STRATOSPHERIC AEROSOL CHARACTERISATION BY BALLOON OBSERVATIONS DURING SESAME

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Two new balloon-borne instruments have been developed by LOA to measure the radiance of the Earth's limb, with the BALLAD instrument, and atmospheric optical depths by solar occultation, with the BOCCAD instrument. BALLAD is observing at three wavelengths (450, 600 and 850 nm) with polarization measurements at 850 nm. BOCCAD is working at four wavelengths, the three of BALLAD plus one channel at 780 nm.

Both instruments are integrated on the same gondola. For limb measurements made at large solar zenith angles, the payload is scanning the entire azimuth range by rotation. Before sunset, the payload is pointed toward the Sun for occultation measurements.

Several flights were performed in the frame of SESAME: one in 1994 from France (BALLAD) and two from Sweden (BALLAD + BOCCAD) in the winter 1995. The results concerning the aerosols characteristics (radius and dispersion) and abundance will be presented.