Eventlabel	MAR2013_sel_a_f_03
Campaign	Marion Island 2013
Species	Southern elephant seal (*Mirounga leonina*)
Age	adult; 12 years
Sex	Female
Number	
Length	Not noted
Girth	Not noted
Weight [estimated]	
Weight [calculated]	
Weight [measured]	
ARGOS PTT ID	60044
Transmitter type	SRDL 9000 CTD
Manufacturer	SMRU
PTT Serial Number	10691
PTT Software	
Setting protocol	Software specification for CTD_GEN_07B deployment (MEOP: Temp+Salinity share 2 tx) Transmitting via ARGOS Page transmission sequences: Until day 1464: 0 0 1 0 0 2 3 0 0 4 5 using 1 PTT numbers Satellite availability (UTC): 00: -- on -- 01: -- on -- 02: -- on -- 03: -- on -- 04: -- on -- 05: -- on -- 06: -- on -- 07: -- on -- 08: -- on -- 09: -- on -- 10: -- on -- 11: -- on -- 12: -- on -- 13: -- on -- 14: -- on -- 15: -- on -- 16: -- on -- 17: -- on -- 18: -- on -- 19: -- on -- 20: -- on -- 21: -- on -- 22: -- on -- 23: -- on -- Transmission targets: 56000 transmissions after 365 days In Haulouts: ON (one tx every 1 min 20 secs) for first 5 hours then cycling OFF for 6 hours, ON for 1 hour Check sensors every 4 secs When near surface (shallower than 10m), check wet/dry every 1 sec Consider wet/dry sensor failed if wet for 7 days or dry for 99 days Dives start when wet and below 6m for 8 secs and end when above 6m for 0, or dry at any time No separation of 'Deep' dives A cruise begins if there has been no dive for 9 mins A haulout begins when dry for 10 mins and ends when wet for 40 secs Dive shape (normal dives): 4 points per dive using broken-stick algorithm Dive shape (deep dives): none CTD upcasts: max 2000 dbar up to 6 dbar in 2 dbar bins. 17 cut points per profile Send the deepest 1 upcasts in each 6-hour period. Minimum depth to trigger collection of cast: 1000m in hour 1 600m in hour 2 300m in hour 3 100m in hour 4 50m in hour 5 25m in hour 6 or 20% greater than current maximum.

Sample CTD sensor every 1 seconds.
Temperature: Collected, Stored. Valid
range: -2.5 to 30.2 degC   Conductivity:
Collected, Not stored.   Salinity:
Calculated, Stored. Valid range: 28.9 to 37.1 No
GPS data TRANSMISSION BUFFERS (in RAM): Dive in
groups of 3 (6.25 days @ 10mins/dive): 300 =
1200 bytes No 'deep' dives Haulout: 30 = 120
bytes 6-hour summaries in groups of 3 (7.5 days):
10 = 40 bytes No berniegrams No timelines
Cruise: 30 = 120 bytes No diving periods No spot
depths No emergence records No Duration
histograms No Max depth histograms CTD casts (7.5
days): 30 = 120 bytes No GPS fixes   TOTAL 1600
bytes (of about 21000 available)   MAIN BUFFERS
(in 6.2 Mb Flash): Dive in groups of 3 (416.667
days @ 10mins/dive): 20000 x 100 bytes = 2000000
bytes No 'deep' dives Haulout: 3000 x 16 bytes =
48000 bytes 6-hour summaries in groups of 3 (450
days): 600 x 68 bytes = 40800 bytes No
berniegrams No timelines Cruise: 3000 x 16 bytes
= 48000 bytes No diving periods No spot depths No
emergence records No Duration histograms No Max
depth histograms CTD casts (500 days): 2000 x 164
bytes = 328000 bytes No GPS fixes   TOTAL 2407 kb
(from 6333 kb available)   PAGE CONTENTS (256
bits - 9 overhead): PAGE 0: PTT NUMBER
OVERHEAD (28-bit code)   -----------[8
bits: 0 - 7]   PAGE NUMBER   -----------[3
bits: 8 - 10]   DIAGNOSTICS in format 0:   TX
number: wraparound 11 bits in units of 32
(range: 0 to 65504)   -----------[11 bits: 11 -
21]   DIVE group in format 0:   Normal
dives transmitted in groups of 3   Time of
start of last dive: max 5 days 12 hours @ 30
secs= 15840   tx as raw 14 bits in units
of 1 (range: 0 to 16383)
(recommended sell-by 5 days 11 hours)
Max depth: -- not transmitted --   Dive
duration: odlog 1/6 in units of 30 s (range: 0
to 5715 s)   Mean speed: -- not transmitted -
-              Profile data (4 depths/times, 0
speeds):   Depth profile: odlog
2/6 in units of 25 dm (range: 0 to 23887.5 dm)
Calculation time: -- not
transmitted -- Surface duration: odlog 2/4 in
units of 2.5 s (range: 0 to 588.75 s)
