Table A-1: Metadata, IOPs and AOPs given at wavelength λ, and biogeochemical *in situ* measurements available for the CoastColour sites. The two notations Chl-a and TChl-a refer to Chlorophyll-a concentration measured by High-Performance Liquid Chromatography (HPLC) and by fluorometry respectively.

Metadata	Notation	Units
Date, Time		-
Station, Cruise		-
File name, File_id (station)		-
Latitude, longitude		degrees
Wind speed		$m\,s^{-1}$
Cloud cover		-
Measurement depth		m
Secchi depth		m
Water depth		m
Photic depth	$Z_{p\%}$	m
Mixed layer depth	MLD	m
Temperature		°C
Salinity		psu
Provider		-

Concentrations	Notation	Units
Chlorophyll-a (fluoromery)	Chl-a	$mg\,m^{-3}$
Total chlorophyll-a (HPLC)	TChl-a	$mg\,m^{-3}$
TSM	TSM	$g\,m^{-3}$
Non algal particulate matter	NAP	$g\,m^{-3}$
Particulate inorganic matter	PIM	$g\,m^{-3}$
Particulate organic matter	POM	$g\,m^{-3}$
CDOM fluorescence	CDOMf	Qse

Flags	Notation	Units
General flag	Flag	-
Location flag	Location_flag	-
Time flag	Time_flag	-
Chlorophyll-a method	Chla_flag	-
CoastColour Product	CCP_flag	-

IOPs	Notation	Units
Total absorption coefficient	$a\,(\lambda)$	m^{-1}
Particles absorption coefficient	$a_p\,(\lambda)$	m^{-1}
NAP absorption coefficient	$a_{NAP}\,(\lambda)$	m^{-1}
Absorption by phytoplankton	$a_{ph}\,(\lambda)$	m^{-1}
Absorption by detritus	$a_d\,(\lambda)$	m^{-1}
CDOM absorption coefficient	$a_g\,(\lambda)$	m^{-1}
Total (back)scattering coefficient	$b_{(b)}\,(\lambda)$	m^{-1}
NAP scattering coefficient	$b_{NAP}\,(\lambda)$	m^{-1}
NAP backscattering coefficient	$b_{bNAP}\,(\lambda)$	m^{-1}
Backscattering ratio	$b_{bp}(\lambda)/b_p\,(\lambda)$	-
Total beam attenuation coefficient	$c\,(\lambda)$	m^{-1}
Particles beam attenuation coefficient	$c_p\,(\lambda)$	m^{-1}
Turbidity		FNU, FTU

AOPs	Notation	Units
Remote-sensing reflectance	$Rrs\,(\lambda)$	sr^{-1}
Water-leaving reflectance	$RLw\,(\lambda)$	-
Water-leaving radiance (or above-water upwelling radiance)	$Lw\,(\lambda)$	$mW\,cm^{-2}\,\mu m^{-1}\,sr^{-1}$
Above-water downwelling irradiance (or incident irradiance)	$Es\,(\lambda)$	$mW\,cm^{-2}\,\mu m^{-1}$
Downwelling irradiance	$Ed\,(\lambda)$	$mW\,cm^{-2}\,\mu m^{-1}$
Diffuse attenuation of Ed	$Kd\,(\lambda)$	m^{-1}
Diffuse attenuation of PAR	K_{par}	m^{-1}