

Table S3: Summary of on-station data acquisition during MoorSPICE

Instrument/Sampler	Parameters	Coverage
CTD	T, S, O ₂ , Transmissiometry, Fluorimetry	All stations
Lowered ADCP	U, V	All stations
Bottle samples	S samples	All stations
	NO ₃ , NO ₂ , SiO ₄	All stations
	PO ₄	All stations
	Dual C fixation and N ₂ fixation	C17, C18, C19, C20, C21, C22, C30, C38, C39, C40, C41, C42, C43, C49, C54, C56, C57 at depths 5, 15, 30, 70 m
	N ₂ fixation	C17, C18, C19, C20, C21, C22, C38, C39, C40, C41, C42, C43, C49, at depths 350, 600, 850 and 1000 m
	<i>nifH</i> gene quantification	C17, C18, C19, C20, C21, C22, C30, C38, C39, C40, C41, C42, C43, C49, C54, C56, C57 at depths 5, 15, 30, 70, 350, 600, 850 and 1000 m
	Flow cytometry cell counts	C17, C18, C19, C20, C21, C22, C30, C38, C39, C40, C41, C42, C43, C49, C54, C56, C57 at depths 5, 15, 30, 70, 350, 600, 850 and 1000 m
	DOC	C17, C18, C19, C20, C21, C22, C30, C38, C39, C40, C41, C42, C43, C49, C54, C56, C57 at depths 5, 15, 30, 70, 350, 600, 850 and 1000 m
	DON/DOP	C17, C18, C19, C20, C21, C22, C30, C38, C39, C40, C41, C42, C43, C49, C54, C56, C57 at depths 5, 15, 30, 70, 350, 600, 850 and 1000 m
	Chlorophyll	C17, C18, C19, C20, C21, C22, C38, C39, C40, C41, C42, C43, C49, at depths 350, 600, 850 and 1000 m
	DOM molecular composition (FTI-CRMS)	C17, C18, C19, C20, C21, C22, C38, C39, C40, C41, C42, C43, C49, at depths 350, 600, 850 and 1000 m
	TEP	C17, C18, C19, C20, C21, C22, C30, C38, C39, C40, C41, C42, C43, C49, C54, C56, C57 at depths 5, 15, 30, 70, 350, 600, 850 and 1000 m
Repeated Stations (number of casts / time on station)	8 (2/3hr39) 17 (2/2 hr32) 18 (2/3hr5) 19 (2/3hr23) 20 (2/3hr04) 21 (2/2hr50) 22 (2/2hr35) 28 (2/2hr25) 38 (2/2hr16) 39 (2/3hr22) 40 (2/3hr21) 41 (2/3hr20) 42 (2/6hr03) 43 (2/2hr32) 50 (6/7hr37) 57 (4/9hr48)	
2012-2014 repeated stations (Pandora Cast / MoorSPICE Cast)	49/1 53/3 80/30 76/33 74/34 72/35 71/36 70/37 68/38 66/39 64/40 63/41 61/42 59/43 43/44 36/49 35/50 34/51 31/52 29/53 27/54 25/55 23/56 20/57	