CC1804SH Underway Data Processing Notes

The raw UW data were extracted from the various Shimada instrument files.

Notes: The fluorometer may have experienced algal growth in the flow cell towards the end of the cruise. Check those values against satellite data if critical.

The available variables from these files are:

COG – course over ground (deg)

SOG – ship speed over ground (knots)

USWFlow – flowrate of the UW system (units unknown)

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)

RelHum – relative humidity (% saturation)

TSG_Temp – temperature measured by the TSG SBE 21 unit (deg C).

TSG_Cond – conductivity measured by the TSG SBE 21 unit (mS/cm).

TSG_Sal – water salinity measured by the TSG SBE 21 unit (PSU).

TSG_Density – seawater density calculated Temp & Sal (kg/m^3)

SoundVel – sound velocity calculated by the TSG unit (m/sec)

TSG_Temp_2 – temperature measured by the TSG SBE 45 unit (deg C).

TSG_Cond_2 – conductivity measured by the TSG SBE 45 unit (mS/cm).

TSG_Sal_2 – water salinity measured by the TSG SBE 45 unit (PSU).

TSG_Density_2 – seawater density calculated from Temp & Sal (kg/m^3)

SoundVel_2 – sound velocity calculated by the TSG unit (m/sec)

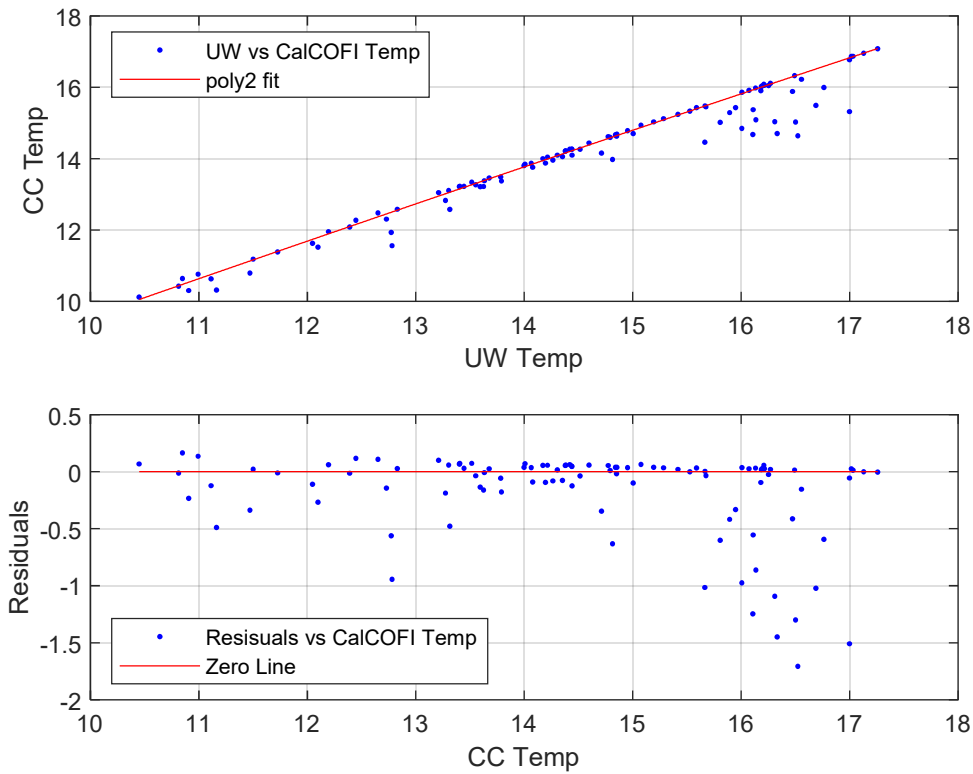ChlFluor – chlorophyll fluorescence (volt).

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)

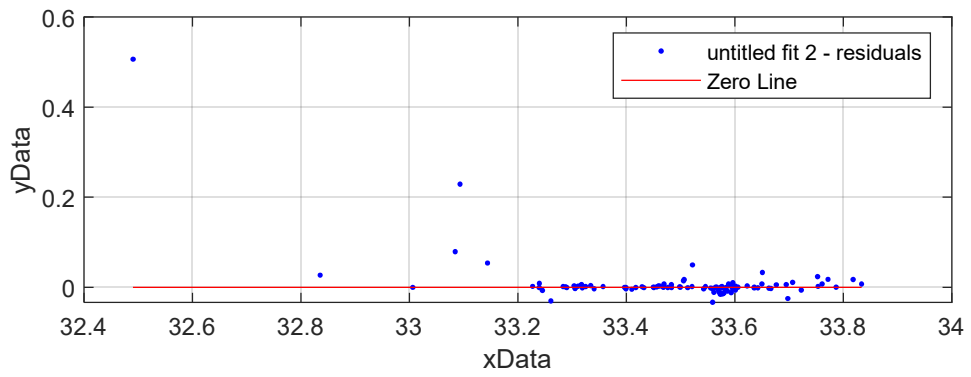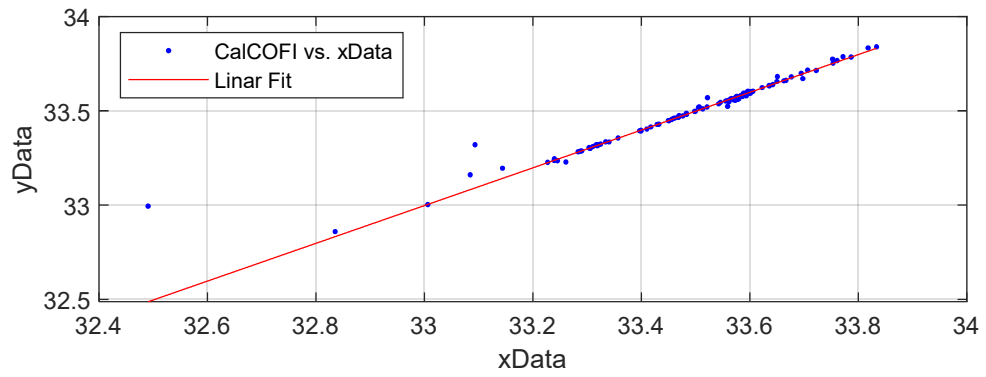Pred_Chl – chlorophyll derived from calibrations of ChlFluor vs. CalCOFI 0 to 12 m bottle Chl a (ug-Chl/L).

Temperature Calibration:

Pred_Temp – temperature derived from calibrations of TSG_Temp vs. CalCOFI 0 to 12 m bottle

Salinity Calibration:

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

Chlorophyll Calibration:

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