CC1806SR Underway Data Processing Notes

The data were extracted from the *.MET files provided by the R/V Sally Ride.

The available variables from these files are:

COG – course over ground (deg)

SOG – ship speed over ground (knots)

USWFlow – measure of water flow through the UW system (varying units).

PARSurf – photosynthetically available radiation measured aboard the ship (uE/Sec/Meter^2).

LongWaveRad – Long Wave Radiation (W/M^2, Pyranometer)

ShortWaveRad - Short Wave Radiation (W/M^2, Pyranometer)

WindSpeed – wind speed (m/sec)

WindDir – wind direction (deg)

AirTemp – air temperature (deg C)

AtmPress – atmospheric pressure (mb)

AtmPress_SLC – atmospheric pressure, sea level corrected (mb)

RelHum – relative humidity (% saturation)

TSG_Temp – water temperature measured by the Sally Ride's TSG75 unit (deg C).

TSG_Cond – water conductivity measured by the Sally Ride's TSG75 unit (mS/cm).

TSG_Sal – water salinity calculated by the Sally Ride's TSG75 unit (PSU).

TSG_Dens – water density as sigma-t calculated by the Sally Ride's TSG75 unit (kg/m^3).

SoundVel – sound velocity calculated by the Sally Ride's TSG75 unit (m/sec)

TSG_Temp_2 – water temperature measured by the Sally Ride's TSG xxx unit (deg C).

TSG_Sal_2 – water salinity calculated by the Sally Ride's TSG xxx unit (PSU).

TSG_Dens_2 – water density as sigma-t calculated by the Sally Ride's TSG xxx unit (PSU).

SoundVel_2 – sound velocity calculated by the Sally Ride's TSG xxx unit (m/sec)

TSG_Temp_5 – water temperature measured by the Sally Ride's TSG xxx unit (deg C).

TSG_Sal_5 – water salinity calculated by the Sally Ride's TSG xxx unit (PSU).

SSTemp - Hull Temperature measurement with SBE48 in Transducer Void (degC)

Oxygen – oxygen concentrations measured by the Sally Ride's TSG xxx unit (mL/L).

OxygenSat – oxygen saturation measured by the Sally Ride's TSG xxx unit (%).

OxygenTemp – temperature of the water oxygen measurements were made on (deg C)

ChlFluor – chlorophyll fluorescence (volt).

Derived variables are:

Pred_Temp – temperature derived from calibrations of TSG_Temp vs. CalCOFI 0 to 12 m bottle temperatures (deg C)

Pred_Sal – salinity derived from calibrations of TSG_Sal vs. CalCOFI 0 to 12 m bottle salinity (PSU)

Pred_Chl – chlorophyll derived from calibrations of ChlFluor vs. CalCOFI 0 to 12 m bottle Chl a (ug-Chl/L).
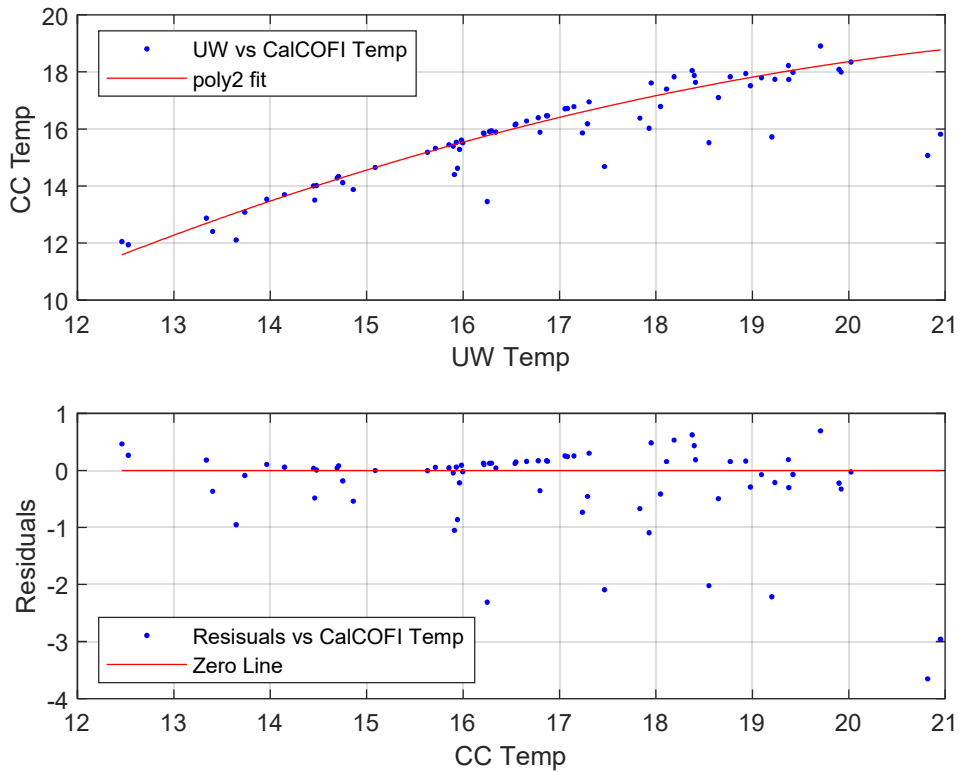
Temperature Calibration:

