

Black carbon measurement by SP2 on board DC-8

PI: Yutaka Kondo (RCAST, Univ. of Tokyo)

Parameters measured by SP2

- 2) Mass and coating thickness of individual black carbon (BC) particles with diameters between 90-600 nm.**

- 2) Diameters of individual and non-light absorbing particles with diameters of 250-1000 nm.**

- 3) Size distributions of BC and non-light absorbing particles every 1-5 minutes, depending on aerosol concentrations**

Operations of SP2 on board DC-8

(a) Operation requirements

Aircraft speed and outside temperature: no specific requirement

Temperature in the cabin 10-25C

(b) Measurements in clouds in polluted air are important in investigating uptake of BC and heating of clouds by BC, provided that inlet is appropriate for interstitial aerosol.

(c) Total number concentration of aerosol is seen on our SP2 screen. It is not fed to the DC-8 system, due to our limited time.