



Progress on XBT biases

Or, what I have been doing for the last two years.

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www.csiro.au



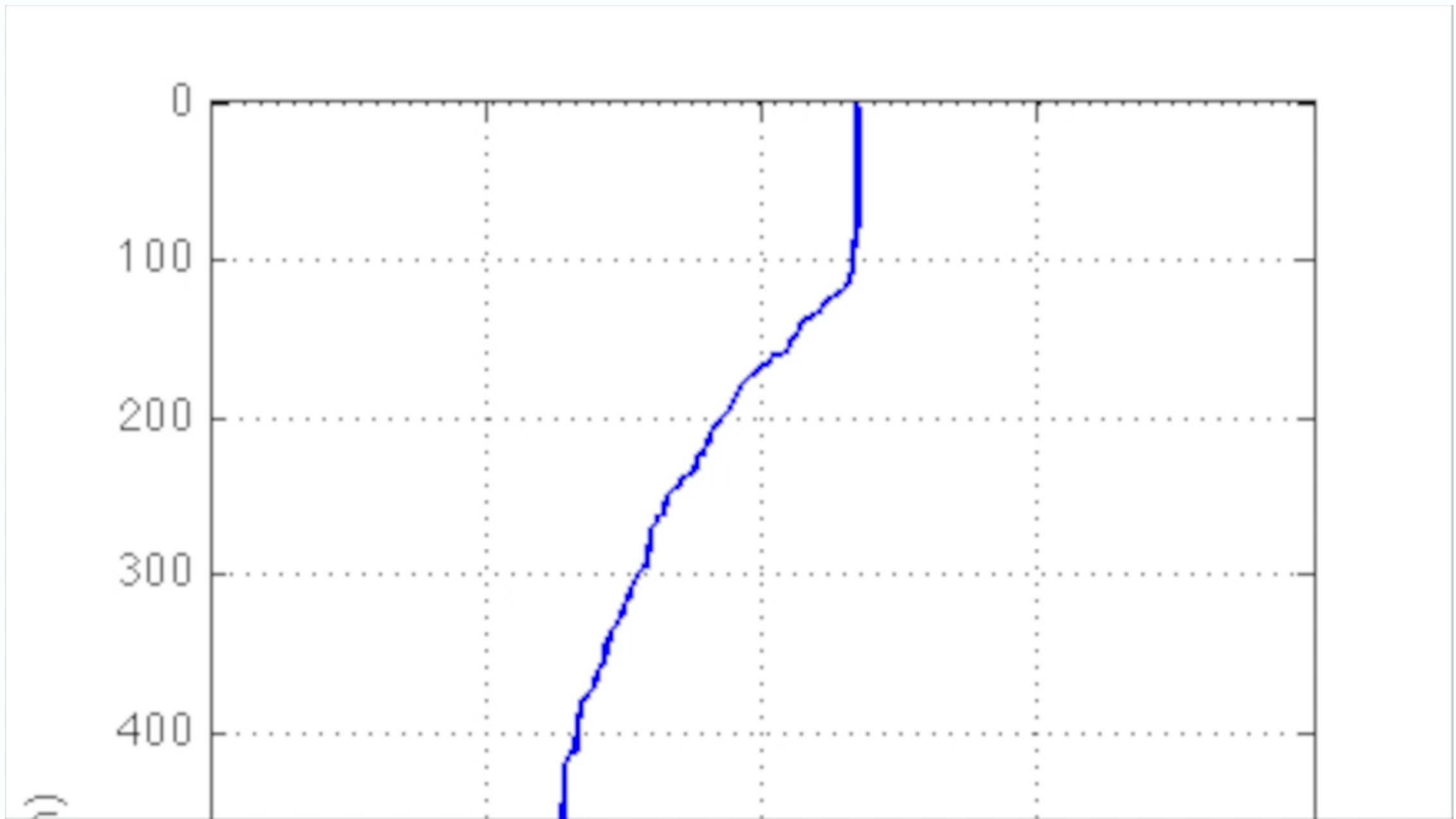
Updates to the XBT/CTD pairs database

Since the Cowley et al 2013 publication:

