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TiltMeter Raw Data

These are raw uncalibrated data from RBRconcerto tiltmeters (not parsed), currently sampled at 20 SPS and 5SPS, product of a middleware driver.

Oceans 2.0 API filter: [dataProductCode=APT](#)

RBR manufacturer data sheet: <http://rbr-global.com/wp-content/uploads/2017/10/0005642revA-RBRconcerto-APT.pdf>

General file format description: <https://docs.rbr-global.com/apt>

Revision History

- 20180503: Initial release

Formats

Format is .apt, consisting of comma-separated numeric values as shown in the section below. The file names end in either -5SPS or -20SPS with file extension .apt, depending on the sampling rate.

Oceans 2.0 API filter: [extension=apt](#)

ONC also sends the .apt files to IRIS, as currently done with seismometer data (102). Example: <http://service.iris.edu/fdsnws/dataselect/1/query?net=NV&sta=CBC27&loc=Z1&cha=AHD&starttime=2019-10-05T00:00:00&endtime=2019-10-05T01:00:00&format=geocsv&nodata=404>

Examples

A sample .apt file would look as follows:

```
2018-05-21 00:00:00.000, 2018-05-21 00:00:00.000, 30329006.407409906, 30457821.032032370, 31001010.211184620,
5768823.195248843, 30485965.311527252, 5849140.640348196
2018-05-21 00:00:00.050, 2018-05-21 00:00:00.050, 30329003.203660249, 30457826.070487499, 31001010.723412036,
5768823.181279004, 30485945.921391248, 5849140.645004809
2018-05-21 00:00:00.100, 2018-05-21 00:00:00.100, 30328996.283933520, 30457824.962213635, 31001011.952757835,
5768823.171965778, 30485962.051898241, 5849140.635691584
2018-05-21 00:00:00.150, 2018-05-21 00:00:00.150, 30328997.261822223, 30457825.008779764, 31001009.996980428,
5768823.183607310, 30485957.693308591, 5849140.628706664
2018-05-21 00:00:00.200, 2018-05-21 00:00:00.200, 30329000.279307365, 30457823.714241385, 31001009.410247206,
5768823.199905456, 30485948.976129293, 5849140.640348196
```

Each line contains the following information:

1	NTP time	YYYY-MM-DD HH:MM:SS.sss format.	The time that the NTP client reports. This is reset automatically per the configured NTP refresh rate while the NTP source is accessible.
2	Logger time	YYYY-MM-DD HH:MM:SS.sss format.	The time that the internal logger reports. Drift should be ± 60 s/year.
3	Accelerometer X period (picoseconds)	Double precision (64 bit) floating point number.	The period of the X (first) channel of the triaxial accelerometer.
4	Accelerometer Y period (ps)	Double precision (64 bit) floating point number.	The period of the Y (second) channel of the triaxial accelerometer.
5	Accelerometer Z period (ps)	Double precision (64 bit) floating point number.	The period of the Z (third) channel of the triaxial accelerometer.
6	Accelerometer temperature period (ps)	Double precision (64 bit) floating point number.	The period of the temperature (fourth) channel of the triaxial accelerometer.
7	BPR pressure period (ps)	Double precision (64 bit) floating point number.	The period of the pressure (first) channel of the BPR.
8	BPR temperature period (ps)	Double precision (64 bit) floating point number.	The period of the temperature (first) channel of the BPR.

Sample file with 20 SPS for download: [RBRILTMETERACCBPR63055_20191029T071627.144Z-20SPS.ap](#)

The first column in this file is the timestamp from the middleware drive.

Discussion

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