



## POLARIS SOH help



**POLARIS Data Summary** D1 D2 D3 D4 W1 W2 W3 W4 SOH Log Help

Station	Year	005	006	2007
ACKN	ILRN	078T		
ACTO	ILRN	079T	1	2
ALFO	OTRO		3	4
ALGO	ILRN		5	6
ALRB	ILRN		7	8
ANMB	PECO	S	M	T
AP3N	PECO	W	T	F
ARVN	PEMO	S	M	T
ATKO	PEMO	W	T	F
BAND	KASO	1	2	3
BATG	KELB	4	5	6
BOXN	KELB	7	8	9
BRCO	KILO	10	11	12
BRPO	KILO	13	14	15
BULN	KLBO	16	17	18
CAMN	KLBO	19	20	21
CBRD	KLNB	22	23	24
CHEG	KNDN	25	26	27
CLBO	KNDN	28	29	30
CLPO	KSVQ	31		
CLSB	PLVO			
CLVB	PLVO			
CLWO	LAIN			
CODG	LDGN			
COGB	LDGN			
COWN	LDIO	S	M	T
CTLN	LDIO	W	T	F
DELO	LGSN	1	2	3
DREO	LGSN	4	5	6
DSMN	LINO	7	8	9
DVKN	LINO	10	11	12
EKTN	LITE	13	14	15
ELAO	LITE	16	17	18
ELFO	LUPN	19	20	21
ELGO	LUPN	22	23	24
ENGB	MACE	25	26	27
EPLD	MACE	28	29	30
FLLB	MADG	31		
GALN	MADG			
GASC	MALG			
GBLN	MALG			
GIFN	MALO	S	M	T
GLWN	MALO	W	T	F
GOWB	MCKN	1	2	3
GUYG	MCKN	4	5	6
064T	MEDO	7	8	9
	MEDO	10	11	12
	MGCB	13	14	15
	MGCB	16	17	18
	MGTN	19	20	21
	MGTN	22	23	24
	MH1B	25	26	27
	MH1B	28	29	30
	MH2B	31		
	MH2B			
	MH3B			
	MH3B			
	MH4B			
	MH4B			
	MILN			
	MILN			
	MPPD			
	MPPD			
	MRHQ			
	MRHQ			
	MSNO			
	MSNO			
	MUMO			
	MUMO			
	THMB			
	THMB			
	TIGG			
	TIGG			
	TIMO			
	TIMO			
	TOBO			
	TOBO			
	TORO			
	TORO			
	TSJB			
	TSJB			
	TWBB			
	TWBB			
	TWGB			
	TWGB			
	TWKB			
	TWKB			
	TYNO			
	TYNO			
	VIMO			
	VIMO			

**OTRO-2007-05-20 Polaris CYG391 TRD466 CAR062**

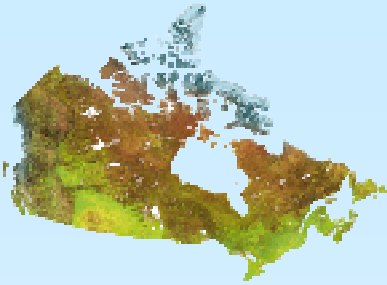
This POLARIS SOH page is reached by clicking Help link on SOH blue banner, then on station code OTRO, then finding May 2007 on the calendar and clicking on day 20.

To load page 2 for the same station, click on D2 at the top or double-click on the image.

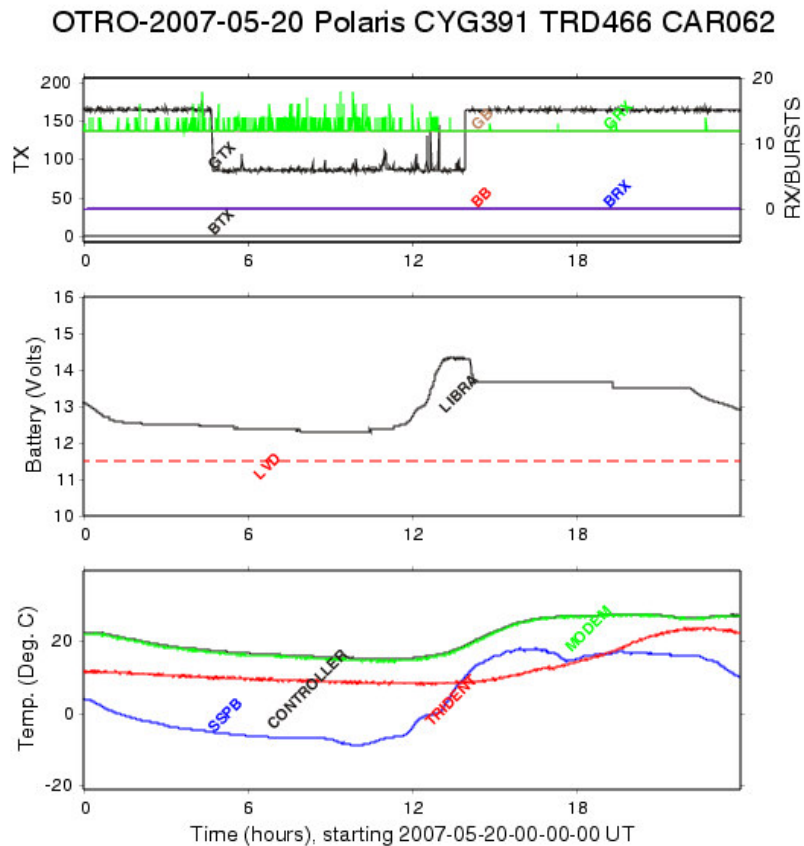


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## POLARIS SOH help



Page 1 of POLARIS SOH shows 3 graphs, all starting at 00 UT and lasting 24 hours.

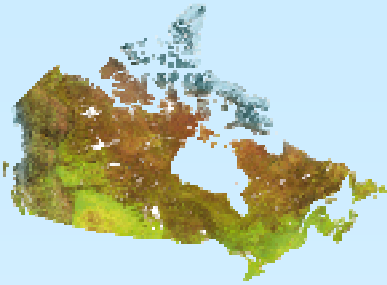
Top graph shows VSAT, middle one battery volts and the bottom graph shows temperature SOH.

Each graph is described in details on next pages.



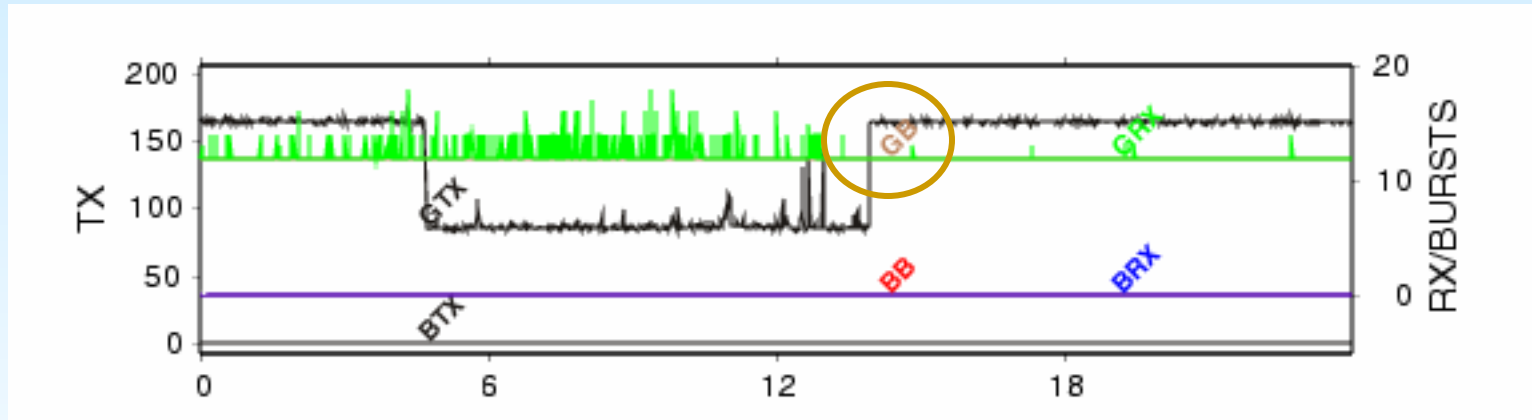
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# POLARIS

