S13b No Microwave Flare of Sgr A* around the G2 Periastron Passing

M. Tsuboi, Y. Asaki (ISAS/JAXA), Y. Yonekura, Y. Miyamoto(Ibaraki Univ.), H. Kaneko, M. Seta, N. Nakai (Univ. of Tsukuba), O. Kameya, M. Miyoshi (NAOJ), H. Takaba, K. Wakamatsu (Gifu Univ.), Y. Fukuzaki (GSI), K. Uehara (Univ. of Tokyo), and M. Sekido (NICT)

Recently IR observations found that a small gas cloud is approaching the Galactic center BH (GCBH), or Sagittarius A* (Sgr A*) (Gillessen et al. 2012). The cloud, called "G2", has the estimated mass of $3M_E$ and will approach until the periastron distance of about $2000R_s$ in the spring of 2014 (Gillessen et al. 2013, Phifer et al. 2013). Although the nature of the G2 is still in controversy, this cloud may give some perturbation to the accretion disk around the GCBH because the cloud is somewhat extended. If any unusual increase of Sgr A* begins, it is very important for study of the mechanism of the event to observe the initial raising phase by ourselves and to alert world-wide community to observe it. Then we have been daily monitoring Sgr A* at 22 GHz since February 2013 with a sub-array of Japanese VLBI Network (JVN) in order to explore the flux density variability with the G2 approaching. The sub-array consists of Mizusawa 10-m RT, Takahagi/Hitachi 32-m RT, and Gifu 11-m RT. Tsukuba 32-m RT and Kashima 34-m RT have joined it sometimes. The average flux density of Sgr A* in $DOY = 40 - 505$ is $S_\nu = 1.17 \pm 0.30$ Jy. The average and the data scattering are still consistent with previously observed values (e.g. Herrnstein et al. 2004). We have observed no strong microwave flare of Sgr A* by May 31 2014 although the G2 already passed the expected periastron.