Global-COE Special Lecture

Long-period seismic waves excited by the 1933 Sanriku earthquake

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Date & Time: 10:00 - 11:30 Oct 16, 2009 on Friday
Place: Research Center for Earthquake and Volcanic Eruption
Annex Bldg. #1 Meeting Room
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Abstract:

This work was motivated by the recent seismological studies in the Sanriku region by the Tohoku University group and Dr. Steve Kirby’s group. In the old studies, seismograms recorded with the traditional pendulum seismographs were used, and inevitably only relatively short period waves were used. In view of the tsunami potential of the Sanriku type outer-rise earthquakes, it is important to investigate long-period seismic waves. We analyzed long-period seismic waves recorded with a Benioff linear extensometer at Pasadena, which are probably the first recordings of long-period (up to 300s) Love and Rayleigh waves. A systematic analysis of these long-period waves suggests that the 1933 earthquake is about twice as large (in moment) as was suggested at periods up to 100s. This conclusion is qualitatively consistent with the earlier results obtained by Ben-Menahem (1977) and Okal (1922).