

I09N 2025 CRUISE WEEKLY REPORT

Despite it being just our first week at sea, it seems we've been here forever, given our bumpy journey thus far. Before the I09N cruise even began, we had to postpone our departure from Henderson, Western Australia, because the DIC van lab did not arrive on time. We were supposed to leave on March 17 (Monday), but we didn't depart until March 21 (Friday)! Consequently, the number of stations we planned to occupy in 2025 was reduced from 122 to 106 to compensate for the lost sea days. However, 106 stations feel more like a mirage in the desert at this point, as you will understand in a few paragraphs.

The problem started when the Australian government placed the DIC van on hold in Singapore due to a small acetone content. We all (including the agents) learned the hard way that acetone is a controlled substance in Australia. After the removal of the acetone, the DIC van was finally released. The container was transported from Singapore to Fremantle, with a stop and over in Malaysia, aboard the *M/V Jogela*. From then on, our favorite hobby was tracking the *M/V Jogela* on her journey to Australia. Her voyage was smooth; the DIC van arrived on March 19 as expected, and the GAC agents facilitated a quick release from customs before transporting it to Henderson on March 20 morning, where the *R/V Thompson* was docked.

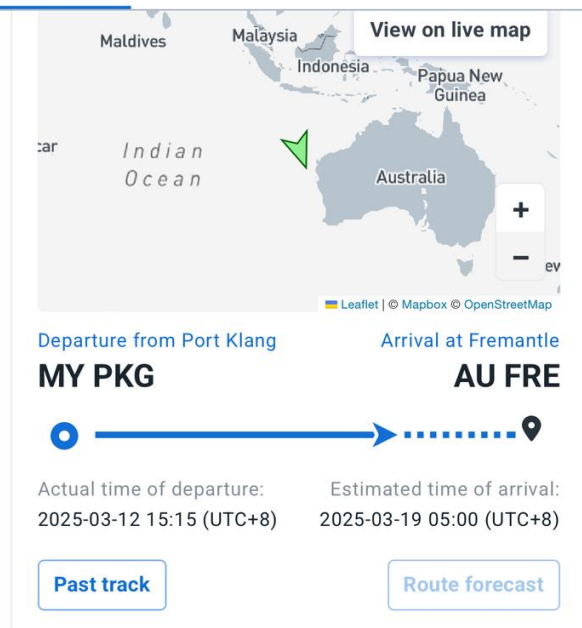
For those unfamiliar with Western Australia, Henderson is a half-hour drive from Fremantle. Our mobilization at the Australian Marine Complex (AMC) in Henderson was a distinct chapter. Security is much tighter there than at any other port, and the sequence of shuttles we had to take to reach berth four, where *R/V Thompson* was docked, constantly confused us! However, despite the challenges and the isolated AMC location (we weren't even allowed to walk on the dock), our mobilization was flawless, thanks to the wonderful assistance of the *R/V Thompson* crew! We couldn't have been better served!

In all this DIC van drama, Chris Ikeda went above and beyond to keep us informed every step of the way. He stayed in Henderson throughout our extended period and worked hard with Chuck

 **JOGELA**
 Container Ship
 IMO: 9619402

[Overview](#) [Port call log](#) [Vessel characteristics](#)



Tracking M/V Jogella. Photo: Leah Chomiak



The DIC van is finally on the R/V Thompson main deck. Chris Ikeda couldn't be happier. Photo: Viviane Menezes

Featherstone and Abby Tinari to set up the DIC van on March 20. An issue is that the DIC van door cannot close properly (a minor concern in a sea of problems). They hope for fair winds and following seas.

“Despite the delay, we departed from Aussie!”

After our extended MOB, *R/V Thompson* departed on March 21 at 0800 local time with 28 scientists on board, along with our Naval Observer (Lt Cdr Sazzad Hossen) from the Bangladesh Navy. This will enable us to sample Bangladesh waters at the northern end of the

I09N line for the first time!

We didn't anticipate that problems would follow us at sea...

First Week at Sea

The *R/V Thompson* departed from Henderson on March 21 at 08:00 (local). After the challenging mobilization, it was nice to relax a bit and enjoy life at sea. The science party bonded over many dinners and local beers in Freo, continuing in high spirits at sea, helping each other set up labs and secure everything. Our first-timers experienced a bit of seasickness but without major issues. We had two days of transit to our test station.

Our test station was outside Australian Marine Parks and scheduled for March 23. The test station started at 1100 local time, enabling both morning and night teams to take part. The plan was to begin with a shallow bio-cast (0-1000 m), followed by a deep cast (surface to bottom, approximately 2500 m at this station). The bio-cast started with Genevieve Clow and Roxanne Mina acting as CTD watchstanders. Everything seemed normal, and everyone was thrilled to start finally.

