The evolution of ozone observed by UARS MLS in the Northern Hemisphere polar vortex is shown as a function of time throughout the stratosphere, for the 1991-1992 and 1992-1993 winters. The impact of stratospheric sudden warmings on the observed ozone distribution is shown. Observational evidence suggesting the relative importance of transport and chemical mechanisms in producing the observed ozone distribution in regions throughout the stratosphere is discussed.