

OCEAN OPTICS XXIV

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<https://oceanopticsconference.org>

Thursday, October 11

Poster Session 4

10:30–12:00

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WISPSTATION: A NEW AUTONOMOUS ABOVE WATER RADIOMETER SYSTEM

A new autonomous above water radiometer system (WISPstation) was developed based on the experience with the handheld WISP-3 system. The instrument records reflectance with an extended wavelength range of 350 to 1100 nm in two viewing directions, which enables continuous and autonomous high-quality measurements for autonomous water quality monitoring and satellite validation. All channels are measured with a single spectrometer. This design makes resulting reflectances less sensitive to radiometric and spectral calibration errors and drifts. In various Copernicus projects (Tapas, EOMORES, CoastObs and Monocle) the WISPstation is being tested in highly diverse water types and environmental conditions, ranging from case-1 in Mediterranean coastal waters to turbid waters with cyanobacteria proliferation in lakes and lagoons. In view of its initial scientific application, the system is designed to reliably produce high frequency observations to quantify variability in physical and biological water system parameters. The WISPstation results are stored in the online database WISPcloud allowing users to extract data for analysis. A webinterface is being set up to visualise the measurements. We present spectral results, time series analysis, drift analysis, and satellite match-up validation results for various locations.

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