- New datasets added for pairs analysis:
 - *Southern Surveyor*, 2 voyages in 2013
 - *Southern Surveyor*, 2015 (CTD & height tests)
 - *Investigator*, 2016 (cold water and T5s – not so good!)
 - *Aurora Australis*, 2012 (cold water)
 - *Southern Surveyor*, 2 voyages in 2012
 - SHOM, 2014 (thanks Franco)
 - *Urania*, 2008-2009 (thanks Franco)
 - *INSTANT Baruna Jaya 200x?*

Sippican DB from CSIRO trips, modern probes, from 2011-2015

Some interesting comparisons

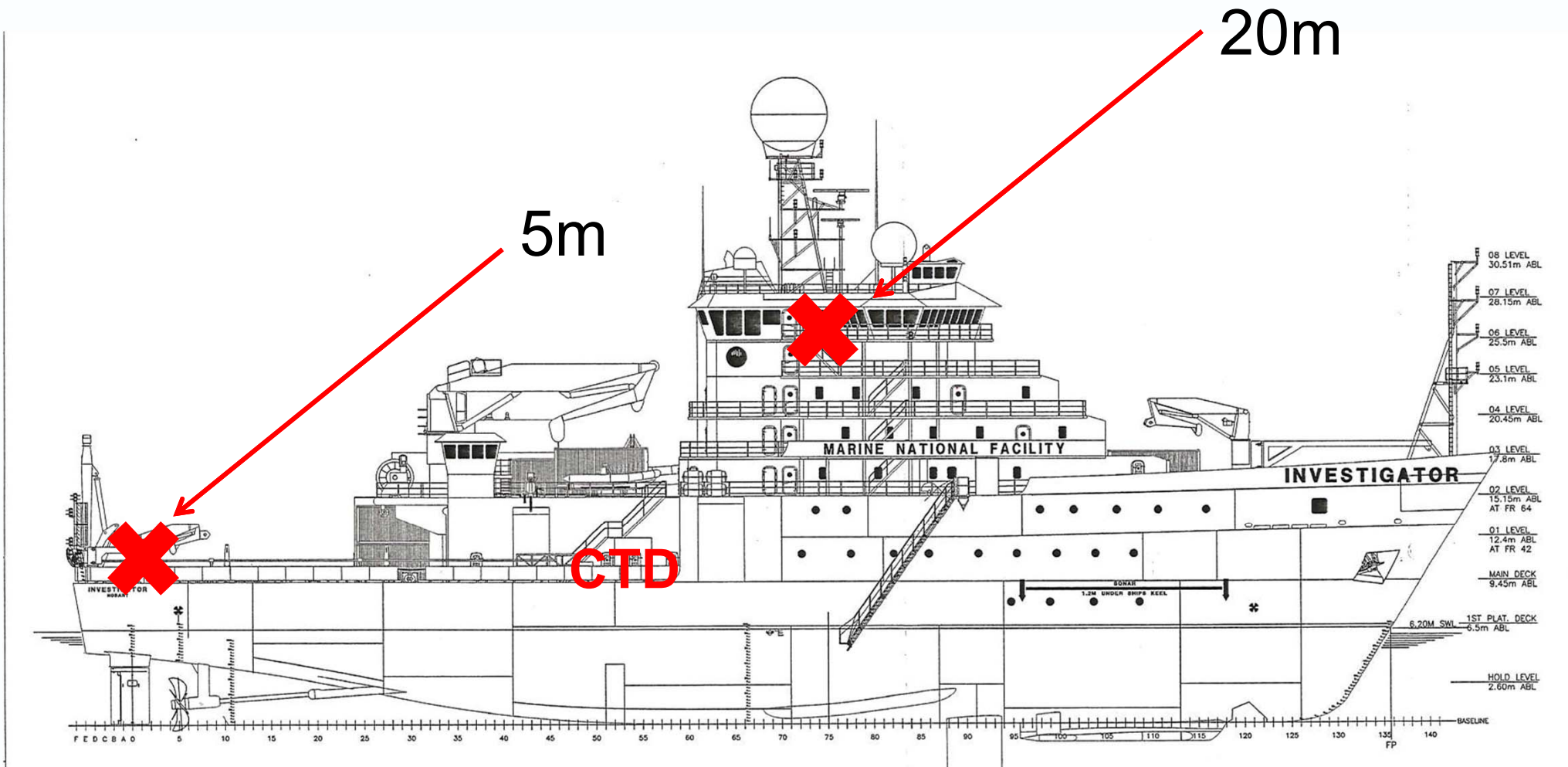


Height analysis preview

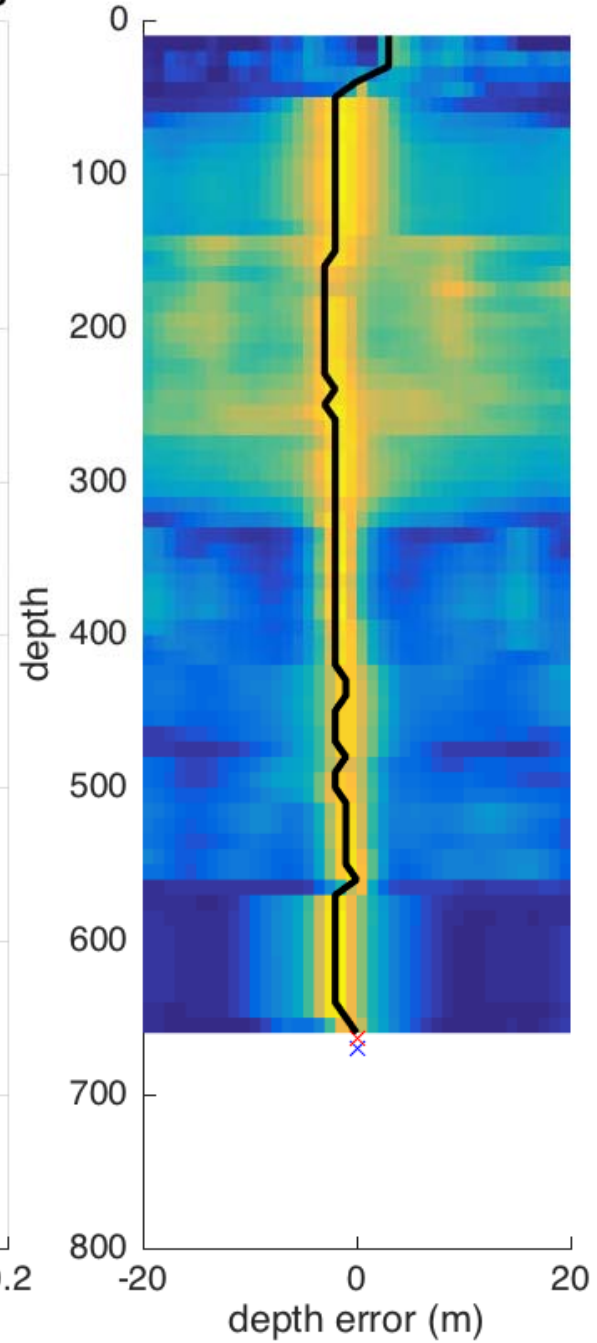
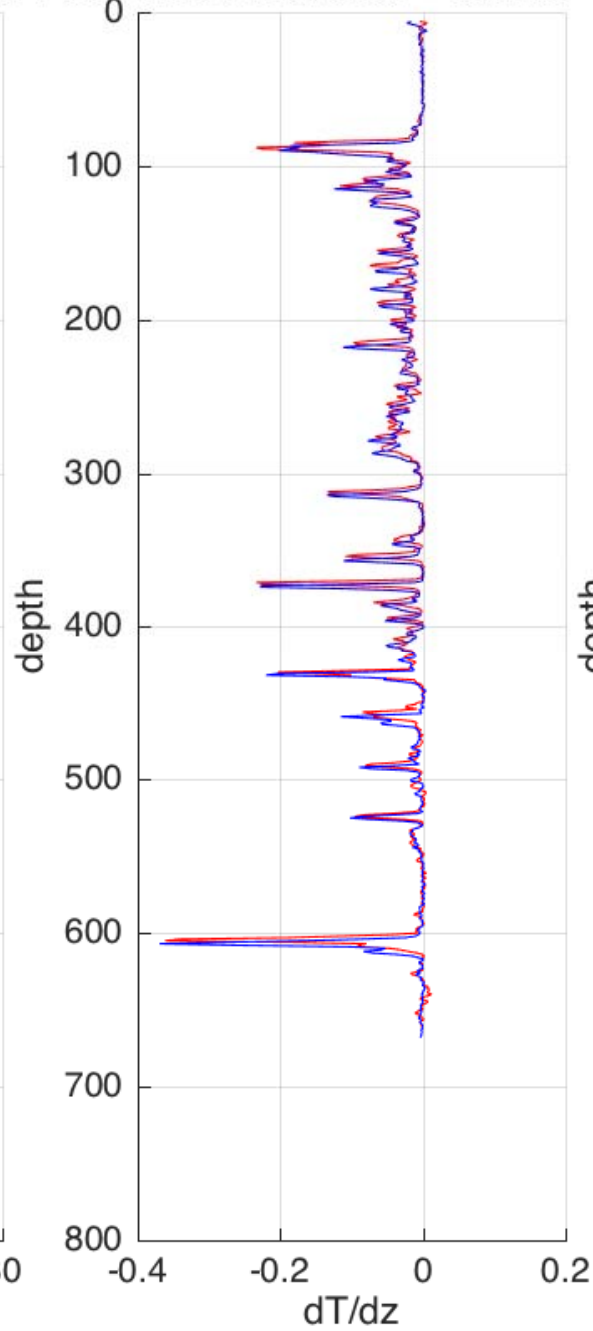
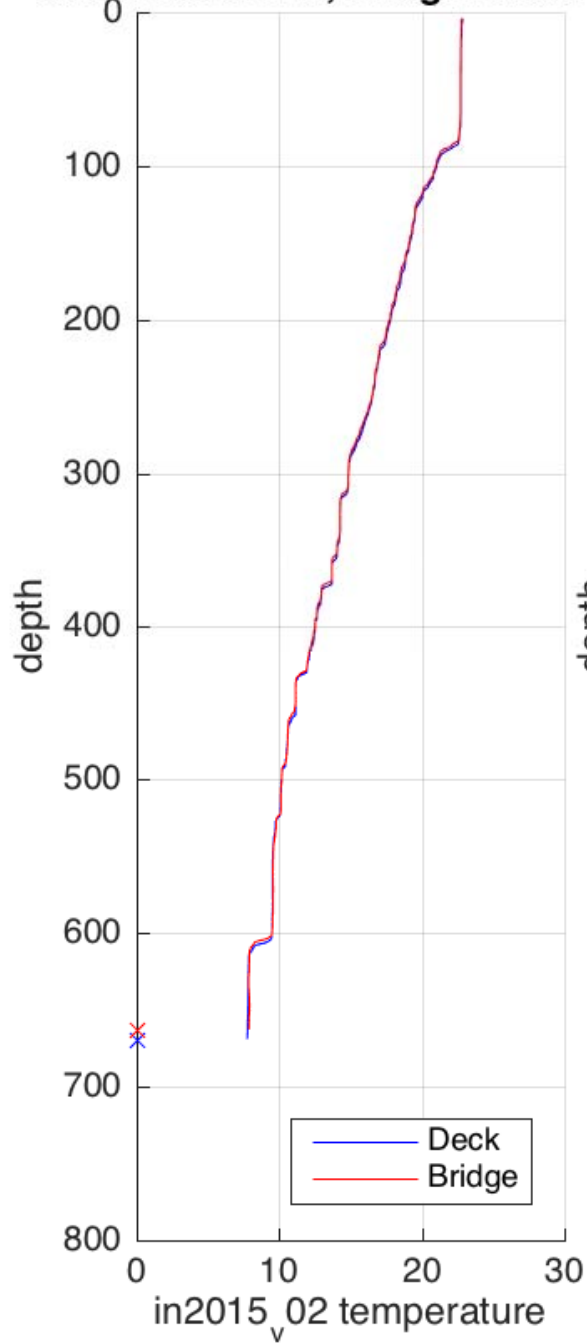
Using Sippican DB probes (2013/06)

