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#####
#
# NBP calibration data file for sensors
#
# NOTE:
# 1. In order for these calibrations to take affect, uwint must
# be restarted.
#
# 2. Please enter serial numbers for all sensors
#
# 3. Remember, when you check this file back into RCS, use the
# -u option. It MUST remain in /usr/local/packages/rvdas/config
#
# Revised August 10, 2000 K. Gavahan
# - Initial revision.
#
# Revised...
#
#####
#
# Ship - LMG or NBP
#
SHIP NBP
#
#####
#
# Science specific information
#
VESSEL: NBP
TITLE: NBP0803
NUMBER: NBP0803
START_DATE: 02/22/2008
END_DATE: 03/17/2008
CHIEF_SCIENTIST: Phil Bart
PARTICIPATING SCIENTISTS:
#
#-----
# Data specific information
#
# Base file name for data files
BASE_FILE: NBP0803
#
# NAVIGATION LOGGERS - loggers and data directory
NAV_LOGGERS: l_gyr,l_pcode,l_seap
DATA_LOC_NAV: /data/logger/nav
#
# UNDERWAY LOGGERS - loggers and data directory
UW_LOGGERS: l_met,l_sim,l_tsg,l_bathy
DATA_LOC_UWAY: /data/logger/uw
#
NETWORK: science
#
#
LOGGER_LOC: /usr/local/packages/rvdas/bin
#

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#
#####
#
# Geophysical information
#
# The value for YEAR can be obtained by running /usr/local/bin/decimal_year.
# It should be updated everytime the gravity offset is updated.
#
# Gravity offset information
#
CRUISE_ID: NBP0803
#GRAV_OFFSET: 972326.93 on 0401.
#GRAV_OFFSET: 972327.68 on 0402.
#GRAV_OFFSET: 972304.02 on 0501
#GRAV_OFFSET: 972305.39 on 0501b
#GRAV_OFFSET: 972308.37 on 0506
#GRAV_OFFSET: 972310.34 on 0601
#GRAV_OFFSET: 972311.94
#GRAV_OFFSET: 972309.88 on 0602
#GRAV_OFFSET: 972311.96
#GRAV_OFFSET: 972312.25 on 0603
#GRAV_OFFSET: 972311.95
#GRAV_OFFSET: 972318.07
#GRAV_OFFSET: 972319.71
#GRAV_OFFSET: 972320.26
#GRAV_OFFSET: 972320.07
#GRAV_OFFSET: 972319.42
#GRAV_OFFSET: 972316.86
#GRAV_OFFSET: 972318.65
#GRAV_OFFSET: 972316.67
#GRAV_OFFSET: 972302.95 on 0710
#GRAV_OFFSET: 972302.90
#GRAV_OFFSET: 972309.39 on 0801
GRAV_OFFSET: 972304.41
YEAR: 2008.13
#
#####
#
# Gravity QC
#
# LOCATION      : where the final data file is located
# GAP           : minimum allowable time gap      (in seconds)
# FIELD         : field where value can be found (starting at 1 after timestamp)
# NAME          : name of the field
# MIN           : minimum allowable value          (XXX means ignore)
# MAX           : maximum allowable value          (XXX means ignore)
# ROC           : maximum allowable rate of change (XXX means ignore)
# DELIMITER     : the delimiter for the body of data items (SPACE, COMMA, . . .)
#
#TAG LOCATION GAP FIELD NAME MIN MAX ROC DELIMITER
GRQC /data/current_cruise/geopdata/GRV/ 30 1 GRAVITY 4000 12000 100 SPACE
#####
#
# NBP PSP and PIR coefficients
# PSP serial number: 33090F3      Cal: 27 Feb 2007

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# PIR serial number: 33023F3      Cal: 8 Mar 2007
#
# PSP and PIR assumed to be cal number * 10^-6
#
# Calculations make in the programs....
#   PIR = mV / ( coeff V/wm^-2 * 10^3mV/V)
#   PSP = mV / ( coeff v/wm^-2 * 10^3mV/V)
#
# For example, program will calculate
#   PIR coefficient = 1/ (3.92x10^-6 * 10^3) = 255.1
#   PSP coefficient = 1/(8.05x10^-6 * 10^3) = 124.22
#
PSP1 8.16
PIR1 3.87
#####
#
# NBP met
#
# PAR serial number: 6356   8 Aug 07
# PAR Calibration Factor = 5.8644 V/uE/cm^2sec
# PAR Probe Dark offset = -0.1 mV
#
# old PAR      1/6.30 (Dry V/uE/cm^2sec) 0.0021 (Probe Dark in Volts)
#
# PAR      1/6.06 (Dry V/uE/cm^2sec) 0.0004 (Probe Dark in Volts)
# PAR      1/6.10 (Dry V/uE/cm^2sec) 0.0004 (Probe Dark in Volts)
# PAR      1/6.10 (Dry V/uE/cm^2sec) 0.0004 (Probe Dark in Volts)
# PAR      1/6.27 (Dry V/uE/cm^2sec) 0.0001 (Probe Dark in Volts)
# PAR      1/5.44 (Dry V/uE/cm^2sec) 0.00201 (Probe Dark in Volts)
# PAR      1/5.8644 (Dry V/uE/cm^2sec) -0.0001 (Probe Dark in Volts)
#
PAR 0.17 0.0001
#
#####
#
# Transmissometer HydroDAS
# Serial number CST-397DR
# Date Calibrated 02/13/2006
#
# % transmission = (vsig - vd) / (vref - vd)
#
#   vd = 0.061
#   vref = 4.772
#
#   = (vsig - 0.061) / (4.772 - 0.061)
#
#   Vdark   Vref
TRAN 0.061 4.772
#
#
#####
#
# Fluorometer
# Serial number AFL-044
# Date Calibrated 5/31/2006

