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Innovative under water light field products from MERIS and OLCI: Inputs for bio-geochemistry

Didier Ramon (1), Robert Frouin (2), Dominique Jolivet (1), François Steinmetz (1), Mathieu Compiègne (1), and Philippe Goryl (3)

(1) HYGEOS, 165 av. de Bretagne, 59000 Lille, France, (2) Scripps Institution of Oceanography, La Jolla, USA, (3) ESA-ESRIN, Italy

Within the ESA SEOM (Scientific Exploitation of Operational Missions) program, and in particular the PPP (PAR for Primary Production, http://www.esa-par.net) project, we have completed the classical PAR product (the daily amount of light quanta between 400 and 700 nm reaching the surface per unit area, under clear and cloudy pixels) and computed a first series of other radiative quantities for which the community manifested interest: the scalar PAR below the surface and its uncertainty, the spectral shape of PAR, and the average cosine for total light below the surface. We present the algorithms and some example maps from MERIS and OLCI imagery.