

# Magnetocavitation mechanism for the generation of the flares and the plasma ejections from the corona of the accretion disk of the neutron star

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The processes of the generation of the flares and the plasma ejections from the corona of the accretion disk of the neutron star are investigated. The magnetocavitation mechanism as the possible mechanism of these processes is proposed. According to this mechanism, the plasma ejections and flares are produced because of the destruction of the plasmoids in the corona plasma of the accretion disk. These plasmoids are created by the magnetic reconnection in the current sheets of the corona plasma of the accretion disk [1]. The part of the plasmoids are ejected from the corona, but others are collapsed because of the resonant wave processes and shock waves in the corona plasma. The estimations of the flare and ejection parameters are performed. The possibility of the application of the suggested mechanism to the plasma turbulization in the corona of the accretion disk and the acceleration of the jets from the neutron stars is discussed.

## References

- [1] E. Priest & T. Forbes, *Magnetic reconnection: MHD theory and applications* (Cambridge University Press, 2000)

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