



Airborne Measurements of Aerosol radiative Forcing, Surface Albedo, and Flux Divergence during MILAGRO

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We present a method to determine aerosol radiative forcing from simultaneous measurements of irradiance with the Solar Spectral Flux Radiometer (SSFR) and aerosol optical thickness with the Ames Airborne Tracking Sunphotometer (AATS-14) onboard the NASA aircraft Jetstream-31. In this context, special emphasis is given to spectral surface albedo at and around the MILAGRO sites T0 and T2. The impact of instrumental errors, atmospheric and aerosol correction, solar zenith angle and spatial heterogeneities is used to estimate the error bars of the albedo from 350 nm to 2100 nm. Direct aerosol absorption measurements with SSFR above the Gulf of Mexico, based on flux divergence, are presented.