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#
# Chlorophyll concentration in mg/l(mg/m**3) =
#   (Vmeasured - CWO) * SF (scale factor)
#
#   CWO = Vblank = dark counts
#
#   Dark Ccounts = 0.177
#   SF = 9.8116
#
#   = (Vmeasured - 0.177) * 9.8116
#
#   Dark_Counts SF
FLUR  0.177   9.8116
#
#####
#
#   Flow meters
#
FLO1  0.026
FLO2  0.024
FLO3  0.06
FLO4  0.055
#
#####
#
# Engineering
#
# RPM pitch rudder
SENG  25.  10.  3400.  2500.  20.
PENG  25.  10.  3400.  2500.  20.
# Roll and Pitch Pot
POPI  4.0  4.0
# Seawater flow meter
# swfl *c1  +c2
SWFL  48.0  0
#
#####
#
# NBP winches
#
# Scale conversion information for the science
# winches on the NBP. Sheave measurements made
# on 01/01/00. Wire Pull tests done on dates
# indicated
#
# stbd winch      sheave diam= 28.125"   .714m
# 9/16" wire      wire diam  = 0.5625"   .014m
#      total circumference= 90.124" 2.289m
#      magnets    = 24
#      Payout Scale factor= 3.755      .095
#      Tension Scale Factor= 200
#      operation limit= 20,718 lb
#
# port winch      sheave diam= 28.125   .714m
# .680" wire      wire diam  = 0.680    .017m

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#         total circumference= 90.493" 2.297m
#             magnets      = 24
#         Payout Scale factor= 3.77      0.096m
#         Tension Scale Factor= 180
#             operation limit= 20,150 lb
#
# baltic winch  sheave diam= 12.125   .308m
# .322" wire    wire diam  = 0.322    .008m
#         total circumference= 39.103" 0.993m
#             magnets      = 10
#         Payout Scale factor= 3.910    0.099m
#         Tension Scale Factor= 200
#             operation limit= 5,980 lb
#
# Load pin in waterfall winches is sending out an A/D
# value of 2 even under 0 tension
# Also, payout pos/neg is opposite other winches
# uwf winch     sheave diam= 12.125   .308m
#             wire diam  = 0.322    .00818m
#         total circumference= 39.103" 0.993m
#             magnets      = 10
#         Payout Scale factor= 3.910    0.0993m
#         Tension Scale Factor= 60
#             operation limit= 5,980 lb
#
# lwf winch     sheave diam= 12.125   0.308m
#             wire diam  = 0.3125  0.00794m
#         total circumference= 39.074" 0.993m
#             magnets      = 10
#         Payout Scale factor= 3.907    0.0993m
#         Tension Scale Factor= 60
#             operation limit= 6,565 lb
#
# wnc1 and WNC2 are old.
#
# winch  payout tension speed
# name fields are in format A:B where y=Ax+B
#
# new winch strings
# meters out = mout * a
# speed = speed * c
# tension = (tension * b) - e
#
#   a      b      c      d      e
SWNC -0.1   200    1.67  20718  -800
PWNC  0.1   180    1.67  20150   0
BWNC  0.1   62.5   1.67  5980   437.5
WWNC  -0.1   60    -1.67  5980   0
# old winch strings
LWF  -0.1   60    -1.67  6565   0
UWF  -0.1   60    -1.67  5980   0
WNC1   0.1   200   1.67  NAN   0
WNC2  -0.1   60    -1.67  NAN   0
#
#
#####

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#####  
##  
***** Calibration factors for SBE 21 S/N 3198 *****  
***** Calibration Date of 20 May 06 *****  
# c:currently in use  
# Temperature calibration factors  
%TEMPERATURE%  
g 0.00422473160  
h 0.000629770835  
i 0.0000205272425  
j 0.00000154706370  
fo 1000.000  
*  
  
# conductivity calibration factors  
%CONDUCTIVITY%  
g -4.27061383  
h 0.504384737  
i -0.000453257393  
j 0.0000472934991  
p -0.000000095700  
t 0.0000032500  
*  
  
***** Remote Temperature Probe SN #1267 *****  
***** Calibration Date of 12-Apr-06 *****  
# external temperature calibration factors  
%EXTERNAL TEMPERATURE%  
g 0.00476625066  
h 0.000664522185  
i 0.0000284261863  
j 0.00000262601374  
fo 1000.000  
*  
  
#  
#####
```