

CC1904RL Underway Data Processing Notes

The raw UW data were extracted from the various files in the UW Directory structure.

Notes:

TSG-SBE45 did not function properly

The available variables from these files are:

DateTime, Date, Time – these are UTC.

COG – course over ground (deg)

SOG – ship speed over ground (knots)

USWFlow – seawater flow rate (Flowmeter-Bow) (gal/min ?)

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 Reuben Lasker TSG SBE 21 unit (deg C).

TSG_Cond – conductivity measured by the Reuben Lasker TSG SBE 21 unit (mSi/m^2).

TSG_Sal – salinity calculated by the Reuben Lasker TSG SBE 21 unit (PSU).

TSG_Dens – density calculated by the ship's systems from Temp and Cond.

SoundVel – sound velocity (m/sec).

SSTemp – sea surface temperature from unknown sensor (deg C).

ChlFluor – chlorophyll fluorescence (arbitrary units).

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 – Chl-a derived from calibrations of Fluorescence measurements vs. CalCOFI 0 to 12 m bottle salinity ($ug-Chl / L$)