

<b>Eventlabel</b>	DRE2015_Wed_a_m_06
<b>Campaign</b>	Drescher 2015
<b>Species</b>	Weddell seal ( <i>Leptonychotes weddellii</i> )
<b>Age</b>	Adult
<b>Sex</b>	Male
<b>Number</b>	
<b>Length</b>	245 cm
<b>Girth</b>	190 cm
<b>Weight [estimated]</b>	400
<b>Weight [calculated]</b>	
<b>Weight [measured]</b>	
<b>ARGOS PTT ID</b>	142938
<b>Transmitter type</b>	SMRU series 9000 SRDL CTD satellite tag with 0.5 Watt WildCat RF unit, D
<b>Manufacturer</b>	SMRU
<b>PTT Serial Number</b>	10515
<b>PTT Software</b>	
<b>Setting protocol</b>	<p>Software specification for CTD_GEN_07A deployment (Standard CTD Temp+Salinity)</p> <p>Transmitting via ARGOS Page transmission sequences:</p> <p style="padding-left: 40px;">Until day 1464: 0 1 0 2 0 3 0 2 0 3 0 using 1 PTT numbers</p> <p>Satellite availability (UTC):</p> <p style="padding-left: 40px;">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 --</p> <p>Transmission targets:</p> <p>48000 transmissions after 365 days</p>

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 dive characterisation algorithm

Dive shape (deep dives):

none

CTD upcasts: max 2000 dbar up to 8 dbar in 2 dbar bins.

18 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: -3 to 37.5 degC

Conductivity: Collected, Not stored.

Salinity: Calculated, Stored. Valid range: 32 to 37

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 172 bytes = 344000 bytes  
No GPS fixes

TOTAL 2422 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  
-----[2 bits: 8 - 9]

DIAGNOSTICS in format 0:

TX number: wraparound 11 bits in units of 32 (range: 0 to 65504 )  
Number of resets: wraparound 1 bits in units of 1 (range: 0 to 1 )  
-----[12 bits: 10 - 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)

Sell-by range: 5 days

Number of records: raw 2 bits in units of 1 (range: 0 to 3 )

Reason for end: -- not transmitted --

Group number: wraparound 8 bits in units of 1 (range: 0 to 255 )

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)

Profile times: raw 5 bits in units of 32.2581 permille (range: 0 to 1000

permille)

Speed profile: -- not transmitted --

Residual: raw 2 bits in units of 60 (range: 0 to 180 )

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  
-----[2 bits: 8 - 9]

DIAGNOSTICS in format 1:

Max depth ever: odlog 1/4 in units of 500 dm (range: 0 to 23250 dm)  
-----[5 bits: 10 - 14]

CRUISE group in format 0:

Number of records: raw 1 bits in units of 1 (range: 0 to 1 )

Cruise number: wraparound 4 bits in units of 1 (range: 0 to 15 )

Start time: -- not transmitted --

End time: max 5 days 12 hours @ 2 mins= 3960

tx as raw 12 bits in units of 1 (range: 0 to 4095 )

(recommended sell-by 5 days 11 hours)  
Sell-by range: 5 days 4 hours  
Duration: raw 9 bits in units of 120 s (range: 0 to 61320 s)  
cf. Max duration is 16 hours  
Speed: -- not transmitted --  
Reason for end: -- not transmitted --  
-----[26 bits: 15 - 40]

HAULOUT in format 0:

Number of records: raw 1 bits in units of 1 (range: 0 to 1 )  
Haulout number: wraparound 4 bits in units of 1 (range: 0 to 15 )  
Start time: -- not transmitted --  
End time: max 5 days 12 hours @ 2 mins= 3960  
tx as raw 12 bits in units of 1 (range: 0 to 4095 )  
(recommended sell-by 5 days 11 hours)  
Sell-by range: 5 days 4 hours  
Duration: raw 9 bits in units of 120 s (range: 0 to 61320 s)  
cf. Max duration is 16 hours  
Reason for end: -- not transmitted --  
Contiguous: -- not transmitted --  
-----[26 bits: 41 - 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 )  
(recommended sell-by 6 days 17 hours)  
Sell-by range: 7 days  
Number of records: raw 1 bits in units of 1 (range: 0 to 1 )  
Cruising time: -- not transmitted --  
Haulout time: raw 6 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)  
Deep Dive time: -- not transmitted --  
Normal dives:  
Avg max dive depth: odlog 2/6 in units of 25 dm (range: 0 to 23887.5 dm)  
SD max dive depth: odlog 2/4 in units of 50 dm (range: 0 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 --  
Avg dive duration: -- not transmitted --  
SD dive duration: -- not transmitted --  
Max dive duration: -- not transmitted --  
Avg speed in dive: -- 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  
-----[2 bits: 8 - 9]

