# Thermal Observations of Asteroidal Inactive Comet, C/2002 CE10 in Mid-IR.

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Recent projects for asteroids search such as LINEAR, NEAT, LENEOS and Spacewatch, have discovered peculiar orbit asteroids which have extremely large a (semi-major axis), e (eccentricity) and i (inclination). They should be from the Oort cloud because their orbital elements are similar to the Halley-type comets. These kind of minor bodies do not belong to any category, yet. That is the reason that they are called peculiar asteroids.

C/2002 CE10 was discovered as an unusual asteroid whose orbital elements are a=9.82AU, e=0.792 and i=45.5deg. However, on Aug. 22.724, 2003 (UT), it showed a very faint narrow cometary tail although it did not show cometary coma at all (Takato et al., IAU Circular 8193, 2003). Therefore, this object was registered in the comet list this present and it is the most inactive comet except (7963) 133P/Elst-Pizarro in the main asteroid belt.

We performed mid-IR thermal observations of C/2002 CE10 after perihelion passage with the ESO3.6m + TIMMI2 at the La Silla observatory in Chile. Combining the lightcurve correction from the Kiso observatory in optical, and using the standard thermal model for asteroids, we derived the effective radius; r=12km and the geometric albedo; pv=0.02. The radius is larger than regular comets and the geometric albedo is comparable to the Halley's nucleus (pv=0.04) and unusual asteroid (pv=0.02-0.03).

We will finally discuss on the result of near-IR and optical photometry and spectroscopy with the Subaru.