

UVEX 2023: First Community Workshop

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51 years ago...



The ultraviolet spectrum of zeta Tauri

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This report describes a study of the ultraviolet spectrum of the R-shell star, zeta Tauri. The observational material consists of high-dispersion spectrograms obtained from a rocket experiment **launched in November 1972**. The spectra cover the wavelength interval, 1100-2050 Å, with a resolution of about 0.1 Å. The u.v. stellar lines indicate that (1) the star has an effective temperature as high as 27000K, (2) the stellar atmosphere appears to have serious abundance deficiencies in carbon and silicon, (3) the velocity field in the atmosphere is complicated but shows evidence for outward acceleration and differential rotation.

Sara Heap attended the UVEX 2023 workshop!

What is the goal of UVEX?

UVEX: How does the Universe work

- The Metal Poor Universe: early Universe, dwarf galaxies
- The Pan-chromatic Universe: FUV through radio
- Understanding comes through through spectroscopy

The landscape

Spektr-UF (Russia)

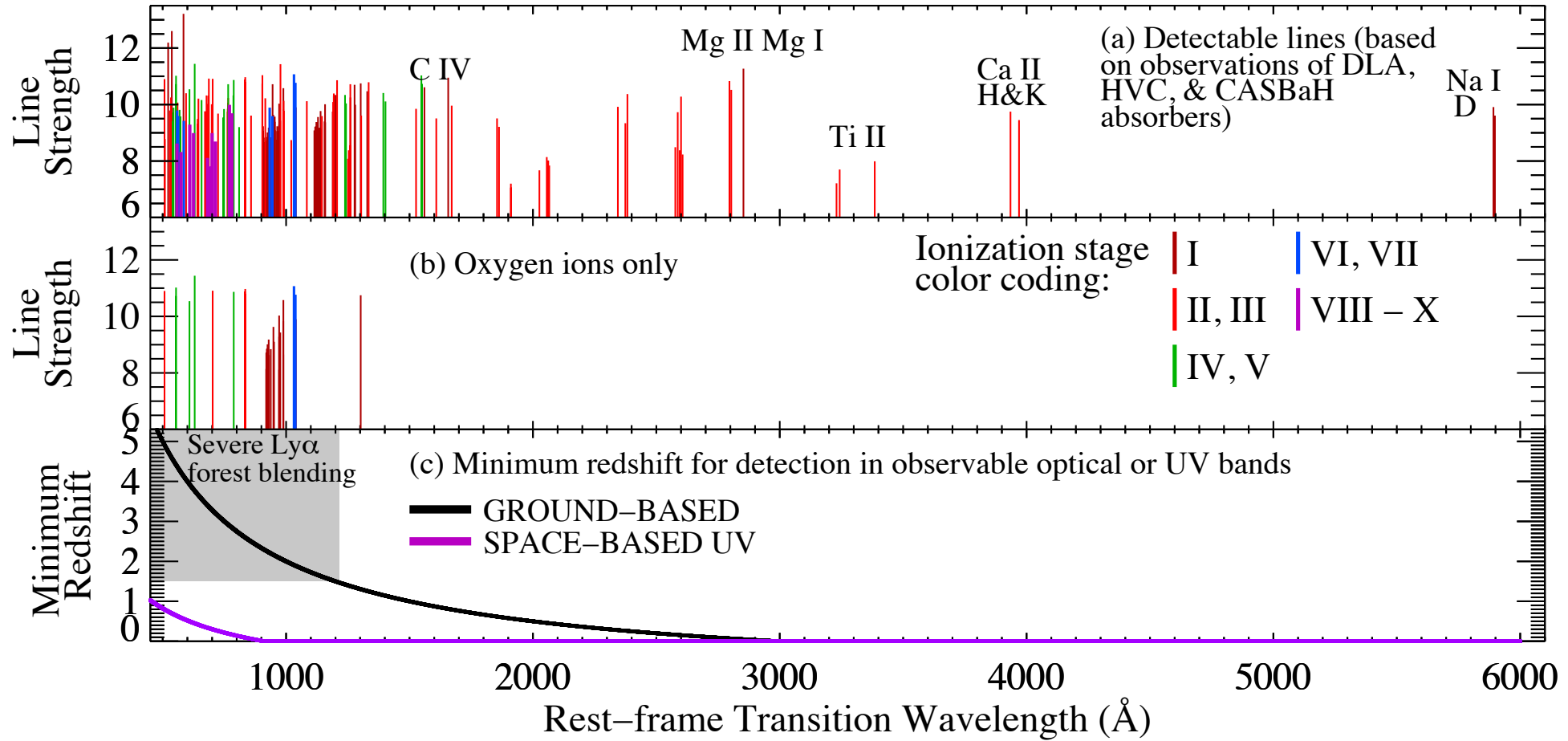
Chinese Space Station Telescope (China)