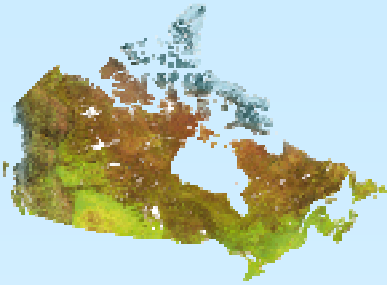
## POLARIS VSAT communication details



GB

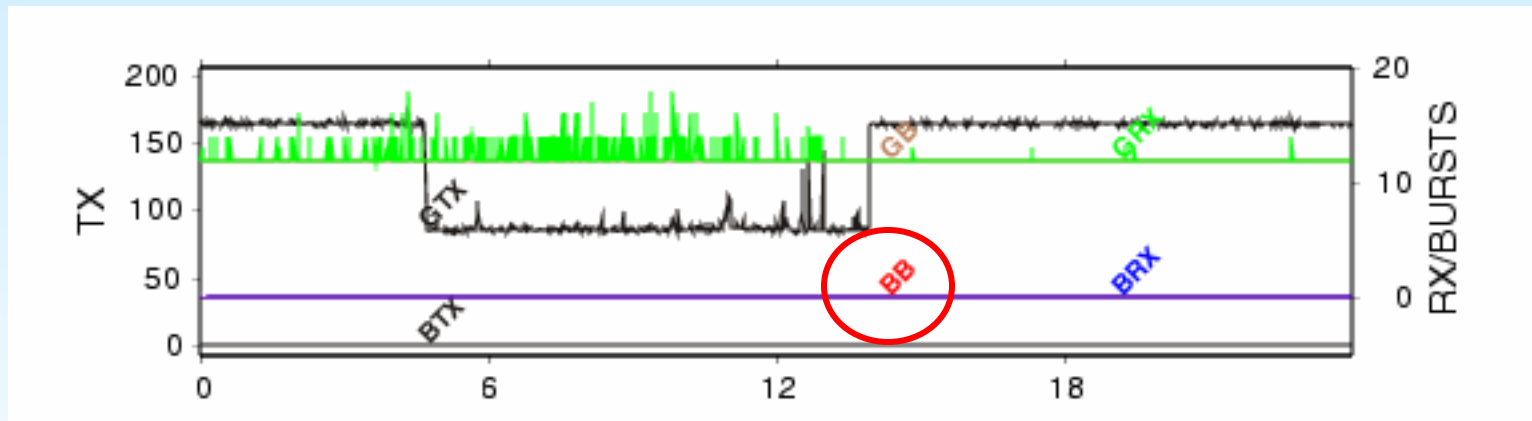
GB is the number of good TDMA bursts per minute. Since TDMA frame length is 5 seconds, GB should remain steady at 12. The GB line in brown is masked by the GRX line in green.





# POLARIS

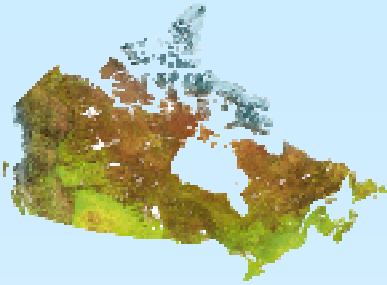
## POLARIS VSAT communication details



**BB**

BB is number of bad TDMA burst per minute. It should be zero, as long as transmission from remote to hub is going fine.

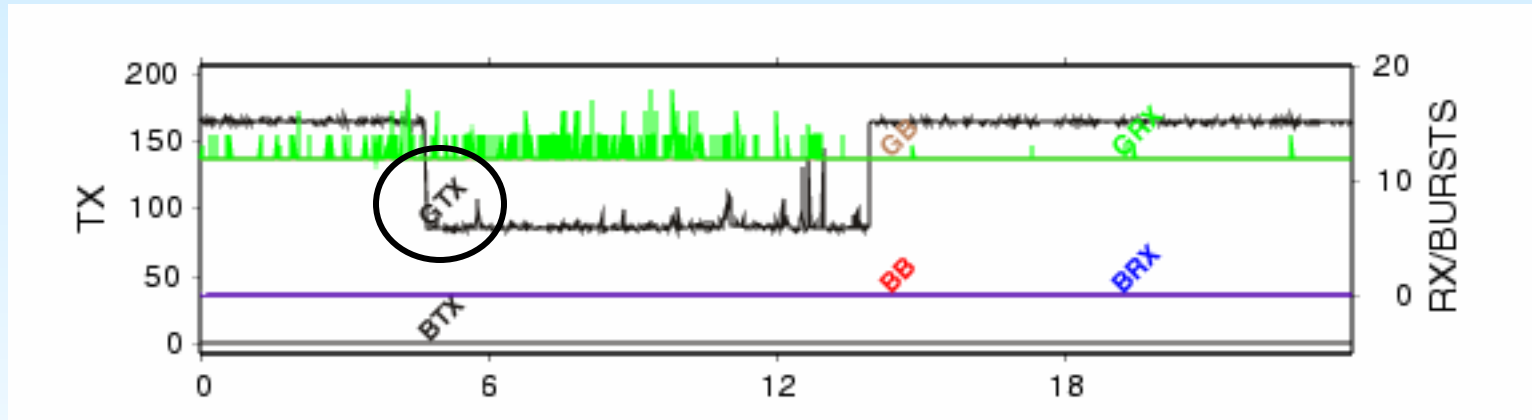




# POLARIS



## POLARIS VSAT communication details



GTX

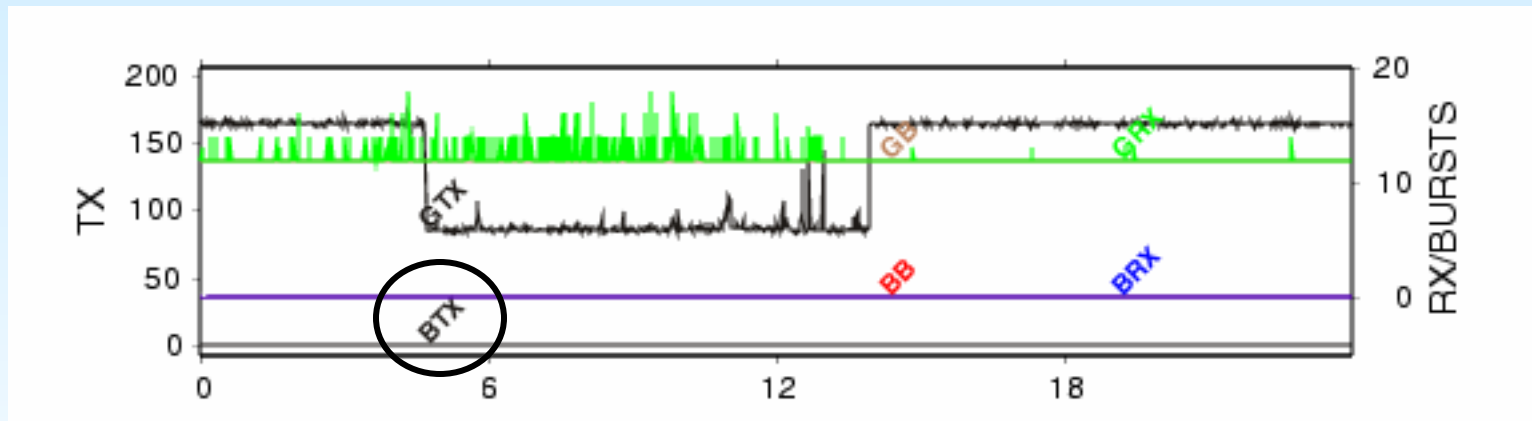
GTX is the number of good transmit packets. It depends on the volume of data collected at the site that varies based on sample rate, background noise and frequency of recorded events.





# POLARIS

## POLARIS VSAT communication details



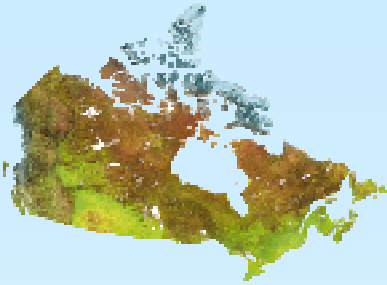
**BTX**

BTX is number of bad transmit packets per minute and should remain zero as long as the remote site is transmitting good packets.



