

# TRIAXUS DATA

## Data Types collected by Triaxus



**Note:** Sample Triaxus data files are attached to this page; click the paperclip icon in the upper left corner of the page to access the data sets.

The Triaxus unit is a platform that hosts a number of different sensors. The table below is based on a review of the "[Explanation of TRIAXUS Data File.xlsx](#)" file where the data sections are color coded to distinguish between the different sensors installed on Triaxus.

Categories	Types
<p>CAT 1 (blue) – ship location data</p> <ul style="list-style-type: none"><li>• NMEA compliant Lat, Lon</li></ul>	<ul style="list-style-type: none"><li>• UTC</li><li>• Latitude</li><li>• DDLat</li><li>• Longitude</li><li>• DDLong</li><li>• Distance</li><li>• Ship Speed (Distance/Time)</li><li>• Horizontal Dilution signal</li><li>• Alt_AMSL</li></ul>
<p>CAT 2 (pink) – Depth Data</p> <ul style="list-style-type: none"><li>• NEMA compliant water depth in feet. (Must add draft of ship (2.43m) to equal actual depth of water column)</li></ul>	<ul style="list-style-type: none"><li>• Water depth, feet</li><li>• Water depth, meters</li><li>• Water depth, fathoms</li></ul>
<p>CAT 3 (green) - general seabird-like data (horizontal)</p> <ul style="list-style-type: none"><li>• SeaBird values are collected 4 times per second.</li><li>• Note: the sample rate collected when the LOPC data is collected is the one that appears in file.</li></ul>	<ul style="list-style-type: none"><li>• scan count</li><li>• pressure</li><li>• depth</li><li>• temp</li><li>• cond</li><li>• Spec Cond</li><li>• DO43, mg.L</li><li>• DO43 % sat</li><li>• Optode T</li><li>• Bat</li></ul>
<p>CAT4 (purple) – Chlorophyll Data from BBE Fluoroprobe</p> <ul style="list-style-type: none"><li>• Fluoroprobe values are collected every 2-4 second.</li><li>• Each sample repeats in file until new value is collected.</li><li>• Note: The sum of the different color groups should equal the total chlorophyll.</li></ul>	<ul style="list-style-type: none"><li>• Date</li><li>• Time</li><li>• depth</li><li>• temp</li><li>• green</li><li>• bluegreen</li><li>• diatom</li><li>• crypto</li><li>• YS</li><li>• Total</li><li>• Transmission</li></ul>
<p>CAT5 (salmon) – Phytotflash device</p> <ul style="list-style-type: none"><li>• Phytotflash values are collected about every 10 secs.</li><li>• Each sample repeats in file until new value is collected.</li></ul>	<ul style="list-style-type: none"><li>• date</li><li>• time</li><li>• Fo</li><li>• Fm</li><li>• Fv</li><li>• Yield</li></ul>

<p>CAT 6 (grey/tan) – Laser optical plankton counter (LOPC)</p> <ul style="list-style-type: none"> <li>LOPC values are averaged over 0.5 sec intervals.</li> </ul>	<ul style="list-style-type: none"> <li>snapshot indicator</li> <li>threshold</li> <li>sample #</li> <li>flow counts</li> <li>delta time</li> <li>avg flo time counts</li> <li>flow speed</li> <li>laser monitor</li> <li>electronic counts</li> <li>count period</li> </ul>
<p>CAT 7 (red) – plankton density</p> <ul style="list-style-type: none"> <li>Biomass Coefficient for correction of oversized particles: <ul style="list-style-type: none"> <li>ECD</li> <li>2.585 Ovolum ug</li> <li>Lovol</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Go_flwmt r_speed</li> <li>SmplVol (Ship_spd)</li> <li>SmplVol(TOF_spd)</li> <li>SmplVol(Go_spd)</li> <li>Zdens</li> <li>Z(ug)</li> <li>OvrSzd</li> </ul> <p>Z(ug)&lt;5</p>
<p>CAT 8 (orange) – actual size of particulates</p> <ul style="list-style-type: none"> <li>121 BIN columns ranging from: BIN7 - BIN128)</li> </ul>	<ul style="list-style-type: none"> <li>BIN7: 105um</li> <li>.....</li> <li>BIN128: 1920um</li> </ul>

## Data Subsets, data products

TBD.... In general, consumers are interested in the data w.r.t. time and interesting events. For example, open water yields flat lines (very few deltas), where areas with upwelling and/or river mouths show more interesting data (x axis should be time.)

Visual representations will be similar to those described in: [Yurista\\_et\\_al\\_2012.pdf](#). Sample visualizations include:

