Input discussion

Discussion

- For the upcoming potential exploitation of hyperspectral satellite data towards a better understanding of phytoplankton community:

We need a consistent core data set which can be collected **globally** in a standardized way

1) At first (short term) compilation of a global data set with PFT information on HPLC and beyond, hyperspectral IOP & AOP

2) Mid term: Establishement of key sites (mooring, float, ..) and ship cruises with

- core data set for suite of platforms
- how to develop consensus on standardized way
- How to host (data repositories) validation and algorithm development data sets

Short-term/mid-term community activities

- Novel concept IOCCG working group but in a more open way: running blog, open white paper

Discussion forums (in person) for moving towards consolidation

- EU Forsight WS 2019
- February 2020 ASLO/AGU
- Ocean Optics Oct 2020

- IOCCG Phytoplankton taxonomy protocol
- Hyperspectral task force

Different satellite sensors for ocean colour application and potentially for identifying phytoplankton diversity

Instrument	SNR ~500nm	Spectral coverage	Spectral res. at VIS (nm)	Pixel size at VIS (m)	Revisit time (days)	Swath (km)	Lifetime	Coverage (Geo)
MSI/S-2	154	4 Bands in VIS	27-98	10	< 10*	290	2015-	56°S-83°N
OLCI/S-3	1541	10 bands in VIS	7.5-15	300	< 2.8*	1270	2016-	81.6°S-81.6°N
TROPOMI /S5P	1000	270-500, 675-775	< 1	350	1	2600	2017-	76°S-76°N
DESIS	400	420-1000	2.55	30	3 to 5	30	2018-	52°S-55°N
EnMAP	495	420-2450	6.5	30	4 to 5	30	2020-	74°S-74°N
PACE	1000	350-890	5	1000	2	240	2022-	~77°S-77°N
UVN/S-4	1400	305-500, 750-775	0.5	350	0.04	GEO	2021-	~30°-65°N, 39°W-51°E
UVN/S-5	1500	270-500, 685-710, 750-773	0.5	350 0	1	2600	2021-	~77°S-77°N