Introduction to MISO MC800 movie showing MISO Imaging/Data systems and Operation of Anti-pretrip Collar via Subsea HD video imaging

Dan Fornari – WHOI-MISO 2017 RVTEC Meeting

The MISO imaging and data systems have been integrated with MC-800 and MC-400 multicorers and used on 7 UNOLS vessels for science data acquisition over the last few years (RV Sikuliaq, RV Thompson, RV Sally Ride, RV Oceanus, RV Savannah, RV Melville, & RV Atlantis). In all cases, the MISO systems provided real-time (1 Hz) depth, altitude, CTD data and real-time imagery via digital-still camera every 10 sec with strobe illumination. The data telemetry system used to acquire the real-time data over conducting cables (either 0.322" CTD or 0.680" coax) is the MISO DataLink, a network extending technology implemented over the past ~5 years by Marshall Swartz at WHOI for MISO.

The video provided for RVTEC shows, for the first time, our testing of an anti-pre-trip collar to prevent pre-tripping of the system due to launch and water entry as well as ship heave during initial descent. The collar was visually observed via the MISO HD video system installed on the MC-800 and the collar removal was triggered via a software switch in the DataLink that actuated the subsea winch-motor that pulled the collar off the spyder arbor.

The collar system was developed at WHOI with considerable input by the OSU Coring Facility engineers (Paul Walzack and Chris Moser) as well as WHOI Coring Facility engineers (Jim Broda and Ellen Roosen). Mark St. Pierre at WHOI helped machine and design the collars.
This system was tested on the RV Oceanus during a cruise offshore Monterey, CA in March-April 2017, Anne Dekas of Stanford U. was the Chief Scientist. The use of the MISO systems resulted in excellent core recovery on all multicorer deployments and the anti-pre-trip collar worked flawlessly.

The system is available for use. Anyone interested should please contact Dan Fornari at dfornari@whoi.edu. If you have upcoming multicoring cruises he would be very interested in discussing how to utilize the MISO systems to enhance the science data acquisition