

## Aligned and Depth-Binned Profile Data (Legacy)

Legacy Aligned and Depth Binned profile data for sensors that are collecting profile data are described here. A profile is a series of measurements made throughout the water column grouped by each pass through the water, known as a 'cast', as opposed to continuous time series data. Profiles of the water column can be created by performing casts with instruments. Casts involve lowering an instrument down into the water and back up again while it is making measurements. Cast detection or delineation is performed automatically with manual oversight, [contact us](#) for further details. The measurements from the various sensors attached to and within the instrument are processed to filter, smooth, align, and average data into depth bins. Information about the data processing is included in the header of the data product. Specifically, the default processing steps are:

- The alignment of oxygen to account for instrument response lags. This is instrument dependent.
- Chlorophyll is filtered using a 25 median point filter.
- Temperature and conductivity data is smoothed using a 5 point running mean.
- Practical salinity, sound speed, and density are calculated using smoothed temperature, smoothed conductivity, and pressure.
- Data is averaged into 1 m bins centred at 1 m intervals. Data is only averaged into its corresponding bin if 70% of the data within the bounds of the bin has a QAQC flag of 1.

The descending portion of the cast is then extracted. This aligned and depth binned process is announced by having "-CORRECTED" appended to the start time in the file name. This data product consists of one file per cast per device. For example, if three devices perform two casts at the same time this will result in six separate files. These files have a header that defines what each column of data is representing. Each sample of data is preceded by a timestamp. The timestamp is followed by the first column of data. All other columns of data are comma-delimited as can be seen below. This data product is very similar to data product [Aligned and Depth-Binned Profile Data \(On-Demand\)](#), however, each cast and device is a separate file.

Please note that these files are generated beforehand offline and are available through Data Search for applicable instruments. Production of these files was superseded by [Aligned and Depth-Binned Profile Data \(On-Demand\)](#) and ceased when the newer was made available. Availability is therefore limited. Existing files are maintained for data reproducibility.

Please consult individual instruments' documentation for more information.

[Oceans 3.0 API filter:](#) `dataProductCode=CPD`

### Revision History

1. 20150302: Initial Release

### Formats

There is only one format for this data product which is a text file with a .cor extension. This type of file can be open in a wide variety of programs such as notepad, Wordpad, etc.

[Oceans 3.0 API filter:](#) `extension=cor`

```

% Salish Sea Marine Survival Project - Patrol 9
% Process date 2017-Jan-18
% "Calculation of derived variables: Practical Salinity Density and Sound Speed are calculated using smoothed
Conductivity and smoothed scan-shifted Temperature. T Scan shift ahead = 0; Smoothing: 5-point running mean"
% "All data binned into depth bins of 1m."
% "Oxygen data shifted ahead by 18 scans"
% "25 median point filter applied to the Chlorophyll data"
% Cast ID: PSF_VI_20150223_005
% Cast Location: Victoria
% Cast Number 5 of 6
% Start Down Cast: 20150223T164920.000Z [UTC]
% End Down Cast: 20150223T165254.667Z [UTC]
% Start Down Cast Longitude: -123.7183 deg E
% Start Down Cast Latitude: 48.319 deg N
% End Down Cast Longitude: -123.7198 deg E
% End Down Cast Latitude: 48.3193 deg N
% Patrol Devices:
% - RBRconcerto C.T.D.DO.Fllfast6 (S/N 65681)
% - Alec Electronics Rinko-III 186
% - Turner Cyclops-7 Fluorometer (S/N 2013859)
% - Android GPS Nexus 7 Tablet (SN DBOKBC175709)
% Time [UTC] , Absolute Pressure Corrected [db] , Conductivity Corrected [S/m] , Density Corrected [kg/m^3] ,
Depth Corrected [m] , Practical Salinity Corrected [psu] , Pressure Corrected [db] , Sound Speed Corrected [m
/s] , Temperature Corrected [°C]
% ----- BEGIN DATA -----
20150223T164922.460Z 11.013056 , 3.325291 , 1023.934049 , 1.000000 , 30.930283 , 0.880556 , 1481.293806 ,
9.020264
20150223T164925.286Z 12.095610 , 3.325342 , 1023.940499 , 2.000000 , 30.931867 , 1.963110 , 1481.307079 ,
9.018498
20150223T164926.750Z 13.134183 , 3.325455 , 1023.945135 , 3.000000 , 30.931896 , 3.001682 , 1481.327469 ,
9.019434
20150223T164928.083Z 14.154720 , 3.326112 , 1023.952583 , 4.000000 , 30.935929 , 4.022219 , 1481.358245 ,
9.021703
20150223T164929.250Z 15.103802 , 3.326669 , 1023.959737 , 5.000000 , 30.939882 , 4.971302 , 1481.385411 ,
9.023693
20150223T164930.500Z 16.218657 , 3.326962 , 1023.966685 , 6.000000 , 30.942240 , 6.086157 , 1481.406395 ,
9.023612
20150223T164931.667Z 17.194483 , 3.327079 , 1023.972445 , 7.000000 , 30.943788 , 7.061983 , 1481.422153 ,
9.022993
20150223T164932.833Z 18.224292 , 3.327342 , 1023.979072 , 8.000000 , 30.946186 , 8.091791 , 1481.440893 ,
9.022753
20150223T164934.000Z 19.160310 , 3.327722 , 1023.986375 , 9.000000 , 30.949980 , 9.027810 , 1481.459494 ,
9.022356
20150223T164935.250Z 20.155179 , 3.328249 , 1023.994953 , 10.000000 , 30.955112 , 10.022678 , 1481.481673 ,
9.022224
20150223T164936.500Z 21.196284 , 3.328657 , 1024.002358 , 11.000000 , 30.958547 , 11.063784 , 1481.503931 ,
9.022505
20150223T164937.750Z 22.175900 , 3.328899 , 1024.008564 , 12.000000 , 30.960771 , 12.043399 , 1481.523021 ,
9.022575
20150223T164939.167Z 23.254966 , 3.329501 , 1024.017630 , 13.000000 , 30.966110 , 13.122465 , 1481.548247 ,
9.022854

```

## Example File

An example file is available to download here: [RBRCONCERTO65681\\_20150223T164920.000Z-CORRECTED.cor](#)