



## 1182 - NIRCam GTO - IRDC Mapping

Cycle: 1, Proposal Category: GTO

### INVESTIGATORS

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### OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
Observation Folder				
	1	snake-1-L	NIRCam Imaging	(1) SNAKE-FIELD-1
	2	Snake-2	NIRCam Imaging	(4) SNAKE-FIELD-2
	3	IRDC18223	NIRCam Imaging	(2) IRDC18223
	4	Brick	NIRCam Imaging	(3) BRICK

### ABSTRACT

Using NICER extinction mapping, we will characterize the structure of selected Infrared Dark Clouds (IRDC).

Three well-studied IRDCs will be targeted: G0.253+0.016 (the Brick), G11.11-0.12 (the Snake), and IRDC 18223. Using the unprecedented infrared sensitivity of NIRCam, we will take deep observations using the F115W, F182M, F356W, and F444W filters. The expected background star density at these low-latitude fields should permit probing  $A_V > 50$  with 3-arcsecond angular resolution.

### OBSERVING DESCRIPTION

Environments for Massive Star Formation: Extinction Mapping of Infrared Dark Clouds. Using the Near Infrared Color Excess Method, we will use the great sensitivity and angular resolution of NIRCam to use background star counts to measure the column densities of infrared dark clouds.

Proposal 1182 - Targets - NIRCам GTO - IRDC Mapping

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	SNAKE-FIELD-1	RA: 18 10 29.5702 (272.6232092d) Dec: -19 23 7.28 (-19.38536d) Equinox: J2000		
<i>Comments:</i> <i>Category=ISM</i> <i>Description=[Cold neutral medium, Dark interstellar clouds, Dust nebulae, Interstellar clouds, Protostars]</i>				
(2)	IRDC18223	RA: 18 25 8.4863 (276.2853596d) Dec: -12 45 25.24 (-12.75701d) Equinox: J2000		
<i>Comments:</i> <i>Category=ISM</i> <i>Description=[Dark interstellar clouds, Dense interstellar clouds, Protostars]</i>				
(3)	BRICK	RA: 17 46 9.6995 (266.5404146d) Dec: -28 42 15.00 (-28.70417d) Equinox: J2000		
<i>Comments:</i> <i>Category=ISM</i> <i>Description=[Dark interstellar clouds, Interstellar clouds, Protostars]</i>				
(4)	SNAKE-FIELD-2	RA: 18 10 7.5000 (272.5312500d) Dec: -19 28 30.00 (-19.47500d) Equinox: J2000		
<i>Comments:</i> <i>Category=ISM</i> <i>Description=[Dark interstellar clouds, Dense interstellar clouds, Dust nebulae, Protostars]</i>				

Fixed Targets

Proposal 1182 - Observation 1 - NIRCam GTO - IRDC Mapping

Thu Oct 14 23:00:09 GMT 2021

<b>Observation</b>	<p><b>Proposal 1182, Observation 1: snake-1-L</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRCam Imaging</p>									
<b>Diagnostics</b>	<p>(Visit 1:1) Warning (Form): Data Excess over lower threshold</p> <p>(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>									
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>		<b>Targ. Coord. Corrections</b>			<b>Miscellaneous</b>		
	(1)	SNAKE-FIELD-1	RA: 18 10 29.5702 (272.6232092d)							
			Dec: -19 23 7.28 (-19.38536d)							
			Equinox: J2000							
	<p><i>Comments:</i></p> <p><i>Category=ISM</i></p> <p><i>Description=[Cold neutral medium, Dark interstellar clouds, Dust nebulae, Interstellar clouds, Protostars]</i></p>									
<b>Template</b>	<b>Module</b>				<b>Subarray</b>					
	ALL				FULL					
<b>Dithers</b>	<b>#</b>	<b>Primary Dither Type</b>		<b>Primary Dithers</b>		<b>Subpixel Dither Type</b>		<b>Dither Size</b>	<b>Subpixel Positions</b>	
	1	FULLBOX		6TIGHT		SMALL-GRID-DITHER			2	
<b>Spectral Elements</b>	<b>#</b>	<b>Short Filter</b>	<b>Long Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Total Integrations</b>	<b>Total Dithers</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	F115W	F356W	SHALLOW2	7	1	12	12	4122.92	
	2	F200W	F444W	SHALLOW2	7	1	12	12	4122.92	

