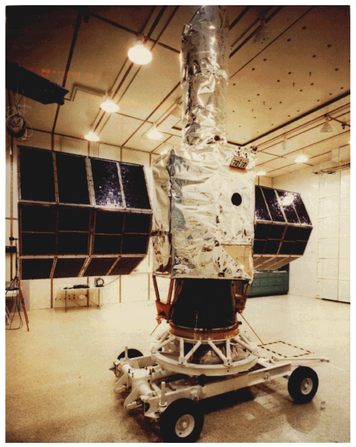
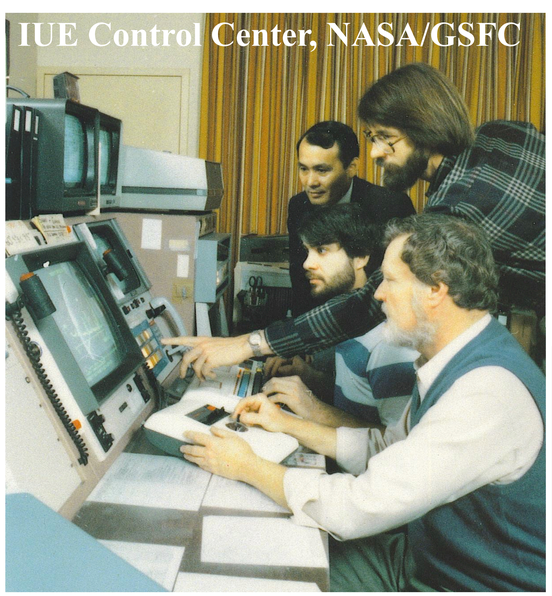
# Historical Celebration – 1978 – 1987 – 60 yrs UV Astronomy

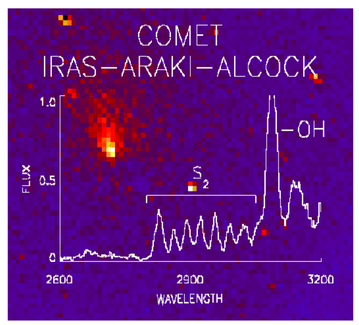
1978 1979 1980 1981 1982 1983 1984 1985 1986 1987

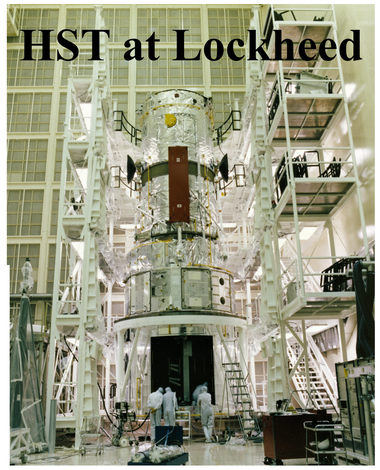
*IUE* (1978 - 1996)





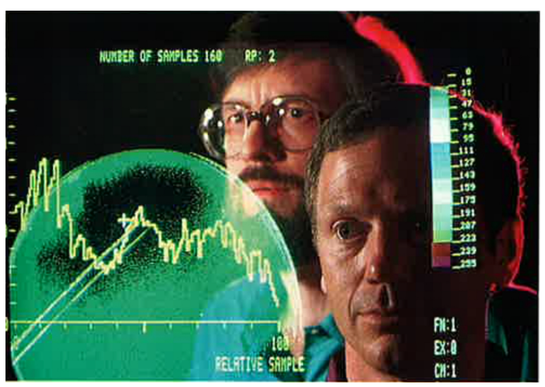


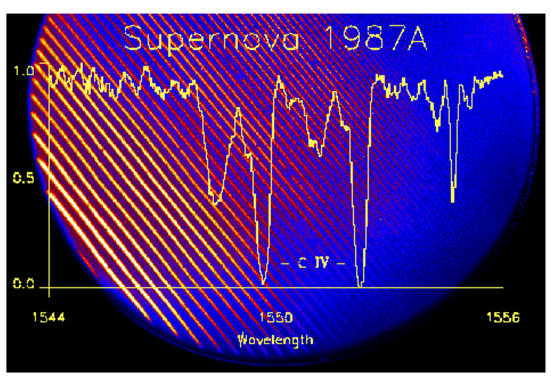



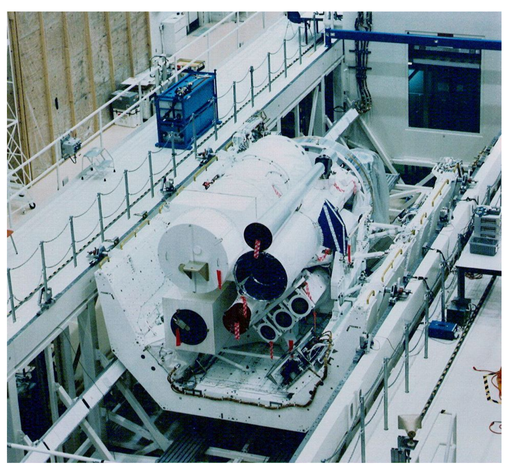






Hubble (above and left) and Astro Observatory (below) developed, tested, and prepared for launch in 1986. But…

HUT, UIT, and WUPPE

*Challenger* (Jan. 28 1986):

(Hubble and Astro Observatory space shuttle launches delayed from early 1986 to 1990.)

**The crew of *Challenger*, STS-51-L**

Spartan-203 (Halley) on *Challenger* was lost


JHU Halley Sounding Rocket Mission Mounted one month later 26 Feb 1986 (21.093UG) and again on 13 March 21.095UG) , supporting Giotto flyby

**Rocket ultraviolet spectroscopy of comet Halley and abundance of carbon monoxide and carbon**

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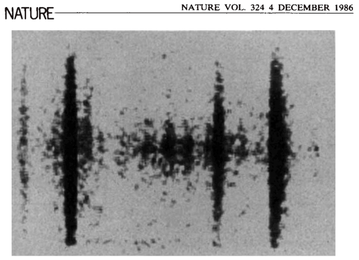


**Fig. 1** A photographic representation of the raw counts from the spectrograph on NASA 21.093UG is shown for a 72.2-s exposure of comet Halley centred in the entrance slit of the spectrograph. The horizontal axis is the wavelength dispersion from ~1,150 to 1,800 Å, and the vertical axis is along the 7.7 arc min slit with the sunward direction pointing down. The three brightest lines are O I λ1,304, C I λ,1561, and C I λ1,657. H I λ1,216 appears as a weak feature due to the heavy attenuation below 1,230 Å by a $CaF_2$ filter in front of the entrance slit.