

# The Evolution of Icy Planetesimals in the Inner Solar System: Formation of Terrestrial Planets and Water Supply

# Ryosuke Machida[1]; Yutaka Abe[2]

[1] Earth and Planetary Sci., Univ. of Tokyo; [2] Earth Planetary Sci., Univ. Tokyo

Recent studies (Chiang & Goldreich, 1997; Chiang et al., 2002) imply that the interior of the solar nebula is shadowed from direct exposure to sunlight, so that the H<sub>2</sub>O ice is prevented from sublimation even at the formation zone of terrestrial planets. In such circumstances, the planetesimals formed through the gravitational instability are mainly composed of ice. It is possible that the H<sub>2</sub>O in the icy planetesimals contributes the supply of water to the terrestrial planets. In this study, we examine the evolution of such icy planetesimals considering their sublimation and collisional growth.