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First evidences of MOPITT CO measurements in the Boundary Layer during the European heatwave of 2003

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At the beginning of August 2003 an anticyclone was positioned over W. Europe for about 2 weeks, allowing temperature and pollution to increase to very high levels. In particular, France experienced one of its hottest periods. Because of these exceptional meteorological conditions, the boundary layer during the heatwave period grew up more than usually. Using a large number of data available in France, we will evidence that the boundary layer height has reached an altitude greater than 3500 m. Moreover, the sensitivity of the Measurements Of Pollution In The Troposphere (MOPITT) IR instrument has been enhanced in the lowermost layers because of the high surface temperature. Consequently, carbon monoxide (CO) was measured by MOPITT within the Boundary Layer. For these reasons, MOPITT successfully detected European local sources of CO during the heatwave. Finally, we will present the time evolution of CO distribution at the lowest levels during summer 2003 over W. Europe.