# Altitude profiles of ENA fluxes precipitating into the low-latitude ionosphere

# Kazushi Asamura [1], Toshifumi Mukai [1], Yoshifumi Saito [1], Yoichi Kazama [1], Shinobu Machida [2]

[1] ISAS, [2] Dept. of Geophys., Kyoto Univ.

Energetic neutral atoms (ENAs) with energies of 4 to 35 keV were measured at the low-latitude ionosphere by a sounding rocket under a geomagnetically quiet condition. These particles precipitate into the ionosphere from the magnetosphere. The precipitating ENAs undergo through a lot of collisions with dense atmospheric particles up to a time they loose most of their energies or go back into the magnetosphere. These collisional interactions are significant below an altitude of approximately 300 km, since a density of the atmospheric particles increases with decreasing altitudes exponentially. In order to estimate the effects of the collisional interactions, we calculated the profile numerically with the Monte Carlo method, and compared it with the measured profile.