CTD in format 0:

End time: max 7 days @ 5 mins= 2016  
tx as raw 11 bits in units of 1 (range: 0 to 2047 )  
(recommended sell-by 6 days 23 hours)

Sell-by range: 6 days 18 hours  
 CTD cast number: -- not transmitted --  
 Min pressure: -- not transmitted --  
 Max pressure: raw 10 bits in units of 2 dbar (range: 8 to 2054 dbar)  
 Min temperature: raw 13 bits in units of 5 (range: 2000 to 42955 = -3 to 37.955 °C in steps of 0.005 °C)  
 Max temperature: raw 13 bits in units of 5 (range: 2000 to 42955 = -3 to 37.955 °C in steps of 0.005 °C)  
     cf. Valid temperatures: -3 to 37.5 degC  
 Min salinity: raw 10 bits in units of 5 mPSU (range: 32000 to 37115 mPSU)  
 Max salinity: raw 10 bits in units of 5 mPSU (range: 32000 to 37115 mPSU)  
     cf. Valid salinity: 32 to 37  
 Number of samples: -- not transmitted --  
 10 profile points 0 to 9 (from total of 18 cut points):  
     First 8 pressures are fixed  
     Min pressure is fixed  
     Max pressure is sent separately  
     Temperature: raw 9 bits in units of 1.95695 permille (range: 0 to 1000 permille)  
 Temperature residual: -- not transmitted --  
     Salinity: raw 8 bits in units of 3.92157 permille (range: 0 to 1000 permille)  
 Salinity residual: -- not transmitted --  
 Temperature bounds : -- not transmitted --  
 Conductivity bounds : -- not transmitted --  
 Salinity bounds : -- not transmitted --  
 -----[237 bits: 10 - 246]  
  
 Available bits used exactly  
 === End of page 2 ===

PAGE 3:

PTT NUMBER OVERHEAD (28-bit code)  
 -----[8 bits: 0 - 7]  
  
 PAGE NUMBER  
 -----[2 bits: 8 - 9]  
  
 DIAGNOSTICS in format 2:  
 -----[0 bits: 10 - 9]  
  
 CTD in format 1:  
  
 End time: max 7 days @ 5 mins= 2016  
     tx as raw 11 bits in units of 1 (range: 0 to 2047 )  
     (recommended sell-by 6 days 23 hours)  
 Sell-by range: 6 days 18 hours  
 CTD cast number: -- not transmitted --  
 Min pressure: -- not transmitted --  
 Max pressure: -- not transmitted --  
 Min temperature: -- not transmitted --  
 Max temperature: -- not transmitted --  
     cf. Valid temperatures: -3 to 37.5 degC  
 Min salinity: -- not transmitted --  
 Max salinity: -- not transmitted --  
     cf. Valid salinity: 32 to 37  
 Number of samples: -- not transmitted --  
 8 profile points 10 to 17 (from total of 18 cut points):  
     8 pressure bins: raw 9 bits in units of 1 bin (range: 0 to 511 bin)  
     Temperature: raw 9 bits in units of 1.95695 permille (range: 0 to 1000 permille)  
 Temperature residual: raw 7 bits in units of 2 mdegC per sample (range: 0 to 254 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 2 mPSU per sample (range: 0 to 254 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)

-----[237 bits: 10 - 246]

Available bits used exactly  
=== End of page 3 ===

**Deployment**



**Immobilisation**

<https://doi.pangaea.de/10.1594/PANGAEA.857918>

**Comment**

Seal tag: none  
Deployment site: Drescher Inlet  
Previous deployment: none

**Tag deployed**

2016-01-21T12:40:14      -72.899      -19.182

**Tag retrieved**

**First transmission**

2016-01-21T12:40:14      -72.899      -19.182

**Last transmission**

2016-06-09T11:37:13      -72.819      -19.202