Proposal 1182 - Observation 2 - NIRCcam GTO - IRDC Mapping

Thu Oct 14 23:00:09 GMT 2021

<b>Observation</b>	<b>Proposal 1182, Observation 2: Snake-2</b> <b>Diagnostic Status: Warning</b> Observing Template: NIRCcam Imaging									
	(Visit 2:1) Warning (Form): Data Excess over lower threshold (Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
<b>Diagnosics</b>										
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>			<b>Targ. Coord. Corrections</b>		<b>Miscellaneous</b>		
	(4)	SNAKE-FIELD-2	RA: 18 10 7.5000 (272.5312500d) Dec: -19 28 30.00 (-19.47500d) Equinox: J2000							
<i>Comments:                  Category=ISM                  Description=[Dark interstellar clouds, Dense interstellar clouds, Dust nebulae, Protostars]</i>										
<b>Template</b>	<b>Module</b>					<b>Subarray</b>				
	ALL					FULL				
<b>Dithers</b>	<b>#</b>	<b>Primary Dither Type</b>		<b>Primary Dithers</b>		<b>Subpixel Dither Type</b>		<b>Dither Size</b>	<b>Subpixel Positions</b>	
	1	FULLBOX		6TIGHT		SMALL-GRID-DITHER			2	
<b>Spectral Elements</b>	<b>#</b>	<b>Short Filter</b>	<b>Long Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Total Integrations</b>	<b>Total Dithers</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	F115W	F356W	SHALLOW2	7	1	12	12	4122.92	
	2	F200W	F444W	SHALLOW2	7	1	12	12	4122.92	

Proposal 1182 - Observation 3 - NIRCam GTO - IRDC Mapping

Thu Oct 14 23:00:09 GMT 2021

<b>Observation</b>	<b>Proposal 1182, Observation 3: IRDC18223</b> <b>Diagnostic Status: Warning</b> Observing Template: NIRCam Imaging									
	(Visit 3:1) Warning (Form): Data Excess over lower threshold (Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
<b>Diagnosics</b>										
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>		<b>Targ. Coord. Corrections</b>			<b>Miscellaneous</b>		
	(2)	IRDC18223	RA: 18 25 8.4863 (276.2853596d) Dec: -12 45 25.24 (-12.75701d) Equinox: J2000							
Comments: Category=ISM Description=[Dark interstellar clouds, Dense interstellar clouds, Protostars]										
<b>Template</b>	<b>Module</b>					<b>Subarray</b>				
	ALL					FULL				
<b>Dithers</b>	<b>#</b>	<b>Primary Dither Type</b>		<b>Primary Dithers</b>		<b>Subpixel Dither Type</b>		<b>Dither Size</b>	<b>Subpixel Positions</b>	
	1	FULLBOX		6TIGHT		SMALL-GRID-DITHER			2	
<b>Spectral Elements</b>	<b>#</b>	<b>Short Filter</b>	<b>Long Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Total Integrations</b>	<b>Total Dithers</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	F115W	F356W	SHALLOW2	7	1	12	12	4122.92	
	2	F200W	F444W	SHALLOW2	7	1	12	12	4122.92	

Proposal 1182 - Observation 4 - NIRCam GTO - IRDC Mapping

Thu Oct 14 23:00:09 GMT 2021

<b>Observation</b>	<p><b>Proposal 1182, Observation 4: Brick</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRCam Imaging</p>									
<b>Diagnostics</b>	<p>(Visit 4:1) Warning (Form): Data Excess over lower threshold</p> <p>(Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 4:2) Warning (Form): Data Excess over lower threshold</p> <p>(Visit 4:2) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>									
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>			<b>Miscellaneous</b>			
	(3)	BRICK	RA: 17 46 9.6995 (266.5404146d) Dec: -28 42 15.00 (-28.70417d) Equinox: J2000							
	<p><i>Comments:</i>  <i>Category=ISM</i>  <i>Description=[Dark interstellar clouds, Interstellar clouds, Protostars]</i></p>									
<b>Template</b>	<b>Module</b>				<b>Subarray</b>					
	ALL				FULL					
<b>Mosaic</b>	<b>Rows</b>	<b>Columns</b>	<b>Row Overlap %</b>	<b>Column Overlap %</b>	<b>Row shift</b>	<b>Column shift</b>	<b>Tile Order</b>			
	2	1	5.0	10.0	0.0	0.0	ROW_MAJOR			
<b>Dithers</b>	<b>#</b>	<b>Primary Dither Type</b>		<b>Primary Dithers</b>	<b>Subpixel Dither Type</b>		<b>Dither Size</b>	<b>Subpixel Positions</b>		
	1	FULLBOX		6TIGHT	SMALL-GRID-DITHER			2		
<b>Spectral Elements</b>	<b>#</b>	<b>Short Filter</b>	<b>Long Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Total Integrations</b>	<b>Total Dithers</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	F115W	F356W	SHALLOW2	7	1	12	12	4122.92	
	2	F200W	F444W	SHALLOW2	7	1	12	12	4122.92	
<b>Special Requirements</b>	<p>Group Visits within 53.0 Days</p> <p>Visits Same PA</p>									