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Emissions of primary aerosol and precursor gases in the years 2000 and 1750 prescribed data-sets for AeroCom

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Abstract. Inventories for global aerosol and aerosol precursor emissions have been collected (based on published inventories and published simulations), assessed and prepared for the year 2000 (present-day conditions) and for the year 1750 (pre-industrial conditions). These global datasets establish a comprehensive source for emission input to global modeling, when simulating the aerosol impact on climate with state-of-the-art aerosol component modules. As these modules stratify aerosol into dust, sea-salt, sulfate, organic matter and soot, for all these aerosol types global fields on emission strength and recommendations for injection altitude and particulate size are provided. Temporal resolution varies between daily (dust and sea-salt), monthly (wild-land fires) and annual (all other emissions). These datasets benchmark aerosol emissions according to the knowledge in the year 2004. They are intended to serve as systematic constraints in sensitivity studies of the AeroCom initiative, which seeks to quantify (actual) uncertainties in aerosol global modeling.

[Final Revised Paper](#) (PDF, 6509 KB) [Discussion Paper](#) (ACPD)

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