CASTOR/INSIST (Canada, India)

FUV: critical & unique diagnostics

DISCOVERY SPACE

Most Previous QSO Absorber Studies Use These Lines



Spectroscopy on demand

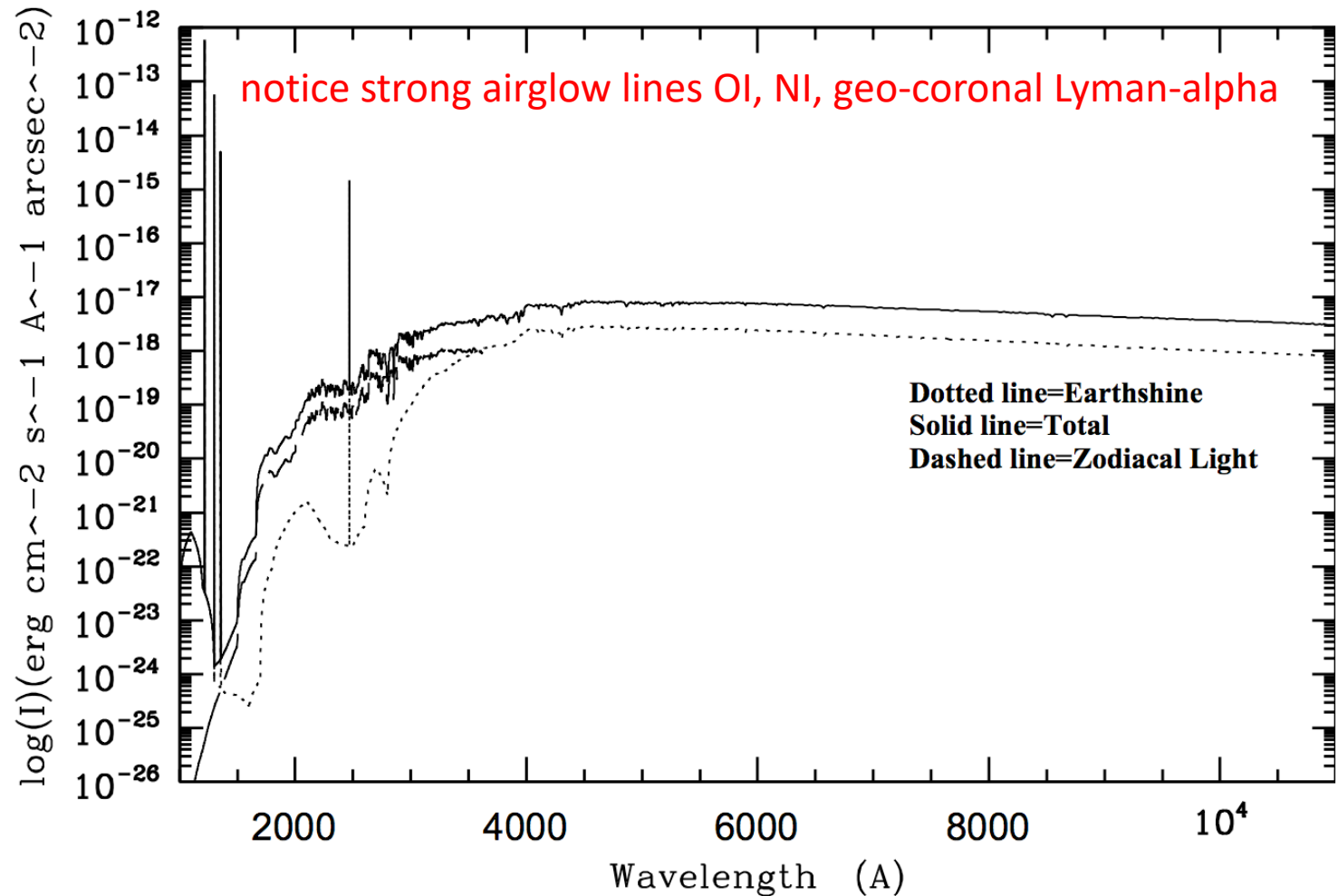
Supernovae

Ly_alpha	NIII	1750	OIV	1342	MGII	2800
HeII	1640	NIII	1805	OIV	1407	
			OIV	2493		
HeII	3203	NIII	1885		AlIII	1860
		NIII	2740	Ov	1371	
CIII	1175		Ov	2785		
CIII	2297	NIV	1719			
		NIV	3480	OVI	1037	
CIV	1107			OVI	1080	
CIV	1169	NV	1240	OVI	1122	
CIV	1230			OVI	1171	
CIV	1549					
CIV	2404					
CIV	2423					

