

## Progress in Bend-Fault Hydrology in the Old Incoming Plate (H-ODIN) project

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Hydration due to plate bending-induced normal faults (bend-faults) in the region between the trench axis and outer rise (outer rise) has recently drawn considerable attention (e.g., Grevemeyer et al., 2007; Fujie et al., 2013). In order to deepen our understanding of bend-fault hydration, we have submitted an IODP pre-proposal: Bending fault hydrology of the Old Incoming Plate (H-ODIN). We also organized an IODP workshop, Bend-Fault Serpentinization, in London, 2016, sponsored by CHIKYU IODP Board, the UK-IODP, and ECORD. We refined drilling purpose, drilling site and drilling strategy for Northwest Pacific region (Old-Cold subduction) and Middle America region (Young-Hot subduction) in the workshop, because it is ideal to compare subduction zones in several contrasting geodynamic states (e.g. Old plate vs Young plate, Horst-and-graben bend-fault structures are well developed in the northwestern Pacific subduction system. We will present our progress in the proposals.

Keywords: Drilling project into plate bending-induced normal faults, Northwest Pacific region