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Laser Measurements of Air-Entrained Asian Dust JALAL BUTT, NIMMI C.P. SHARMA, Central Connecticut State University, JOHN E. BARNES, NOAA/ESRL/Global Monitoring Division — Light Detection And Ranging (Lidar) is a remote sensing technique used to measure and profile the atmosphere. Lidar achieves this through the detection of laser-light scatter off aerosols, air molecules, and clouds. A CCD Camera lidar (CLidar) was employed at Mauna Loa Observatory (MLO), an atmospheric baseline station in Hawaii, to profile the atmosphere. During the spring, Eastern Asian dust activity intensifies significantly, generating a high level of dust in the near-ground air. Some of this dust becomes entrained in circulating air, and is then lofted and transported by prevailing winds across the Pacific Ocean and over MLO. CLidar measurements of aerosol scattering during spring months revealed extinction peaks at mid-range altitudes. Back trajectories of air parcels from the altitude and location of observed aerosol peaks were calculated and origins coincided with known dust sources.

Jalal Butt
Central Connecticut State University

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