cf. cruise starts after 9 mins (540 secs)
Dive area: -- not transmitted --   -----------
[225 bits: 22 - 246]   Available bits used
exactly === End of page 0 ===   PAGE 1:   PTT
NUMBER OVERHEAD (28-bit code) -----------[8
bits: 0 - 7]   PAGE NUMBER   -----------[3
bits: 8 - 10]   DIAGNOSTICS in format 1:
Max depth ever: odlog 1/4 in units of 500 dm
(range: 0 to 23250 dm)   -----------[5
bits: 11 - 15]   CRUISE group in format 0:
hours @ 2 mins= 3960   tx as raw 12 bits
in units of 1 (range: 0 to 4095)
(recommended sell-by 5 days 11 hours)
transmitted -- -----------[26 bits: 16 - 41]
time: max 5 days 12 hours @ 2 mins= 3960
cf. Max duration is 16 hours

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                            Reason for end:  -- not transmitted --
                            Contiguous:  -- not transmitted --      -----------
                            [25 bits: 42 - 66]      SUMMARY group in format 0:
                                   Transmitted in groups of 3     Record
                            could be in buffer for 7 days 12 hours
                            End time:  max 7 days @ 6 hours= 28           tx
                            as raw 5 bits in units of 1  (range: 0 to 31 )
                            bits in units of 15.873 permille (range: 0 to
                            1000 permille)   Dive time:  raw 6 bits in units
                            of 15.873 permille (range: 0 to 1000 permille)
                            to 11775 dm)          Max max dive depth:
                            odlog 2/6 in units of 25 dm (range: 0 to 23887.5
                            dm)           Avg dive duration:  odlog 1/6 in
                            units of 30 s (range: 0 to 5715 s)           SD
                            dive duration:  odlog 1/4 in units of 60 s
                            (range: 0 to 2790 s)        Max dive
                            duration:  odlog 1/6 in units of 30 s (range: 0
                            to 5715 s)           Avg speed in dive:  --
                            not transmitted --           Number of dives:
                            odlog 1/4 in units of 2  (range: 0 to 93 )
                                   Deep dives:           Avg max dive
                            depth:  -- not transmitted --          SD max
                            dive depth:  -- not transmitted --
                            Max max dive depth:  -- not transmitted --
                            Number of dives:  -- not transmitted --
                            Avg SST:  -- not transmitted --      -----------
                            [180 bits: 67 - 246]   Available bits used
                            exactly  === End of page 1 ===   PAGE 2:       PTT
                            NUMBER OVERHEAD (28-bit code)  -----------[8
                            bits: 0 - 7]    PAGE NUMBER     -----------[3
                            bits: 8 - 10]   CTD in format 0:         End time:
                            max 7 days @ 10 mins= 1008           tx as raw
                            10 bits in units of 1  (range: 0 to 1023 )
                            dbar (range: 6 to 2052 dbar)    Min temperature:
                            raw 15 bits in units of 1  (range: 2500 to 35267
                            = -2.5 to 30.267 °C in steps of 0.001 °C)
                            Max temperature:  raw 15 bits in units of 1
                            (range: 2500 to 35267  = -2.5 to 30.267 °C in
                            steps of 0.001 °C)           cf. Valid
                            temperatures: -2.5 to 30.2 degC       Min
                            salinity:  raw 12 bits in units of 2 mPSU (range:
                            28900 to 37090 mPSU)    Max salinity:  raw 12
                            bits in units of 2 mPSU (range: 28900 to 37090
                            mPSU)        cf. Valid salinity: 28.9 to 37.1
