



12669 - Exploring the Bottom End of the White Dwarf Cooling Sequence in the Open Cluster NGC6819

Cycle: 19, Proposal Category: GO

(Availability Mode: SUPPORTED)

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	(2) NGC-6819-SHIFTED	ACS/WFC WFC3/UVIS	1	16-Jun-2011 21:09:00.0	yes
02	(2) NGC-6819-SHIFTED	ACS/WFC WFC3/UVIS	1	16-Jun-2011 21:09:07.0	yes
03	(2) NGC-6819-SHIFTED	ACS/WFC WFC3/UVIS	1	16-Jun-2011 21:09:13.0	yes
04	(2) NGC-6819-SHIFTED	ACS/WFC WFC3/UVIS	1	16-Jun-2011 21:09:19.0	yes

4 Total Orbits Used

ABSTRACT

The recent discovery by our group of an unexpectedly bright end of the white-dwarf (WD) luminosity function (LF) of the metal-rich, old open cluster NGC 6791 casts serious doubts on our understanding of the physical process which rules the formation and the cooling of WDs. It is clear at this point that the theory badly needs more observations.

Here we propose WFC3/UVIS and ACS/WFC HST observations reaching the bottom end of the WD LF, for the first time in a solar-metallicity, 2.5-Gyr-old, populous open cluster: NGC 6819.

OBSERVING DESCRIPTION

This is also a two-epoch astrometric program.

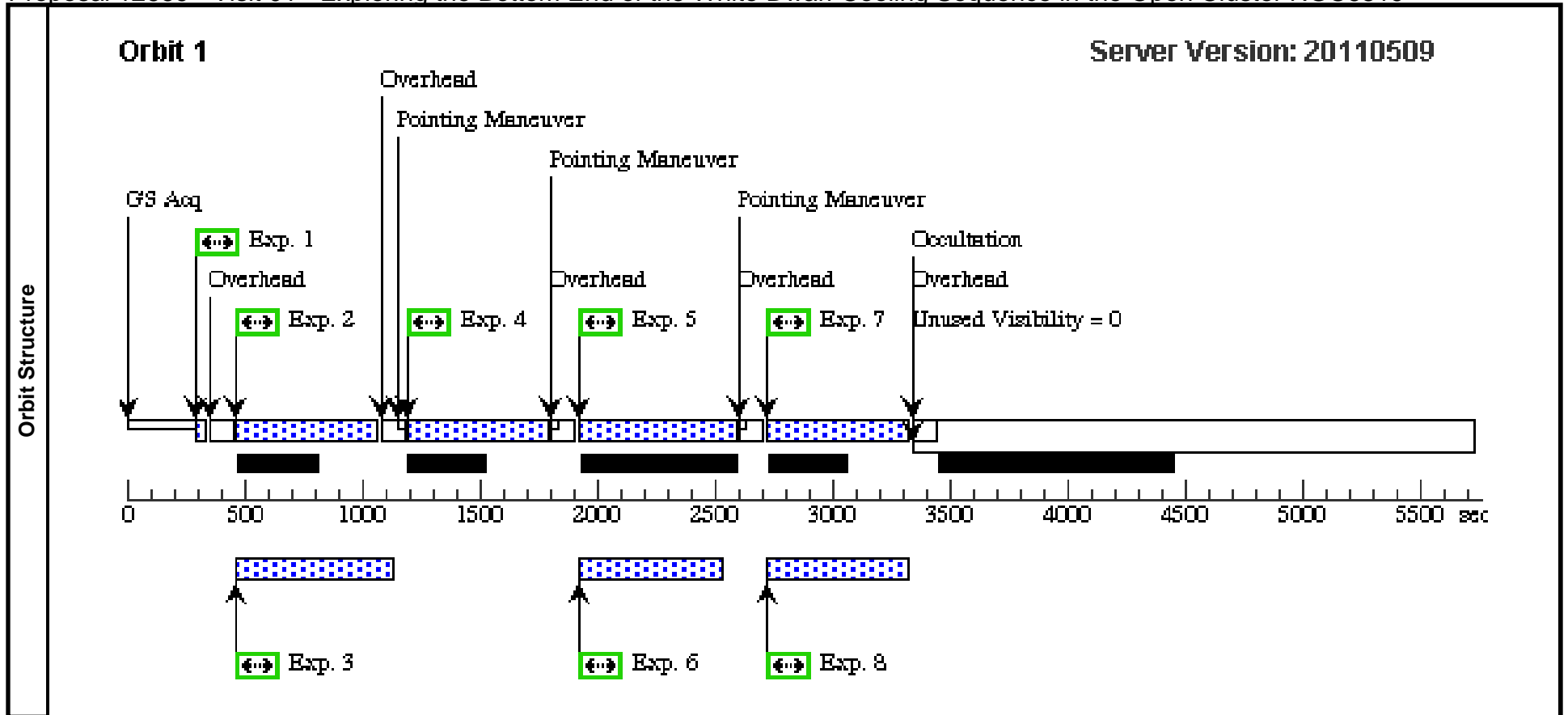
The first epoch is in this Cycle17, for which we were allocated with 8 orbits.

