

***Interactive comment on* “Characteristics, sources, and transport of aerosols measured in spring 2008 during the aerosol, radiation, and cloud processes affecting Arctic climate (ARCPAC) project” by C. A. Brock et al.**

Anonymous Referee #1

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This manuscript presents an overview of the airborne measurements of aerosol size, composition, and optical properties made in the troposphere of the Alaskan Arctic during the ARCPAC field study in April 2008. The paper is very well written; the tables contain useful summaries and the figures are of high quality. The experimental methods are adequately described and referenced, and the conclusions appear to be sound. The manuscript should be published in ACP after the authors have addressed one relatively minor issue below.

Can the authors comment on the cause of the 26% bias between the directly measured

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and calculated (Mie theory) scattering shown in Figure 5? Is it mainly due to discrepancy in the assumed refractive index of $1.52 - 0i$ or due to error in the measured dry size distribution?

Editorial Page 27367, Line 26: Change “leads” to “lead”

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 27361, 2010.

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