



Quantifying Global Marine Biogenic NO Emissions

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Nitrogen oxides (NO_x) are among the most important molecules in atmospheric chemistry and nitrogen cycle. We suggest that biogenic NO production in ocean water can be a source of atmospheric NO_x . Nitrification and denitrification in the ocean produces nitrites which can be further reduced to NO through microbiological processes. We report global distributions of marine biogenic NO emission. This new source improves the agreement between satellite observations and model simulations over large areas. Our model simulations show that the new biogenic NO source increases the atmospheric oxidative capacity and aerosol formation rate showing a closer link between atmospheric chemistry and ocean microbiology.