

# Voyager Diffuse Observations

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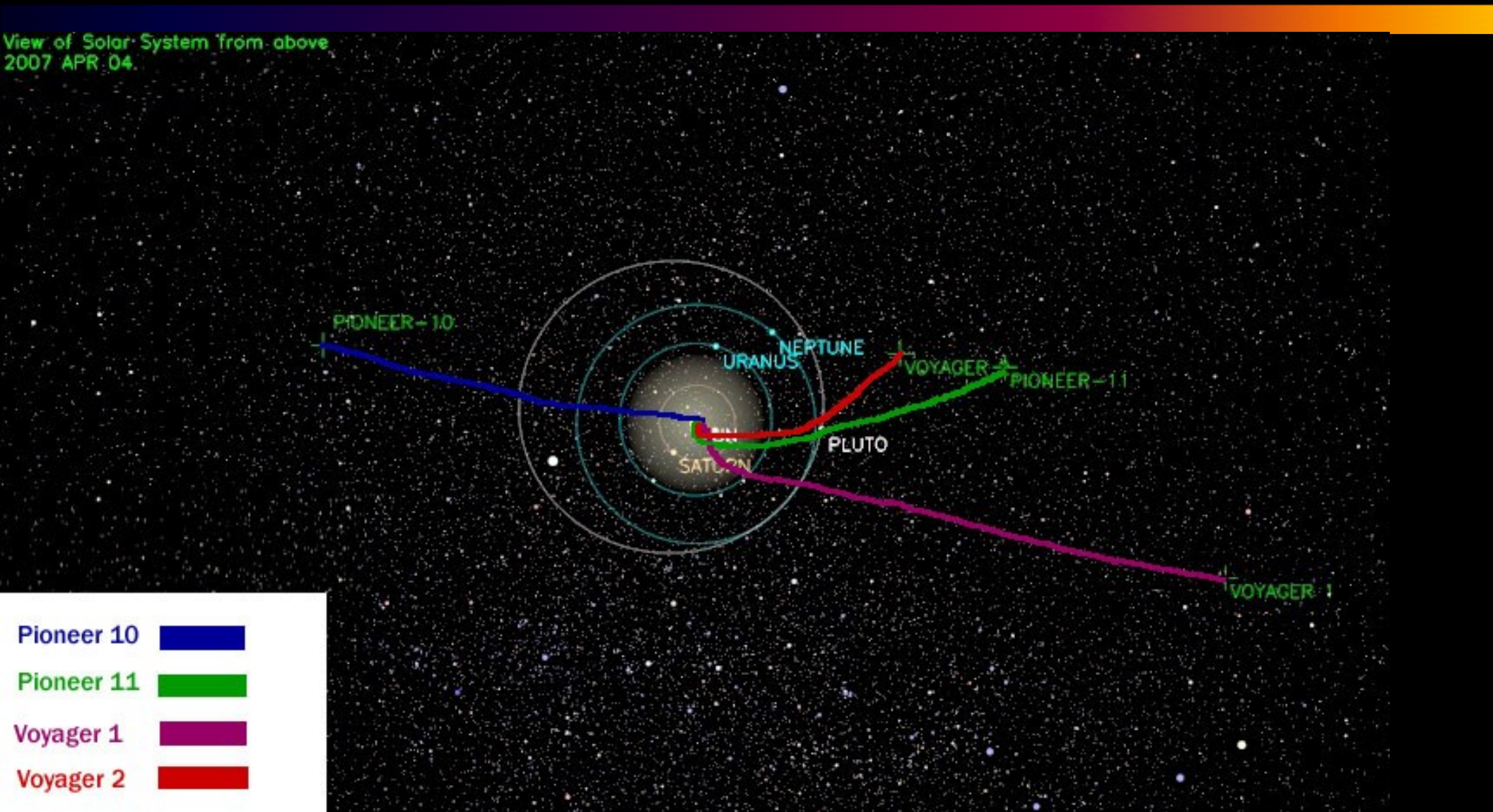
# Voyager Program

- Voyager 1 and 2
  - Launched in 1977.
- V1 to Jupiter and Saturn.
- V2 to all Jovian planets.
- Reached 5 AU In 1979.
  - V1 by Feb. 1.
  - V2 by May 2.
- Now at 113 and 92 AU, respectively.



