Wide band observation of the neutron star X-ray binary GS1826-238 with Suzaku

Yuki Nonaka¹, Kazutaka Yamaoka¹, Atsumasa Yoshida¹, Satoshi Sugita², Hiromitsu Takahashi³, Makoto Uemura³ and Simone Migliari⁴

Aoyama Gakuin University
Nagoya University
Hiroshima University
ESAC

E-mail(NY): ynonaka@phys.aoyama.ac.jp

Abstract

We report on simutaneous X-ray (Suzaku) and radio (ATCA) observations of the low mass X-ray binary GS 1826-238 which has resemble spectrum like black hole binaries. Suzaku observed this source on 21-23 Oct. 2009 for a net exposure of about 100 ksec, while the ATCA radio telescope observed it with 5 and 9 GHz on 22 Oct. for 12 hours. Unfortunately, we did not detect radio counter parts with 3 sigma upper limits of 0.09 mJy and 0.12 mJy in 5 and 9 GHz respectively. Suzaku has successfully obtained a broadband X-ray energy spectrum in the 0.5-120 keV range with a good statstics. The averaged spectrum can be well explained by a blackbody plus a power law with an exponential cutoff of 51 keV. Comparison with the low/hard state of black hole binaries will be discussed.