UVEX: low(est) background

The spectrum of the sky as seen by HST

The spectrum of the sky as seen by Hubble



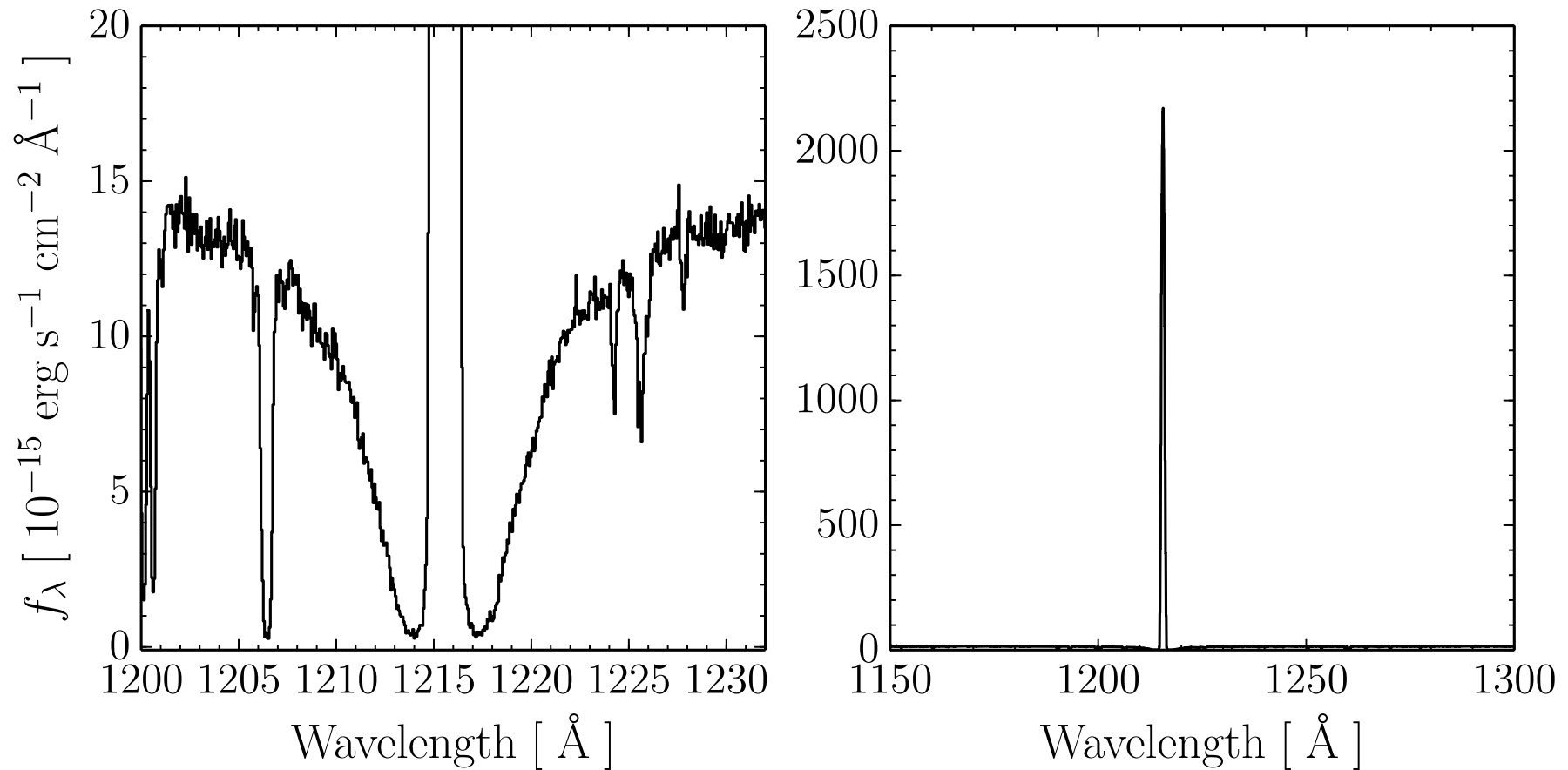
