

## A prospect of long-term monitoring in deep seafloor boreholes

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The Integrated Ocean Drilling Program (IODP), scheduled to begin in 2003, plans exploration beneath ocean floor using multiple-drilling platform operation. In IDOP, the riser-ripped drilling ship enables us to drill deep holes beneath ocean floor, and gives us opportunities to make a long-term borehole observation for understanding of a dynamics of deep region. However, there are few observations in a borehole which has a depth of more than 3km below seafloor. We present a prospect of long-term monitoring in deep seafloor boreholes.

A long-term borehole observation in a seismogenic zone has higher priority in Initial Science Plan of IODP and expects to need advanced technology development. Therefore, a long-term borehole monitoring in a seismogenic zone is discussed as the case study. We evaluated the scientific objectives, environmental conditions and specification of borehole monitoring in a seismogenic zone. Some engineering problems related to a deep borehole monitoring are also recognized through the discussion.