

CC1802SH Underway Data Processing Notes

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

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/M², Pyranometer)

ShortWaveRad - Short Wave Radiation (W/M², 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_Conc – 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/m³)

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

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

TSG_Conc_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/m³)

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_Ch1 – chlorophyll derived from calibrations of ChlFluor vs. CalCOFI 0 to 12 m bottle Chl a (ug-Chl/L).