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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: NBP0305
NUMBER: NBP0305
START_DATE: 10/26/03
END_DATE: 12/13/03
CHIEF_SCIENTIST: Neale
PARTICIPATING SCIENTISTS:
#
#-----
# Data specific information
#
# Base file name for data files
BASE_FILE: NBP0305
#
# NAVIGATION LOGGERS - loggers and data directory
NAV_LOGGERS: l_adul,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_grv,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: NBP0305
#GRAV_OFFSET: 972338.57 on cruise 0304a
GRAV_OFFSET: 972340.71
YEAR: 2003.79
#
#####
#
# 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: 24-01-03
# PIR serial number: 32845F3 Cal: 09-06-03
#
# PSP and PIR
#
# PIR = mV / ( coeff V/wm^-2 * 10^3mV/V)
# PIR coefficient = 1/ (4.14x10^-6 * 10^3)
# PIR coefficient = 1/(4.14x10^-3)
# PIR coefficient = 241.5
#
# PIR = mV / ( coeff V/wm^-2 * 10^3mV/V)
# PIR coefficient = 1/ (3.88x10^-6 * 10^3)
# PIR coefficient = 1/(3.88x10^-3)
# PIR coefficient = 257.7
#
# PIR = mV / ( coeff V/wm^-2 * 10^3mV/V)
# PIR coefficient = 1/ (4.13x10^-6 * 10^3)
# PIR coefficient = 1/(4.13x10^-3)
# PIR coefficient = 247.1
#
# PIR = mV / ( coeff V/wm^-2 * 10^3mV/V)
# PIR coefficient = 1/ (3.92x10^-6 * 10^3)

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#      PIR coefficient = 1/(3.92x10^-3)
#      PIR coefficient = 255.1
#
#      PSP = mV / ( coeff v/wm^-2 * 10^3mV/V)
#      PSP coefficient = 1/(8.19x10^-6 * 10^3)
#      PSP coefficient = 1/(8.19x10^-3)
#      PSP coefficient = 122.1
#
#      PSP = mV / ( coeff v/wm^-2 * 10^3mV/V)
#      PSP coefficient = 1/(8.11x10^-6 * 10^3)
#      PSP coefficient = 1/(8.11x10^-3)
#      PSP coefficient = 123.3
#
#      PSP = mV / ( coeff v/wm^-2 * 10^3mV/V)
#      PSP coefficient = 1/(8.52x10^-6 * 10^3)
#      PSP coefficient = 1/(8.52x10^-3)
#      PSP coefficient = 117.4

#NOTE: Pay attention to significant digits
PSP1 117.4
PIR1 241.5
#
#####
#
# NBP met
#
# PAR serial number: 6357 //03
# PAR Calibration Factor = 6.30 V/uE/cm^2sec
# PAR Probe Dark offset = 2.1 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 0.1639 0.0004
#
#####
#
# Transmissiometer
# Serial number CST-422PR
# Date Calibrated 02/24/03
#
# % transmission = (vsig - vd) / (vref - vd)
#
#      vd = 0.058
#      vref = 4.772
#
#      = (vsig - 0.058) / (4.772 - 0.058)
#
#      Vdark      Vref
TRAN 0.058      4.772
#
#####
#

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# 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
# 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
#

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# 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
#
#
#####
#####
##
***** Calibration factors for SBE 21 S/N 1390 *****
***** Calibration Date of 29 May 03 *****
# currently in use
# Temperature calibration factors
%TEMPERATURE%
g 0.00421019024
h 0.000594640281
i 0.00000444891723
j -0.00000186469051
fo 1000.000
*

# conductivity calibration factors
%CONDUCTIVITY%
g -3.92868160
h 0.469806858
i 0.000764098134
j -0.0000160788378
p -0.0000000957
t 0.00000325
*

***** Remote Temperature Probe SN #2593 *****

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\*\*\*\*\* Calibration Date of 06-Feb-03 \*\*\*\*\*

# external temperature calibration factors

%EXTERNAL TEMPERATURE%

g 0.00427986177

h 0.000619586021

i 0.0000206496791

j 0.00000161096809

fo 1000.000

\*

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