It is important to collect the first epoch data as soon as possible (ideally before the end of 2008, or as soon as possible in any case) so to enlarge the time-base-line when the second epoch will be collected (4 orbits in Cycle 19).

Proposal 12669 - Visit 01 - Exploring the Bottom End of the White Dwarf Cooling Sequence in the Open Cluster NGC6819

Fri Jun 17 01:09:23 GMT 2011

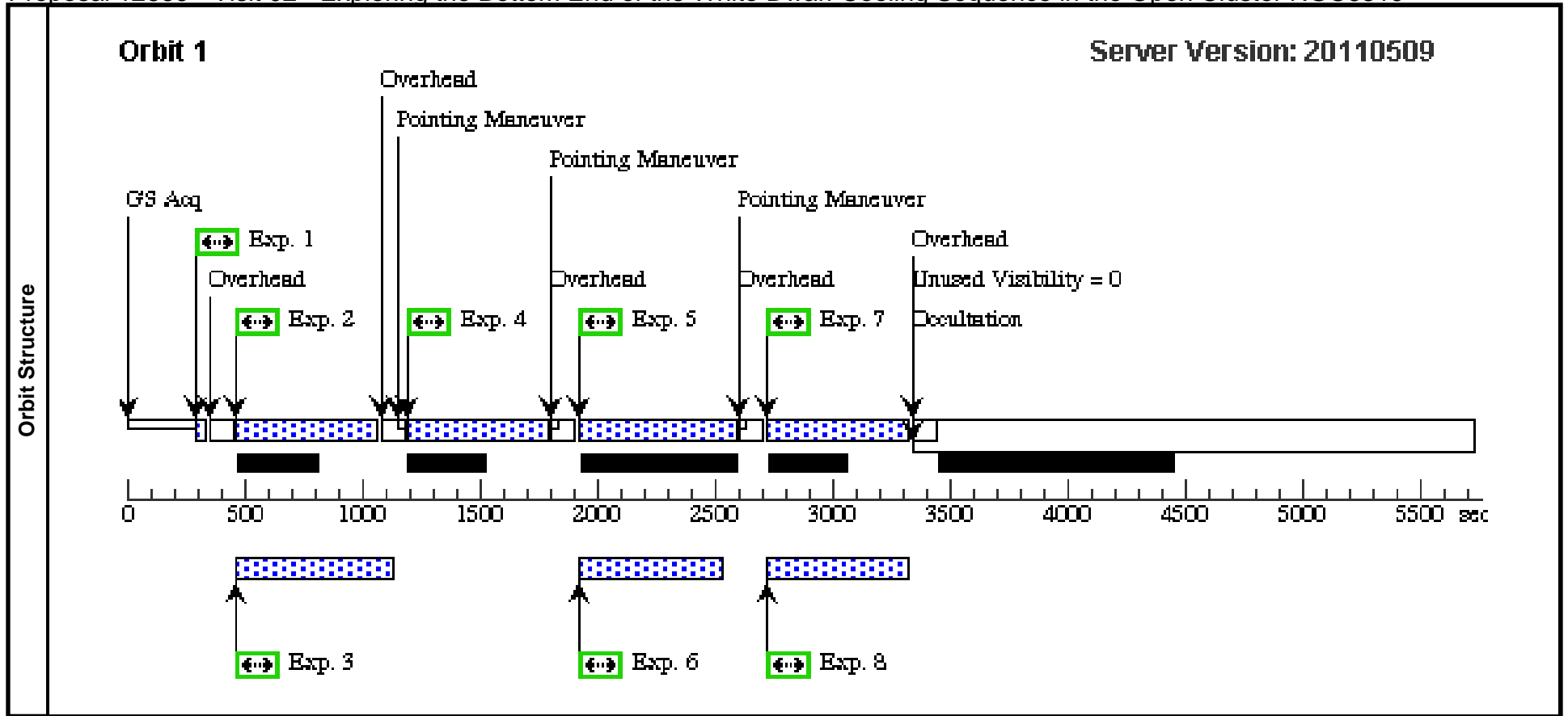
Visit	Proposal 12669, Visit 01, implementation Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 79D TO 81 D; AFTER 30-SEP-2012:23:59:59																																																																																																			
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	2	(2) NGC-6819-SHIFTED	(2) NGC-6819-SHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W	CR-SPLIT=NO	POS TARG -120,-120	Prime + Parallel Group 2-3 in Visit 01	600 Secs [==>]	[1]																																																																																										
	3	(2) NGC-6819-SHIFTED	(2) NGC-6819-SHIFTED	ACS/WFC, ACCUM, WFCENTER	F814W	CR-SPLIT=NO; GAIN=2.0		Prime + Parallel Group 2-3 in Visit 01	466 Secs [==>]	[1]																																																																																										
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Proposal 12669 - Visit 02 - Exploring the Bottom End of the White Dwarf Cooling Sequence in the Open Cluster NGC6819

