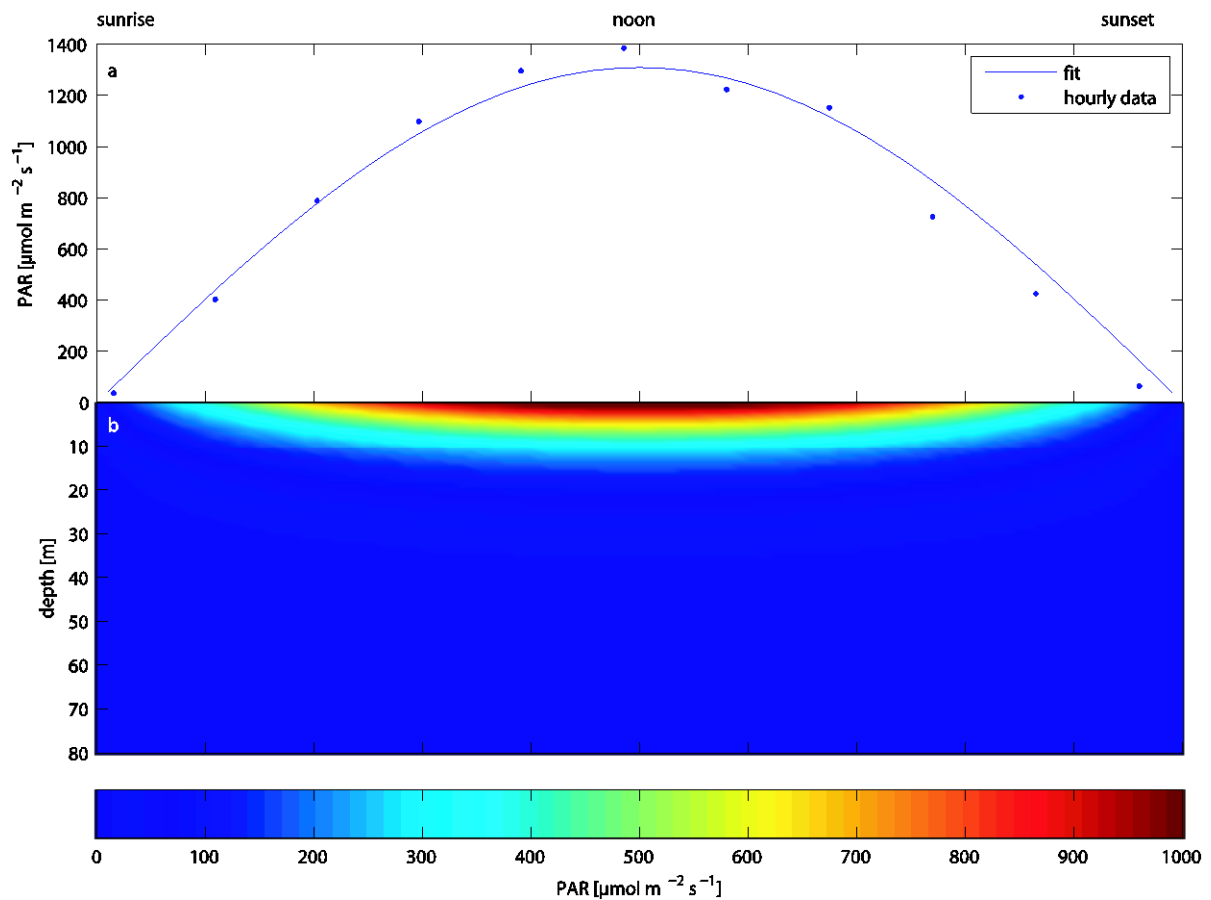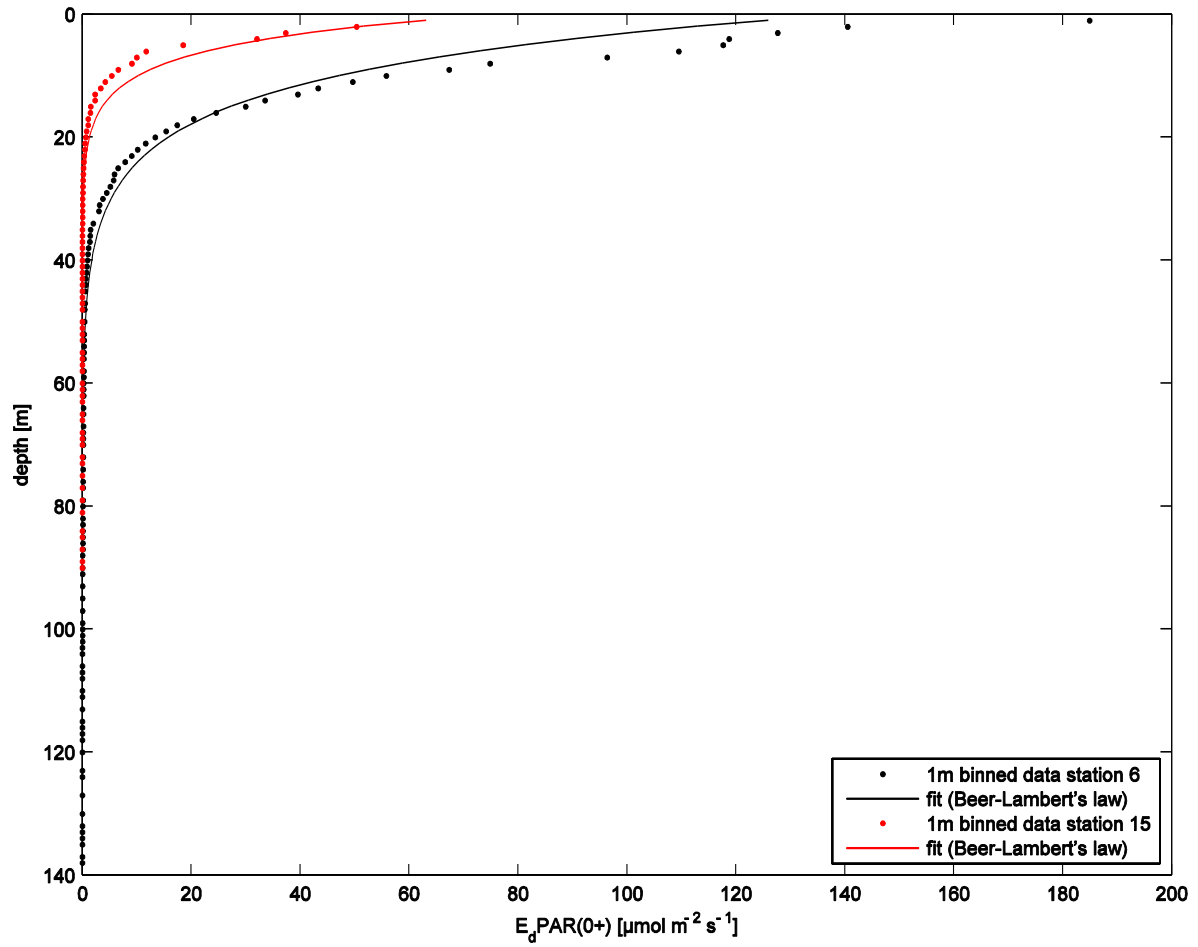# Supplement

Figure S1: (a) Data points represent hourly radiation measurements (W m^{-2}) from the ship (DOY 193.1 - 193.6 during SPACES) converted into photosynthetic active radiation (PAR, μmol m^{-2} s^{-1}), blue line is the fitted data using a sine function. (b) Calculated PAR over the course of a day depending on depth by applying Beer-Lambert's law.

Figure S2: Example of two $E_dPAR(0+)$ depth profile measurements during ASTRA-OMZ. Data points are 1m binned data of station 6 (black) and station 15 (red). The line is calculated from $E_dPAR(0+)$ profile by applying Beer-Lambert's law using a station specific attenuation coefficient K_d obtained from the $E_dPAR(0+)$ depth profile measurement at the corresponding station during ASTRA-OMZ.

