



## 12183 - The magnetar SGR 0418+5729 in the optical and infra-red

Cycle: 18, 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	(1) SGR0418+2729	ACS/WFC WFC3/IR	2	18-Aug-2010 15:31:55.0	yes

2 Total Orbits Used

### ABSTRACT

The newly-discovered SGR 0418+5729 offers a unique opportunity to study the optical and infra-red emission of a magnetar: it is closer and less extincted than any other. The optical/IR counterpart has not yet been identified, so we ask for a short observation to find it, and establish its usefulness for further detailed study.

### OBSERVING DESCRIPTION

This program is simple:

The main goal of this program is deep imaging of SGR 0418+5729, whose coordinates were accurately measured from X-ray images obtained with

Chandra.

The observations involve exposures at standard dithered pointings.

The brightest star in the field now has  $V \sim 14$ ,  $J \sim 12$ , and is  $\sim 30''$  from the region of interest. Depending on the orientation, three possible  $V \sim 10$  stars may be in the field, but at  $\sim 1.5'$  distance. With the ACS/WFC1 aperture, there is no chance of their bleed columns to approach the target area.

Since there are no filter or camera changes within an orbit, and the program is short and simple, there should be no further considerations.

Proposal 12183 (STScI Edit Number: 0, Created: Wednesday, August 18, 2010 3:31:56 PM EDT) - Overview

Visit		<b>Proposal 12183, Visit 01, implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/IR, ACS/WFC Special Requirements: (none)						Wed Aug 18 19:31:56 GMT 2010		
Patterns	#	Primary Pattern		Secondary Pattern		Exposures				
	(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.67 Angle Between Sides=69.05 Center Pattern=false			(1)				
(2)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false			(2)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	SGR0418+2729	RA: 04 18 33.8670 (64.6411125d) Dec: +57 32 22.91 (57.53970d) Equinox: J2000		V=25	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(1) SGR0418+2729	ACS/WFC, ACCUM, WFC1	F606W				Pattern 1, Exps 1-1 (1)	500 Secs [==>621.0 Secs (Pattern 1)] [==>621.0 Secs (Pattern 2)] [==>621.0 Secs (Pattern 3)] [==>621.0 Secs (Pattern 4)]	[1]
2	(1) SGR0418+2729	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPAR S50				Pattern 2, Exps 2-2 (2) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	[2]	

