**2017-03-22**

Info for header:

CTD Pressure: Lab calibration (29th Oct 2002) adjusted by applying -0.48dbar offset to the bias based on in-air surface readings of the CTD.

CTD Temperature: Pre-cruise lab calibration was used after comparisons with dual sensor and post-cruise calibration information.

CTD Conductivity: Pre-cruise lab calibration adjusted after comparisons with dual sensor, post-cruise calibrations and water sample data. Primary conductivity adjusted by bias of +0.0018 mS/cm . Secondary conductivity adjusted by bias of +0.0016 mS/cm.

CTD Oxygen: Oxygen data are from a SeaBird SBE43 sensor with pumped flow in-line after the primary temperature and conductivity sensors. A lag of -8 seconds was applied to oxygen voltage in the Seabird processing step Align. Downcast CTD oxygen voltage and upcast temperature and salinity were used to calibrate CTD to water sample oxygen (upcast). The 107 casts required 6 calibration groups. Fitting method followed Seabirds Application Note 64-2 (“SBE 43 Dissolved Oxygen Sensor Calibration and Data Corrections using Winkler Titrations”). A remaining pressure dependent shape in the residual between water sample and CTD oxygen was removed by subtracting a mean curve.  Parts of the mean curve were found by fitting sections of data from discreet pressure ranges.  The parts were then stitched together via spline interpolation to create a full profile mean curve.

CTD Fluorometer: Fluorometer data are from a Seapoint sensor with pumped flow in-line after the secondary temperature and conductivity sensors. Calibration with bottle data performed using bottle chlorophyll values between 0.025 and 0.60 mg/m3. The number of observations used were 116 out of 141 with a standard deviation of 0.03 in the residuals. Coefficients used: Slope:  0.7909, Bias: -0.0045. Alignment of -4 seconds was used. Frequent single dropouts in fluorescence to 0 have been fixed by setting to neighbor value.

ISUS: Voltage 6 is Satlantic’s ISUS Nitrate Sensor SN 72. Data are uncalibrated. The voltage is proportional to nitrate.

Transmissometer data are unprocessed, using calibration from 28 Aug 2006.

PAR data are unprocessed, using corrected calibration from 13 Mar 2007.

Altimeter data are unprocessed, using calibration from Mar 2005.

**Earlier email:**

Adjustments:

Transmissometer:

Transmission is converted from volt(x) to %(y) using coefficients m and b: y =mx+b

Please convert existing transmission (%) back to volt : x = (y-b1)/m1

where b1 = -1.0660 and m1=19.053 (incorrect calibration coeff)

And reconvert volts back to %: y=m2x + b2

where b2 = -1.084 and m2 = 19.360 (28Aug 2006 calibration)

PAR SN70123:

Please edit PAR with calibration correction: y = 1.5976x ,where x is existing PAR value

This correction then accurately applies calibration from 13 Mar 2007.

ISUS and PAR on for Casts:

 1 2 3 4 7 8 9 13 15 20 21 22 23 24 25 26 27 28

 29 31 33 38 39 42 43 44 46 50 57 60 61 63 64 69 82 83 84

 94 106