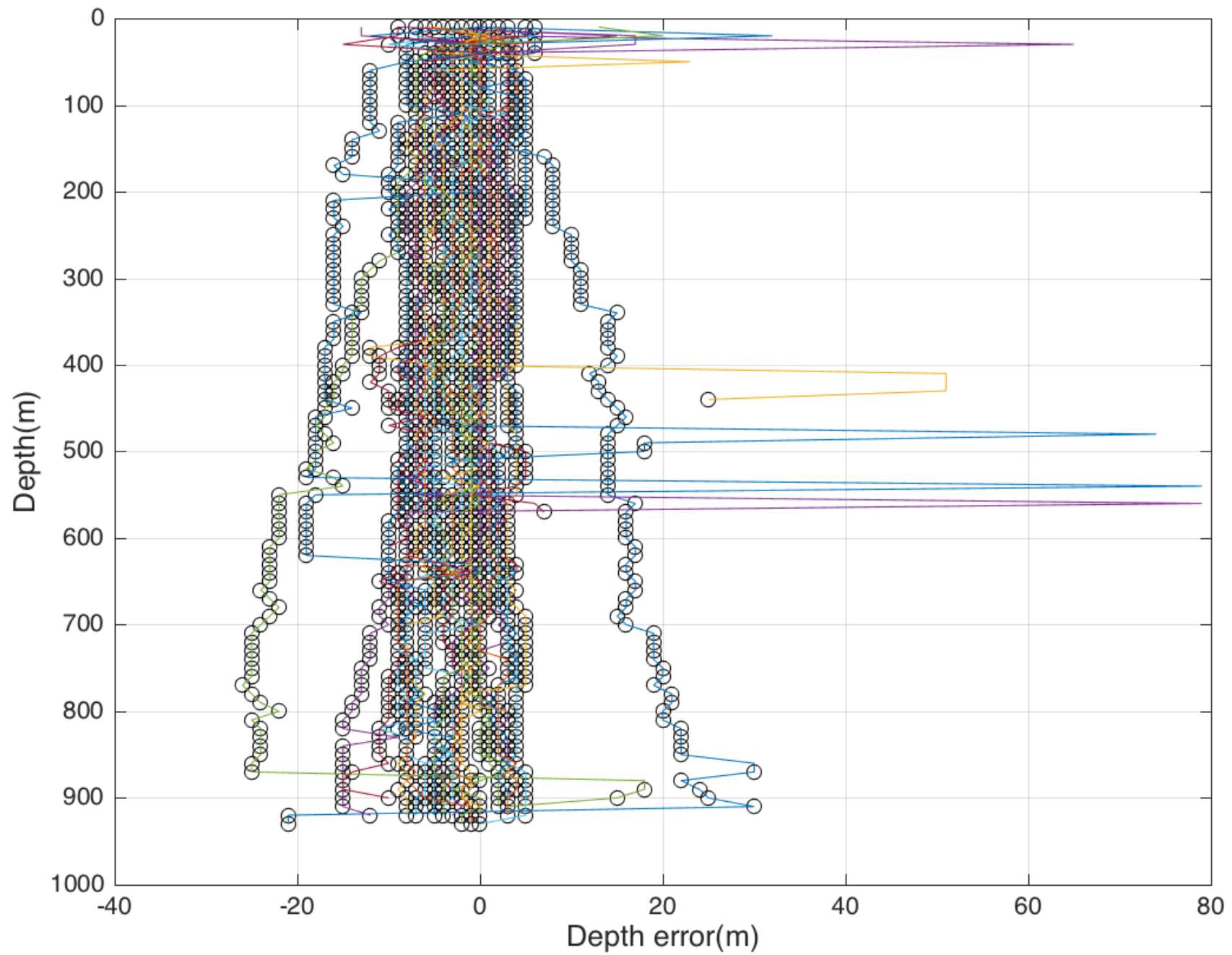
- Collected 39 XBT-XBT pairs (deck-bridge launches)
- Deployed while underway (~10-12 knots)
- Aimed to hit the bottom where possible (13 pairs)
- Deck and bridge deployments coordinated – released at the same time

