Wednesday, October 10
Poster Session 3
16:00–18:00

Poster 27

THE OCEAN COLOUR CCI IN-SITU DATA SET: VALIDATION OF OCEAN-COLOUR REMOTE SENSING PRODUCTS IN THE SENTINEL ERA

Chlorophyll concentration is the principal photosynthetic pigment in phytoplankton, and a key variable in the global carbon cycle, recognised as an Essential Climate Variable (ECV) by the Global Climate Observation System (GCOS). Ocean colour remote sensing enables regular global observations of chlorophyll-a but calculation of trends requires a long and consistent time-series derived from multiple missions. The Ocean Colour Climate Change Initiative (OC-CCI) project focuses on water-leaving radiance in the visible domain which is merged from ESA's Envisat MERIS, NASA's SeaWiFS and MODIS-Aqua and NOAA's Suomi VIIRS sensors, and then used to derive chlorophyll-a, inherent optical properties and diffuse attenuation coefficient. A major next step is to include data from the Sentinel-3 OLCI sensors. The need for high-quality in situ data to develop and validate ocean-colour satellite products is well acknowledged by the scientific community and space agencies. This work presents the latest developments in the OC-CCI in-situ database including validation and uncertainty characterization of the OC-CCI products. The database comprises in-situ measurements of remote-sensing reflectance, chlorophyll-a concentration, inherent optical properties, diffuse attenuation coefficient and total suspended matter, from 1997, at the global scale, gathered from several sources (see Valente et al, 2016, ESSD). Inclusion of in situ data requires conversion of "raw" data into a consistent format, quality control (including identification/removal of duplicates), reduction of data in time/space, metadata propagation and merging of all data into one unique table. The database was designed to be easily accessed and used by the OC community, and is available on https://doi.pangaea.de/10.1594/PANGAEA.854832.

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