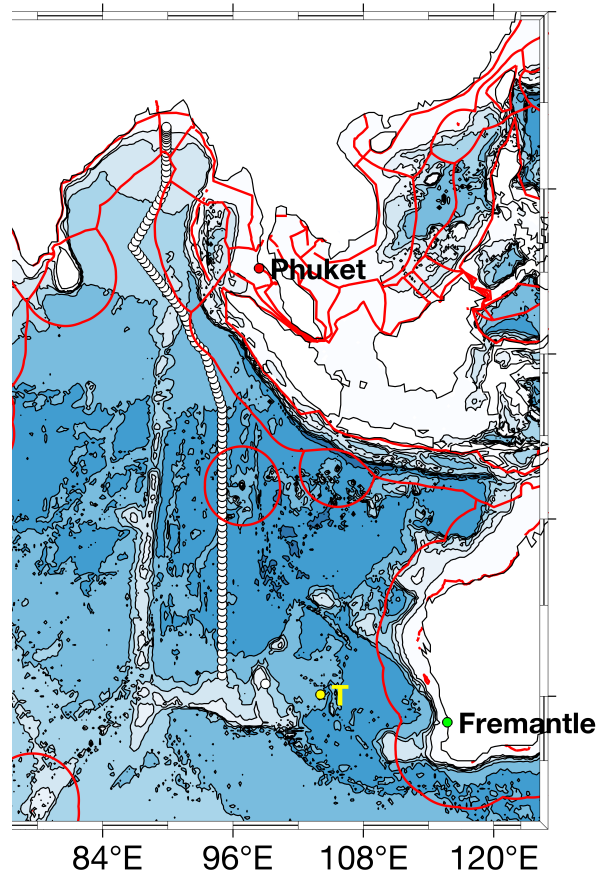
However, once the CTD package entered the water, we faced several problems: the winch software froze, the bottles could not be fired, the CTD software became unresponsive, and the cable got tangled. Ultimately, we lost connection with the CTD package. The cast was aborted, and the package was brought back to the surface. No water was collected, and the deep cast has not been attempted. The winch was not functioning correctly.

Since resolving all the issues we experienced at the test station would take a long time, we decided to continue our journey to the first station while the ship and the ODF team worked diligently to address all the problems.

After replacing the carousel, we conducted a **second test station** en route to Station 1 on March 24 at 10:30 (local time). The goal was to test the replaced equipment, so the second test station was shallow (0-1000 m). All the bottles were fired without issues, and the winch worked fine. The bio team appreciated having all the water!

On March 25 at 23:40 (local), we arrived at our **first station** located at 28.311°S and 95°E, at a depth of 3,093 m. Everything functioned well despite the noise in the altimeter (we use it to find the bottom precisely). It was our first experience with bottom approximation. As you can imagine, drawing water from all 36 bottles was slow since this was our first bottle sampling on this cruise. We have improved significantly since then!

We then thought our lives would become the monotonous endless loop that defines GO-SHIP cruises—*deploy, recover, sample, deploy*. **But life can't be so simple.**



Updated I09N 2025 track. Notice that we started north of Broken Plateau as usual instead of occupying latitudes south of it as we planned to cover the 2024 I08S gap. Horizontal resolution has also changed in the equatorial area (20 nm to 30 nm)

We faced a new problem: the aft winch we used for rosette deployment stopped working at station 2. The winch display didn't show the correct speed or payout, and to complicate matters, the altimeter was quite noisy during the bottom approximation! A judgment call was made, and we fired the first bottle 20 m above the bottom. We didn't want to risk losing the package under these adverse conditions!

With the winch failure, we had to delay station 3 to replace the winch and perform a re-termination. Both winches are DASH-5, but we are now using the forward winch instead of the aft. ODF (Jesse McLaughlin and John Calderwood) R/V Thompson (Marine Techs and crew) worked hard to solve this problem!

Stations 4 to 6 progressed without major incidents, aside from the noisy altimeter that has troubled us from the beginning. We replaced the altimeter and cables for station 4, but this didn't resolve the problem as we had hoped. The only other issue was a leak in the underway system used by the Bio team, which the crew worked swiftly to address!

A few days ago, on Monday the 24th, while monitoring the weather, we noticed the emergence of a tropical depression in the southeastern Indian Ocean. Since then, we have been following its progress. Initially, it developed into a tropical storm projected to reach our location by March 28. This tropical storm eventually transformed into **Cyclone Courtney** (*cyclones are what hurricanes are called in the Indian Ocean*)!

To our surprise, **we were now facing a hurricane ahead of us.** However, the issues plaguing our trip ultimately proved beneficial by delaying our journey and keeping us away from a direct encounter with Courtney, which was forecasted to reach Category 2 or even 3!

As we followed Courtney with attention, our question became: *Would we encounter her?*

While uncertain about our hurricane encounter, **the altimeter completely failed during the bottom approximation at station 6,** and tension in the winch cable spiked as the package was closed to the bottom. It was challenging for our first-time CTD watchstanders to manage this situation in real time, but they persevered.

Station 7 on March 27 was even more challenging. The CTD system failed on the way up. Multiple reboots of the server were attempted, but nothing seemed to work. Some bottles closed and collected water; others did not. The different teams are working hard to understand the depths at which the bottles were sampled. A few ideas are in play, and we may be able to rescue some data.

**“So far, a sea of problems
— but we are working
hard to make I09N
possible !”**



Tropical Cyclone (Hurricane) Courtney. March 28 forecast

To avoid losing even more time, we proceeded to our next station (station 8 at 24S) while repairs were underway.

We couldn't imagine that the failure would be far more extensive there. In a nutshell, **nothing functioned at station 8, nothing!** We retrieved the package after a few hundred meters. The team immediately began troubleshooting, replacing, and testing everything.

We held on to our position on March 26 at 8 a.m., expecting to do the cast immediately after we solved the rosette problems. **Of course, this wouldn't be so easy**

While troubleshooting the CTD, the ship's sea drive (the main propulsion system) failed, prompting the crew to begin its replacement. As we confronted two independent and critical issues, the sea started to feel Courtney's effects. All operations have been on hold since then. We are patiently waiting for the sea to calm down! This has been our life for the last 24 hours.

Last but not least, we have deployed 2 Core Argo floats!

This concludes our updates for this week. Our saga continues...

Best from the Southeast Indian Ocean,

Viviane Menezes (Chief Scientist)

Leah Chomiak (co-chief Scientist)