

Studies s of SFXTs with MAXI and Suzaku

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ABSTRACT

A SFXT (Super-giant Fast X-ray Transient) is a subclass of High Mass X-ray Binaries, composed of a supergiant and a highly magnetized neutron star. Although SFXTs are usually X-ray dim ($L \sim 10^{32}$ erg/s), they sometimes show fast and violent X-ray flares with 2-3 orders of magnitude flux increases. Trying to understand the flaring mechanism of SFXTs, we analyzed archival Suzaku data of one such object, IGR J16195-4945. An intense flare with a duration of some 10 ks was detected with the XIS and the HXD. During the flare, the absorbing column did not increase, and the fluorescent Fe-K line became weaker or broader. These results argue against a popular scenario which invokes clumpy stellar winds to explain the SFXT flares. Instead, the data prefer an alternative scenario which assumes "magnetic gating". The properties of SFXTs make them an ideal target of MAXI. Actually, MAXI has detected some of them, including the 5560-sec pulsator 4U 2206+543. Since this object was observed with Suzaku in 2007, we will present analysis of the Suzaku data. Finally, ASTRO-H will provide a powerful diagnostics of Fe-K lines during flares. We may detect Doppler shifts due to a sudden infall of matter from the Alfvénic surface.