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Room:Convention Hall

Time:May 25 14:00-16:30

Preliminary results of logging-while-drilling, IODP Expedition 334, Costa Rica Seismogenesis Project (CRISP)

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Integrated Ocean Drilling Program (IODP) Expedition 334 is the first step in the Costa Rica Seismogenesis Project (CRISP), designed to understand the processes that control nucleation and seismic rupture of large earthquakes at erosional subduction zones. The scientific objectives of this expedition include constraining the architecture and evolution of the plate boundary megathrust, the role of fluids, as well as the nature of the upper plate in a tectonically erosive margin along a drilling transect at two slope sites. One of our goals is to obtain a comprehensive suite of geophysical logs at two sites using state-of-the-art logging-while-drilling (LWD) technology. The principal objectives of the LWD program are to document in situ physical properties (natural gamma ray, density, neutron porosity, resistivity, and annular fluid pressure and temperature), stratigraphic and structural features, compaction state, and hydrological parameters. Electrical resistivity images will be used to determine fracture orientations, to infer stress directions from borehole breakouts, and to orient core samples. We will present preliminary results from LWD measurements that were obtained during Expedition 334 from mid-March to mid-April 2011.

Keywords: IODP, CRISP, LWD, Seismogenic zone