Seasonal development of iron limitation in the sub-Antarctic zone

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Supplementary Information

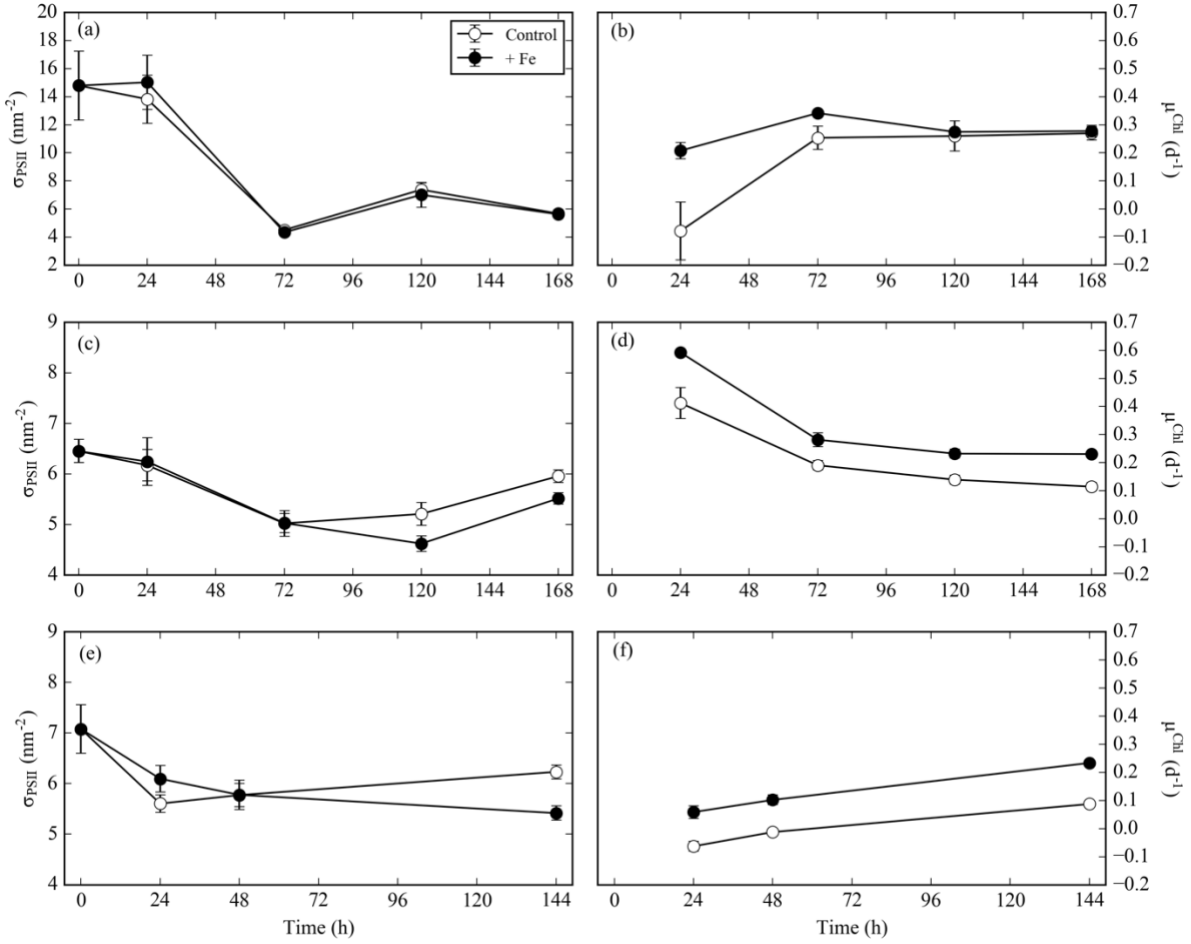

Figure S1: σ_{PSII} (nm^{-2}) (a, c, e) and chlorophyll-a specific growth rates (d^{-1}) (b, d, f), from the control and Fe addition treatments of experiments initiated in the sub-Antarctic zone over early summer (a, b), mid-summer (c, d), and late summer (e, f). Displayed here are averages with ± standard deviations (*n* = 3 for all time points, except end time point where *n* = 5). Please note the different scale in panel a, compared to c and e.

