



16512 - WFC3/IR Time-Dependent Sensitivity in Staring Mode (Clusters)

Cycle: 28, Proposal Category: CAL/WFC3

(Availability Mode: RESTRICTED)

INVESTIGATORS

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VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) M-4	WFC3/IR	1	03-Aug-2021 11:00:14.0	yes
02	(1) M-4	WFC3/IR	1	03-Aug-2021 11:00:15.0	yes

2 Total Orbits Used

ABSTRACT

The WFC3/IR detector photometric sensitivity is typically characterized by the measurement of isolated, standard spectrophotometric white dwarf stars. To supplement those observations, we seek to measure fluxes of hundreds of stars in stellar clusters over time, to achieve higher precision than using a single star. In this program, we propose to repeat observations from previous observations of M4 (Program 14725) to mitigate effects from different observation configurations.

OBSERVING DESCRIPTION

We propose two visits of WFC3/IR observations of M4. Both visits will be executed with the same exposure parameters, but will be scheduled approximately 3 months apart, to best sample the time dependence of the sensitivity within the window in which the target is visible. Each visit will

Proposal 16512 (STScI Edit Number: 0, Created: Tuesday, August 3, 2021 at 10:00:15 AM Eastern Standard Time) - Overview

be composed of 4 exposures, the first two in F110W and the latter two in F160W. The F110W images will use 14 samples with the SPARS50 sample sequence to match those taken in 14725. Due to the shorter orbit duration in 2021 (compared to 14725 in 2017), the latter two exposures will use an NSAMP of 13, to avoid visibility overrun. To mitigate persistence, POSTARGS of 2.5 arcseconds in X and Y will be used between exposures, to match the observations of 14725.

Proposal 16512 - Visit 01 - WFC3/IR Time-Dependent Sensitivity in Staring Mode (Clusters)

Visit	Proposal 16512, Visit 01, scheduling					Tue Aug 03 15:00:15 GMT 2021				
	Diagnostic Status: No Diagnostics									
	Scientific Instruments: WFC3/IR									
	Special Requirements: BETWEEN 20-AUG-2021:00:00:00 AND 15-SEP-2021:00:00:00									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(1)	M-4	RA: 16 23 41.7160 (245.9238167d) Dec: -26 30 19.01 (-26.50528d) Equinox: J2000			V=5.9		Reference Frame: ICRS		
Comments: Category=STELLAR CLUSTER Description=[GLOBULAR CLUSTER]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) M-4	WFC3/IR, MULTIACCUM, IR-UVIS-FIX	F110W	SAMP-SEQ=SPARS 50; NSAMP=14	POS TARG -5,5		652.938154 Secs (652.938 Secs) [==>]	[1]
	2		(1) M-4	WFC3/IR, MULTIACCUM, IR-UVIS-FIX	F110W	SAMP-SEQ=SPARS 50; NSAMP=14	POS TARG -2.5,2.5		652.938154 Secs (652.938 Secs) [==>]	[1]
	3		(1) M-4	WFC3/IR, MULTIACCUM, IR-UVIS-FIX	F160W	SAMP-SEQ=SPARS 50; NSAMP=13	POS TARG 0,0		602.937703 Secs (602.938 Secs) [==>]	[1]
	4		(1) M-4	WFC3/IR, MULTIACCUM, IR-UVIS-FIX	F160W	SAMP-SEQ=SPARS 50; NSAMP=13	POS TARG -7.5,7.5		602.937703 Secs (602.938 Secs) [==>]	[1]
Orbit Structure	Orbit 1 Server Version: 20210514 GS Acq Exp. 1 Exp. 2 Exp. 3 Exp. 4 Reconfig Occultation Pointing Maneuver Pointing Maneuver Pointing Maneuver Unused Orbital Visibility = 21 0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 sec									

Proposal 16512 - Visit 02 - WFC3/IR Time-Dependent Sensitivity in Staring Mode (Clusters)

Visit	Proposal 16512, Visit 02, scheduling					Tue Aug 03 15:00:15 GMT 2021				
	Diagnostic Status: No Diagnostics									
	Scientific Instruments: WFC3/IR									
	Special Requirements: ORIENT 180D TO 180D FROM 01									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(1)	M-4	RA: 16 23 41.7160 (245.9238167d) Dec: -26 30 19.01 (-26.50528d) Equinox: J2000			V=5.9		Reference Frame: ICRS		
	Comments: Category=STELLAR CLUSTER Description=[GLOBULAR CLUSTER]									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) M-4	WFC3/IR, MULTIACCUM, IR-UVIS-FIX	F110W	SAMP-SEQ=SPARS 50; NSAMP=14	POS TARG -5,5		652.938154 Secs (652.938 Secs) [==>]	[1]
	2		(1) M-4	WFC3/IR, MULTIACCUM, IR-UVIS-FIX	F110W	SAMP-SEQ=SPARS 50; NSAMP=14	POS TARG -2.5,2.5		652.938154 Secs (652.938 Secs) [==>]	[1]
	3		(1) M-4	WFC3/IR, MULTIACCUM, IR-UVIS-FIX	F160W	SAMP-SEQ=SPARS 50; NSAMP=13	POS TARG 0,0		602.937703 Secs (602.938 Secs) [==>]	[1]
	4		(1) M-4	WFC3/IR, MULTIACCUM, IR-UVIS-FIX	F160W	SAMP-SEQ=SPARS 50; NSAMP=13	POS TARG -7.5,7.5		602.937703 Secs (602.938 Secs) [==>]	[1]
Orbit Structure	Orbit 1 Server Version: 20210514									