# SSH consortium project: Collaborative sprite observation with high school students

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As one of educational projects in geophysics for Japanese high school students, a sprite observation project collaborated with 14 Super Science High-schools (SSH) in western Japan area will be introduced in this talk. Following with a previous success of sprite detection by high school students since 2004 in an observation campaign by Astro High-school in Japan during the period 2004-2006, the SSH consortium was established at Kochi University of Technology (KUT) in December 2006 with being supported by a national grant of Japan Science and Technology Agency (JST). At the 14 SSH participants, a high-sensitivity CCD camera of WAT-100N (Watec Co.) with a 6 mm F/1.4 C-mount video lens (Fujinon Co.) was set up with special software of UFOCapture (SonotaCo) in order to detect TLE events (sprites, elves, etc.) especially in winter season above the northern shore of western Japan. The project has been carried out with great success in obtaining many video images of sprites and elves in these two years. For example, 43 TLE events were recorded in 2006-2007 winter season and more than 100 events are being recorded in 2007-2008 season. A few triangulation results were obtained in the first season after students' struggles at each high school. In the second season, more than 20 triangulation results were successfully obtained by many high school students.

On September 2, 2007, the JAXA S-520-23 sounding rocket was launched from Uchinoura, Kagosima, Japan (131.08 E, 31.25 N) with a purpose of obtaining thermospheric neutral wind in wide altitude range from 120 km up to 250 km by using resonance scattering luminescence of Lithium vapor (670.8 nm) released from the rocket (Yokoyama et al., this meeting). The SSH consortium also tried to observe the Lithium luminescence. Unfortunately, it was not clear sky condition in the half of 14 SSH sites, a few video data of Lithium were successfully obtained by high school students. As the meteors and other natural or artificial luminescence events could also be recorded by the same camera system, even previously undefined events might be detected as one of new findings by high school students in near future.