

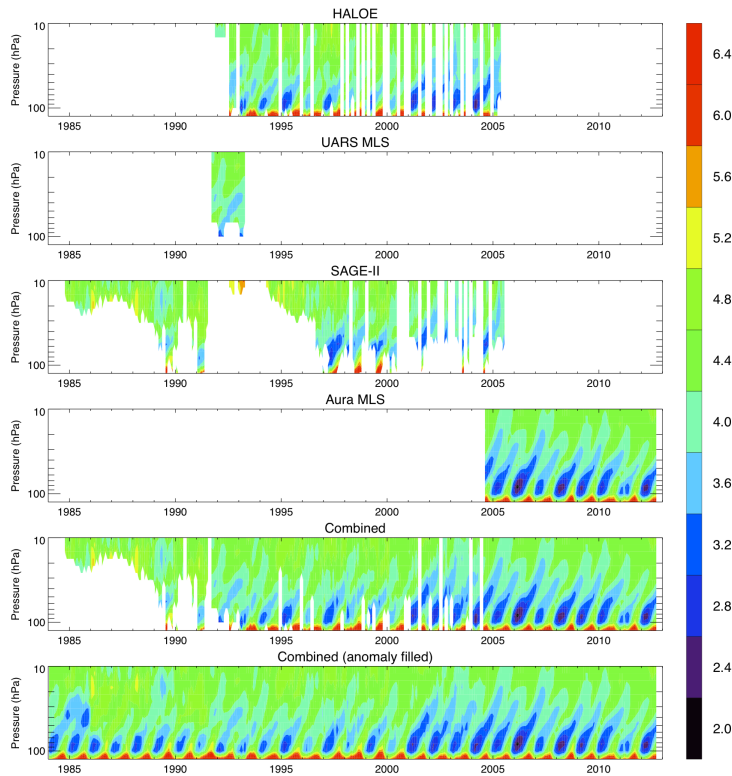
# The Stratospheric Water and OzOne Satellite Homogenized (SWOOSH) Data Set

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Vertical profiles of ozone and humidity from the upper troposphere to stratosphere have been retrieved from several different limb sounding and solar occultation satellite instruments since the 1980s. Instruments include the Stratospheric Aerosol & Gas Experiment (SAGE) and the Polar Ozone & Aerosol Measurement instruments, Upper Atmosphere Research Satellite (UARS) Microwave Limb Sounder (MLS), UARS HALogen Occultation Experiment (HALOE), and most recently, Atmospheric Chemistry Experiment-Fourier Transform Spectrometer and Aura MLS, among others. Here, we present ongoing work aimed at combining these measurements into a geographically gridded data set that can be used for quantifying variability and long-term changes in water vapor and ozone, and can be used for assessing the radiative impact of these changes. In this poster, we describe the process of merging the various data sets, which are gridded into a monthly mean product using both geographic and Photo Voltaic-based equivalent latitude in the horizontal, and pressure and isentropic levels in the vertical. Coincident observations during overlap periods in the satellite record are used to construct bias corrections for each instrument that can be allowed to vary in both the horizontal and vertical.



**Figure 1.** The tropical tape recorder from SWOOSH.