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3-D CTM simulation of polar lower stratospheric ozone intrusion to mid-latitude observed by lidar at the JPL Table Mountain Facility (34.4^o N, 117.7^o W), California

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A high ozone value was observed at the JPL Table Mountain Facility (34.4^o N, 117.7^o W), California on February 27, 2004 at around 450 K potential temperature on its routine ozone measurements by a Differential Absorption Lidar designed for the measurement of tropospheric and stratospheric ozone (5-55 km). The simulation of two-dimensional high resolution (0.3^o latitude X 0.3^o longitude) PV advection model MIMOSA has shown upward transport of high-PV region from polar lower stratosphere (upper troposphere) to the mid-latitude. This event is simulated using the extended version of the model 3-D CTM MIMOSA-CHIM that includes full REPROBUS chemical scheme. Chemical species of the model is initialized by the output of 3-D CTM REPROBUS and the model is forced by the ECMWF wind and temperature fields. The results of the simulation and the possible precursor of the event will be presented and analyzed by studying the model ozone variations during, before, and after the event.