Supplementary material for the manuscript:

Characteristics of biogenically-derived aerosols over the Amundsen Sea, Antarctica

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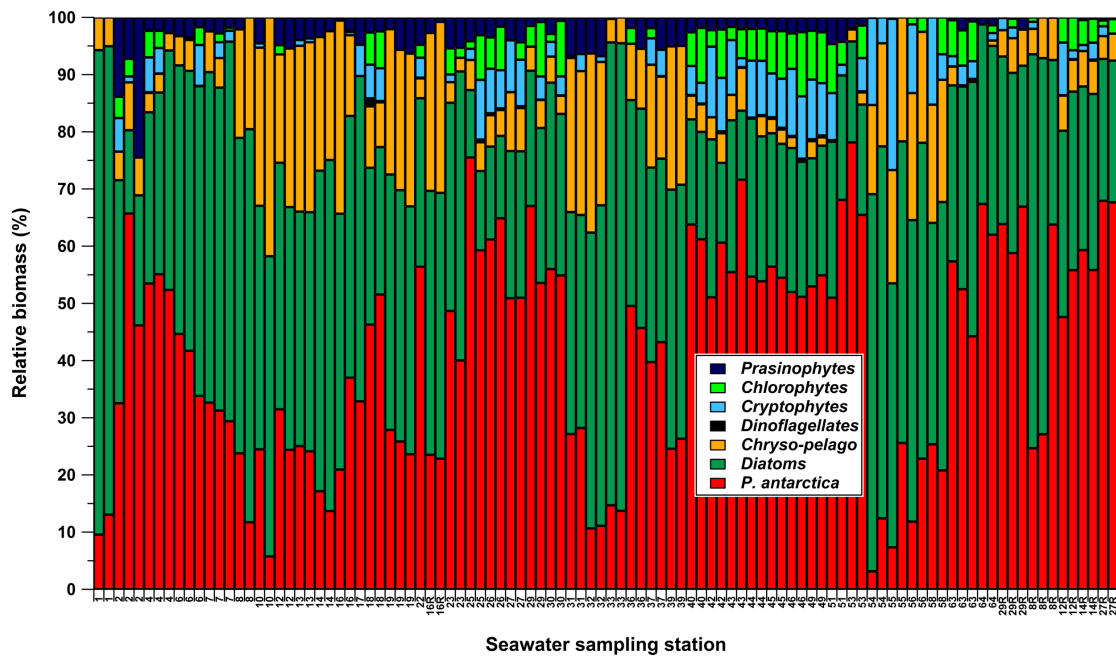
Figure S1. Relative biomass (%) of phytoplankton groups observed in the upper 50 m of the Amundsen Sea during the ANA06B cruise.
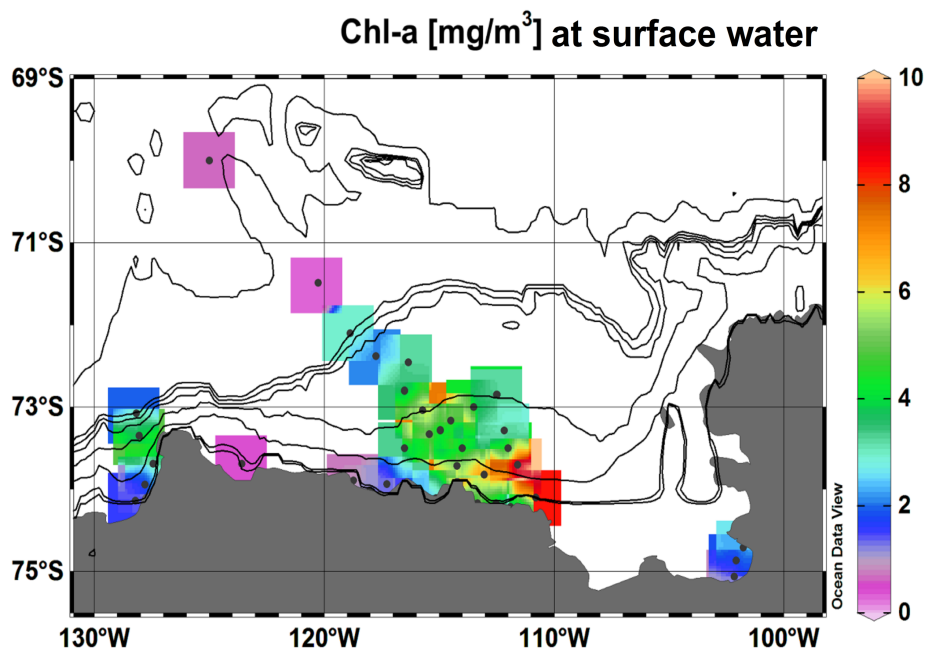
Figure S2. In situ sea surface chlorophyll-a (Chl-a) concentration (mg m^{-3}) observed in the Amundsen Sea during the ANA06B cruise.