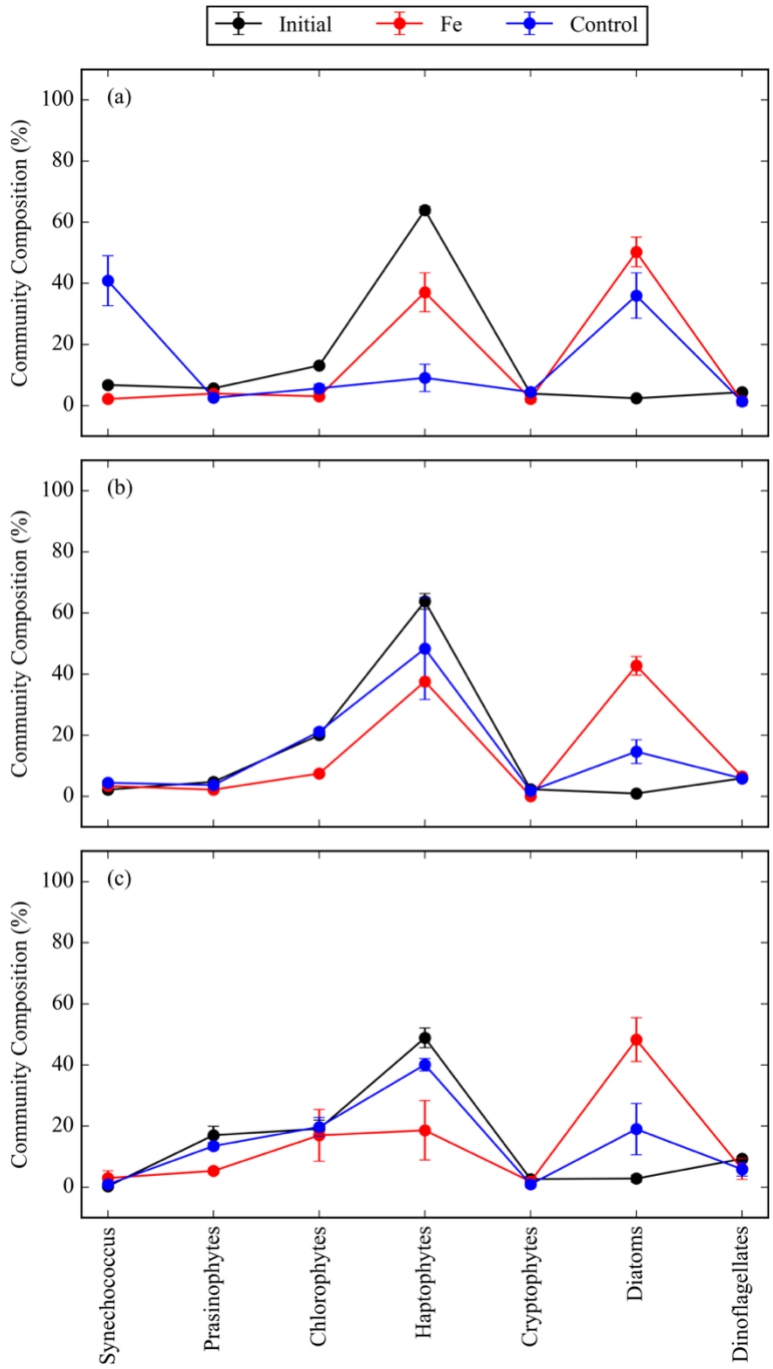

Figure S2: Community composition as a percentage of total chlorophyll a, determined by HPLC (Ras et al., 2008) and CHEMTAX (Mackey et al., 1996), of experiments initiated in (a) early summer, (b) mid-summer and (c) late summer. Initial community composition in black (t = 0 h), with end time point (t = 168, 168 and 144 h respectively) compositions for the iron addition treatment in red, and the control treatment in blue. Displayed here are averages with ± standard deviations, where *n* = 3.