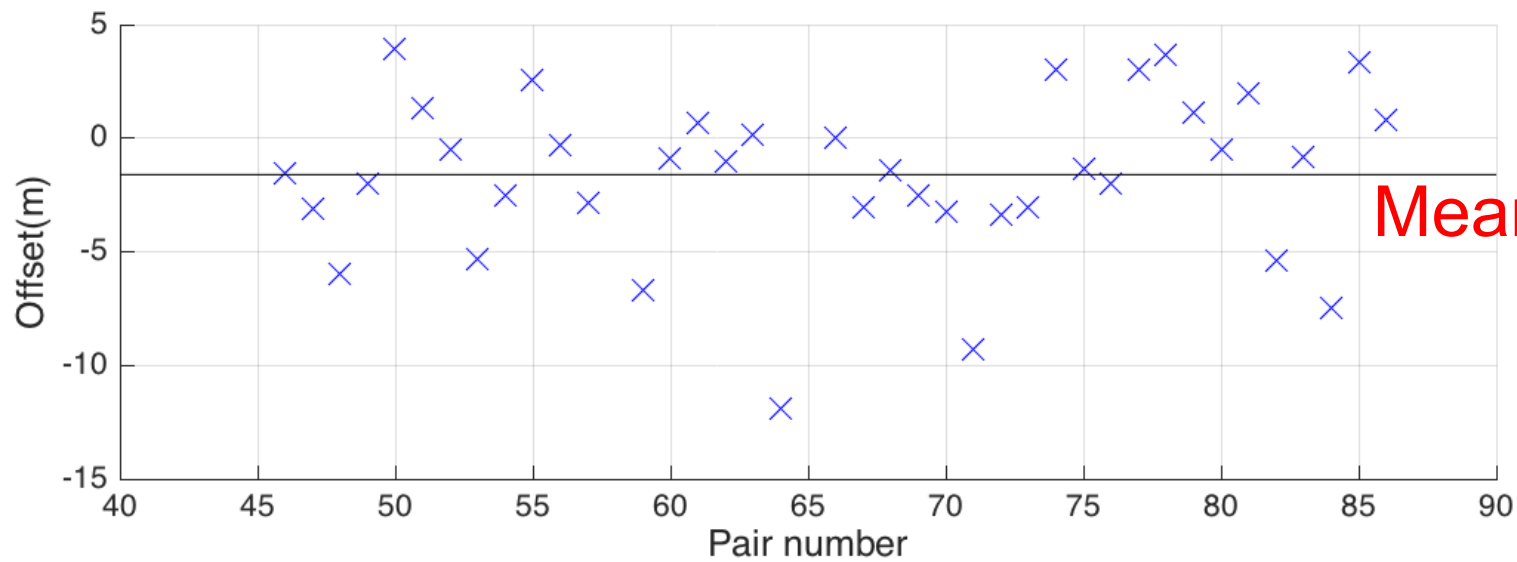