                            of 0.977517 permille (range: 0 to 1000 permille)
                            bounds :  -- not transmitted --
                            Conductivity bounds :  -- not transmitted --
                            Salinity bounds :  -- not transmitted --      ---
                            --------[236 bits: 11 - 246]   Available bits
                            used exactly  === End of page 2 ===   PAGE 3:
                            units of 1  (range: 0 to 1023 )
                                   (recommended sell-by 6 days 23 hours)
                            Max temperature:  -- not transmitted --
                            -         8 profile points 9 to 16 (from total of
                            17 cut points):           Max pressure is
                            sent separately           7 pressure bins:
                            raw 9 bits in units of 1 bin (range: 0 to 511
                            bin)          Temperature:  raw 10 bits in
                            units of 0.977517 permille (range: 0 to 1000
                            permille)        Temperature residual:  raw 7 bits
                            in units of 1 mdegC per sample (range: 0 to 127
                            mdegC per sample)           Pressure already
                            sent           Salinity:  raw 8 bits in units of
```

	3.92157 permille (range: 0 to 1000 permille) Salinity residual: raw 7 bits in units of 1 mPSU per sample (range: 0 to 127 mPSU per sample) Temperature bounds : raw 2 bits in units of 1 lo/hi (range: 0 to 3 lo/hi) Conductivity bounds : -- not transmitted -- Salinity bounds : raw 2 bits in units of 1 lo/hi (range: 0 to 3 lo/hi) -----------[235 bits: 11 - 245] End time: max 3 days 6 hours @ 10 mins= 468 tx as raw 9 bits in units of 1 (range: 0 to 511) (recommended sell-by 3 days 5 hours) Sell-by range: 3 days 2500 to 35267 = -2.5 to 30.267 °C in steps of 0.001 °C) Max temperature: raw 15 bits in units of 1 (range: 2500 to 35267 = -2.5 to 30.267 °C in steps of 0.001 °C) cf. Valid temperatures: -2.5 to 30.2 degC Min salinity: raw 12 bits in units of 2 mPSU (range: 28900 to 37090 mPSU) Max salinity: raw 12 bits in units of 2 mPSU (range: 28900 to 37090 mPSU) cf. Valid salinity: 28.9 to 37.1 of 0.977517 permille (range: 0 to 1000 permille) bounds : -- not transmitted -- Conductivity bounds : -- not transmitted -- Salinity bounds : -- not transmitted -- ------------[235 bits: 11 - 245] UNUSED -----------[1 bits: 246 - 246] === End of page 4 === PAGE 5: PTT NUMBER OVERHEAD (28-bit code) CTD in format 3: End time: max 3 days 6 hours @ 10 mins= 468 tx as raw 9 bits in units of 1 (range: 0 to 511) temperature: -- not transmitted -- Max temperature: -- not transmitted -- cf. Valid temperatures: -2.5 to 30.2 degC Min salinity: -- not transmitted -- Max salinity: -- not transmitted -- cf. Valid salinity: 28.9 to 37.1 Number of samples: -- not transmitted -- 8 profile points 9 to 16 (from total of 17 cut points): permille) Temperature residual: raw 7 bits in units of 1 mdegC per sample (range: 0 to 127 mdegC per sample) Pressure already sent Salinity: raw 8 bits in units of 3.92157 permille (range: 0 to 1000 permille) Salinity residual: raw 7 bits in units of 1 mPSU per sample (range: 0 to 127 mPSU per sample) Temperature bounds : raw 2 bits in units of 1 lo/hi (range: 0 to 3 lo/hi) Conductivity bounds : -- not transmitted -- Salinity bounds : raw 2 bits in units of 1 lo/hi (range: 0 to 3 lo/hi) -----------[234 bits: 13 - 246]
Deployment	
Immobilisation	Induction dose 14:07 11mls Ket IM @ 200mg/ml Induction time 5 minutes Time at recovery recovered after 38min Anesthesia level 4
Comment	Seal tag WW061 Deployment site: MM001 (Boulder's)

Tag deployed	2013-01-08T14:12:00	-46.87739	37.86203
Tag retrieved			
First transmission	2013–01–08T13:47:00	–46.886	37.862
Last transmission	2013–02–11T21:26:02	–53.583	23.125