APPENDIX 2. LIST OF SYMBOLS

Symbol	Description	Unit
$A(\lambda)$	Absorbance	dimensionless
$a(\lambda)$	Total absorption coefficient	m^{-1}
$a_{CDOM}(\lambda)$	Absorption coefficient of CDOM	m^{-1}
$a_{np}(\lambda)$	Absorption coefficient of non-CHL particles	m^{-1}
a^*_{np}	Specific absorption coefficient of non-CHL particles	m^{-1}
$a_{ph}(\lambda)$	Absorption coefficient of chlorophyllous particles	m^{-1}
$a^*_{ph}(\lambda)$	Specific absorption coefficient of chlorophyllous particles	m^{-1}
$a_w(\lambda)$	Absorption coefficient of water	m^{-1}
$bb(\lambda)$	Total backscatter coefficient	m^{-1}
$bb_{ph}(\lambda)$	Backscatter coefficient of chlorophyll	m^{-1}
$bb^*_{ph}(\lambda)$	Specific backscatter coefficient of chlorophyll	m^{-1}
$bb_{TSS}(\lambda)$	Backscatter coefficient of suspended sediments	m^{-1}
bb^*_{TSS}	Specific backscatter coefficient of suspended sediments	m^{-1}
$bb_w(\lambda)$	Backscatter coefficient of water	m^{-1}
D	Particle diameter	μm
$Dist$	Distance between SeaWiFS and modelled water-leaving radiance	$mW/cm^2/\mu m/sr$
$F(\lambda)$	Mean solar irradiance	$mW/cm^2/\mu m/sr$
H	Water depth	m
k	Conversion factor relating inherent water optical properties to water reflectance	dimensionless
k_{TSS}	Coefficient relating particle diameter to number of particles	dimensionless
$L_a(\lambda)$	Aerosol radiance	$mW/cm^2/\mu m/sr$
$L^{cl}_a(\lambda)$	Aerosol radiance over clear waters	$mW/cm^2/\mu m/sr$
MV	Model variables	dimensionless
$nLw(\lambda)$	Normalized water-leaving radiance	$mW/cm^2/\mu m/sr$
NN	Number of particles	dimensionless
OD	Optical density	dimensionless
$OD664_b$	Optical density of 90 % acetone extract before acidification	dimensionless
$OD665_a$	Optical density of 90 % acetone extract after acidification	dimensionless
r	Cuvette pathlength	m
$Rrs(\lambda)$	Remote sensing reflectance	dimensionless
$r_{rs}(\lambda)$	Subsurface remote sensing reflectance	dimensionless
S_{CDOM}	Exponential slope of CDOM	nm^{-1}
S_{np}	Exponential slope of non-CHL particles	nm^{-1}
SS_{CHL}	TSS equivalent of chlorophyll	g/m^3
$t(\lambda,\theta)$	Atmospheric diffuse transmittance in the solar direction	dimensionless
$T_v(\lambda)$	Viewing diffuse transmittance from sea to sensor	dimensionless
$T^{cl}_v(\lambda)$	Viewing diffuse transmittance from sea to sensor over clear waters	dimensionless
$u(\lambda)$	Inherent optical properties expression	dimensionless
V_e	Volume of an acetone extract	L
V_s	Volume of a chlorophyll sample	L
ΔV	Difference between the volume of water with and without sediment	L
ΔW	Difference between the weight of water with and without sediment	g
β	Slope of PSD distribution	dimensionless

γ	Spectral slope of backscatter of TSS	dimensionless
$\varepsilon_{7,8}$	Epsilon, or 765:865 nm ratio of aerosol reflectance	dimensionless
$\varepsilon^{cl}_{7,8}$	Epsilon of clear waters	dimensionless
θ	Solar zenith angle	degree
θ_w	Subsurface solar zenith angle	degree
λ	Wavelength	nm
ρ	Density of particles	g/m^3
$\rho_a(\lambda)$	Aerosol reflectance	dimensionless
$\rho_b(\lambda)$	Bottom reflectance	dimensionless
$\rho^{cl}_a(\lambda)$	Aerosol reflectance over clear waters	dimensionless
$\rho^{n}_a(\lambda)$	New aerosol reflectance	dimensionless
$\rho_g(\lambda)$	Sun glint reflectance	dimensionless
$\rho_r(\lambda)$	Rayleigh scattering reflectance	dimensionless
$\rho_{ra}(\lambda)$	Reflectance due to multiple interactions between molecules and aerosols	dimensionless
$\rho_t(\lambda)$	Top of the atmosphere reflectance	dimensionless
$\rho_w(\lambda)$	Water-leaving reflectance	dimensionless
$\rho_{wc}(\lambda)$	Whitecap reflectance	dimensionless
$\tau^{cl}(\lambda)$	Atmosphere optical thickness over clear waters	dimensionless
$\tau^{n}(\lambda)$	New atmosphere optical thickness	dimensionless
υ	Spectral slope of backscatter of chlorophyll	dimensionless