



## 4368 - Completing the SMACS 0723 NIRISS WFSS EROs

Cycle: 2, Proposal Category: GO

### 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		NIRISS Wide Field Slitless Spectroscopy	(1) SMACS0723

### ABSTRACT

We propose to observe SMACS 0723 with NIRISS WFSS in the F150W filter to complete the Early Release Observations (EROs) of the field. The current NIRISS WFSS

EROs are limited to the F115W and F200W only, missing the F150W middle filter. The proposed F150W observations will enable a wealth of science (currently not achievable with the limited F115W and F200W coverage) for the  $z=0.39$  cluster galaxies and for background sources, including the first detailed spatially-resolved NIRISS spectroscopic study of an exceptional, highly-magnified cluster at cosmic noon. The proposed observations will ensure the long lasting legacy value of the NIRISS EROs of Webb's First Deep Field, and we therefore waive any proprietary time for a direct access of this data by the community.

### **OBSERVING DESCRIPTION**

We request observing the SMACS 0723 cluster with NIRISS in WFSS mode using the two orthogonal grisms (G150R and G150C) with the F150W filter. To maximize the fraction of traces dispersed on the detector for our primary targets of interest in the field, we require a V3 PA range between 235 and 245 degrees.

Proposal 4368 - Targets - Completing the SMACS 0723 NIRISS WFSS EROs

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
	(1)	SMACS0723	RA: 07 23 18.5783 (110.8274096d) Dec: -73 27 17.05 (-73.45474d) Equinox: J2000		
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> <i>Category=Clusters of Galaxies</i> <i>Description=[Brightest cluster galaxies, Galaxy groups, High-redshift clusters]</i>					

Proposal 4368 - Observation 1 - Completing the SMACS 0723 NIRISS WFSS EROs

Mon Jul 14 15:00:10 GMT 2025

<b>Observation</b>	<p><b>Proposal 4368, Observation 1</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRISS Wide Field Slitless Spectroscopy</p>											
<b>Diagnostics</b>	(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>		<b>Targ. Coord. Corrections</b>			<b>Miscellaneous</b>				
	(1)	SMACS0723	RA: 07 23 18.5783 (110.8274096d) Dec: -73 27 17.05 (-73.45474d) Equinox: J2000									
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Clusters of Galaxies</i></p> <p><i>Description=[Brightest cluster galaxies, Galaxy groups, High-redshift clusters]</i></p>											
<b>Dithers</b>	<b>#</b>	<b>Image Dithers</b>					<b>Pattern Size</b>					
	1	8					MEDIUM					
<b>Direct Image</b>	<b>#</b>	<b>Exposure Type</b>	<b>Filter</b>	<b>Grism</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Two Extra Dithers</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	DIRECT	F150W		NISRAPID	10	1	YES	1	1	118.104	
	2	DIRECT	F150W		NISRAPID	10	1	YES	4	4	472.418	
	3	DIRECT	F150W		NISRAPID	10	1	YES	3	3	354.313	
<b>Spectral Elements</b>	<b>#</b>	<b>Exposure Type</b>	<b>Filter</b>	<b>Grism</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>	
	1	GRISM	F150W	GR150R	NIS	8	1	8	8	2834.507		
	2	GRISM	F150W	GR150C	NIS	8	1	8	8	2834.507		
<b>Special Requirements</b>	Aperture PA Range 235.56126717 to 245.56126717 Degrees (V3 235.0 to 245.0)											