

Figure F1. A. Map showing locations of NanTroSEIZE drill sites (red = locations of existing and planned borehole observatory installations) (from Kopf, Araki, Toczko, and the Expedition 332 Scientists, 2011). Expedition 365 focuses on Site C0010, which penetrates the megasplay fault at 407 mbsf. B. Detail map showing location of Site C0010. IL = in-line, XL = cross-line.

Figure F2. Interpreted seismic cross section of Kumano transect offshore and southeast of Kii Peninsula (modified from Moore et al., 2009; after Strasser et al., 2014). From the trench landward, the transect is separated into six morphotectonic domains: protothrust zone, frontal thrust zone, imbricate thrust zone, megasplay fault zone, Kumano Basin edge fault zone, and Kumano fore-arc basin. Drill sites on incoming Philippine Sea plate are not shown. VE = vertical exaggeration.

Figure F3. Detailed seismic reflection lines showing locations of Holes C0010A–C0010E. A. Dip line. B. Strike line. Line locations are shown in Figure F1B. mbsl = meters below sea level.

Figure F4. Schematic showing configuration of Hole C0010A and depths of GeniusPlug and key components of hole completion, Expedition 332.

Figure F5. GeniusPlug components. MTL = miniature temperature logger, AWQ = All Wet-mate QQ-C-465, RTC-PPC = real-time clock pressure period counter.

Figure F6. Schematic of LTBMS string installed in Hole C0010A after recovery of GeniusPlug. Logging units from Expedition 319 LWD runs in Hole C0010A are also shown for reference. BRT = below rotary table.

Figure F7. Operations sequence, Hole C0010A. POOH = pull out of hole.

Figure F8. Photo of GeniusPlug after recovery. P = pressure.

Figure F9. OsmoSampler coils.

Figure F10. Pressure records from GeniusPlug deployment. A. Overview of entire deployment period. B. Installation time window. C. Instrument recovery period.

Figure F11. Pressure records for the 11 March 2011 Tohoku M9 earthquake. A. Data from 9 to 15 March 2011. B. Earthquake record on 11 March 2011.

Figure F12. Pressure records for the 1 April 2016 Mie-ken Nanto-oki M6 earthquake (EQ). A. 2.3 day period from 30 March to 1 April 2016. B. Time window of earthquake.

Figure F13. Chlorinity data from GeniusPlug chemistry (chem) and biology (bio) coils. Interstitial water (IW) results for Sites C0004 and C0010 are shown for comparison.

Figure F14. A. Schematic of FLOCS unit. B–G. Microscope images, with microorganisms stained green. Inoculum for each culture: (B) FLOCS fluids, (C) crushed barite, (D) Site C0004 sediment, (E) olivine, (F) rust from GeniusPlug casing, and (G) control.

Figure F15. LTBMS head, showing configuration of each bay (top) and ROV platform and data recorder (bottom).

Figure F16. Miniscreens used to terminate hydraulic line at the lowermost pressure port.

Figure F17. A. Instrument carrier. SAHF = stand-alone heat flow. B. Strainmeter suspended in moonpool.

Figure F18. Generalized stratigraphic columns for Holes C0010C and C0010D (hanging wall) and Hole C0010E (footwall).

Figure F19. Porosity and *P*-wave velocity data, Holes C0010A–C0010E.