# Spacecraft Positions

View of Solar System from above  
2007 APR 04

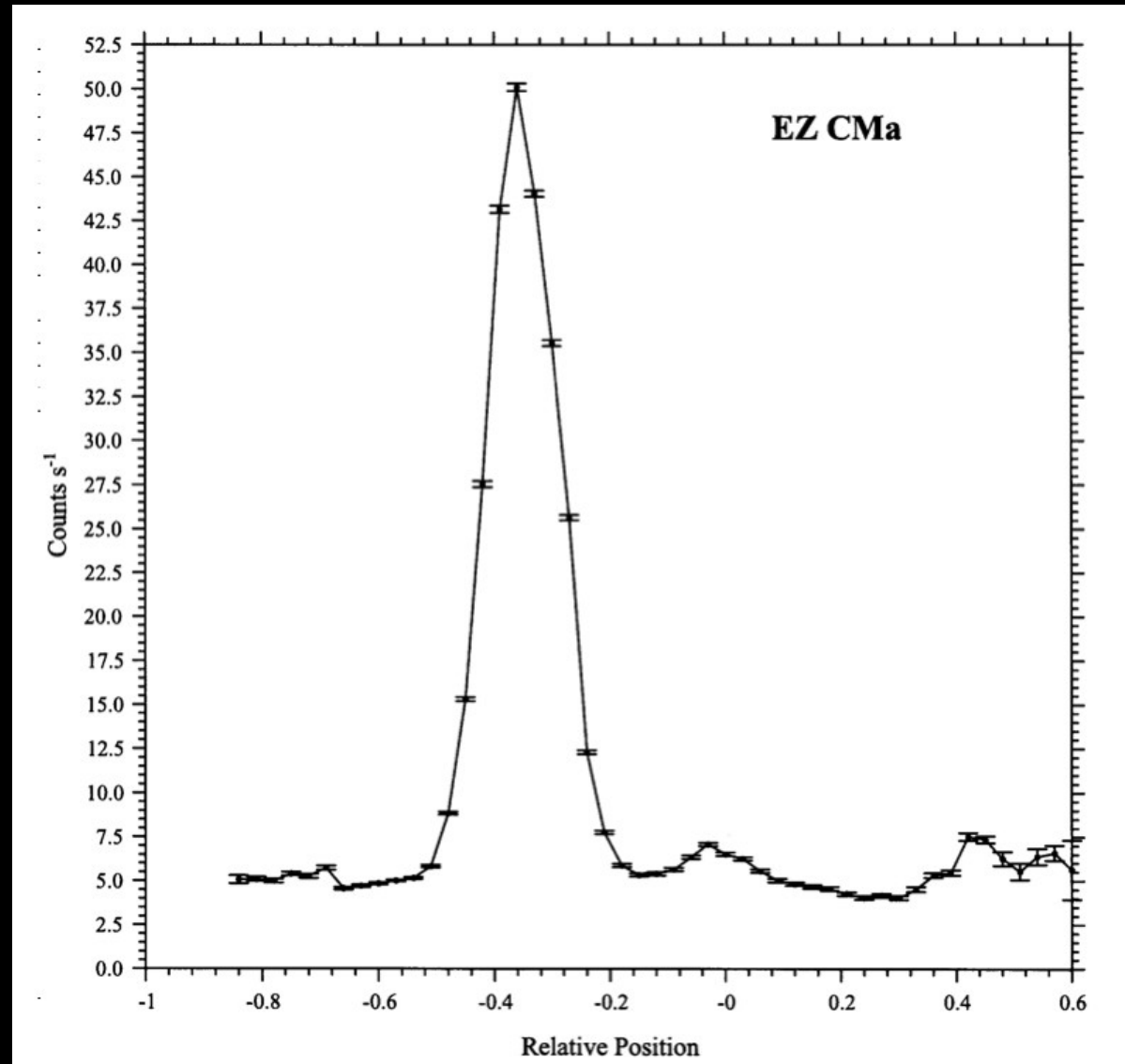


- Pioneer 10
