COS-GTO: An absorption study of galactic intermediate velocity clouds using hot stars in globular clusters

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Scientific Category: ISM AND CIRCUMSTELLAR MATTER

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Abstract

We shall use UV bright hot post-AGB stars located within the globular clusters of NGC 5139, NGC 6752, NGC 7078, NGC 6205, NGC 5272 and NGC 1904 to sample the UV absorption properties of the intervening line-of-sight interstellar gas. Such sight-lines pass through several intermediate velocity clouds (IVC?s) thought to be located within 5 kpc of our Galaxy, thus allowing the physical and chemical state of this gas to be probed and compared with the properties of interstellar gas located in the galactic disk. Elemental abundances of the IVC gas shall be derived in order to determine a possible origin for these in-falling galactic satellite cloud structures.

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Investigators:

	Investigator	Institution	Country
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Number of investigators: 2

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Target Summary:

Target	RA	Dec	Magnitude
NGC5139-UIT-1	13 26 45.0000	-47 27 7.00	V = 13.12 +/- 0.1, F(1300) = 1.90E-13
NGC5139-UIT-2	13 26 52.8000	-47 29 8.00	V = 15.0 +/- 2.0, F(1300) = 0.75E-13
NGC5139-ROA-5701	13 27 29.0100	-47 22 47.00	V = 13.2 +/- 0.2, F(1300) = 5.00E-13
NGC6205-BARNARD29	16 41 33.7000	+36 26 7.90	V = 13.14 +/- 0.2, F(1300)=4.5E-13
NGC7078-K648	21 29 59.4000	+12 10 26.00	V = 14.5 +/- 1.0, F(1300)=2.0E-13
NGC7078-ZNG1	21 29 58.1000	+12 11 44.00	V = 14.98 +/- 0.1, F(1300)=1.0E-13
NGC6752-BOUN-1754	19 11 8.9000	-59 52 20.70	V = 15.99 +/- 0.1, F(1300) = 1.20E-13
NGC6752-UIT-1	19 01 0.0000	-59 59 46.40	V = 13.7 +/- 0.5, F(1300) = 2.00E-13
NGC5272-ZNG1	13 42 18.8000	+28 26 0.80	V = 14.5 +/- 2.0, F(1300) = 3.00E-14
NGC1904-F1179	05 24 11.9000	-24 32 19.10	V = 18.0 +/- 2.0, F(1300) = 2.80E-14

Observing Summary:

Target	Config Mode and Spectral Elements	Flags	Orbits
NGC5139-UIT-1	COS/FUV Spectroscopic G130M		1
	COS/FUV Spectroscopic G160M		
NGC5139-UIT-2	COS/FUV Spectroscopic G130M		2
	COS/FUV Spectroscopic G160M		
NGC5139-ROA-5701	COS/FUV Spectroscopic G130M		1
	COS/FUV Spectroscopic G160M		

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Target	Config Mode and Spectral Elements	Flags	Orbits
NGC6205-BARNARD29	COS/FUV Spectroscopic G130M		1
	COS/FUV Spectroscopic G160M		
NGC7078-K648	COS/FUV Spectroscopic G130M		1
	COS/FUV Spectroscopic G160M		
NGC7078-ZNG1	COS/FUV Spectroscopic G130M		2
	COS/FUV Spectroscopic G160M		
NGC6752-BOUN-1754	COS/FUV Spectroscopic G130M	CVZ	1
	COS/FUV Spectroscopic G160M		
NGC6752-UIT-1	COS/FUV Spectroscopic G130M	CVZ	1
	COS/FUV Spectroscopic G160M		
NGC5272-ZNG1	COS/FUV Spectroscopic G130M		3
	COS/FUV Spectroscopic G160M		
NGC1904-F1179	COS/FUV Spectroscopic G130M		4
	COS/FUV Spectroscopic G160M		

Total prime orbits: 17

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