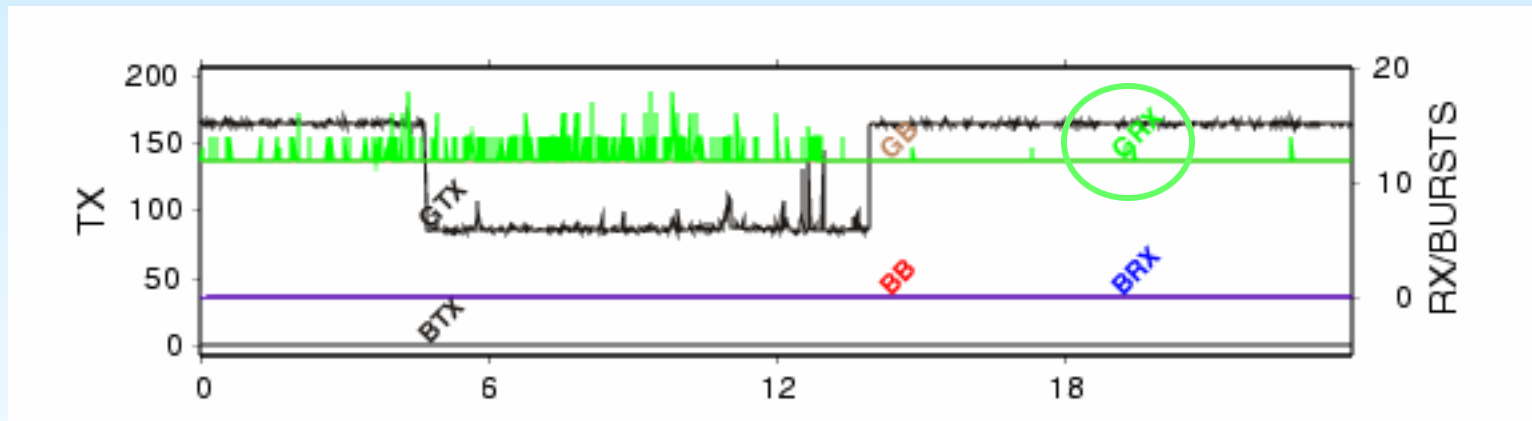
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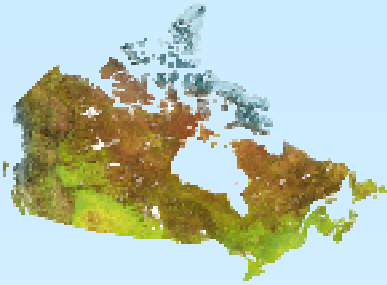
## POLARIS VSAT communication details



**GRX**

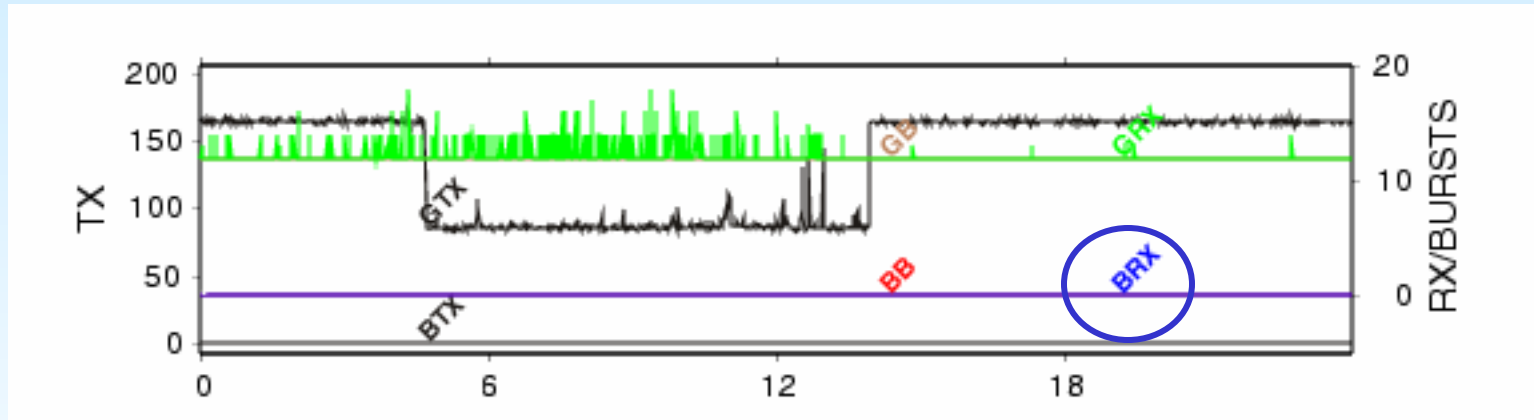
GRX is number of good re-transmit packets. It increases after a halt in transmission or corruption of transmitted packets.





# POLARIS

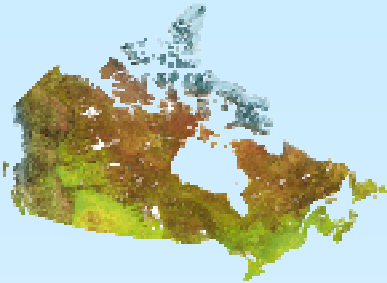
## POLARIS VSAT communication details



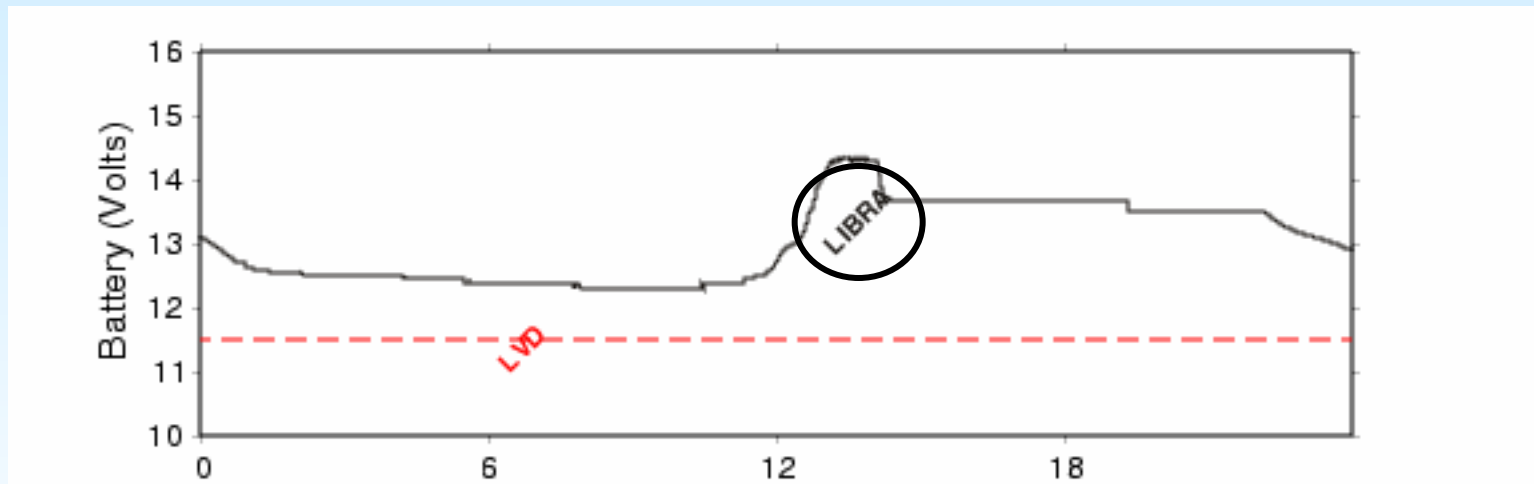
**BRX**

BRX is number of bas re-transmit packets. It should remain at zero if all is fine with RX.



