



Ash and dust together in the UTLS: April 2010 Eyjafjallajökull volcano eruptions and Taklimakan Desert dust storms

Michael Fromm (1), Douglas Westphal (2), James Campbell (2), René Servranckx (3), and Pat Kablick (4)

(1) Naval Research Laboratory, Washington DC, United States (mike.fromm@nrl.navy.mil, 202 767 7885), (2) Naval Research Laboratory, Monterey, California, USA, (3) Canadian Meteorological Centre, Dorval, Québec, Canada, (4) University of Maryland/ ESSIC, College Park, Maryland, USA

On multiple occasions in northern spring 2010, dust storms in the Taklimakan Desert involving extratropical cyclogenesis entrained and lofted enormous abundances of dust into the UTLS. The dust palls were observed by ground and space-based lidar extending from Arctic to subtropical latitudes, from the boundary layer to 12 km altitude. The dust was transported intercontinentally, significantly complicating the source attribution of the aerosol layers observed downstream from Eyjafjallajökull volcano after 14 April. In this paper we will present satellite and ground-based measurements of the Asian UTLS dust plumes, characterize the long-range transport, discuss the synoptic-scale cyclones that entrained the dust to UTLS altitudes, and illustrate the complexity of the dust and volcanic plumes in the air space over Europe in April/May 2010.