



*Supplement of*

## **Fluorescent biological aerosol particles over the central Pacific Ocean: covariation with ocean surface biological activity indicators**

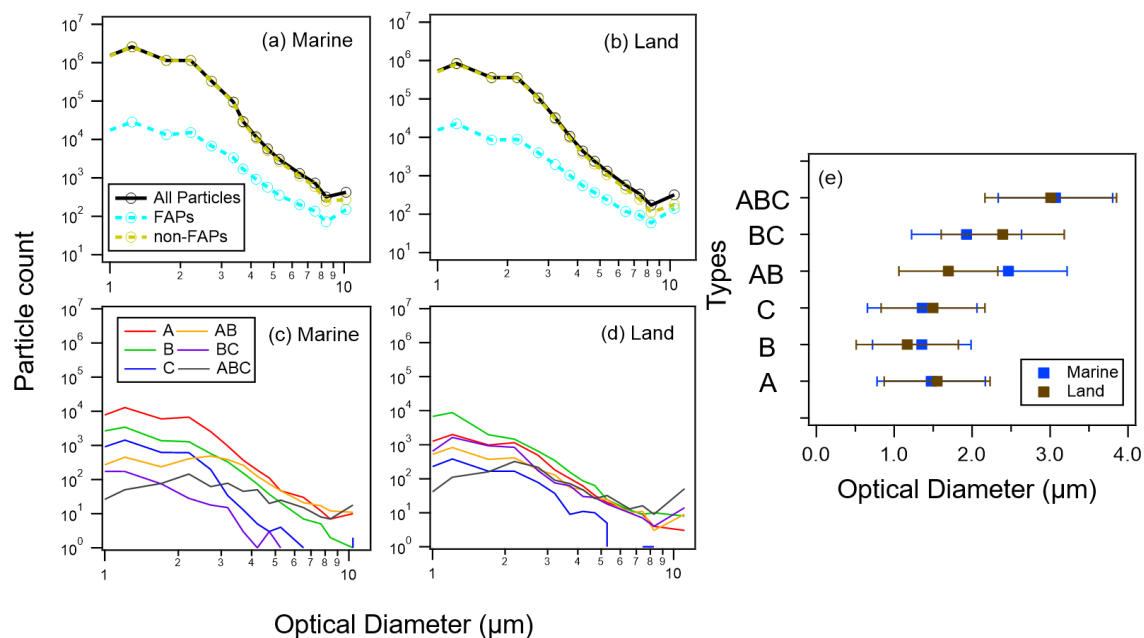
**Kaori Kawana et al.**

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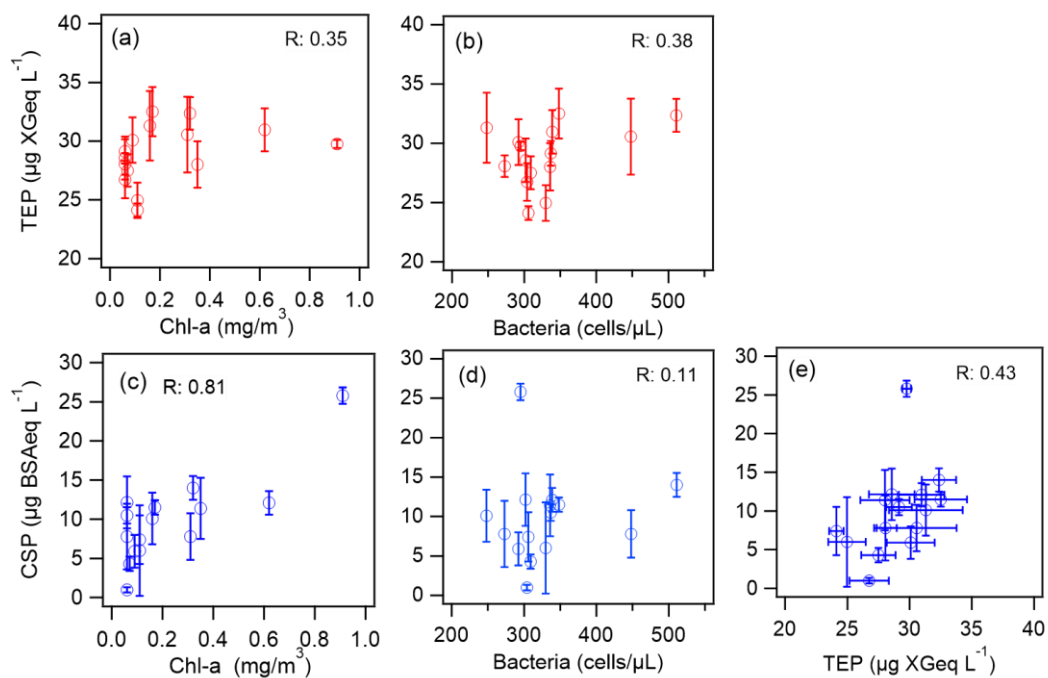
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**Table S1.** List of seawater sampling date and location. Zone: Equatorial upwelling region (EQ), North Pacific subtropical region (NP), and South of the Kuroshio Extension (KR).