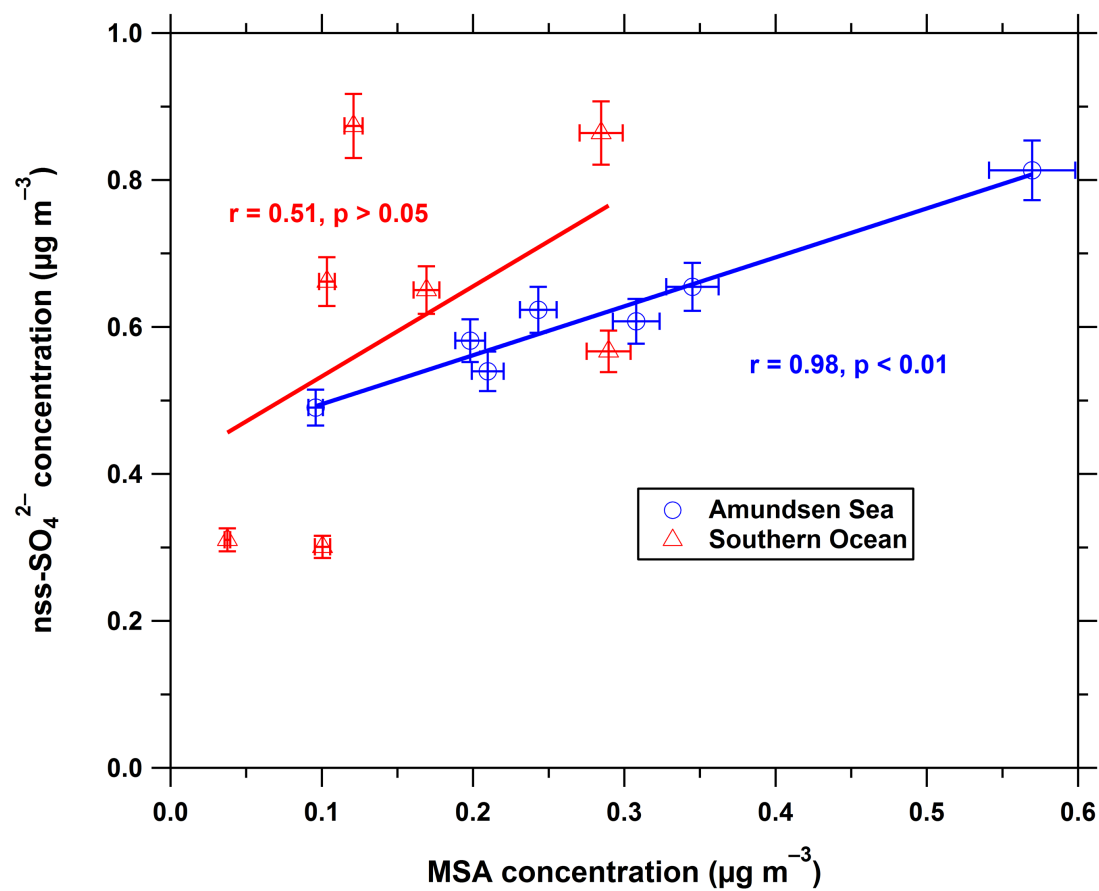
Figure S3. Relationships between nss-SO$_4^{2-}$ and MSA observed over the Southern Ocean (open triangles) and the Amundsen Sea (open circles).
