

```
#####  
#  
# 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: NBP1001  
NUMBER: NBP1001  
START_DATE: 01/02/2010  
END_DATE: 03/02/2010  
CHIEF_SCIENTIST: Eugene Domack  
PARTICIPATING SCIENTISTS: Theodore Scambos, Maria Vernet  
#  
#-----  
# Data specific information  
#  
# Base file name for data files  
BASE_FILE: NBP1001  
#  
# 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  
#
```

```

#
#####
#
# 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: NBP1001
#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 on 0803
#GRAV_OFFSET: 972306.75
#GRAV_OFFSET: 972305.39
#GRAV_OFFSET: 981320.86
#GRAV_OFFSET: 972304.81
#GRAV_OFFSET: 972304.31 on 0905A
GRAV_OFFSET: 972299.85
YEAR: 2010.00

```

```

#
#####
#
# 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: 32850F3 Cal: 24 Sep 2008
# PIR serial number: 32845F3 Cal: 30 Sep 2008
#
# 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 7.89
PIR1 4.15
#####
#
# NBP met
#
# PAR serial number: 6357 02/07/08
# PAR Calibration Factor = 5.6234 V/uE/cm^2sec
# PAR Probe Dark offset = 0.2 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 1/5.6234 (Dry V/uE/cm^2sec) 0.0002 (Probe Dark in Volts)
#
PAR 0.1778 0.0002
#
#####
#
# Transmissometer HydroDAS
# Serial number CST-831
# Date Calibrated 04/09/2008
#
# % transmission = (vsig - vd) / (vref - vd)
#
# vd = 0.061
# vref = 4.772
#
# = (vsig - 0.061) / (4.772 - 0.061)
#
# Vdark Vref

```

```

# TRAN 0.060 4.683 changed 19nov09 to below
TRAN 0.061 4.767
#
#
#####
#
# Fluorometer
# Serial number AFL-011
# Date Calibrated 10/29/2008
#
# 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 0.183 8.6598
#
#####
#
# 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
#     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
# tension = (tension + uwncc6) * uwncc2;
UWNC 0.1 65 -1.67 5980 0 -6
# 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
#
#
#####
#####
#####
#### These TSG coefficients are no longer used. They are for the
#### old TSG no longer installed. They will shortly be removed.
#####
##
***** 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
*

#
#####
```