

Depositional mechanism of the K/T boundary deep-sea deposits in northwestern Cuba

Kazuhisa Goto[1], Eiichi Tajika[2], Ryuji Tada[3], Manuel A. Iturralde-Vinent[4], Shoichi Kiyokawa[5], Yoichiro Nakano[6], Shinji Yamamoto[1], Tatsuo Oji[7], Hideo Takayama[8], Takafumi Matsui[9]

[1] Earth and Planetary Sci., Tokyo Univ, [2] Dept. Earth Planet. Sci., Univ. of Tokyo, [3] Geol. Inst., Univ. of Tokyo, [4] Museo Nacional de Historia Natural, [5] Earth & Planetary Sci., Kyushu Univ., [6] Dept. of Earth and Planetary Sci., Univ. of Tokyo, [7] Geological Institute, Univ. of Tokyo, [8] NHK Nagoya, [9] Dept. of Earth and Planetary Phys., Univ. of Tokyo

The Penalver Formation in northwestern Cuba is one of the thickest K/T boundary deposits, and consists of calcareous clastic rocks showing upward fining. It is composed of a lower gravity flow deposit and an upper homogenite, the latter being interpreted as a deep-sea tsunami deposit. Although macroscopically homogeneous and normally graded, there are slight compositional oscillations repeated 5 times in the upper homogenite. These oscillations are associated with variation of coarse fraction content within insoluble residues. We also found that the Penalver Formation shows lateral lithological variations among the localities. These differences may reflect difference in degree of influence of currents, probably caused by difference in depositional depth among these localities.