Supplementary Information

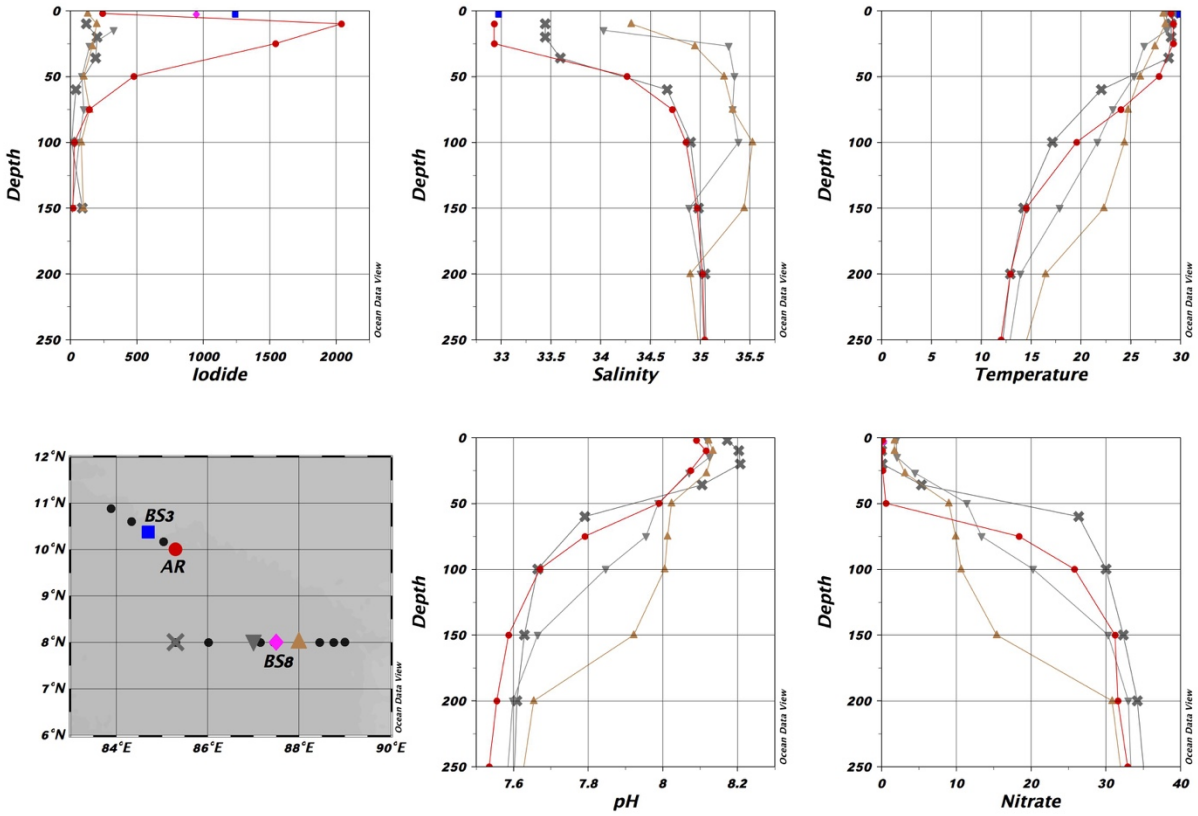

Figure S1. Selected depth profile data from the BoBBLe cruise in the Bay of Bengal, showing exceptionally high surface and subsurface iodide concentrations. Station AR shown by red circle, underway samples BS3 and BS8 shown by blue square and magenta diamond respectively. Note the high salinity core of Summer Monsoon Current (SMC) evident in stations with grey & brown triangle symbols. Figure prepared using Ocean Data View (Schlitzer 2014).

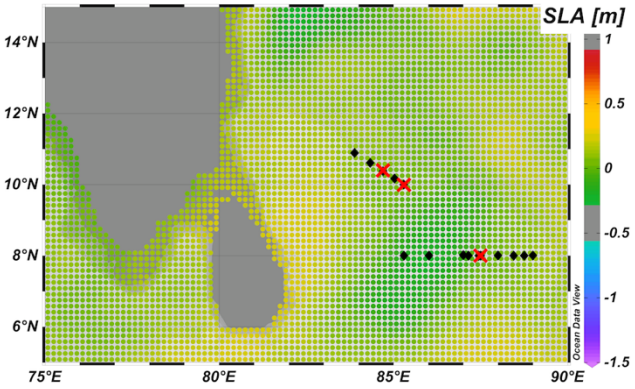

Figure S2. Sea surface height anomaly (SLA, m) for 26-30 June 2016 and BoBBLe station positions, with high iodide stations indicated by red crosses. Green areas show negative sea level anomalies, where upwelling is taking place, indicative of Sri Lanka Dome area. Dataset (Zlotnicki, Qu, and Willis 2016) accessed [2017-01-21] at https://doi.org/10.5067/SLREF-CDRV1. Figure prepared using Ocean Data View (Schlitzer 2014).

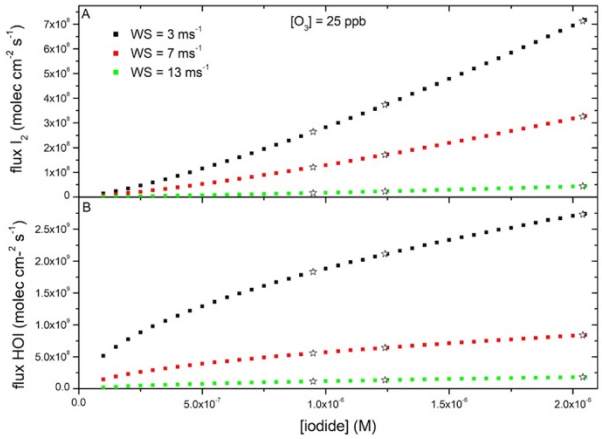

Figure S3: Predicted fluxes for HOI and I_2 emissions (molecules cm^{-2} s^{-1}) as a function of the aqueous iodide concentration (M) for a fixed ozone concentration of 25 ppb and three different wind speeds (black: 3 m s^{-1}, red: 7 m s^{-1}, green: 13 m s^{-1}), calculated using the parametrisation in (Carpenter et al. 2013). The stars symbols show the predicted fluxes for the high (>600 nM) iodide concentrations measured in the tropical Indian Ocean during the BoBBLe cruise.

References

Carpenter, L. J., S. M. MacDonald, M. D. Shaw, R. Kumar, R. W. Saunders, R. Parthipan, J. Wilson, and J. M. C. Plane. 2013. 'Atmospheric iodine levels influenced by sea surface emissions of inorganic iodine', Nature Geoscience, 6: 108-11.

Schlitzer, R. 2014. "Ocean Data View." In.: http://odv.awi.de. Accessed [2018-03-16].

Zlotnicki, V., Z. Qu, and J. Willis. 2016. "JPL MEaSUREs Gridded Sea Surface Height Anomalies Version 1609." In, edited by NASA Physical Oceanography DAAC. NASA Physical Oceanography DAAC.