

## Is a Fireball from Near-Earth Binary Asteroid (164121) 2003 YT1?

**Kasuga, T.** (Kyoto Sangyo University / NAOJ), Sato, M. (NMS), Ueda, M. (NMS), Fujiwara, Y. (NMS), Tsuchiya, C. (NAOJ), and Watanabe, J. (NAOJ)

A bright fireball was detected in the sky over Kyoto, Japan at 15h58m19s UT 2017 April 28 by the SonotaCo Network (SonotaCo, 2009). The network consists of dozens of cameras across Japan, monitoring sky to find sporadic fireballs, even for hazardous small asteroids. The fireball trajectory and the entry speed are compatible with those of the potentially hazardous binary asteroid (164121) 2003 YT1 (e.g. Nolan et al. 2004). The detected altitude was from 85 km to 45 km with the maximum absolute magnitude =  $-4.10 \pm 0.42$  mag. The estimated mass and diameter of meteoroid are  $< 100$ g and  $< 10$ cm respectively, assuming to have the bulk density  $\rho = 1 \text{ g cm}^{-3}$  of 2003 YT1 (Brooks, 2006). In this talk, we present the potential active mechanism for the binary asteroid to release meteoroids and what we can expect in the future.