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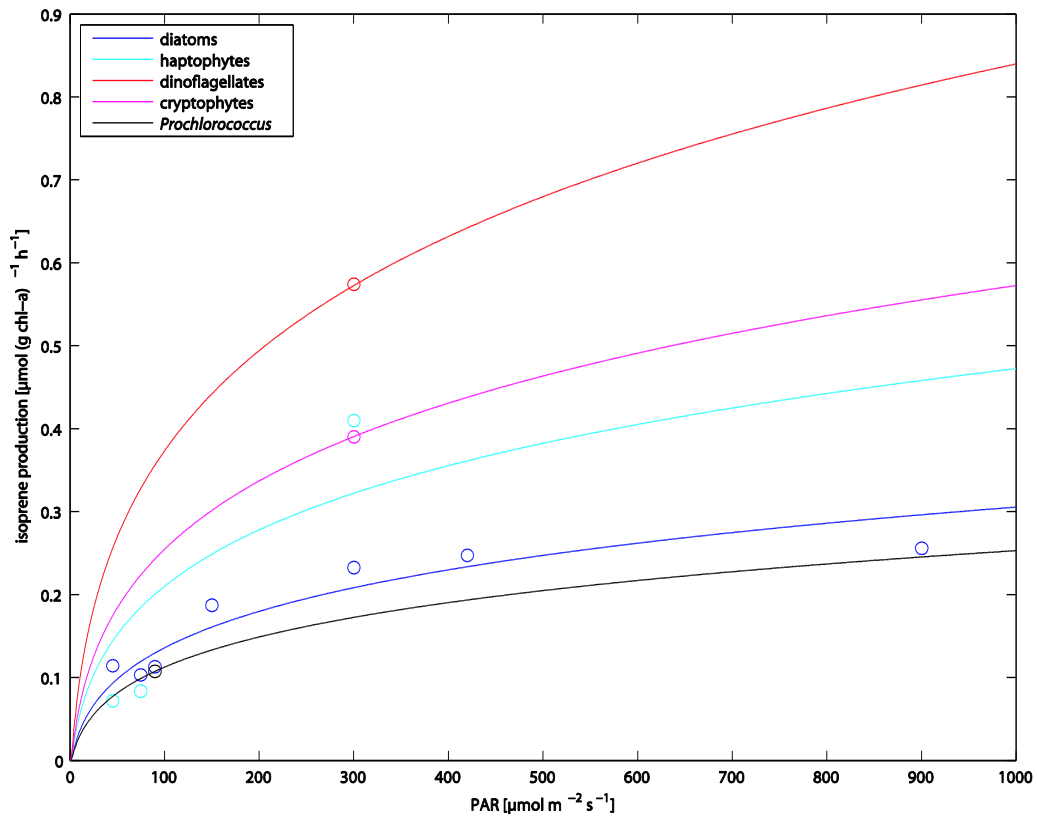
15   **Figure S3: Single literature laboratory chl-a normalized isoprene production rates P_{chloro} (µmol isoprene (g chl-a)$^{-1}$ h^{-1}) (Table 2) as a log squared function of light intensity I (µmol m^{-2} s^{-1}).**
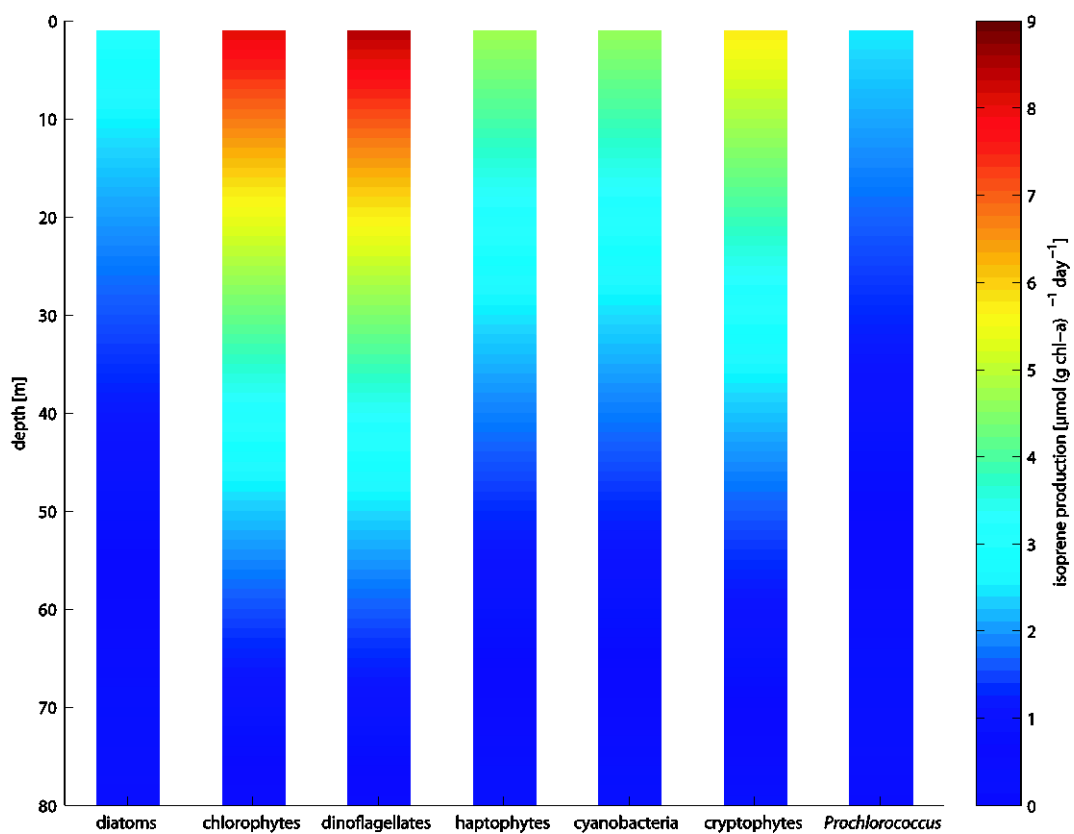