- Pioneer 11
- Voyager 1
- Voyager 2

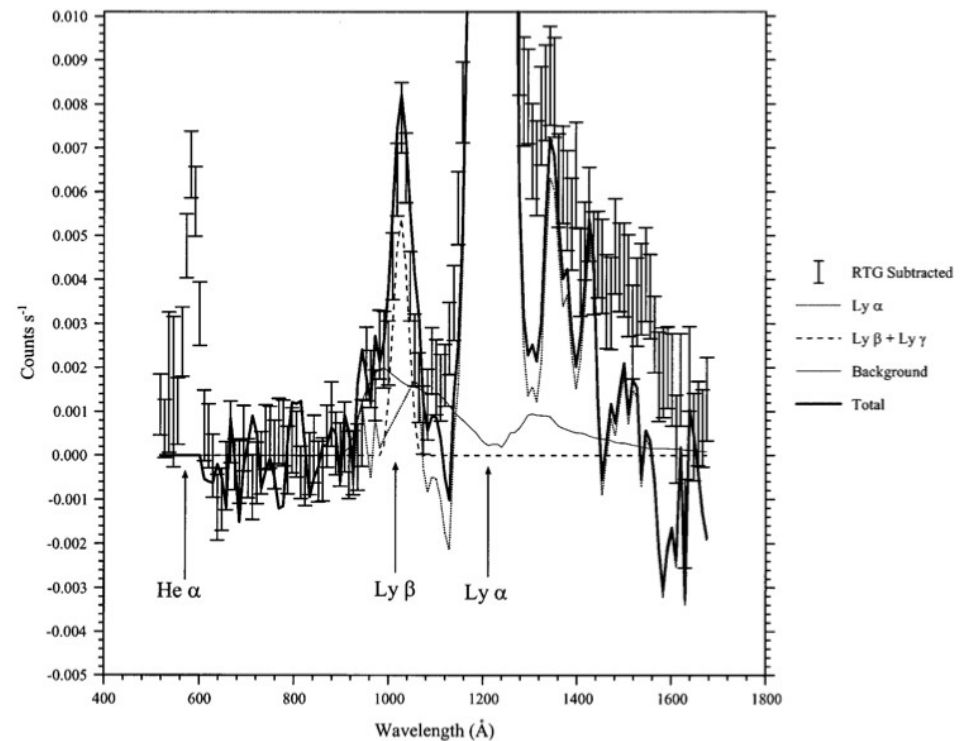
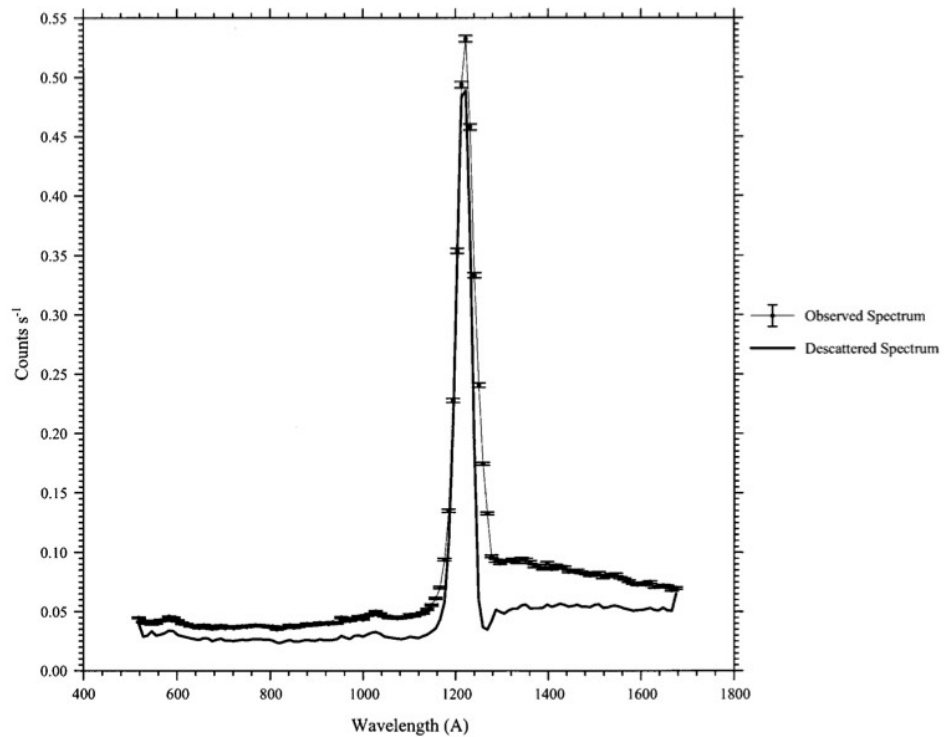
# Spacecraft