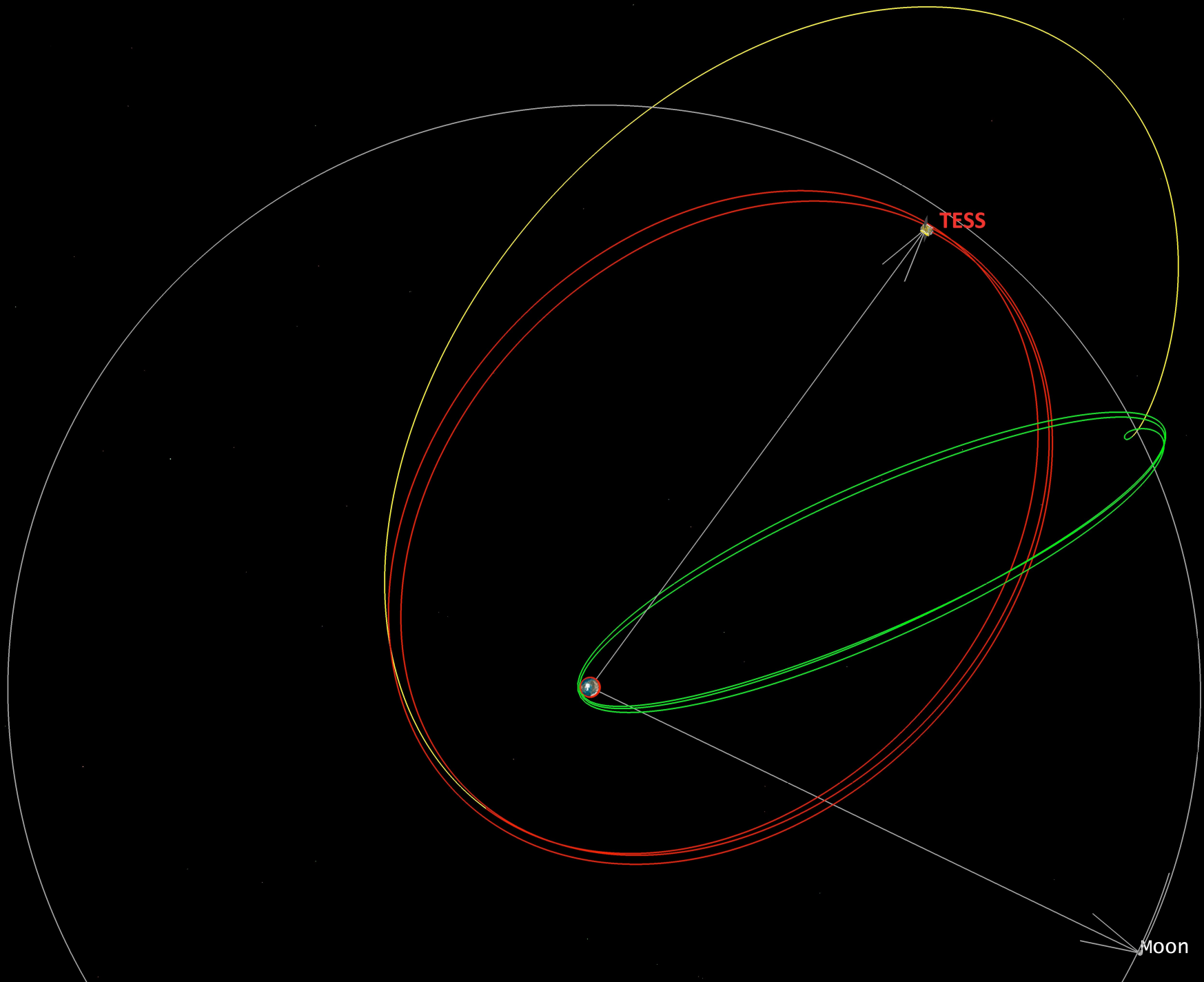
