

[Home](#)[Online Library ACP](#)[Recent Final Revised Papers](#)[Volumes and Issues](#)[Special Issues](#)[Library Search](#)[Title and Author Search](#)[Online Library ACPD](#)[Alerts & RSS Feeds](#)[General Information](#)[Submission](#)[Review](#)[Production](#)[Subscription](#)[Comment on a Paper](#)Impact  
Factor  
4.865ISI  
indexed[Volumes and Issues](#) [Contents of Issue 3](#)

Atmos. Chem. Phys., 8, 555-563, 2008

www.atmos-chem-phys.net/8/555/2008/

© Author(s) 2008. This work is licensed under a Creative Commons License.

## Eddy covariance measurements of sea spray particles over the Atlantic Ocean

S. J. Norris<sup>1</sup>, I. M. Brooks<sup>1</sup>, G. de Leeuw<sup>1,2</sup>, M. H. Smith<sup>1</sup>, M. Moerman<sup>3</sup>, and J. J. N. Lingard<sup>1</sup><sup>1</sup>School of Earth and Environment, University of Leeds, Leeds, LS2 9JT, UK<sup>2</sup>University of Helsinki, Dept. of Physical Sciences, Helsinki, Finland & Finnish Meteorological Institute, Climate and Global Change Unit, Helsinki, Finland<sup>3</sup>TNO, Defence and Security, The Hague, The Netherlands

**Abstract.** Most estimates of sea spray aerosol source functions have used indirect means to infer the rate of production as a function of wind speed. Only recently has the technology become available to make high frequency measurements of aerosol spectra suitable for direct eddy correlation determination of the sea spray particle flux. This was accomplished in this study by combining a newly developed fast aerosol particle counter with an ultrasonic anemometer which allowed for eddy covariance measurements of size-segregated particle fluxes. The aerosol instrument is the Compact Lightweight Aerosol Spectrometer Probe (CLASP) – capable of measuring 8-channel size spectra for mean radii between 0.15 and 3.5  $\mu\text{m}$  at 10 Hz. The first successful measurements were made during the Waves, Air Sea Fluxes, Aerosol and Bubbles (WASFAB) field campaign in October 2005 in Duck (NC, USA). The method and initial results are presented and comparisons are made with recent sea spray source functions from the literature.

[Final Revised Paper](#) (PDF, 703 KB) [Discussion Paper](#) (ACPD)

Citation: Norris, S. J., Brooks, I. M., de Leeuw, G., Smith, M. H., Moerman, M., and Lingard, J. J. N.: Eddy covariance measurements of sea spray particles over the Atlantic Ocean, Atmos. Chem. Phys., 8, 555-563, 2008. [Bibtex](#) [EndNote](#) [Reference Manager](#)

[Search ACP](#)

Library Search

Author Search

[News](#)

- [Sister Journals AMT & GMD](#)
- [Financial Support for Authors](#)
- [Journal Impact Factor](#)
- [Public Relations & Background Information](#)

[Recent Papers](#)

01 | ACPD, 03 Nov 2008:  
Anthropogenic influence on SOA and the resulting radiative forcing

02 | ACPD, 03 Nov 2008:  
Evidence of mineral dust altering cloud microphysics and precipitation

03 | ACPD, 03 Nov 2008:  
Technical Note: A new method for the Lagrangian tracking of pollution plumes from source to receptor using gridded model output

04 | ACPD, 03 Nov 2008: