

**Suzaku observation of the non-dip spectrum of the dipping source XB  
1916-053**

J119a

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Dipping low-mass X-ray binaries (LMXBs) are expected to be essentially the same compared to non-dipping LMXBs, except for their more edge-on inclinations. This provides us an opportunity to probe the dependence of the LMXB emission on the viewing angles, by comparing the persistent X-ray spectra of dippers and non-dippers. More specially, the geometry of Comptonizing coronae can be studied by searching for inclination dependence in the strength of spectral Comptonization. To accomplish this scientific goal, the Suzaku observatory is the most suited based on its superior spectral resolution and hard X-ray band coverage.

We took the first step of this study with the 38 ks Suzaku observation of the dipping source XB 1916-053 on November 8th, 2006. We focused on its non-dip period, and derived an unabsorbed luminosity of  $\sim 4 \times 10^{36}$  erg/s in 2 – 20 keV. We found that its 0.8 – 45 keV broad-band spectrum can be described by the blackbody emission from the neutron star surface plus the accretion disk blackbody emission, on condition that at least the former (or both) is strongly Comptonized. The derived inner disk temperature is 0.5 ~ 0.7 keV, blackbody temperature is 1.3 ~ 1.6 keV, and the corona electron temperature is above 10 keV. Compared to Aquila X-1 (a non-dipping LMXB) in similar soft state, the Comptonization phenomenon on XB 1916-053 is much stronger, which is most likely due to their different inclination angles, causing different Comptonizing paths on the view.