**SBE19plus v2**

The SBE19plusv2 is a standalone CTD, run on internal battery power, without the need of a conducting wire. It gathers data at 4Hz, is good to 1000m, and can take 6 auxillary sensors. This is a useful CTD to use during rough weather or when a quick cast is wanted. The starting configuration was with an SBE43 Oxygen sensor, Datasonics Alitimeter, Seapoint Chlorophyll-a Fluorometer, Seapoint Turbidity, SBE18 pH sensor. A strong pump, the SBE5T, used because of the oxygen sensor, was used to pump flow past the Temperature, Conductivity and Oxygen sensors. This configuration was used for Events 63 and 67 however it was noticed the fluorometer was dropping out and so the configuration was changed before Event 71, moving the pH sensor over the main SBE9plus Rosette and adding a second Seapoint fluorometer in its place. The two fluorometers values agree well and the second fluorometer is free of dropouts.

The CTD uses 9 D-cell batteries and has a starting voltage of X. At X voltage the batteries should be changed. The CTD cut off (no longer runs) is 7.5V. Starting battery voltage (at Event 63) is 12.9V (VMain) and the internal battery running the clock is 7.7V (VLith).

The CTD was deployed in the vertical configuration with a weight clipped onto the bottom for the casts. The CTD was turned on via the magnetic switch, put over the side and down to 5m, where the pump and data logging started after being activated by the conductivity switch (conductivity frequency of 3085) after a pump delay of 45 seconds (or scans?). The CTD was soaked at 5m for 3 minutes, raised to the surface and then lowered at 0.5m/s up to 1.0 m/s to within ~5m of the seafloor, or other preferred depth. The CTD was raised at 1.0m/s and brought on board where the magnetic switch was turned off and the syringe/tube of water reattached to the temperature plumbing to keep the sensors wet. The data was downloaded via serial cable to the Toughbook computer via SeaTerm v XX. The file was saved to \*.hex and \*.xml formats using a filename of “SBE19plus\_6009\_Event##\_date”.

Issues:

Fluorometer 3253 reading was dropping out during Events 63 to 72.