

Mission Scientist Report 30 May 2011

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Citation cloud mission

The decision was made to fly the citation on a mission to sample an extended stratus deck over the SGP site with cloud bases near 1.5 km and cloud tops near 2 km. The Citation took off at approximately 12:30 PM local time climbing to 20,000 feet to obtain an atmospheric aerosol profile. They then ferried to the SGP site and began a spiral descending quickly in the region above cloud-top but then slowing their decent rate to 750 ft/ minute once nearing cloud-top. The descended to below cloud base, approximately 3200 ft and then began a series of along-wind tracks, the first below cloud base approximately 4200 ft, the second just above cloud base and the third just below cloud top. During these legs the SACR was performing a series of domer-cross wind-domer-along wind scans. The Citation repeated these along-wind tracks three times until the stratus deck began to dissipate. At this time they ascended to an altitude of 7-9 km to sample some cirrus that was moving into the area. After attaining a height of 27,600 feet the cirrus began to dissipate and the Citation sampled what was left over the site and then was directed to return to base at approx. 3:30 PM local time.

Mike Jensen / Pavlos Kollias