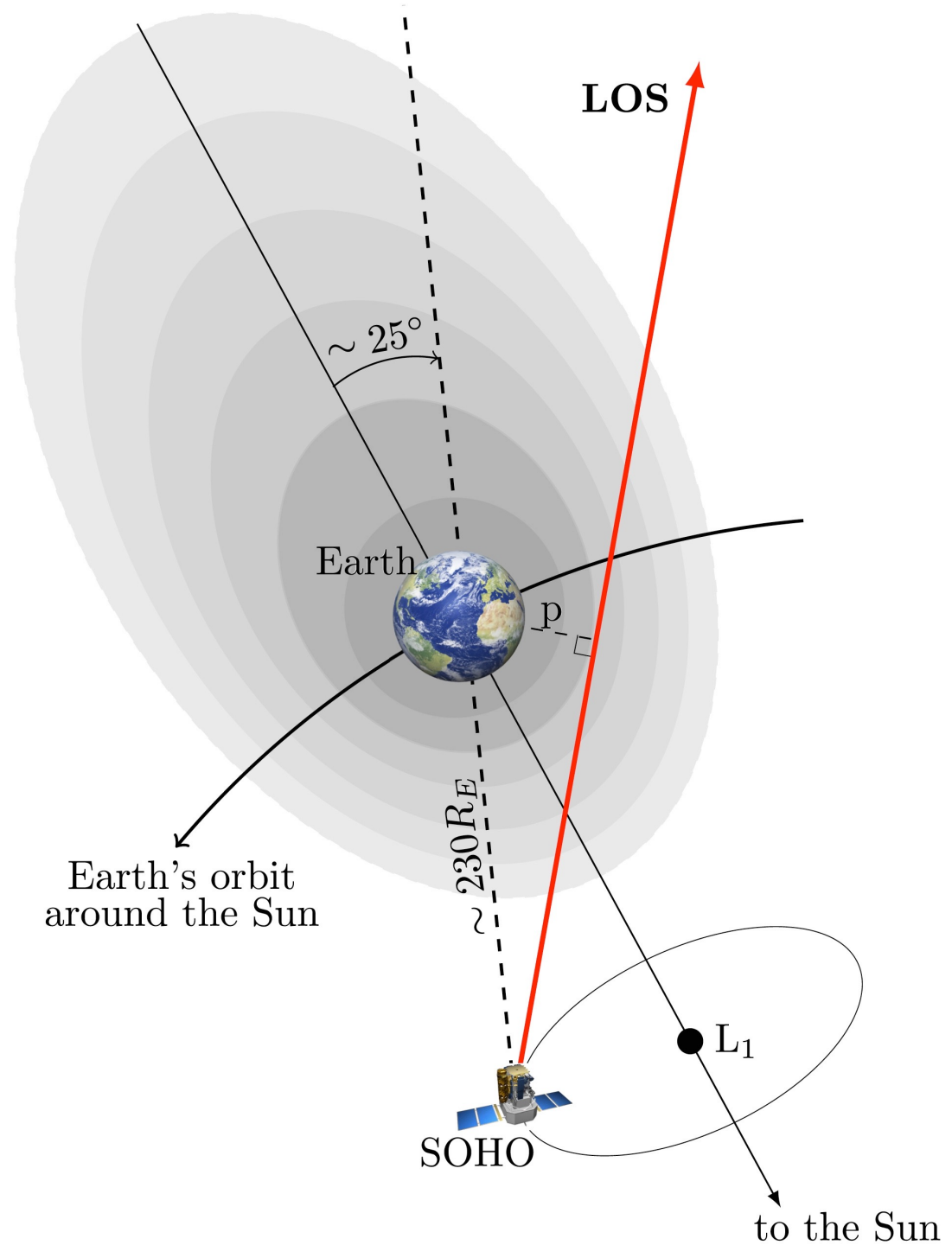
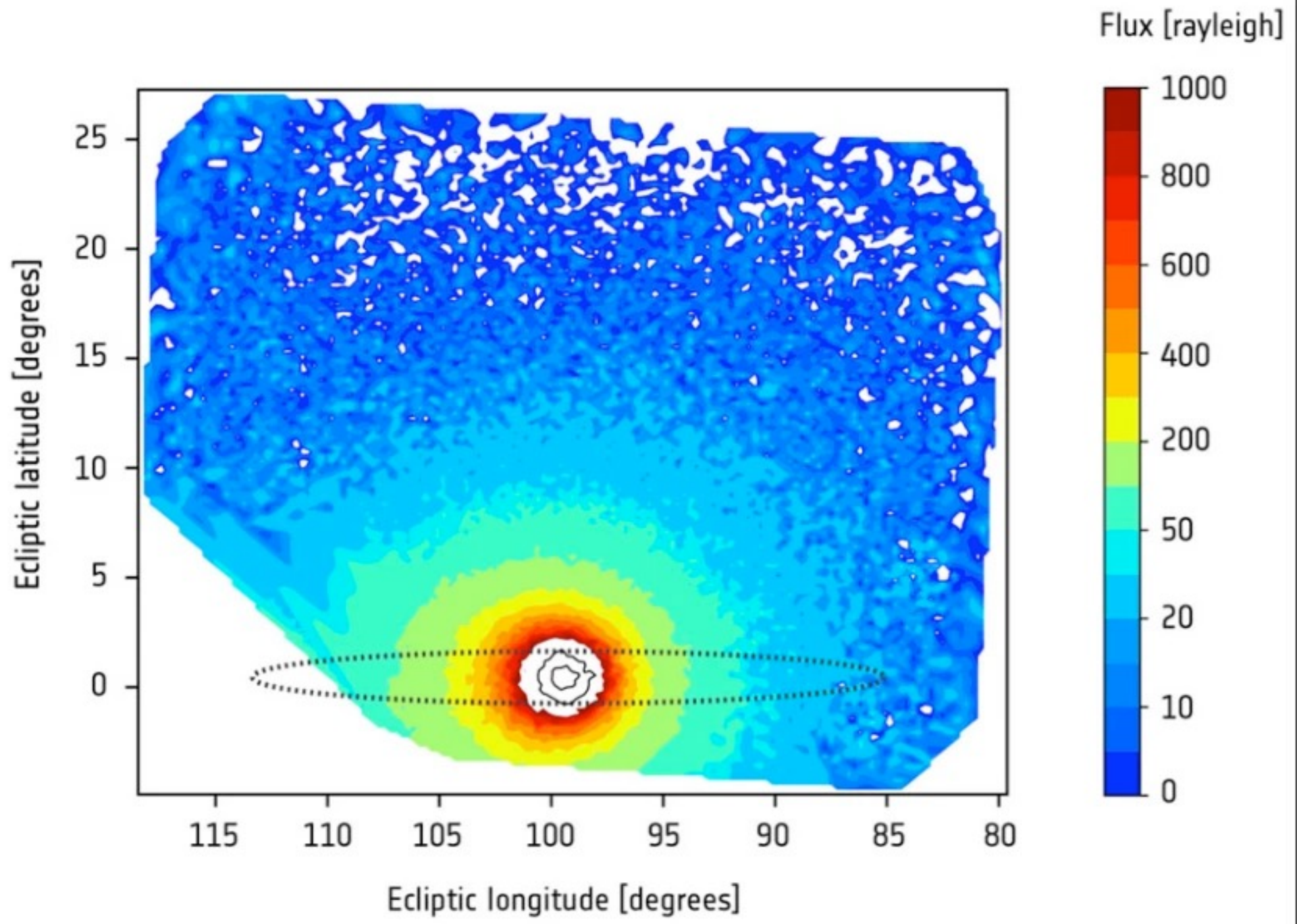


