

C-OPS is a next-generation optical profiling system for determining [apparent optical properties](#) in aquatic systems. It consists of two 7 cm diameter radiometers: one measures in-water upwelling [radiance](#), and the other either downward [irradiance](#) or upward [irradiance](#), pressure/depth, and dual axes tilts. Both radiometers are equipped with up to 19 optical-filter [microradiometers](#) (selected from 29 different [wavelengths](#)) and are mounted on a unique free-fall, kite-like backplane. To avoid influences from the shadow of the boat or dock, the frame can be optimized for either slow descent rates for work in very shallow (e.g. 3 m) and coastal waters, or faster descent rates for observations in the open ocean. C-OPS is so lightweight it can be hand deployed by almost anyone, and the system can be operated from either small or large vessels. The new Compact-Propulsion Option for Profiling Systems (**C-PrOPS**) thruster accessory is available to add ROV-like capabilities to the profiling system. An above-water reference irradiance instrument is also available to measure global irradiance.

[Download](#) : C-OPS from the NASA Technical Memorandum "Advances in Measuring the Apparent Optical Properties (AOPs) of Optically Complex Waters," NASA Tech. Memo. 2010-215856.