

Turbidites collected from the Japan Trench inner slope, during the NT13-19 cruise

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To understand the recurrence of large earthquakes along the Japan Trench, we collected 24 sediment cores from the Japan Trench inner slope, 37.5-40 N, 143.5-144.16 E, water depth 4000-6000 m, during the NT13-19 cruise. Many deep-sea turbidites were intercalated in the sediment cores. We examined the interval and structures of the turbidites using soft-X radiographs. In general, number of the turbidites in a core is high in the southern part off Sendai, but is low in the northern part off Miyako. Meanwhile, intercalated tephra such as Haruna-Ikaho (Hr-FP), Towada-Chuseri (To-Cu) and Towada-a (To-a) were identified in the 13 cores. Based on the eruption ages of the tephra, we estimated the averaged recurrence intervals of 100-500 years in average in almost cores. But there are cores that display different intervals over 1500-2000 years.

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