

A31a **A shape study for icy bodies in the solar system**

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Recent discoveries indicate that there exist elongated icy bodies or contacted binary systems from the outer area of main belt to Trans Neptunian Objects (TNOs) region in the solar system. Several lightcurve studies (e.g. Takahashi and Ip 2004, Lacerda and Jewitt 2007) denote that some icy bodies (20000 Varuna, 139775 2001QG298 etc) are well expressed as a Jacobi ellipsoid or a Roche binary which are the solution of equilibrium figures with no strength like ideal liquid. Equilibrium figures are suspicious for icy bodies because real bodies have any strength and they are far from ideal liquid. However, these studies indicate that this assumption is plausible for minor bodies especially for icy bodies showing relatively large amplitude in their lightcurves. In order to verify the validity of equilibrium shape, more lightcurve observations for icy bodies are needed.

In this meeting, we present a study "A shape study for icy bodies in the solar system" using a new wide field imager, Hyper Supreme-Cum (HSC) which will be installed on the Subaru telescope, and demonstrate that lightcurve studies using HSC are good opportunities for investigating shapes of minor bodies.