

Challenge to monitor the nearby hydrological response to the drilling into hydrothermal venting area: A case for mid-Okinawa Trough Noho hydrothermal site

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Thermal and hydrological properties within a hydrothermal system are obviously key factors to constrain the size, flux and lifetime of a hydrothermal reservoir. During the Expedition 908 conducted with JAMSTEC drilling platform Chikyu, heat flow and pressure monitoring were carried out using SAHF (Stand Alone Heat Flow meter) and POODLE (Pressure and "Ond" On Deep-seafloor for Long-term monitoring Equipment). The main purpose of these observatories is to detect, if any, a thermal and hydrological response to the nearby drilling into a hydrothermal venting site. Such signals should provide critical information about thermal and hydrological properties in a system. We deployed SAHF and POODLE 7 hours before drilling SIP NH-01 (site C9017) and recovered them in November 2016 by using the ROV.

We present here a quick-look report on the monitoring of sub-seafloor temperature and pressure data, recorded in the period of nearby drilling into the Noho hydrothermal venting area in mid-Okinawa Trough.

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