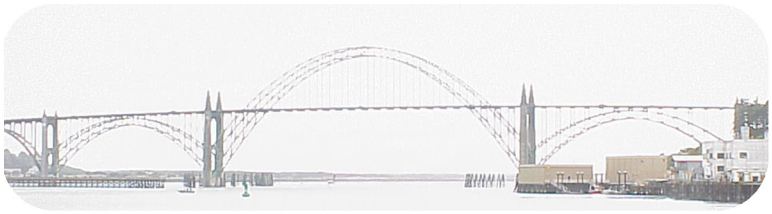


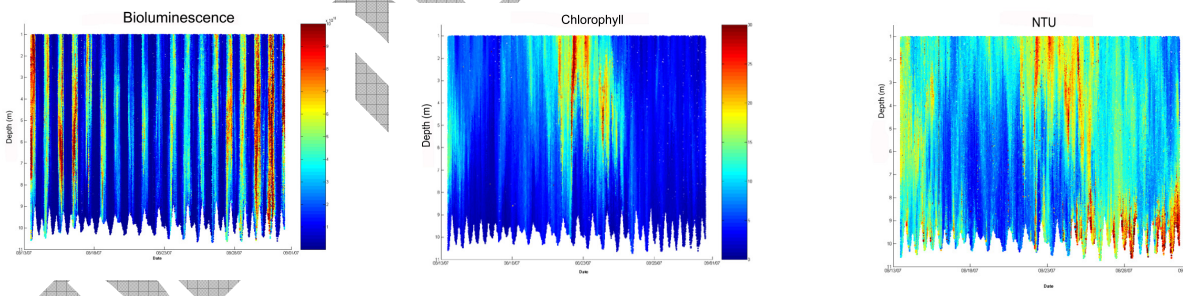
U-BAT

Underwater Bioluminescence Assessment Tool

WET Labs' U-BAT is designed to measure mechanically stimulated bioluminescence in both coastal and oceanic systems from 0–600 m depth.

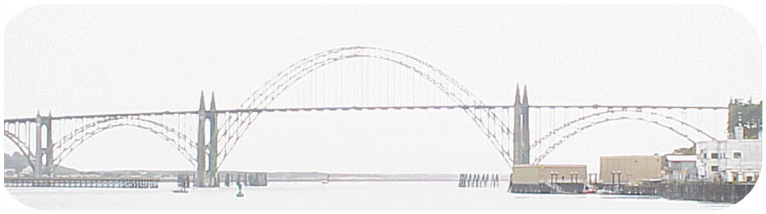
Features

- Provides calibrated, high-resolution (60 Hz signal & 1 Hz average) measurement of mechanically stimulated bioluminescence for assessing water column ecosystem dynamics.
- Field calibration light source is used to track sensor drift.
- Modular design for easy cleaning.



Bioluminescence (photons mL^{-1}), chlorophyll-a (µg L^{-1}), and turbidity (NTU) vertical time series collected with an autonomous profile mooring between August 13–31, 2007, at the California Polytechnic State University Center for Coastal Marine Sciences located in Avila Beach, CA.

Bioluminescence, in conjunction with other IOPs, can provide a more complete picture of spatial and temporal variability of biogeochemical complexity of coastal and ocean ecosystems, especially the response of the planktonic community, to environmental fluctuations.



WET Labs

U-BAT

Preliminary Specifications

Mechanical

General Dimensions	34.93 cm x 10.80 cm x 16.83 cm
Intake	3.81 cm ID; 5.08 cm OD
Weight (in air)	5.10 kg
Weight (in water)	1.64 kg
Pressure housing	Acetal copolymer
Detection chamber	Molded acrylic and titanium dioxide (> 95% reflectance between 430–700 nm) *- light baffled air-bleed ports located at top of the detection chamber exhaust any air*
Flow rate	320 mL s^{-1}
Chamber Volume	0.440 L

Environmental

Temperature range	0–30 deg C
Depth rating	600 m

Electrical

Digital output signal	RS 232
Digital output resolution	16 bit
Baud rate	19200
Input voltage	9-18 VDC
Current, typical	600 mA
Sample rate	60 Hz sampling rate with 1 Hz data output rate
Connector	MCBH-6-MP
Internal data logging	No

Optical

Detectors	Hamamatsu Photomultiplier Tube
Dynamic Range	$2.5e^{6}$ – $2.5e^{13}$ Photons s^{-1}

Data

Units	Photons mL^{-1}

Specifications are subject to change without notice.

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