Fig. 4.4 The ultraviolet spectrum of BL Lac object 1ES1553+113, taken with the HST/COS. *Left* shows a zoom around the Ly α wavelength, and *right* shows an extended range in wavelength and flux. *These data were obtained from the HST Spectroscopic Legacy Archive (HSLA)*

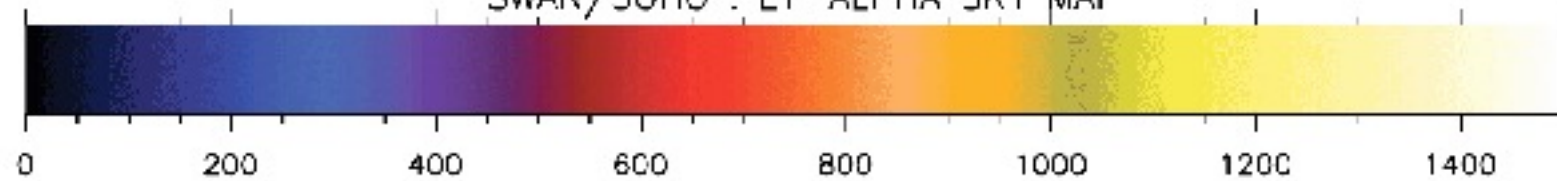




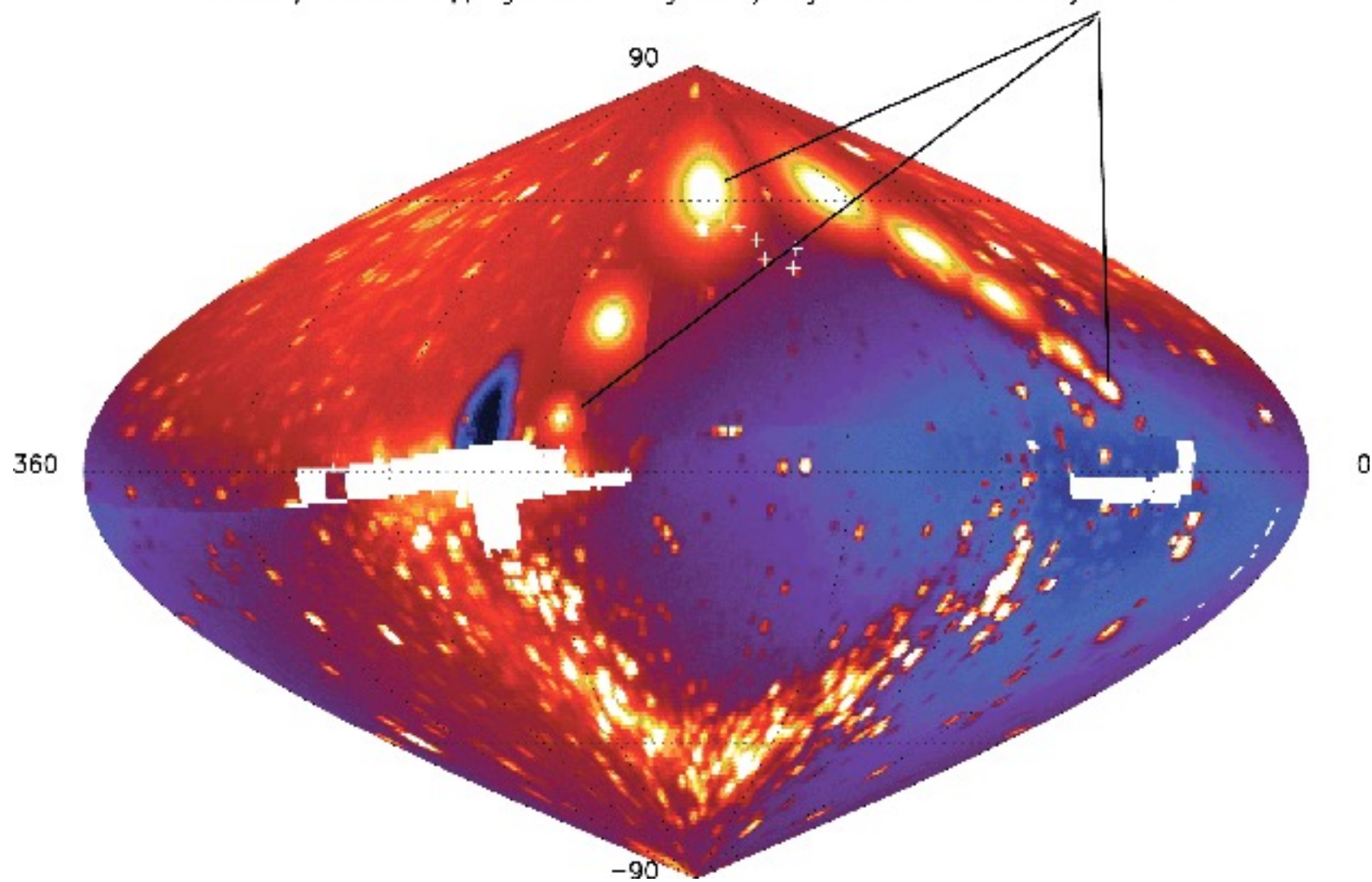


Swan-Soho
Baliukin et al.

SWAN/SOHO : LY-ALPHA SKY MAP



SOHO / SWAN : Mapping and tracking the hydrogen cloud of comet Hyakutake





The Ultraviolet Explorer

Thank you for attending this meeting

Kendall Kleinberg (LOC)
Hannah Earnshaw (SOC)
Harry Teplitz (SOC)
Dan Stern (SOC)