Scenario of flaring activity of the SFXT IGR J16418-4532

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Supergiant fast X-ray transients (SFXTs) are a sub-class of wind-fed High Mass X-ray Binaries (HMXB) in which the normal companion is a supergiant. These systems were collected in a sub-class because of short flares (a few hours duration) in which the X-ray luminosity increases by 3-5 orders of magnitude. The X-ray transient IGR J16418-4532 was discovered by INTEGRAL in 2003 and proposed as a SFXT by Sguera in 2006 after the identification of short duration flares from the system. We explore a possibility to explain the X-ray flaring of this source in terms of a transition of the accretion flow geometry. We consider a situation in which the neutron star in the quiescent state is surrounded by a hot envelope. The flares in this scenario are associated with a collapse of the envelope and its re-formation.

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