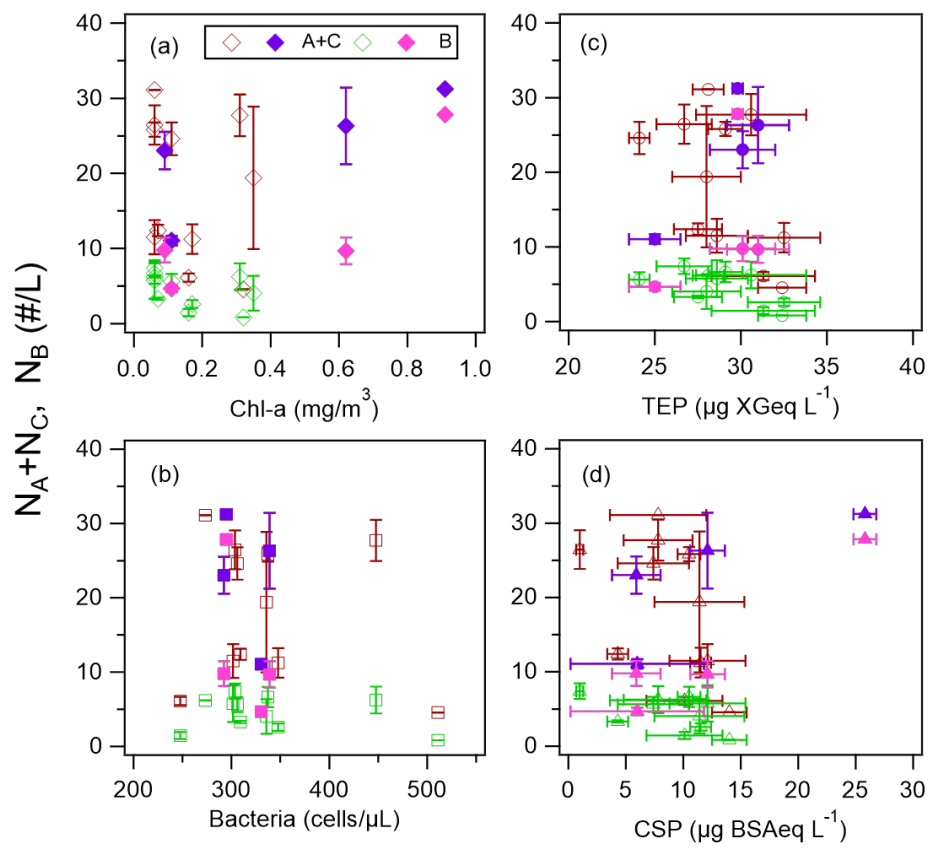
Date (UTC)	Latitude	Longitude	Zone
2019/03/09 00:55	6.35° S	161.41° W	EQ
2019/03/09 19:58	3.53° S	164.39° W	EQ
2019/03/10 22:56	0.00° S	168.56° W	EQ
2019/03/11 20:00	2.54° N	172.08° W	EQ
2019/03/12 19:56	6.05° N	175.39° W	EQ
2019/03/13 20:56	9.25° N	179.21° W	EQ
2019/03/14 20:59	13.00° N	177.21° E	NP
2019/03/15 20:58	16.43° N	174.04° E	NP
2019/03/16 20:59	20.35° N	170.35° E	NP
2019/03/17 22:00	23.17° N	165.55° E	NP
2019/03/18 21:58	24.30° N	160.45° E	NP
2019/03/19 21:58	25.42° N	155.38° E	NP
2019/03/20 22:56	27.00° N	150.00° E	NP
2019/03/21 23:59	30.56° N	146.01° E	KR
2019/03/22 10:24	32.25° N	144.37° E	KR



