

COS-GTO: NUV Spectra of Bright Kuiper Belt Objects

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Abstract

NUV spectra of Kuiper Belt Objects (KBOs) other than Pluto have never yet been obtained. We seek to use COS's sensitivity to determine NUV KBO reflectance slopes and to compare/contrast different KBO spectra by observing two of the brightest. We plan to observe 2005 FY9 ($V=17.0$) for one HST orbit, and 2003 EL61 ($V = 17.5$) for two orbits, using three grating positions in each case to cover the full NUV band. These particular KBOs are known to be somewhat different, prominently showing solid methane (2005 FY9) and water ice (2003 EL61) absorption in near-IR spectra. 2003 EL61 is also unique for its elongated shape; its rapid, 3.9-hour rotation period; and the presence of two moons.

Investigators:

	Investigator	Institution	Country
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Number of investigators: 2

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Target Summary:

Target	RA	Dec	Magnitude
2005-FY9			V = 17.0 +/- 0.5, F(2650)=1.5E-16
2003-EL61			V = 17.5 +/- 0.5, F(2650)=9.0E-17

Observing Summary:

Target	Config Mode and Spectral Elements	Flags	Orbits
2005-FY9	COS/NUV Spectroscopic G230L		1
	COS/NUV Spectroscopic G230L		
	COS/NUV Spectroscopic G230L		
2003-EL61	COS/NUV Spectroscopic G230L		2
	COS/NUV Spectroscopic G230L		
	COS/NUV Spectroscopic G230L		

Total prime orbits: 3

This is a COS GTO project, no scientific justification is needed.