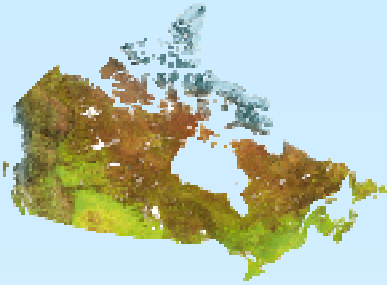


## POLARIS Libra Power Supply SOH

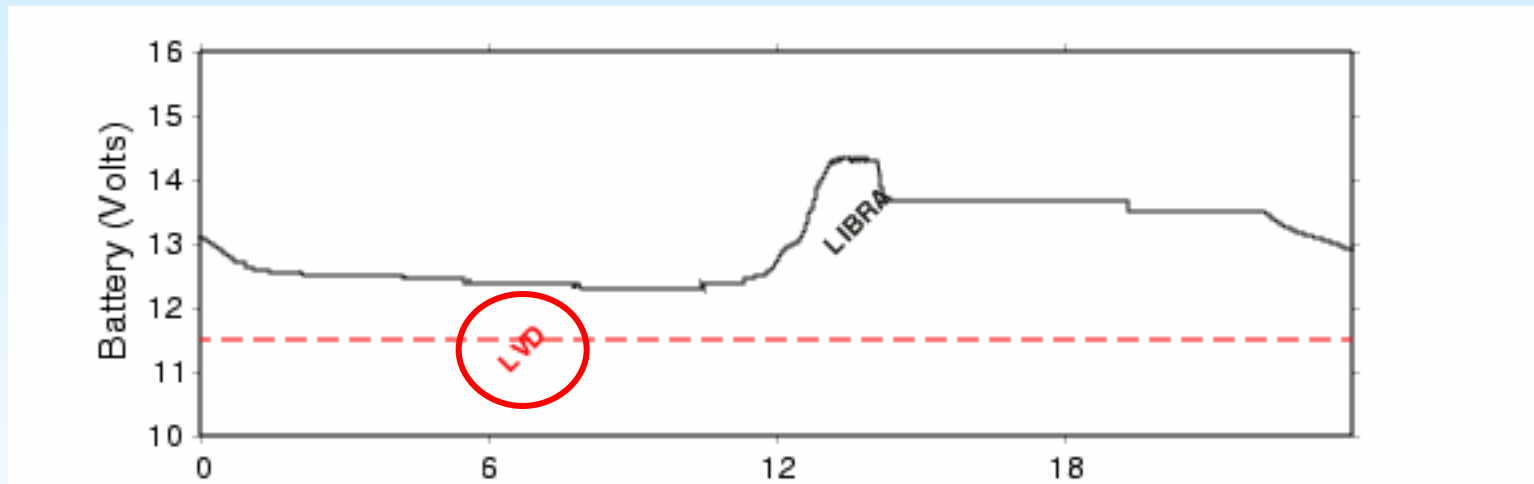


Libra

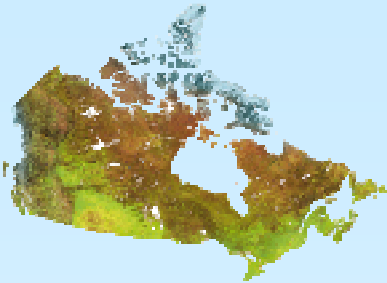
Libra shows battery volts. During the day (right side of graph), the battery is charging while at night (left side) it is discharging.



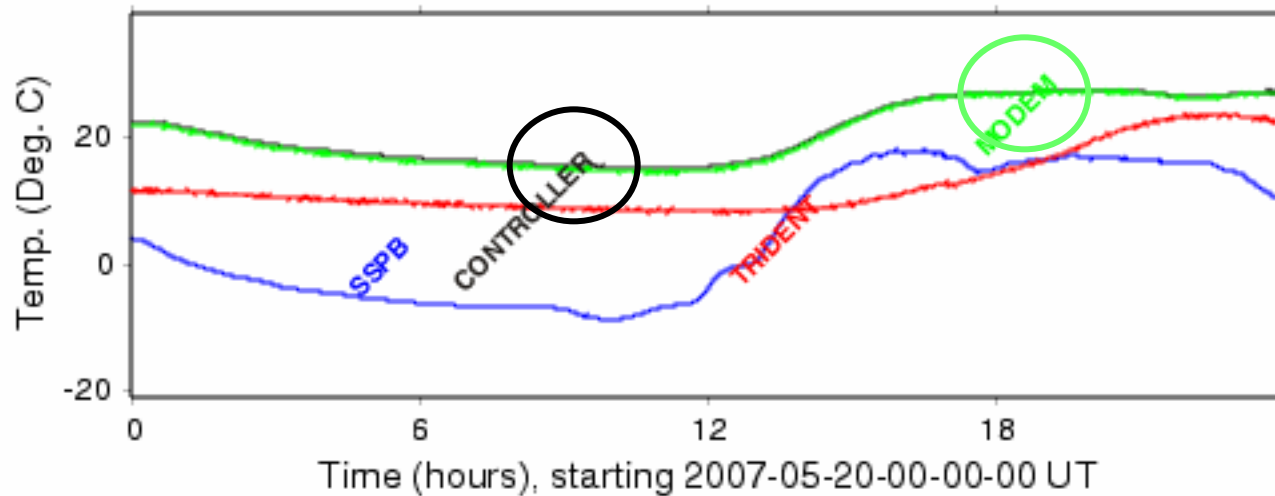
## POLARIS Libra Power Supply SOH



LVD is the low volt disconnect. If battery volts reaches this level, the power Supply will disconnect power to the system to preserve batteries.



## POLARIS Libra Temperature SOH

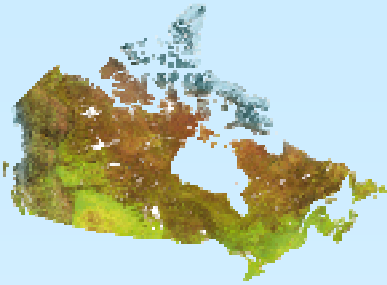


CONT

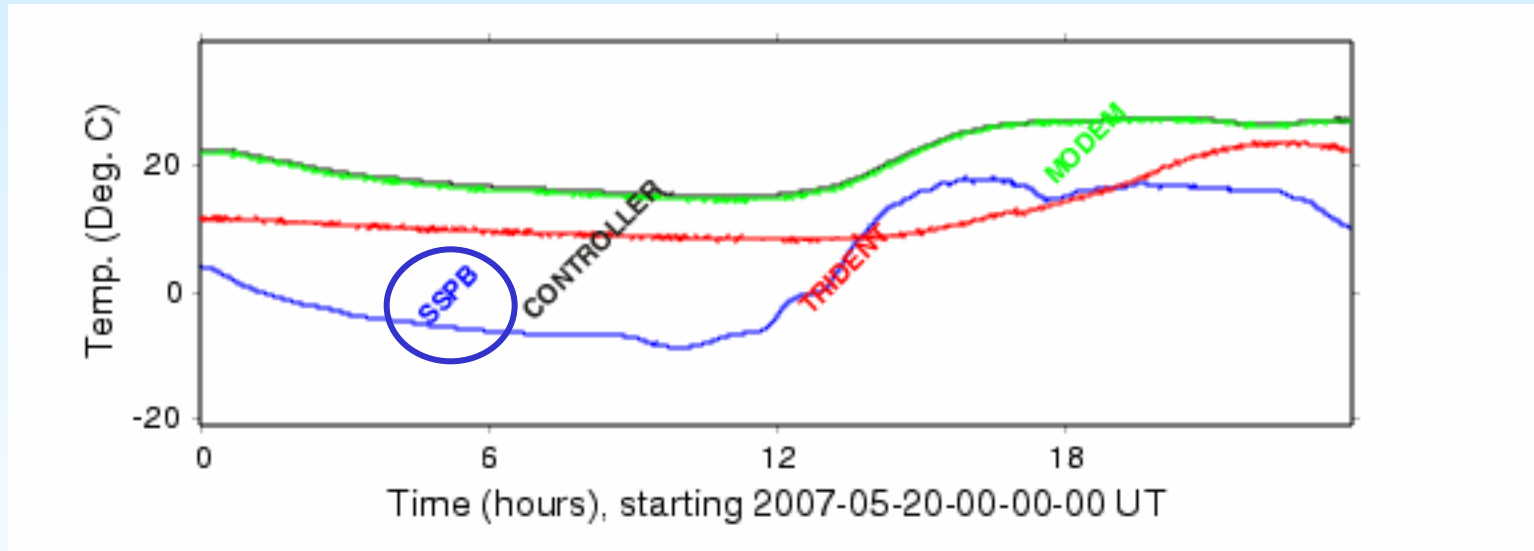
CONTROLLER and MODEM graphs show (identical, in this case) temperature inside the communication controller and VSAT modem.

