

Data Processing: Tara Oceans Polar Circle C-OPS Radiometer

Name: Biospherical Instruments Inc. Compact-Optical Profiling System (C-OPS)

Model: C-OPS System 18

Ed0 SN 181

EdZ SN 182

LuZ SN 183

Purchased by Laboratoire d’Oceanographie de Villefranche

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Initial processing includes removal of points both at the beginning and deepest point of the cast from all three sensors (Fig. 1). Data above a certain tilt maximum for each instrument are removed (values vary). Note that Ed0 is a reference sensor on the ship. The data are binned in time (values vary) to smooth the data (Fig. 2).

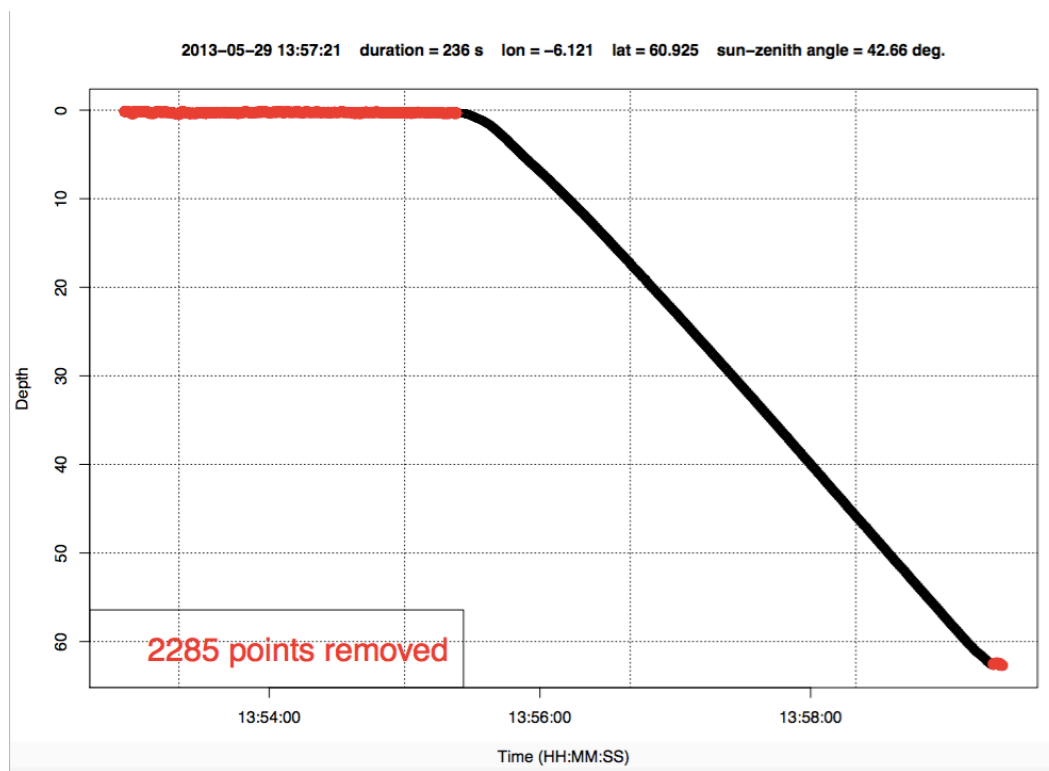


Figure 1. Example depth profile to determine points at the surface and bottom of the cast to be removed.