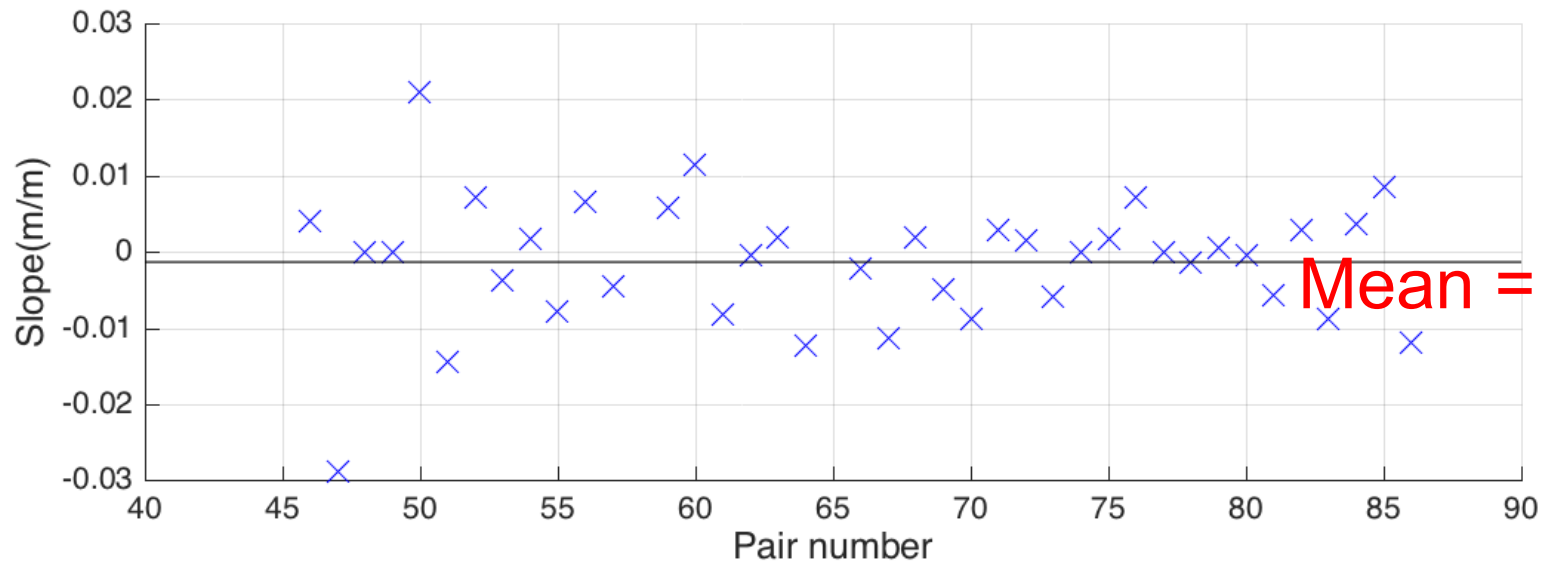
RV Investigator