MODEM

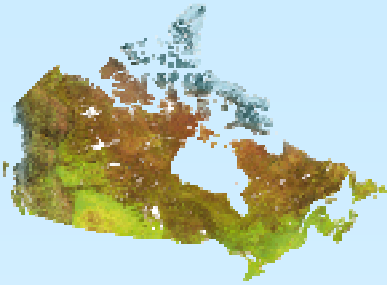
These devices are kept inside a battery box (for the Northern stations) and remain warm most of the time.



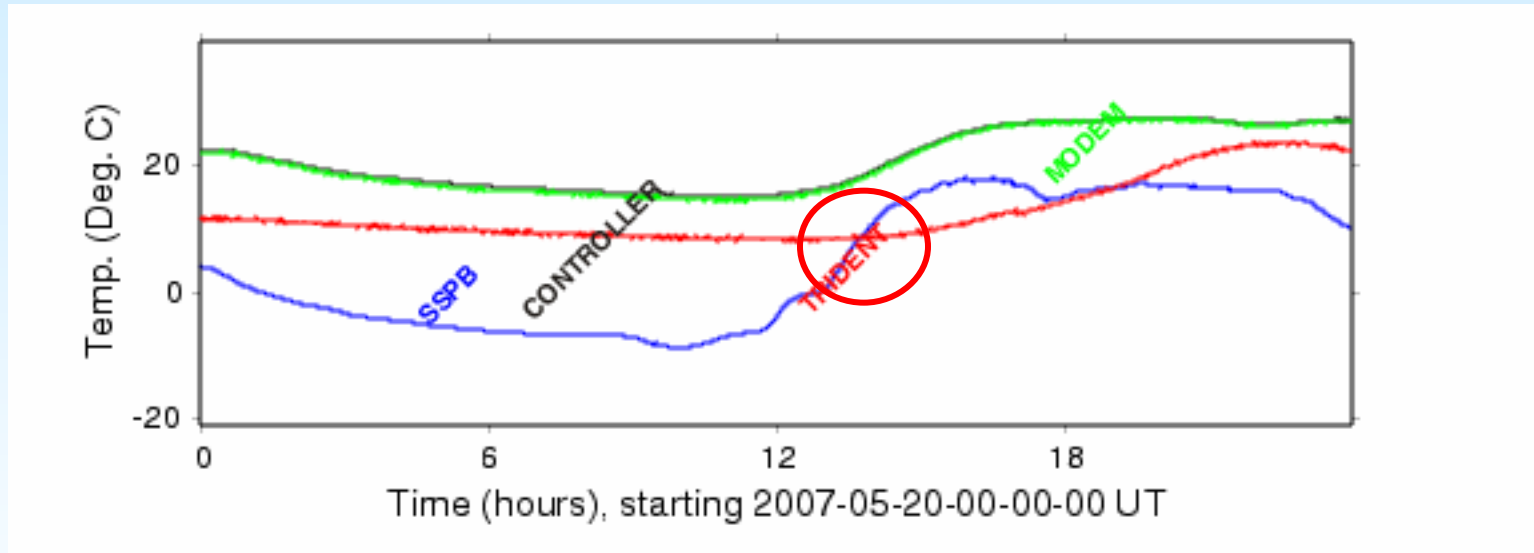
## POLARIS Libra Temperature SOH



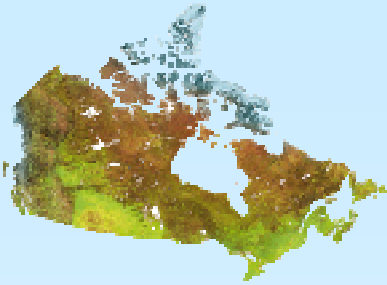
The SSPB device is mounted outside on the antenna and shows a good measure of air temperature.



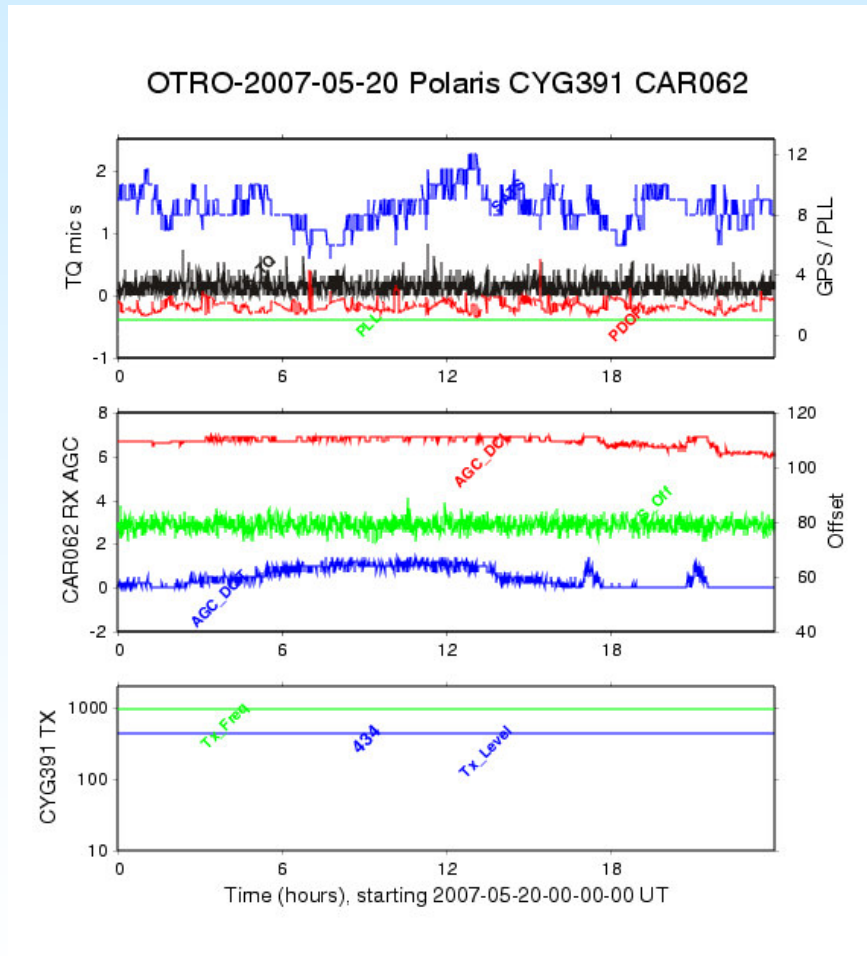
## POLARIS Libra Temperature SOH



The TRIDENT digitizer is installed inside the seismometer vault. This temperature is a good measure of seismometer temperature.



# POLARIS

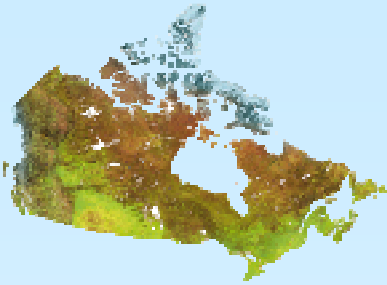


Page 2 of POLARIS SOH shows 3 graphs, all starting at 00 UT and lasting 24 hours.

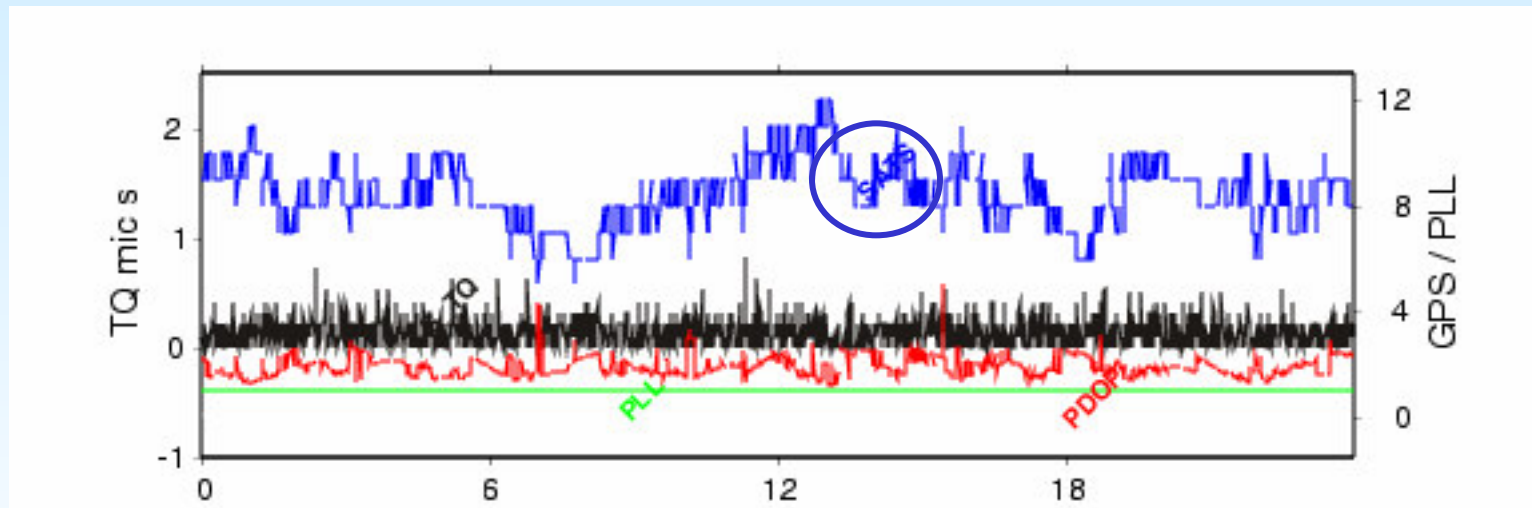
Top graph shows GPS, middle one VSAT gain levels and the bottom graph shows VSAT transmit levels SOH.