Fri Jun 17 01:09:24 GMT 2011

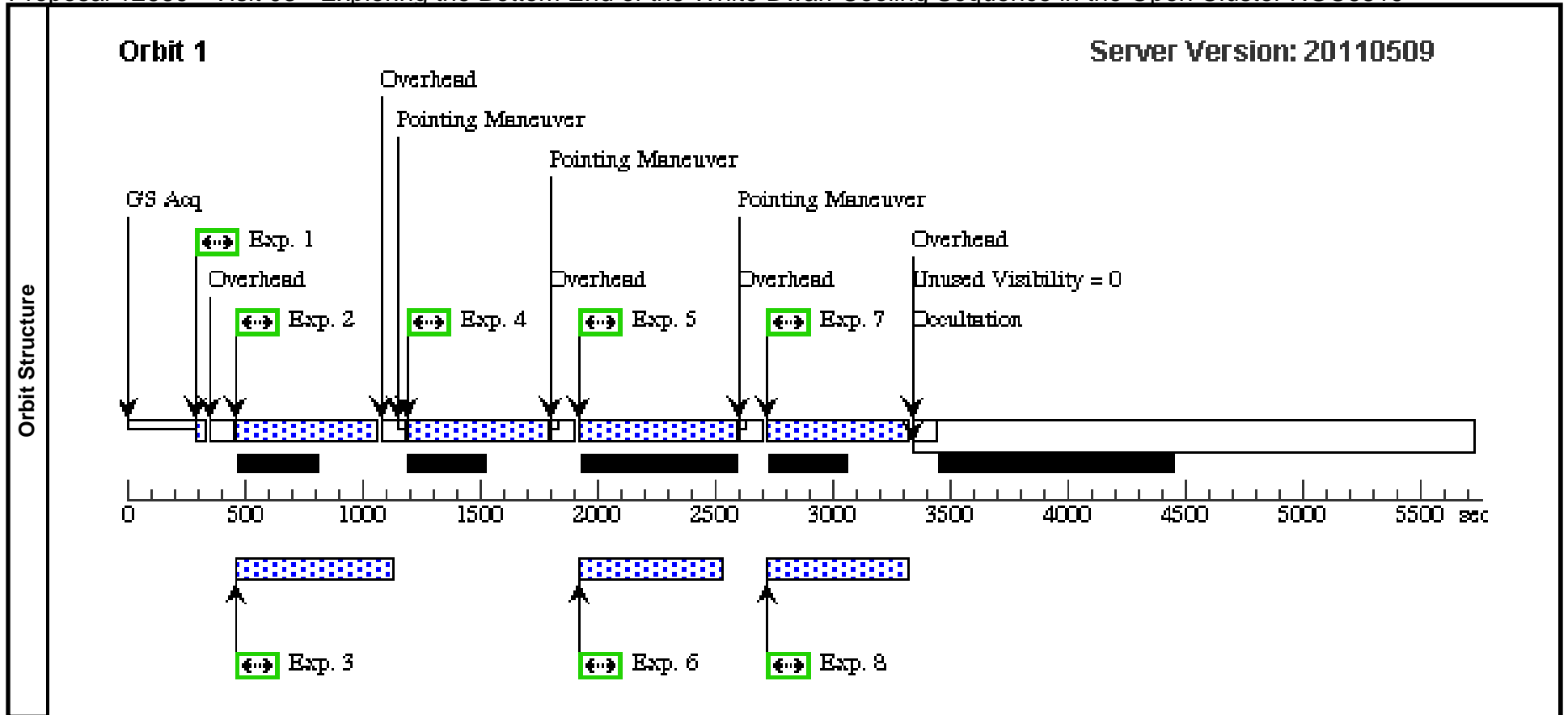
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Fixed Targets		#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
		(2)	NGC-6819-SHIFTED	RA: 19 41 17.7000 (295.3237500d) Dec: +40 11 13.20 (40.18700d) Equinox: J2000		V=25+/-2	Reference Frame: ICRS			
	<i>Comments: This object was generated by the targetselector and retrieved from the NED database. + plus a shift</i>									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NGC-6819-SHIF TED	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W	CR-SPLIT=NO	POS TARG 40,40		10 Secs [==>]	[1]
	2		(2) NGC-6819-SHIF TED	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W	CR-SPLIT=NO	POS TARG 40,40	Prime + Parallel Gro up 2-3 in Visit 02	600 Secs [==>]	[1]
	3		(2) NGC-6819-SHIF TED	ACS/WFC, ACCUM, WFCENTER	F814W	CR-SPLIT=NO; GAIN=2.0		Prime + Parallel Gro up 2-3 in Visit 02	466 Secs [==>]	[1]
	4		(2) NGC-6819-SHIF TED	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W	CR-SPLIT=NO	POS TARG 60,80		600 Secs [==>]	[1]
	5		(2) NGC-6819-SHIF TED	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W	CR-SPLIT=NO	POS TARG 80,60	Prime + Parallel Gro up 5-6 in Visit 02	670 Secs [==>]	[1]
	6		(2) NGC-6819-SHIF TED	ACS/WFC, ACCUM, WFCENTER	F814W	CR-SPLIT=NO; GAIN=2.0		Prime + Parallel Gro up 5-6 in Visit 02	490 Secs [==>]	[1]
	7		(2) NGC-6819-SHIF TED	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W	CR-SPLIT=NO	POS TARG 100,100	Prime + Parallel Gro up 7-8 in Visit 02	606 Secs [==>]	[1]
	8		(2) NGC-6819-SHIF TED	ACS/WFC, ACCUM, WFCENTER	F814W	CR-SPLIT=NO; GAIN=2.0		Prime + Parallel Gro up 7-8 in Visit 02	480 Secs [==>]	[1]



Proposal 12669 - Visit 03 - Exploring the Bottom End of the White Dwarf Cooling Sequence in the Open Cluster NGC6819

