**RADIOMETRIC MEASUREMENTS BY BIO-ARGO FLOATS AS A RESOURCE FOR BIO-OPTICAL PRODUCT VALIDATION**

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Thanks to a new generation of Bio-Argo floats equipped with channels for PAR (Photosynthetically Available Irradiance) and downward irradiance measurements at selected wavelengths (i.e., 380, 412 and 490 nm), the number of radiometric measurements has been dramatically increasing for very diverse open ocean systems. More than 6000 radiometric profiles have so far been acquired around solar noon in the upper 250 m of the ocean. These radiometric profiles are acquired by Bio-Argo floats simultaneously to other key biogeochemical and bio-optical variables (chlorophyll *a*, CDOM, backscattering coefficient). Hence, they represent a fruitful data source for defining the bio-optical status of the oceans and validating bio-optical products.

As these radiometric data are out of operator’s control and collected regardless of meteorological conditions, specific data processing procedures must be developed. Here, we present a data quality-control procedure that accounts for identification of dark signals, clouds, spikes and wave-focusing occurrences. Diffuse attenuation coefficients (Kd) are then derived from these quality-controlled profiles. An analysis of the spectral Kd variability in the surface ocean at the global and regional scale (e.g., Mediterranean Sea, North Atlantic sub-polar and sub-tropical gyres) shows the potential of Bio-Argo floats for identifying oceanic regions with optical properties departing from global bio-optical relationships. Finally, the good comparison observed between satellite-derived Kd values and their Bio-Argo counterparts highlights how a fleet of floats equipped with radiometric sensors can also be a useful resource for satellite product validation.

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