Each graph is described in details on next pages.



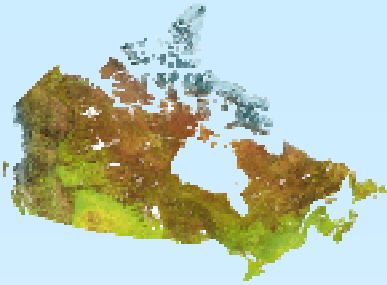


## POLARIS Libra GPS SOH

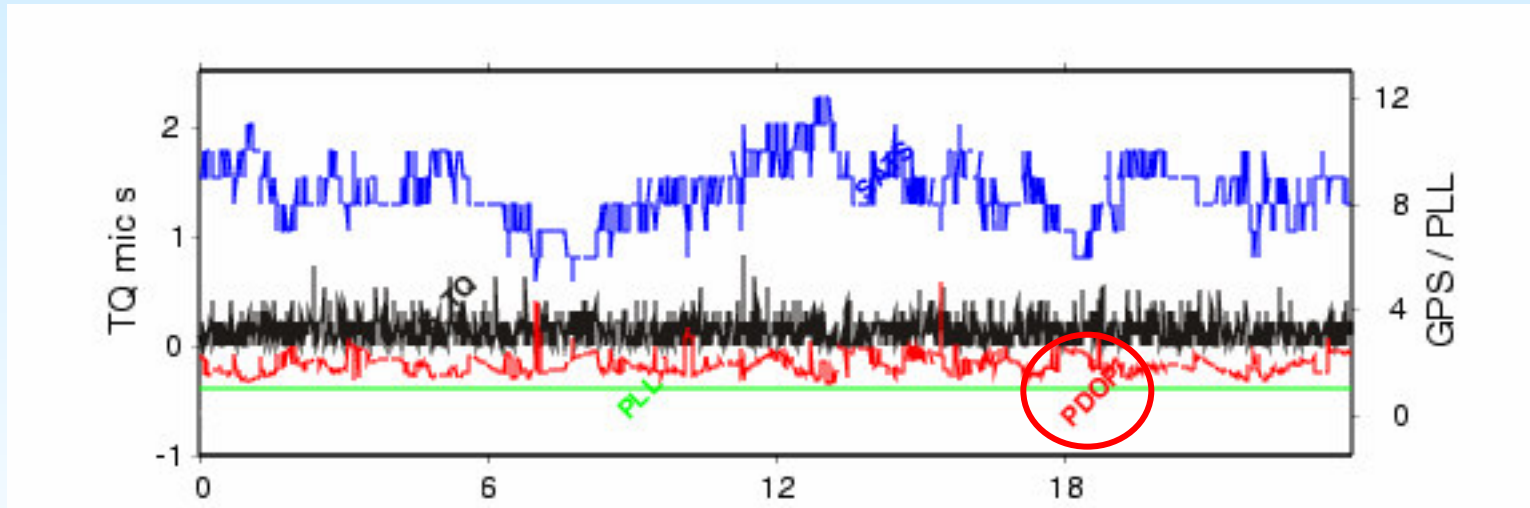


**SATS**

SATS is the number of GPS satellites in use and varies depending on time of the day but should always remain greater than six.



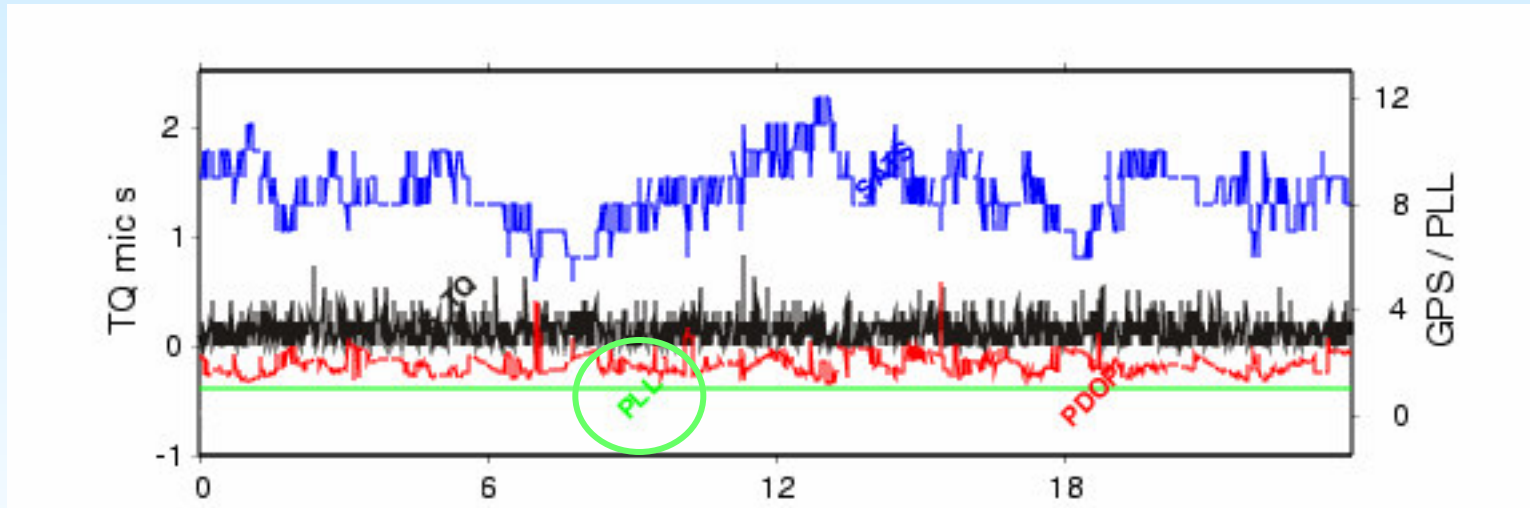
## POLARIS Libra GPS SOH



PDOP is quality of *GPS* and should remain steady and close to 1.5.