Figure S4: Example of calculated P_{chloro} **values (µmol isoprene (g chl-a)$^{-1}$ day^{-1}) for each PFT at station 9 during SPACES depending on the depth in the water column.**
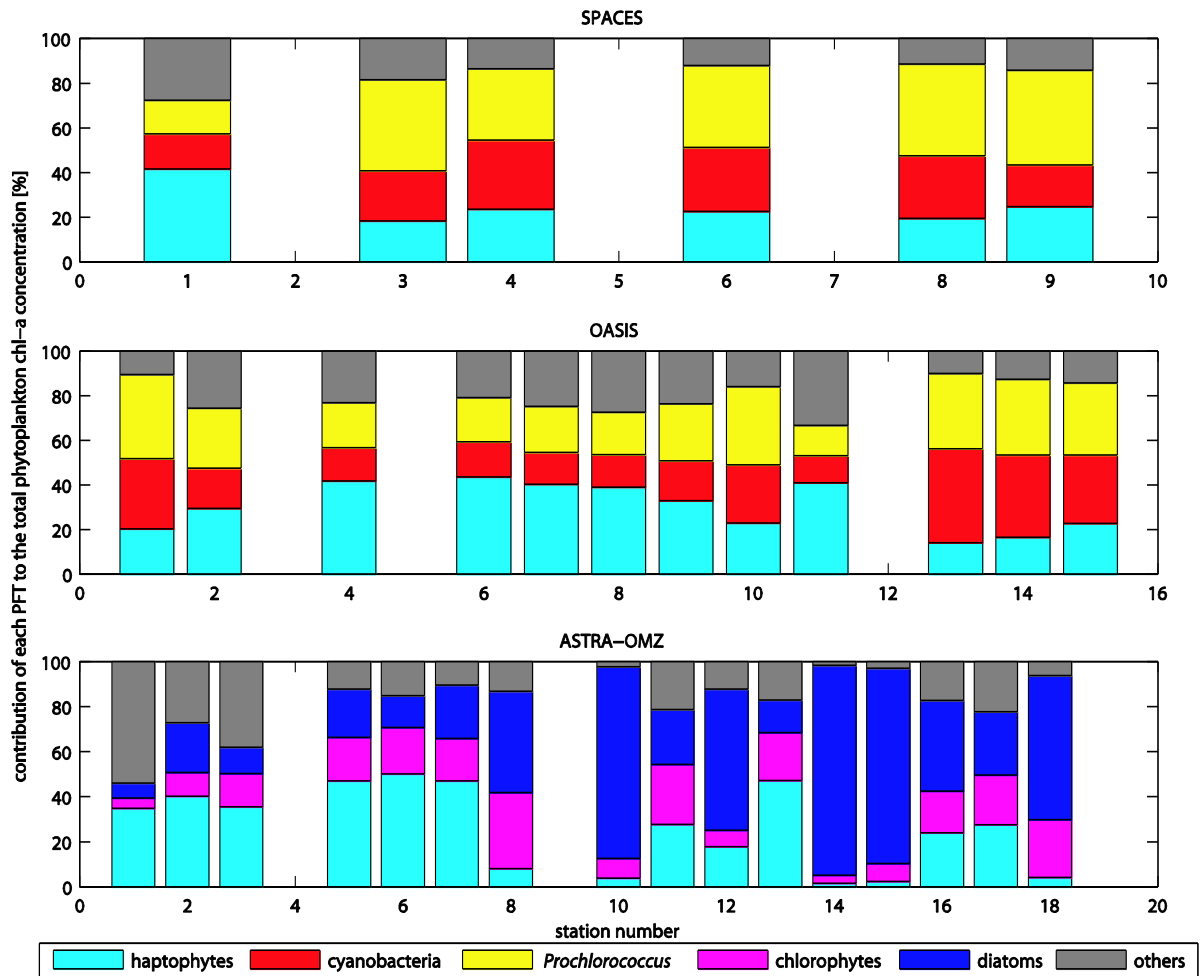
Figure S5: Contribution of each of the three most abundant PFTs to the total phytoplankton chl-a concentration at each station during SPACES (upper panel), OASIS (middle panel), and ASTRA-OMZ (bottom panel).

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