- Identical spacecraft.
  - 10 instruments most of which have been turned off.
  - Powered by RTG.
- Ultraviolet spectrometer (UVS) on each spacecraft.
  - Wavelength coverage: 500 – 1600 Å.
  - Resolution 38 Å for diffuse sources.
- V2 UVS observations ceased in 1998/316 (56 AU).
- V1 UVS observations continuing till 2010 (115 AU).
  - Upwind only since 2001(?).

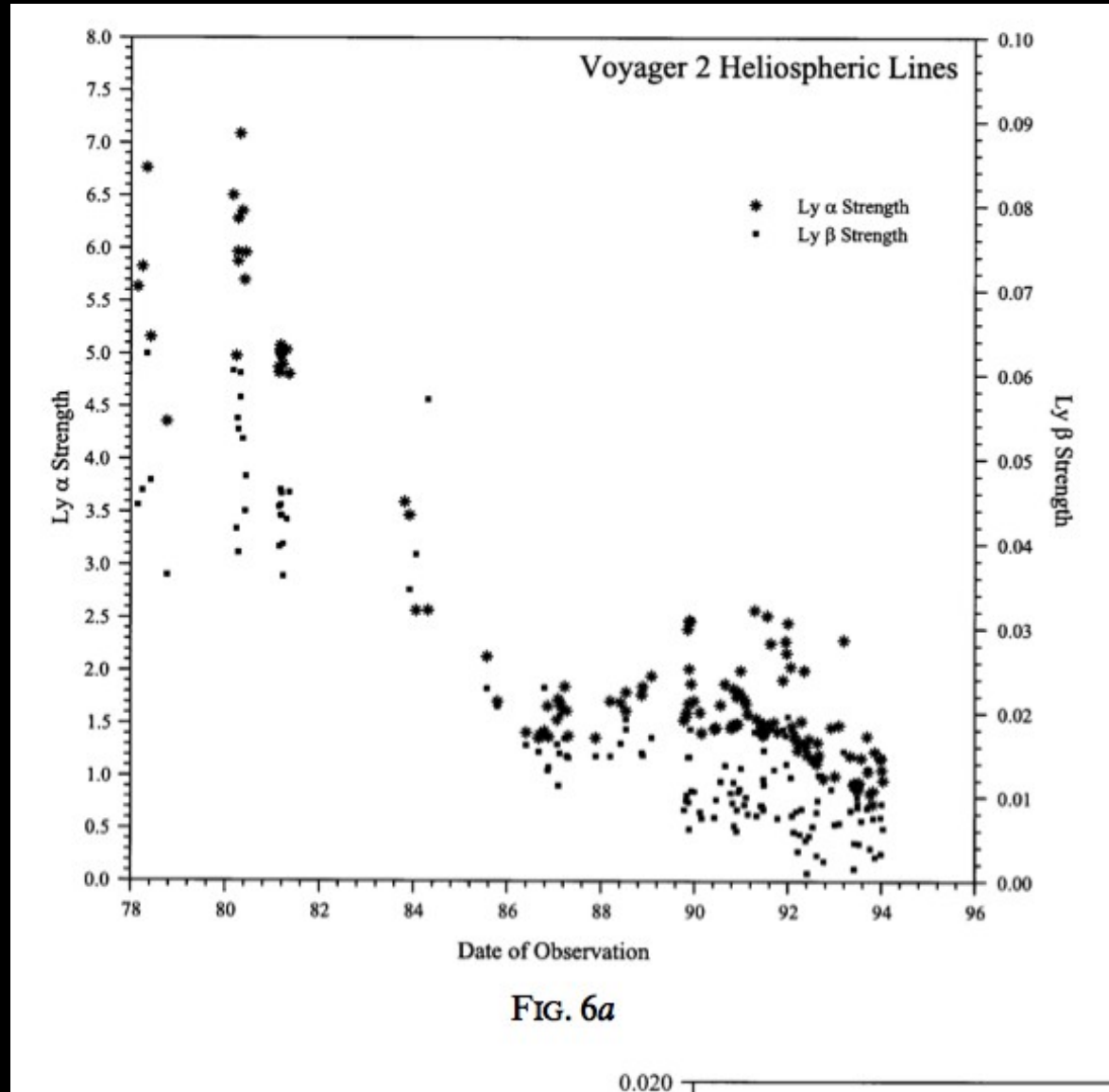
# Limit Cycle Motion



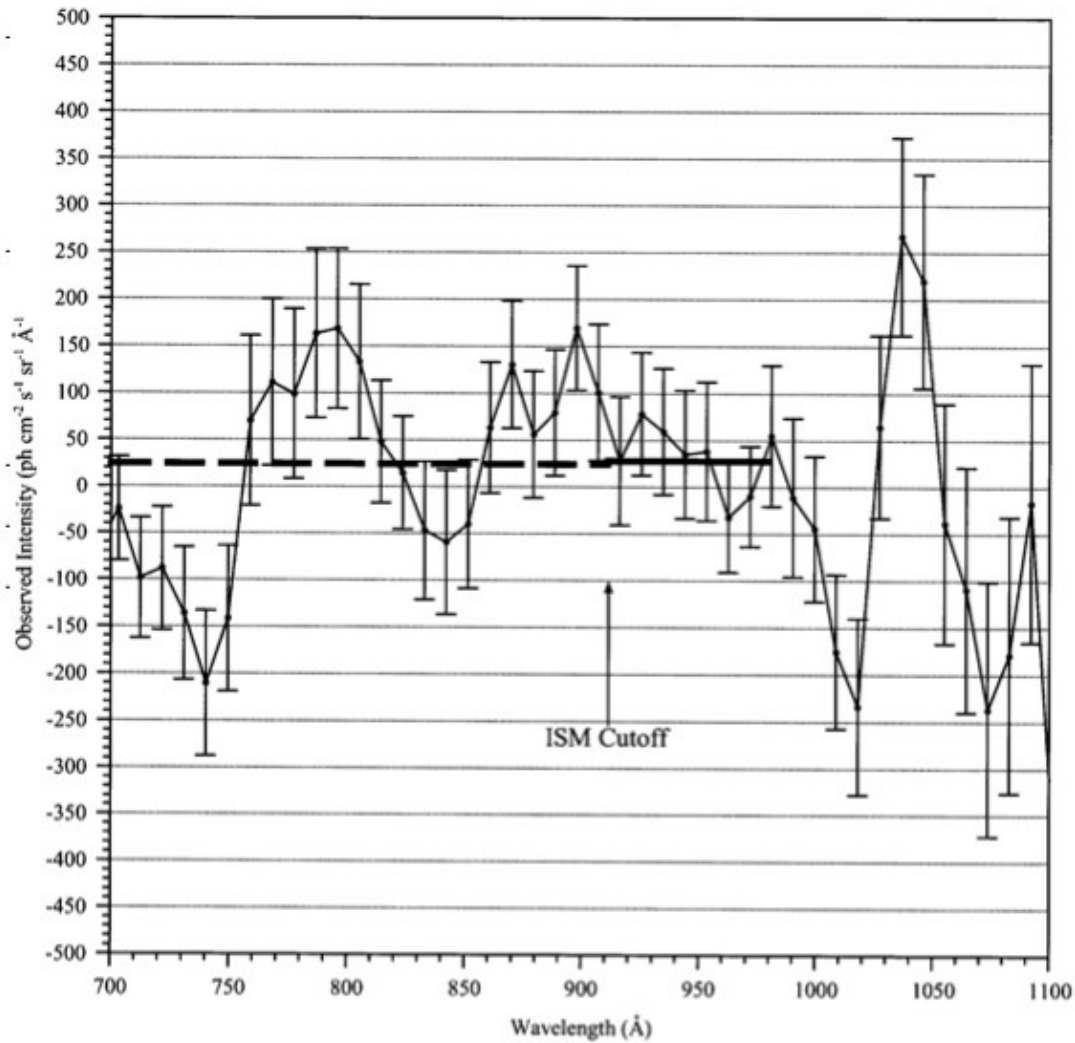
# UVS Spectrum



# Helispheric Lyman Lines



# Background Limit



Formal limit is  $30 \text{ ph cm}^{-2} \text{ s}^{-1} \text{ \AA}^{-1}$



# FUV Diffuse Sky

