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Suzaku By-Week Monitoring of the Galactic Center Sgr A* in X-rays (II)

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A small gas cloud, G2, was on an orbit almost straight into the supermassive blackhole Sgr A^* by spring 2014. This event gives us a rare opportunity to test the mass feeding onto the blackhole by a gas. To catch a possible rise of the mass accretion from the cloud, we have been performing the bi-week monitoring of Sgr A^* in autumn and spring in the 2013 and 2014 fiscal year.

The key feature of Suzaku is the high-sensitivity wide-band X-ray spectroscopy all in one observatory. It is characterized by a large effective area combined with low background and good energy resolution, in particular a good line spread function in the low-energy range. Since the desired flare events associated with the G2 approach are transient, the large effective area are critical and powerful tools to hunt them.

The X-rays from Sgr A^{*} and its nearby emission were clearly resolved from the bright transient source AX J1745.6-2901. No very large flare from Sgr A^{*}was found during the monitoring of the 2013 fiscal year. The neutron star binary AX J1745.6-2901, a magnetar SGR J1745-29 and a bursting pulsar GRO J1744-28 were appeared in the field of view. The third monitoring will be made in September 2014. We may comment on it.