Supplementary Material #1 – Table of abbreviations and acronyms

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| **Abbreviation/**  **acronym** | **Description** |
| ACOLITE | Multi-mission atmospheric correction software  <https://odnature.naturalsciences.be/remsem/acolite-forum/> |
| AERONET-OC | Network of autonomous multispectral radiometers for ocean colour  <https://aeronet.gsfc.nasa.gov/new_web/ocean_color.html> |
| AOT | Aerosol Optical Thickness |
| BEFR | Etang de BErre, FRance, a WATERHYPERNET site |
| BRDF | Bidirectional Reflectance Distribution Function |
| Chl-a | Chlorophyll *a* concentration |
| CDOM | Coloured Dissolved Organic Matter |
| CSV | Comma Separated variables, a file format |
| CIMEL | Cimel Electronique, manufacturer of the CE318 SeaPRISM  <https://www.cimel.fr/solutions/ce318-t/#specifications> |
| COTS | Commercial Off The Shelf |
| DESIS | An imaging spectrometer on the International Space Station  <https://www.dlr.de/en/research-and-transfer/projects-and-missions/horizons/desis> |
| Doves | Constellation of small satellites operated by Planet Labs |
| DSF | Dark Spectrum Fitting, a algorithm variant in the ACOLITE software  <https://odnature.naturalsciences.be/remsem/software-and-data/acolite> |
| DSF\_GC | A combination of the Dark Spectrum Fitting algorithm variant with the Glint Correction option in the ACOLITE software |
| EMIT | An imaging spectrometer on the International Space Station  <https://earth.jpl.nasa.gov/emit/> |
| ENMAP | A spaceborne imaging spectrometer mission  <https://www.enmap.org/> |
| FWHM | Full Width Half Maximum |
| GC | Glint Correction, an algorithm option in the ACOLITE software  (Vanhellemont 2020) |
| GAIT | Lake Garda, ITaly, a WATERHYPERNET site |
| HYPERNETS | Network of autonomous multispectral radiometers for water and land surface reflectance  <https://hypernets.eu> |
| HYPSTAR® | HYperspectral Pointable System for Terrestrial and Aquatic Radiometry |
| L1C | Level 1C, a HYPERNETS data format with radiance and irradiance measurements |
| L2 | Level 2, a HYPERNETS data format with reflectance measurements |
| LED | Light Emitting Diode |
| Landsat 8/9 | Two multispectral satellite missions  https://www.usgs.gov/landsat-missions/landsat-8 |
| LI | “Lubac Index” for *Phaeocystis globosa* defined in (Lubac et al. 2008) |
| LPAR | LA Plata, ARgentina, a WATERHYPERNET site |
| M1999 | Abovewater radiometry measurement method described by (Mobley 1999) |
| M1BE | MOW1, Zeebrugge, BElgium, a WATERHYPERNET site |
| MAFR | MAgest, Gironde, FRance, a WATERHYPERNET site |
| GOCI-1 and GOCI-2 | Multispectral geostationary ocean colour satellite missions  (Ryu et al. 2012) |
| MALH | Modified Astoreca Line Height, a *Phaeocystis globosa* index defined in (Lavigne et al. 2022) |
| MAPD | Mean Absolute Percentage Difference |
| MD | Mean Difference (often called “bias”) |
| MOBY | Marine Optical BuoY  (Brown et al. 2007) |
| MODIS | A multispectral ocean colour satellite mission  <https://modis.gsfc.nasa.gov/> |
| MSG/SEVIRI | METEOSAT Second Generation/Spinning Enhanced Visible and Infrared Imager  <https://www.eumetsat.int/meteosat-second-gen-instruments> |
| MSI | MultiSpectral Instrument |
| MTG/FCI | METEOSAT Third Generation/Flexible Combined Imager  https://www.eumetsat.int/meteosat-third-generation-instruments |
| NIR | Near Infrared |
| NRT | Near Real-Time, e.g. <24 hours between data acquisition and data availability |
| OLCI | A multispectral ocean colour sensor on Sentinel-3 |
| P95 | 95 percentile |
| PACE/OCI | The hyperspectral Ocaen Color Instrument on the Plankton, Aerosol, Cloud ocean Ecosystem spaceborne mission  <https://pace.oceansciences.org/oci.htm> |
| PANTHYR | PAN and Tilt Hyperspectral Radiometer system  (Vansteenwegen et al, 2019) |
| PI | Principal Investigator(s) |
| Pléiades | A multispectral satellite mission  <https://pleiades.cnes.fr/en/PLEIADES/index.htm> |
| PRISMA | A hyperspectral satellite mission  <https://www.asi.it/en/earth-science/prisma/> |
| QC | Quality Control |
| RGB | Red-Green-Blue |
| ROI | Region Of Interest |
| S2, S2A, S2B | Sentinel-2, a multispectral satellite mission with 2 units, -A and -B  <https://sentinel.esa.int/web/sentinel/missions/sentinel-2> |
| S3, S3A, S3B | Sentinel-3, a multispectral satellite mission with 2 units, -A and -B  <https://sentinel.esa.int/web/sentinel/missions/sentinel-3> |
| SeaBASS | SeaWiFS Bio-optical Archive and Storage System (SeaBASS), a in situ measurement data archive  <https://seabass.gsfc.nasa.gov/> |
| SeaPRISM | A variant of the CE318 photometer adapted for water reflectance measurements |
| Sen2Cor | An atmospheric correction algorithm for Sentinel-2 data  (Main-Knorn et al. 2017) |
| SI | International System of Units |
| SimSpec correction | NIR Similarity Spectrum correction  (Ruddick et al. 2005; 2006) |
| SuperDoves | Constellation of small satellites operated by Planet Labs, |
| TBBE | Thornton Bank, BElgium, a WATERHYPERNET site |
| TOA | Top Of Atmosphere |
| TRIOS/RAMSES | A hyperspectral in situ radiometer  <https://www.trios.de/en/ramses.html> |
| UTC | Coordinated Universal Time |
| VEIT | Acqua Alta Oceanographic Tower, near VEnice, ITaly, a WATERHYPERNET site |
| VIIRS | A multispectral ocean colour satellite mission  <https://ncc.nesdis.noaa.gov/VIIRS/> |
| VNIR | Visible and Near Infrared, e.g. 400-900 nm |
| VSWIR | Visible, Near Infrared and Short Wave Infrared, e.g. 400-3000 nm |
| WATERHYPERNET | Network of autonomous hyperspectral radiometers for water colour |
| WFR | Water Full Resolution, an OLCI product |
| ZENODO | A public repository for measurement data  [www.zenodo.org](http://www.zenodo.org) |

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