

**IODP Expedition 385T:  
Panama Basin Crustal Architecture and Deep Biosphere: Revisiting Holes 504B and 896A**

**Week 4 Report (8–14 September 2019)**

**Operations**

Week 4 of Expedition 385T began while the vessel was underway at full speed to San Diego, California. We reduced the vessel's speed on 11 September so that we would arrive at the San Diego pilot station at 1400 h on 15 September. At week's end we had travelled 2648 nmi out of the 2779 nmi total transit. Mileage for the week was 1947 nmi at an average speed of 11.45 kt.

**Science Results**

The scientists prepared the *Preliminary Report* for Expedition 385T.

**Outreach**

The Outreach Team continued their activities by posting six blogs on the [joidesresolution.org](http://joidesresolution.org) website, five posts for Twitter (<https://twitter.com/TheJR>), three posts for Instagram ([http://instagram.com/joides\\_resolution](http://instagram.com/joides_resolution)), and two posts for Facebook (<https://www.facebook.com/joidesresolution>). The team also continued working with the JR Academy students and the science communication projects. The second and third ship-to-shore broadcasts were conducted on 11 and 13 September to a University of Arizona geosciences audience and a middle school in the United States. The team also concluded the initial assessment of the Outreach position aboard by finalizing a 30-page draft report. The report includes suggestions for the position at sea, the development of a social media strategy and content plan, and ways to strengthen the relationship of future officers with the science party. Postexpedition timelines were set for the completion of resources, including a book on the history of IODP and Hole 504B.

**JR Academy**

JR Academy participants spent their last week split between class content, research, science communication projects, and learning about the ship and life aboard the ship. Class content wrapped up with topics covering waves, tides, weather forecasting, wind, seasons, climate, and ocean currents. A navigator with the Polynesian Voyaging Society in Hawaii discussed and answered questions about her career path and experiences as a navigator via a videoconference

call with the class. The Chief Mate discussed his career path and then, with the Bosun, led a class session teaching the students how to tie rope knots that are particularly useful in the marine field. The instructors of the JR Academy discussed their own career paths with the students and also introduced future opportunities in STEM for undergraduate and graduate students that the students could investigate to help them continue in the field. Students also completed their research projects, created a poster about their research, and presented it in a shipboard poster session open to all shipboard personnel. More than 30 people attended, including the shipboard scientists, technical staff, the Captain, and a number of other crew members. All science communication projects were completed this week and showcased at the poster session, including two more ship-to-shore broadcasts, children's books, and a video. Students continued work on final assignments and reflections to be submitted before leaving the ship.

### **Technical Support and HSE Activities**

The IODP JRSO technical support staff engaged in end-of-expedition activities and prepared the laboratories for a safety audit.

#### *Logistics Activities*

- Shipments were completed and paperwork was sent in.

#### *Laboratory Activities*

- Chemistry:
  - A bracket for the Gas Chromatograph Injection Port was 3D-printed.
  - Additional shelving was installed in the Microbiology Laboratory in preparation for the next expedition.
- Physical Properties and Paleomagnetism:
  - All core logging systems were tested and their data upload was verified.
  - Repaired the timing belt drive gear on the aft Whole-Round Multisensor Logger.

#### *Application Support Activities*

- IMS: continued work on Section ID modules.
- GEODESC:
  - Continued design work on Data Capture application.
  - Continued work on prototype Excel workbook to validate proof of concept.
  - Continued work on Template Manager test plan.

#### *HSE Activities*

- Held the weekly fire and boat drill as scheduled.

- Showers and eye washes were checked.
- Updated hazardous chemical storage lists.