

## SP2 analysis of black carbon in snow at NEEM, Greenland

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We measured concentrations of black carbon particles (BC) in snow at NEEM, Greenland. These samples were collected in 2010 from a 3.4m deep pit. BC in melted snow was analyzed with the SP2 (Single Particle Soot Photometer) method developed by Ohata et al. (2011). BC particles in water were aerosolized by an ultrasonic nebulizer and then masses of individual BC particles were measured by SP2, which is based on the laser-induced incandescence technique. Calibration of incandescence signal was carried out with fullerene soot. In order to correct for the loss of BC during aerosolizing, we calculated nebulizer efficiencies using five different sizes of PSLs (polystyrene latex spheres) standard solutions. We evaluated seasonal variations of BC concentrations with respect to those of stable isotopes. We also compared seasonal variations of BC and ionic species.

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