```
#######################################################################
#
# 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: NBP0804
NUMBER: NBP0804
START_DATE: 03/21/2008
END_DATE: 04/14/2008
CHIEF_SCIENTIST: Marcel Croon
PARTICIPATING SCIENTISTS:
#
#----------------------------------------------------------------------
# Data specific information
#
# Base file name for data files
BASE_FILE: NBP0804
#
# 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: NBP0804
#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
YEAR: 2008.21
#
#####################################################################
#
# 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
#  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-557DR
#  Date Calibrated 12/20/2006
#
#  % transmission = (vsig - vd) / (vref - vd)
#
#    vd = 0.061
#    vref = 4.772
#
#   = (vsig - 0.061) / (4.772 - 0.061)
#
#     Vdark   Vref
TRAN  0.056   4.770
#
#
######################################################################
#
#  Fluorometer
#  Serial number AFL-044
```

```
#  Date Calibrated 5/31/2006
#
#  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
#       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 winhes
# 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
#
#
```

```
##########################################################################
##########################################################################
##
#************** Calibration factors for SBE 21 S/N 3198 ********************
#**************    Calibration Date of 20 May 06  ********************
# c:urrently in use
# Temperature calibration factors
%TEMPERTURE%
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
*

#
##########################################################################
```