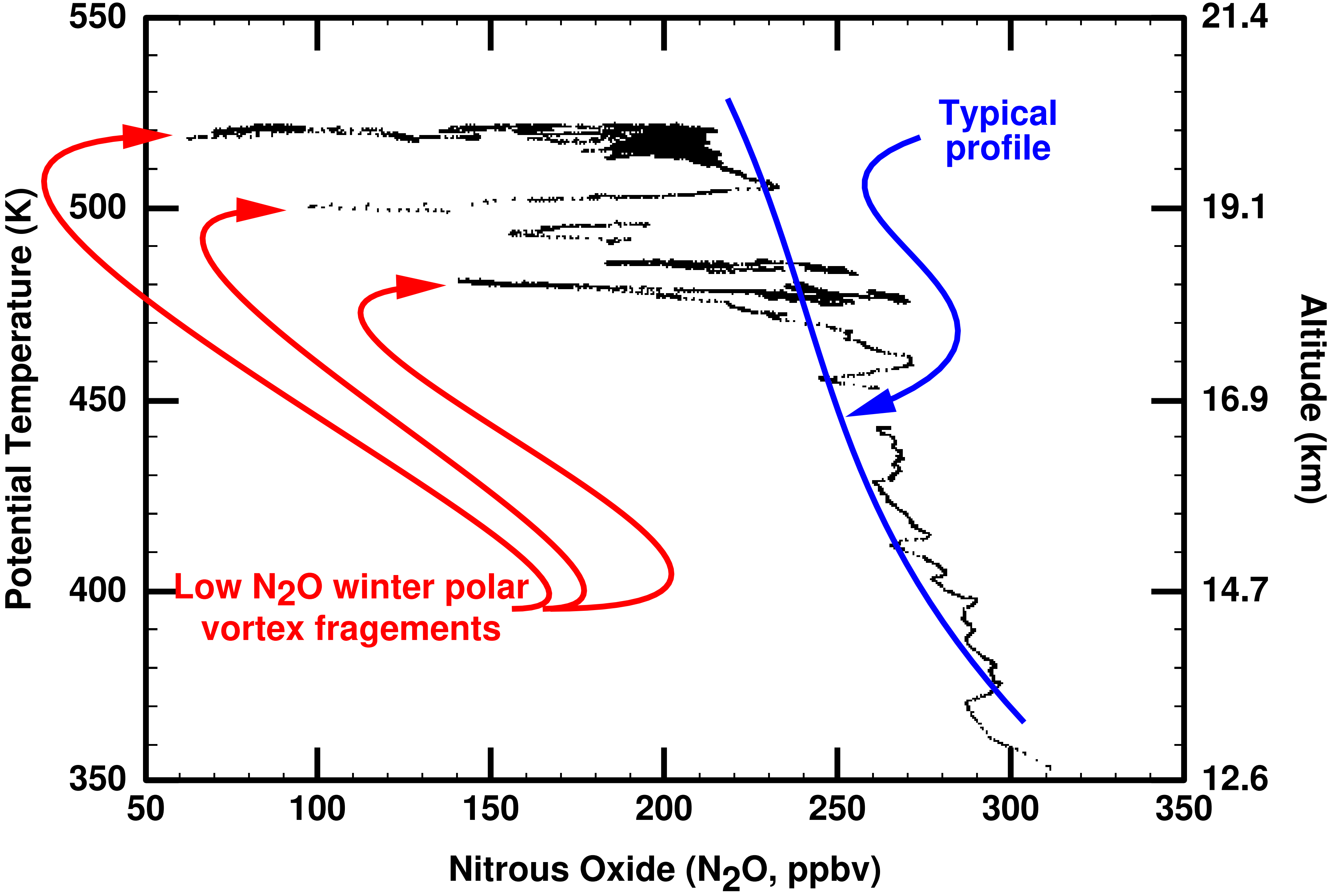
POLARIS Flight of June 26, 1997, Fairbanks, AK



Mid–summer POLARIS flights sampled extremely low values of N2O. These extreme measurements were characteristic of values observed inside the *winter* polar vortex. Theoretical and modeling work suggested that the fragments should be observed following the winter vortex breakup in April and May, but not into late June. The persistence of these observed fragments is a serious challenge to our current understanding of transport and mixing in the summer polar stratosphere.