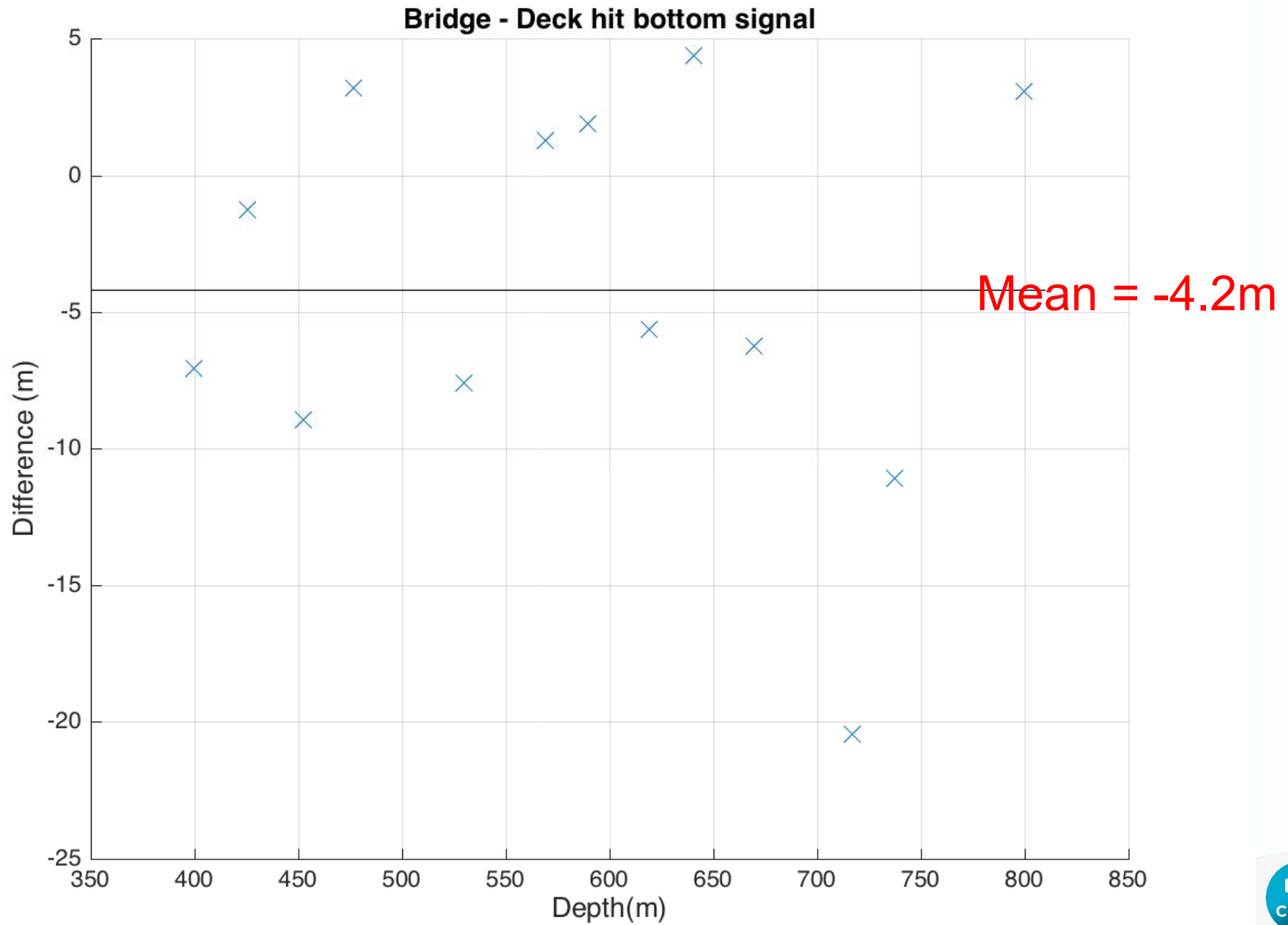


deck: 89007825; bridge: 89007746 time difference = 0mins









For the future

- Are there other pairs datasets that have been collected?
- Can we centralize the location of these pairs at CSIRO? Elsewhere?
- More XBT/CTD comparison data to be collected from other groups?
- Can we have a task team (or sub group) to
 - Make recommendations for future collection of pairs data
 - Carry out comparisons
 - Work with GOShip/JCOMMOPS/others to get pairs data collected

A vision:

Look at putting the modern pairs correction together with an ensemble XBT pairs historical correction?

And continue to update this!