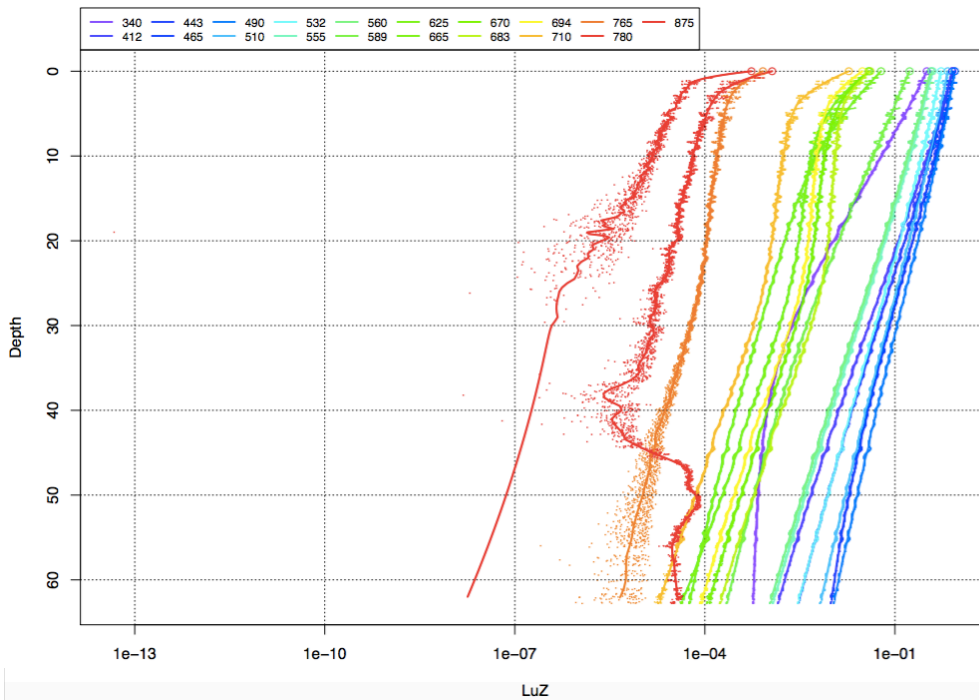
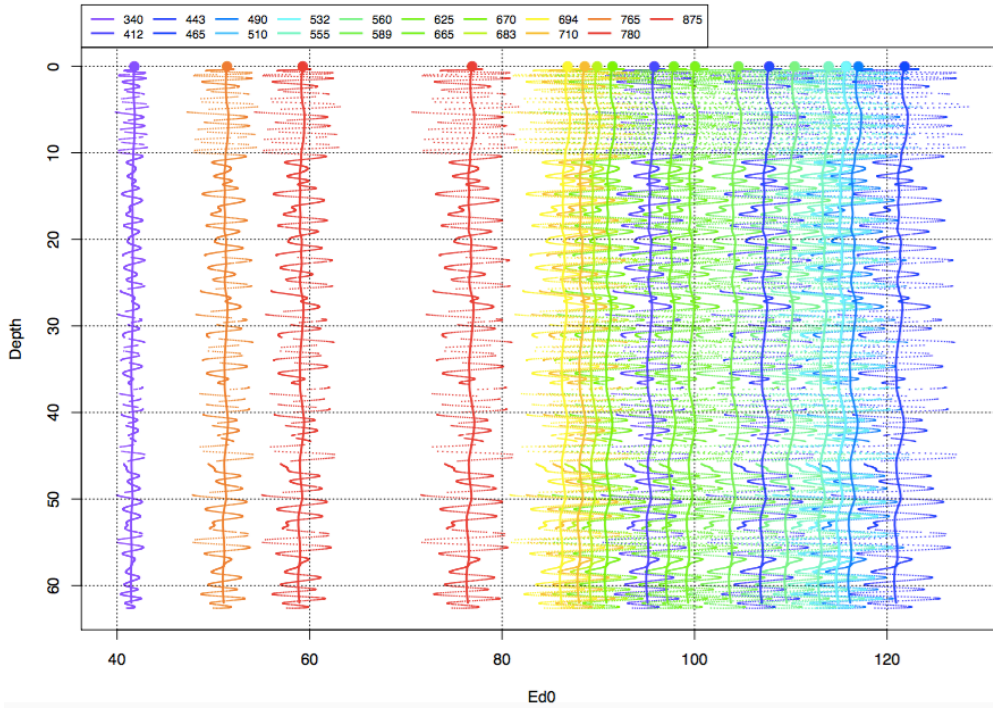


Figure 2. Example results of smoothing the Ed0 reference sensor data (top panel) and the LuZ profiling data (bottom panel).

For each of the 19 instrument wavelengths (340, 412, 443, 485, 490, 510, 532, 555, 560, 589, 625, 665, 670, 683, 694, 710, 765, 780, 875 nm) Reflectance (R), Remote-sensing reflectance (Rrs), and normalized water-leaving radiance (Lwn) are calculated; these values are reported in the SeaBASS files.