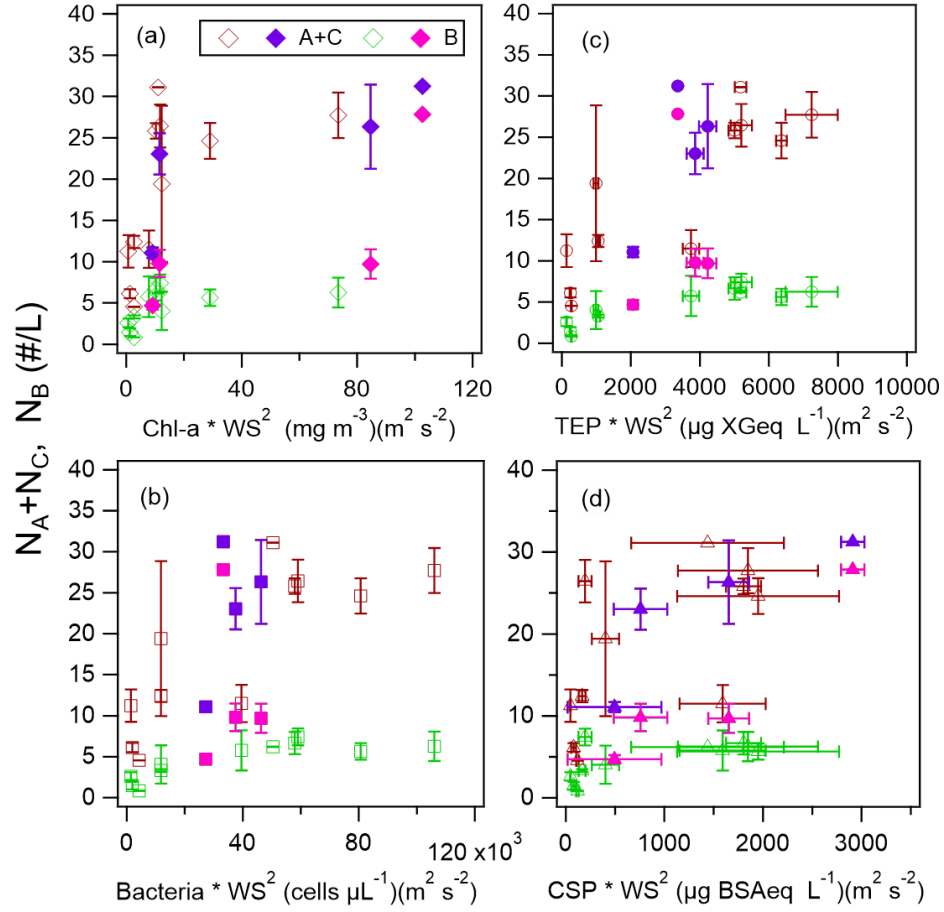
5 **Figure S1.** Count of all particles (black line), fluorescent aerosol particles (FAPs, light blue line), and non-FAPs (light green line) obtained by WIBS-4A during (a) Period 1 when oceanic air masses were dominant, and (b) Period 2 when the influence of terrestrial air masses was prominent. Count of particles with different types of FAPs during (c) Period 1, and (d) Period 2. (e) Particle size in each type of fluorescent particles during Periods 1 and 2. The error bars represent one standard deviation.



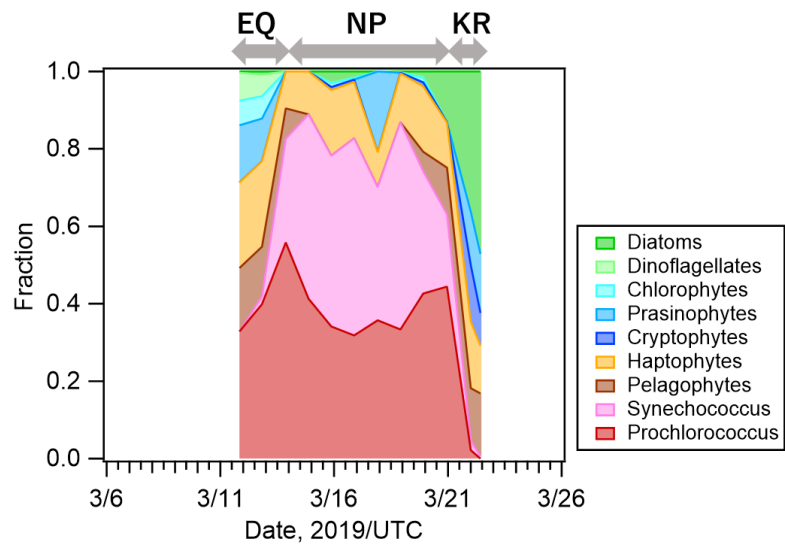
5 **Figure S2.** Correlations between concentrations of bioindicator and/or biological particles concentration for sampled seawater: (a) TEPs and Chl-*a*, (b) TEPs and bacteria, (c) CSPs and Chl-*a*, (d) CSPs and bacteria, and (e) CSPs and TEPs. The error bars represent one standard deviation.



5 **Figure S3.** (a)–(d) Same as Figs.8c–8f, but for bioindicators only. The error bars represent one standard deviation.



5 **Figure S4.** (a)–(d) Same as Figs.8c–8f, but with an exponent of 2 for wind speed. The error bars represent one standard deviation.



**Figure S5.** Distribution of phytoplankton species in the surface seawater.