Pred_Temp – temperature derived from calibrations of TSG_Temp vs. CalCOFI 0 to 12 m bottle temperatures (deg C)

Pred_Sal – salinity derived from calibrations of TSG_Sal vs. CalCOFI 0 to 12 m bottle salinity (PSU)
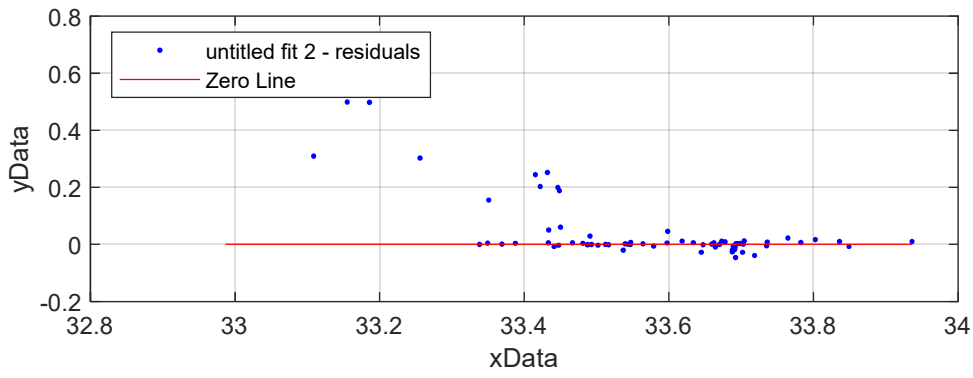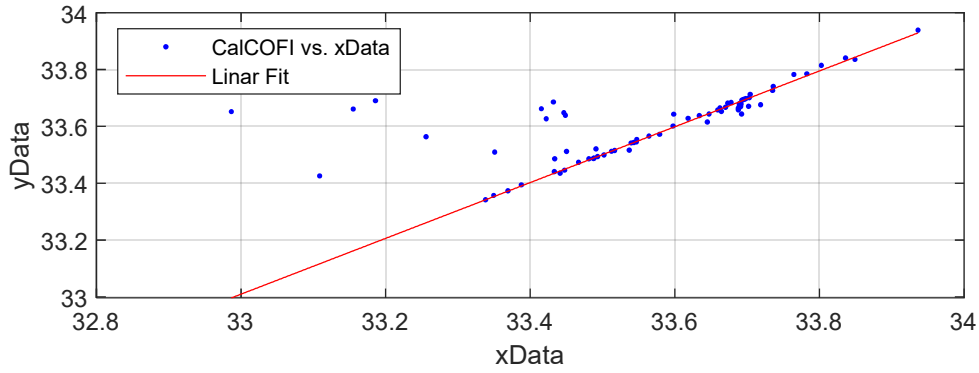
Pred_Chl – chlorophyll derived from calibrations of ChlFluor vs. CalCOFI 0 to 12 m bottle Chl a (ug-Chl/L). All values are set to NaN.

Salinity Calibration:

Pred_Sal – salinity derived from calibrations of TSG_Sal vs. CalCOFI 0 to 12 m bottle salinity (PSU)

Chl a Calibration:

Pred_Chl – chlorophyll derived from calibrations of ChlFluor vs. CalCOFI 0 to 12 m bottle Chl a (ug-Chl/L). All values are set to NaN.