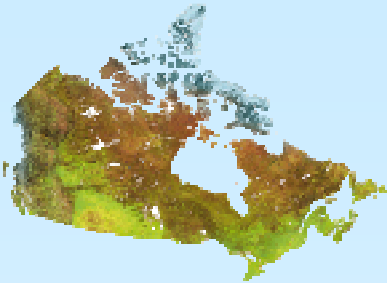


## POLARIS Libra GPS SOH

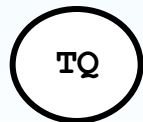
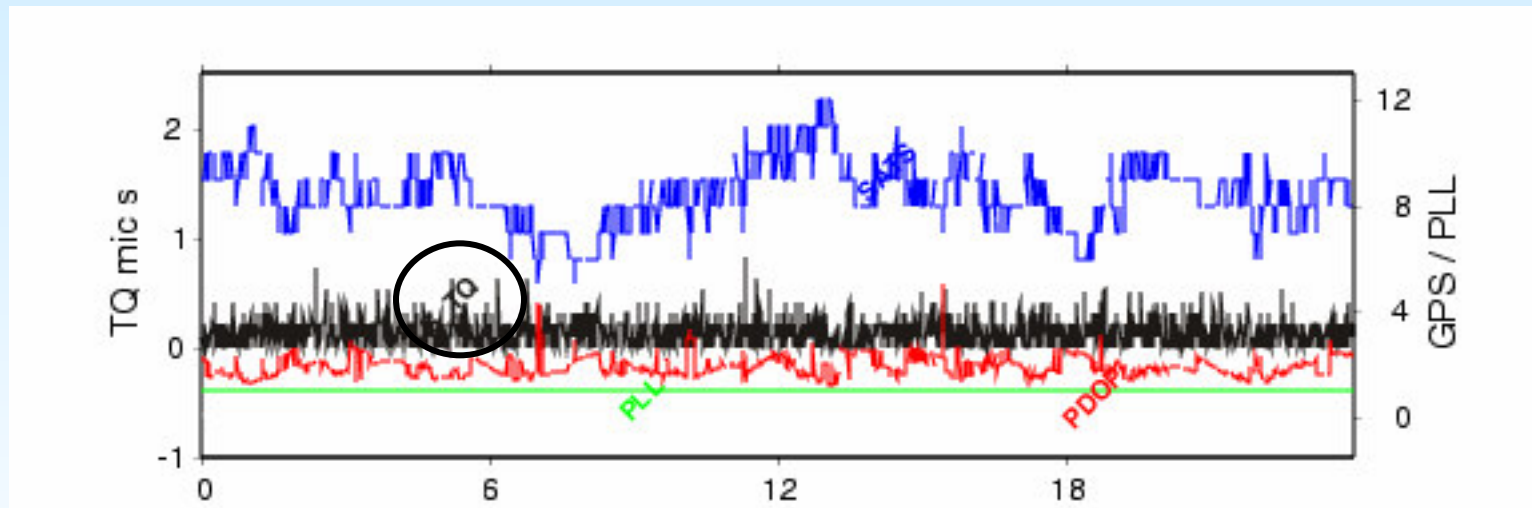


PLL

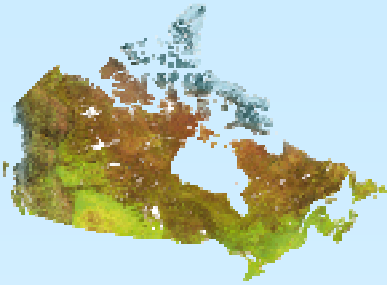
PLL is a measure of time quality and for best quality should remain steady at 1.



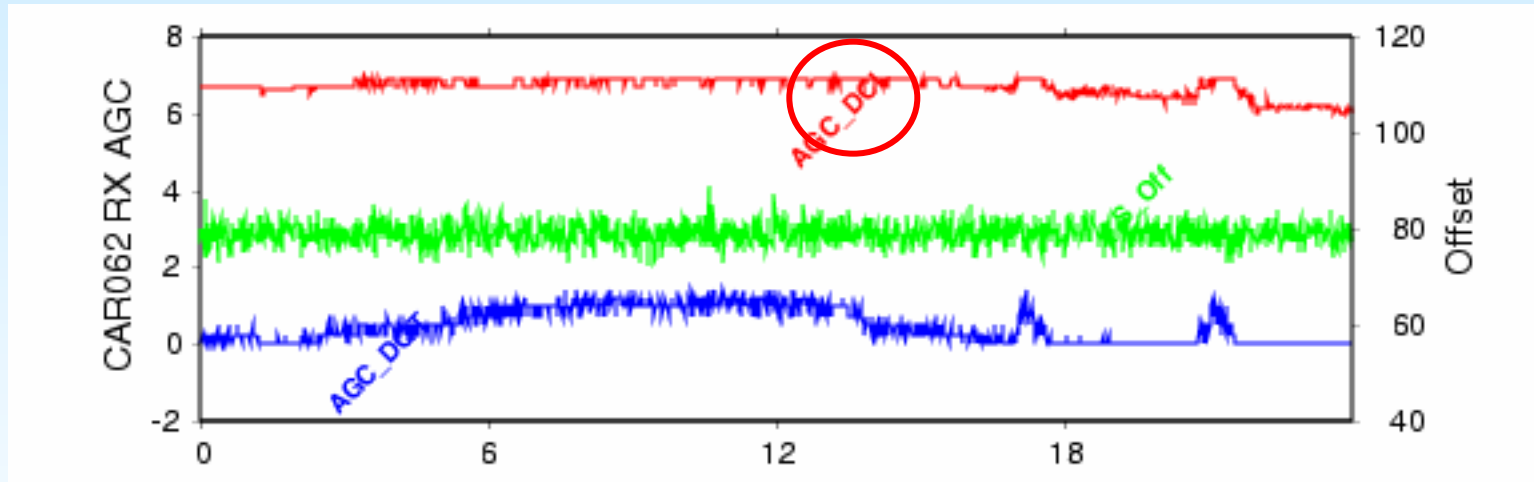
## POLARIS Libra GPS SOH



TQ is the overall time quality in microseconds. It should remain close to 0 and is a good measure of time accuracy of the Libra system.

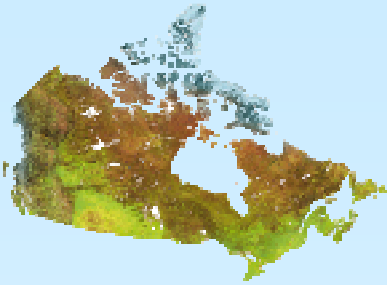


## POLARIS Libra VSAT AGC level SOH



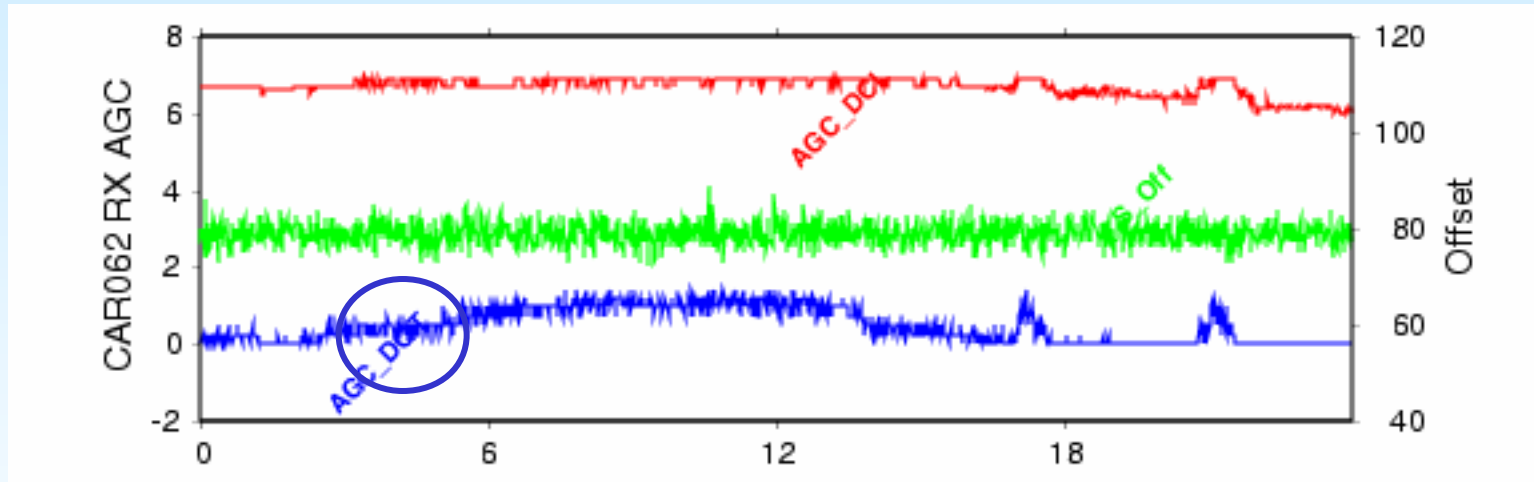
DCL

AGC\_DCL - AGC level for Costas (phase-locked) loop.



# POLARIS

## POLARIS Libra VSAT AGC level SOH



AGC\_DQT - AGC level for quadrature tuner error correction.

