle for the standard magneto-rotational evolution of neutron stars. If the observed period of 4.4 s corresponds to the critical period of Propeller-Accretor transition, the magnetic field should be about  $3 \times 10^{11}$  G. With such a magnetic field, the duration of the Ejector and Propeller stages will significantly exceed the age of the supernova remnant, which is less than 6 thousand years. In this work, we propose a scenario, when a neutron star does not go through the Ejector stage due to fallback accretion and the Hysteresis effect. The Hysteresis effect is that the equality of pressures during the reverse transition, which determines the condition for the onset of a new stage, is set not at the the gravitational capture radius, but at the radius of the light cylinder. As a result, the transition is possible with a significantly shorter period. This leads to a reduction in the time before the Accretor phase.

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