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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: NBP0304
NUMBER: NBP0304
START_DATE: 05/23/03
END_DATE: 03/07/03
CHIEF_SCIENTIST: Joann Stock
PARTICIPATING SCIENTISTS: Steve Cande, Mike Gurnis, Rob Clayton
#
#-----
--
# Data specific information
#
# Base file name for data files
BASE_FILE: NBP0304
#
# NAVIGATION LOGGERS - loggers and data directory
NAV_LOGGERS: l_3df,l_furuno,l_gyr,l_ngl,l_pcode
DATA_LOC_NAV: /data/not-public/logger/nav
#
# UNDERWAY LOGGERS - loggers and data directory
UW_LOGGERS: l_met,l_sim,l_tsg,l_grv,l_bathy
DATA_LOC_UWAY: /data/not-public/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: NBP0304
#GRAV_OFFSET      UPDATED 05-22-03
#GRAV_OFFSET: 972332.17 on cruise 0302
GRAV_OFFSET: 972339.92
YEAR: 2003.38
#
#####
#
# 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: 33023F3 Cal: 11-06-02
#
# PSP and PIR
# 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)
# PIR coefficient = 1/(3.92x10^-3)
# PIR coefficient = 255.1
#
# PSP = mV / ( coeff v/wm^-2 * 10^3mV/V)

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#      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 255.1
#
#####
#
# NBP met
#
# PAR serial number: 6356 2/3/03
# 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 0.1650 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
#
#####
#
# 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

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# 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
#
# 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.

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#
#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 3198
*****
***** Calibration Date of 22 Nov 02 *****
# currently in use
# Temperture calibration factors
%TEMPERTURE%
g 0.00422450290
h 0.000629160453
i 0.0000199900644
j 0.00000139971759
fo 1000.000
*

# conductivity calibration factors
%CONDUCTIVITY%
g -4.26466745
h 0.503825293
i -0.000453054017
j 0.0000474361958
p -0.0000000957
t 0.00000325
*

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