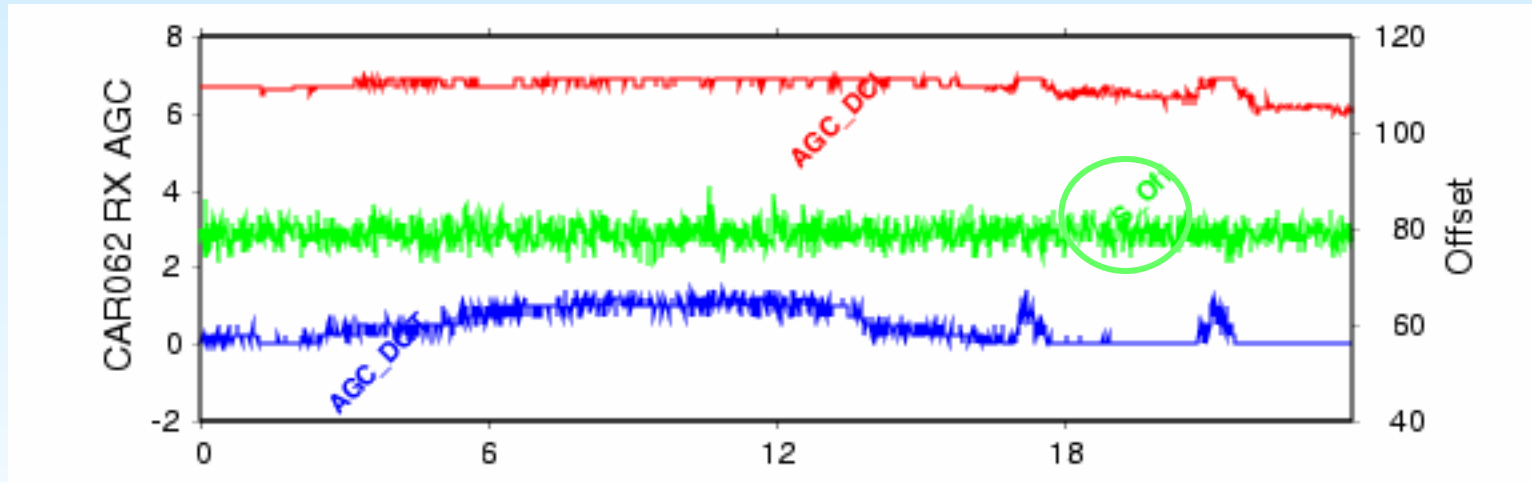


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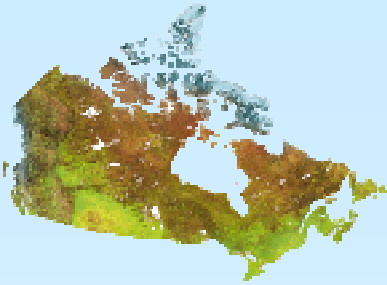
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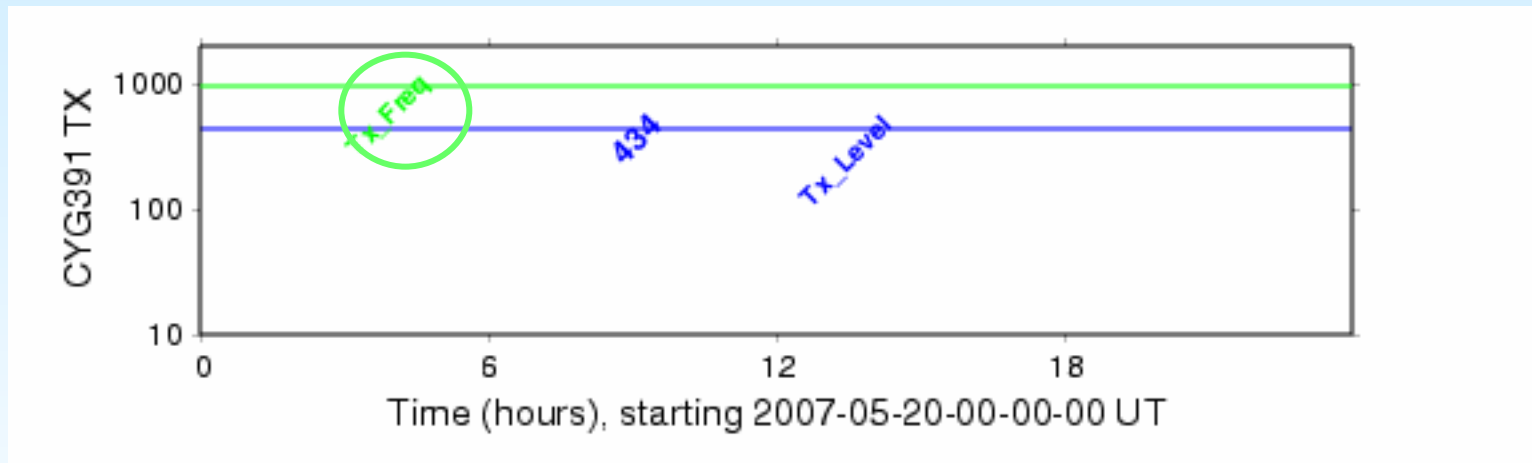
## POLARIS Libra VSAT AGC level SOH



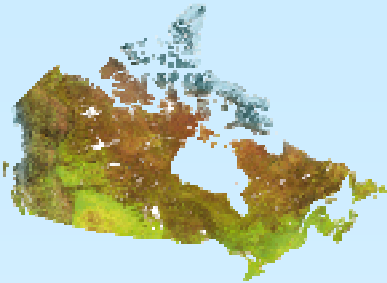
S\_OFF - Symbol offset correction.



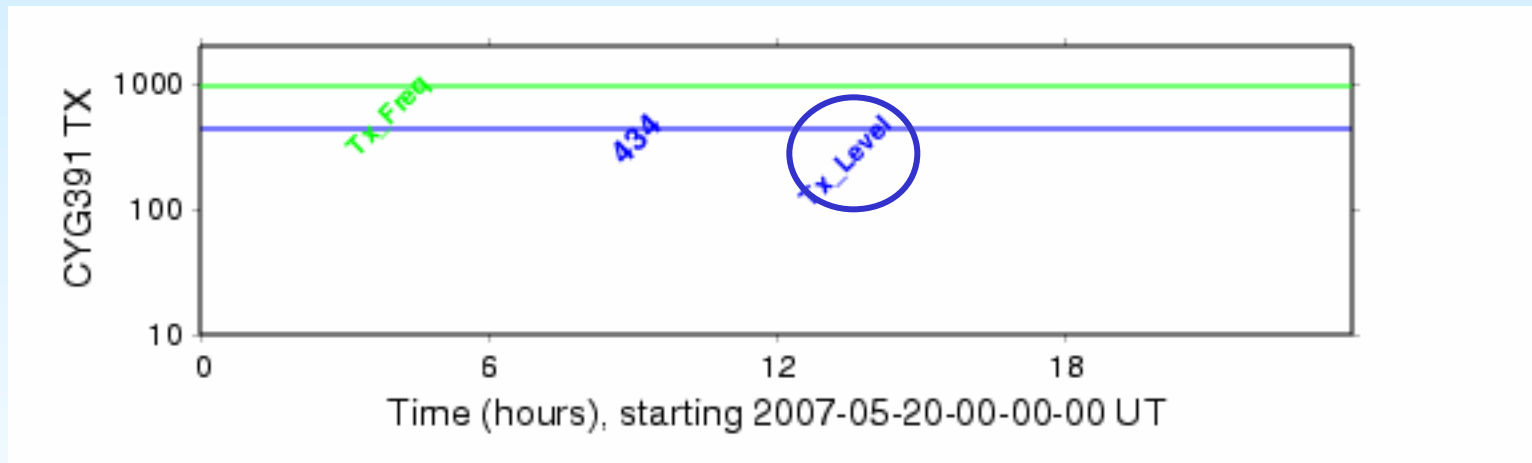
## POLARIS Libra VSAT AGC level SOH



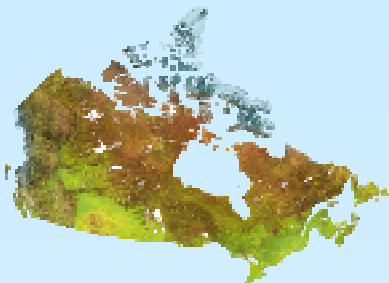
TX\_Freq - Transmit frequency.



## POLARIS Libra VSAT AGC level SOH



TX\_Level - Transmit level. It is 434 at this station. Smaller values indicate better transmit.



# POLARIS

More to come for pages 3  
and 4.