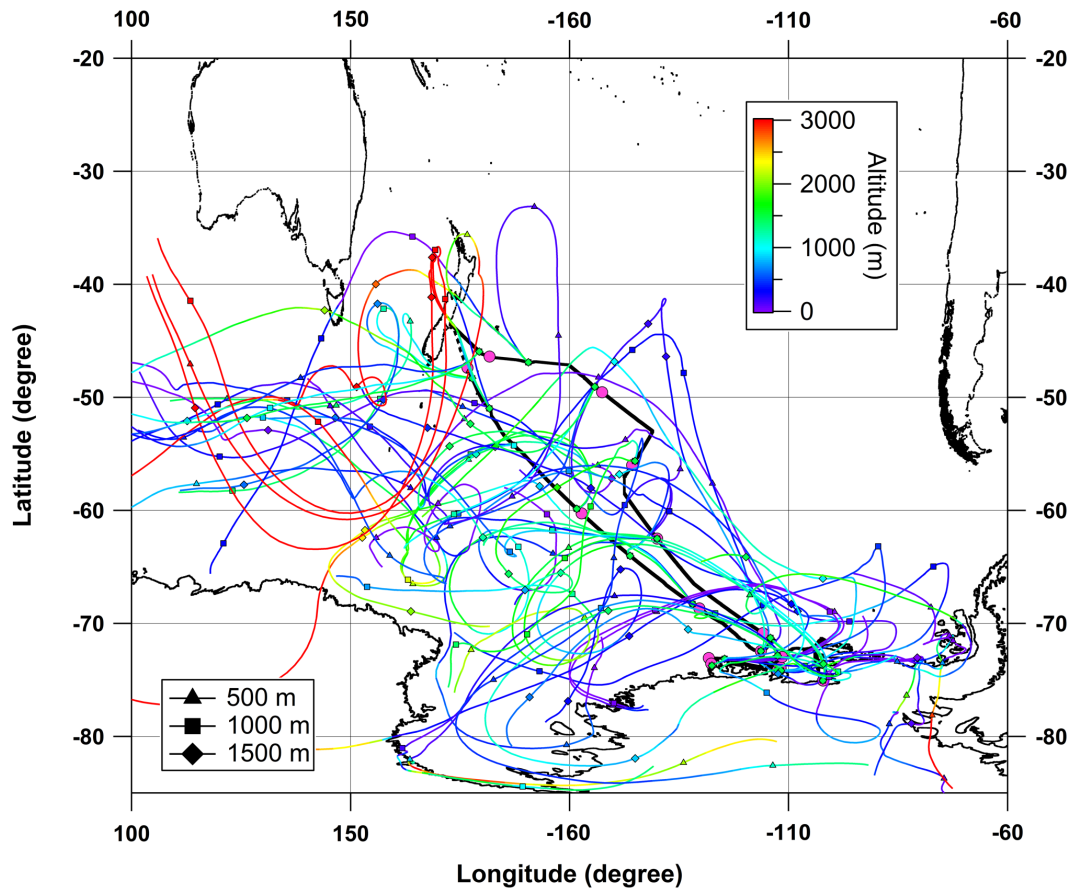
Figure S4. The 168 hours (7 days) air mass backward trajectories for starting alitutdes of 500 m (triangle symbols), 1000 m (square symbols) and 1500 m (diamond sysmbols) above groud level (a.g.l.) during the collection of aerosol samples were calculated from the Global Data Assimilation System (GDAS) database of the National Ocean and Atmospheric Administration (NOAA) and simulated by using the Hybrid Single-Particle Langrangian Integrated Trajectory (HY-SPLIT) model (http://www.arl.noaa.gov/ready/hysplit4.html). Pink circles and black line indicate aersol sampling locations and cruise track during the cruise, respectively.
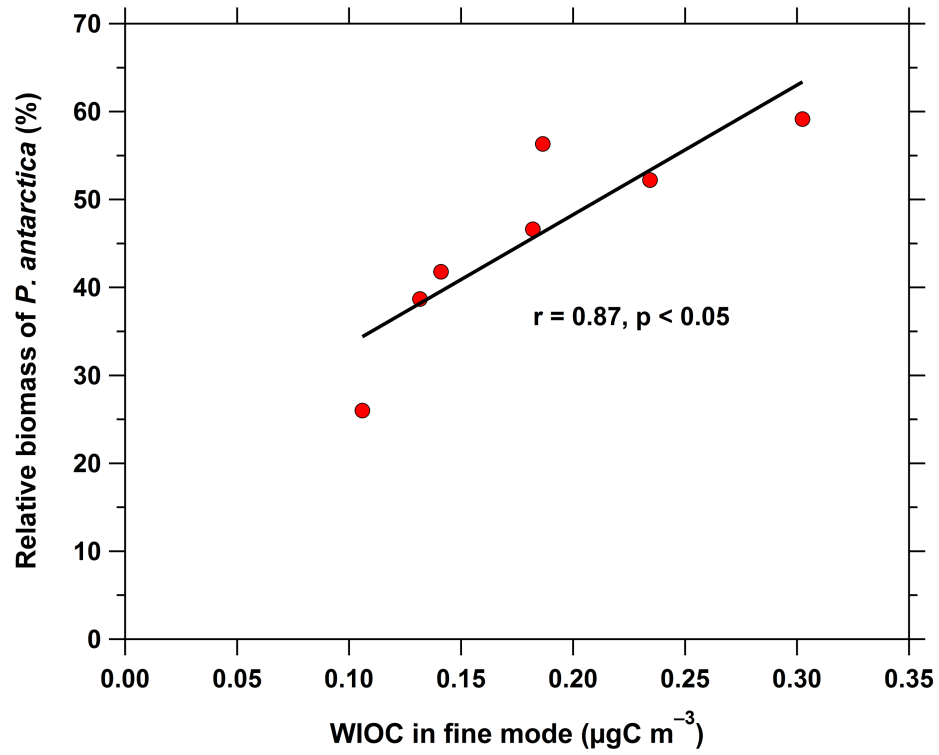
Figure S5. Relationship between relative biomass of *Phaeocysitis antarctica* (*P. antarctica*) and WIOC concentration in fine mode observed over the Amundsen Sea.