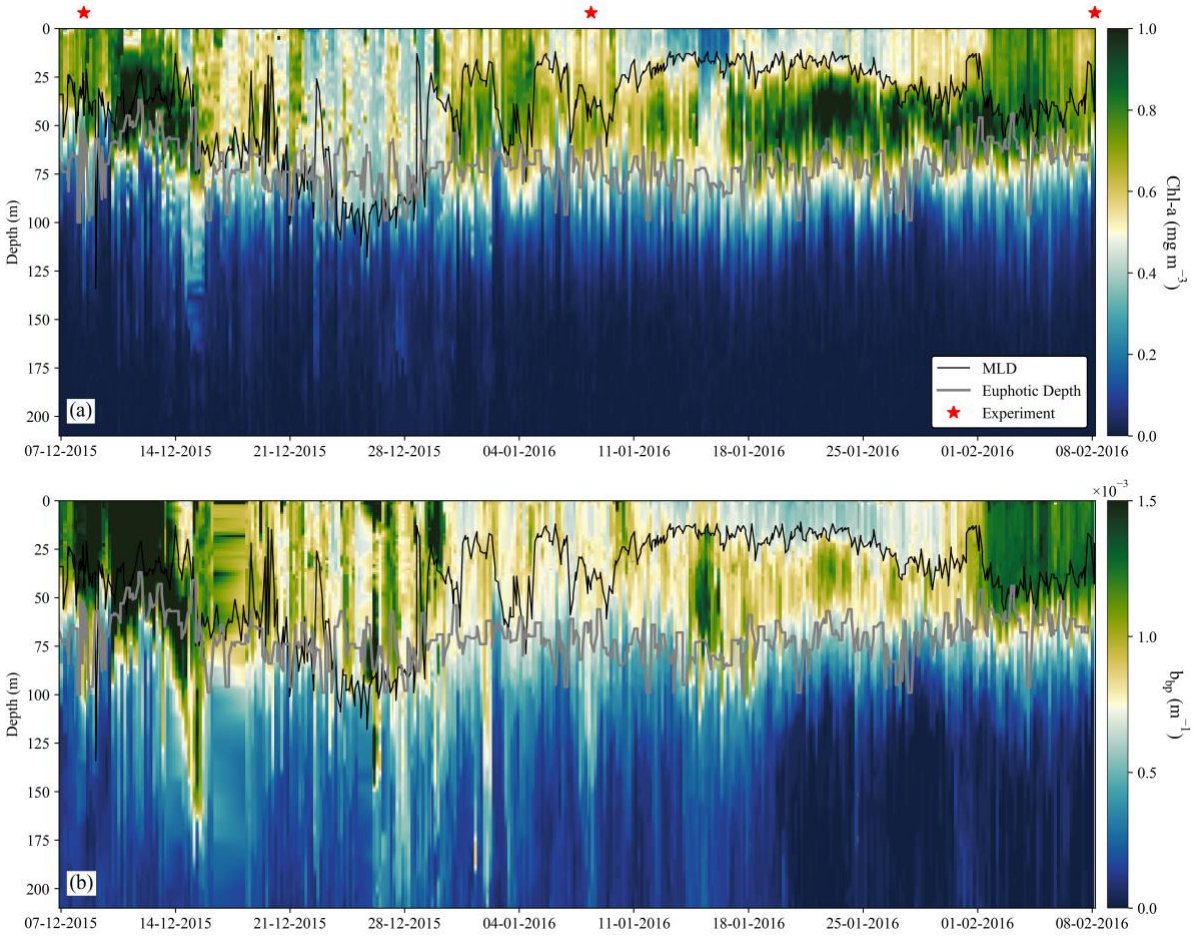

Figure S3: Sections for the glider time series from 7 December 2015 to 8 February 2016 of (a) chlorophyll concentration (Chl-a (mg m^{-3})) and (b) particulate backscatter (b_{bp} (m^{-1})); overlaid with the mixed layer depth (MLD) and the euphotic depth. The red stars indicate the initiation date for the experiments.

		Timepoints (h)						
Experiment	**Variable**	**0**	**24**	**48**	**72**	**120**	**144**	**168**
1 **Fe = 16 bottles** **Control = 16 bottles**	FRRf	3	3	n/a	3	3	n/a	6
	Chl-a	3	3	n/a	3	3	n/a	6
	Nutrients	3	3	n/a	3	3	n/a	6
	HPLC	3	n/a	n/a	n/a	n/a	n/a	3
2 **Fe = 16 Bottles** **Control = 16 Bottles**	FRRf	3	3	n/a	3	5	n/a	10
	Chl-a	3	3	n/a	3	5	n/a	10
	Nutrients	3	3	n/a	3	3	n/a	7
	HPLC	3	n/a	n/a	n/a	2	n/a	3
3 **Fe = 16 Bottles** **Control = 16 Bottles**	FRRf	3	5	5	n/a	n/a	12	n/a
	Chl-a	3	5	5	n/a	n/a	12	n/a
	Nutrients	3	3	3	n/a	n/a	6	n/a
	HPLC	3	n/a	n/a	n/a	n/a	3	n/a

Table S1: Sub-sampling strategy for biological replicates of variables measured within each experiment. The number of samples collected for each variable at each timepoint is listed, where samples were not collected is denoted by 'n/a'.