Fri Jun 17 01:09:24 GMT 2011

Visit	Proposal 12669, Visit 03, implementation Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: SAME ORIENT AS 01; AFTER 30-SEP-2012:23:59:59										
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Fixed Targets		#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
		(2)	NGC-6819-SHIFTED	RA: 19 41 17.7000 (295.3237500d) Dec: +40 11 13.20 (40.18700d) Equinox: J2000		V=25+/-2	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the NED database. + plus a shift</i>											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
	1		(2) NGC-6819-SHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W	CR-SPLIT=NO	POS TARG 40,-120		10 Secs [==>]	[1]	
	2		(2) NGC-6819-SHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W	CR-SPLIT=NO	POS TARG 40,-120	Prime + Parallel Group 2-3 in Visit 03	600 Secs [==>]	[1]	
	3		(2) NGC-6819-SHIFTED	ACS/WFC, ACCUM, WFCENTER	F814W	CR-SPLIT=NO; GAIN=2.0		Prime + Parallel Group 2-3 in Visit 03	466 Secs [==>]	[1]	
	4		(2) NGC-6819-SHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W	CR-SPLIT=NO	POS TARG 60,-80		600 Secs [==>]	[1]	
	5		(2) NGC-6819-SHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W	CR-SPLIT=NO	POS TARG 80,-100	Prime + Parallel Group 5-6 in Visit 03	670 Secs [==>]	[1]	
	6		(2) NGC-6819-SHIFTED	ACS/WFC, ACCUM, WFCENTER	F814W	CR-SPLIT=NO; GAIN=2.0		Prime + Parallel Group 5-6 in Visit 03	490 Secs [==>]	[1]	
	7		(2) NGC-6819-SHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W	CR-SPLIT=NO	POS TARG 100,-60	Prime + Parallel Group 7-8 in Visit 03	606 Secs [==>]	[1]	
	8		(2) NGC-6819-SHIFTED	ACS/WFC, ACCUM, WFCENTER	F814W	CR-SPLIT=NO; GAIN=2.0		Prime + Parallel Group 7-8 in Visit 03	480 Secs [==>]	[1]	



Proposal 12669 - Visit 04 - Exploring the Bottom End of the White Dwarf Cooling Sequence in the Open Cluster NGC6819

Fri Jun 17 01:09:25 GMT 2011

Visit	Proposal 12669, Visit 04, implementation Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: SAME ORIENT AS 01; AFTER 30-SEP-2012:23:59:59										
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	1		(2) NGC-6819-SHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W	CR-SPLIT=NO	POS TARG -120,40		10 Secs [==>]	[1]	
	2		(2) NGC-6819-SHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W	CR-SPLIT=NO	POS TARG -120,40	Prime + Parallel Group 2-3 in Visit 04	600 Secs [==>]	[1]	
	3		(2) NGC-6819-SHIFTED	ACS/WFC, ACCUM, WFCENTER	F814W	CR-SPLIT=NO; GAIN=2.0		Prime + Parallel Group 2-3 in Visit 04	466 Secs [==>]	[1]	
	4		(2) NGC-6819-SHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W	CR-SPLIT=NO	POS TARG -100,80		600 Secs [==>]	[1]	
	5		(2) NGC-6819-SHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W	CR-SPLIT=NO	POS TARG -80,60	Prime + Parallel Group 5-6 in Visit 04	670 Secs [==>]	[1]	
	6		(2) NGC-6819-SHIFTED	ACS/WFC, ACCUM, WFCENTER	F814W	CR-SPLIT=NO; GAIN=2.0		Prime + Parallel Group 5-6 in Visit 04	490 Secs [==>]	[1]	
	7		(2) NGC-6819-SHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W	CR-SPLIT=NO	POS TARG -60,100	Prime + Parallel Group 7-8 in Visit 04	606 Secs [==>]	[1]	
	8		(2) NGC-6819-SHIFTED	ACS/WFC, ACCUM, WFCENTER	F814W	CR-SPLIT=NO; GAIN=2.0		Prime + Parallel Group 7-8 in Visit 04	480 Secs [==>]	[1]	

