

Electromagnetic Survey across the northern Japan Trench, off-Sanriku, Japan

Tada-nori Goto[1], Hitoshi Mikada[1], Gou Fujie[1], Kiyoshi Suyehiro[1], Yoshiyuki Kaneda[2], Tetsuro Tsuru[3], Kohichi Uhira[1], Shuichi Kodaira[4], Ayako Nakanishi[5], Keizo Sayanagi[6], Makoto Uyeshima[7], Hisashi Utada[8], Nobukazu Seama[9], Steven Constable[10]

[1] JAMSTEC, [2] JAMSTEC,Frontier, [3] Frontier, Jamstec, [4] IFREE, JAMSTEC, [5] FRPSD, JAMSTEC, [6] IFPER, Riken, [7] Earthq. Res. Inst., Univ. Tokyo, [8] ERI, Univ. of Tokyo, [9] RESEARCH CTR INLAND SEAS, KOBE UNIV., [10] Scripps Inst. of Oceanography

<http://www.jamstec.go.jp>

We introduce a preliminary result of seafloor magnetotelluric survey near the northern Japan Trench, off-Sanriku, Japan. Ten OBEM instruments, made by SIO, were deployed and recovered in June 2000, along 40 N line. The conductivity structure obtained by two dimensional inversion shows a conductive deformation zone. It implies high fluid content in the deformation zone. In addition, a shallow part of subducting Pacific plate is imaged as conductive. Below 10km in depth, subducting plate becomes resistive. It is concluded that fluid supply from oceanic crust may continue to the depth of 10km.