

Traceability Matrix, PPS Proposal Instructions

Chapter 30: NRSpec Fixed Slit Spectroscopy

Requirement #	Proposal, Visit, Exposure	Comment
Introduction		
NRS0001	661 1	NRSpec Fixed Slit Spectroscopy template exists
Target Acquisition Exposures		
NRS0002	661 1	Field: Target Acquisition Filter
NRS0003	661 1	Target Acquisition Filter, choose from list
NRS0004	661 1	Field: Acquisition Readout Pattern
NRS0006	661 1	Acquisition Readout Pattern, chose from list
NRS0007	661 1	Field: MSA Acquisition Configuration Filename(s)
NRS0008	661 1	MSA Acquisition Configuration Filename(s), specify filenames
NRS0009	661 1	Field: Reference Stars
NRS0010	661 1	Reference Stars, choose from list
Science Exposures		
NRS0013	661 1	Field: Slit
NRS0014	661 1	Slit, choose from list
NRS0027	661 1	Field Subarray
NRS0045	661 1	Subarray, choose DEFAULT or ALLSLITS
Dither Pattern		
NRS0348	661 1	Field: Primary Dither Position
NRS0349	661 1	Primary Dither Position, choose from list
NRS0350	661 1	Field: Sub-Pixel Dither Pattern
NRS0351	661 1	Sub-Pixel Dither Pattern, choose from list
NRS0015	661 1	Field: Grating/Filter
NRS0016	661 1	Grating/Filter, choose from list
NRS0017	661 1.01	Field: Science Readout Pattern
NRS0018	661 1.01	Science Readout Pattern, choose from list
NRS0019	661 1.01	Field: Science Number of Groups
NRS0020	661 1.01	Science Number of Groups, specify number
NRS0021	661 1.01	Field: Science Number of Integrations
NRS0022	661 1.01	Science Number of Integrations, specify number
NRS0030	661 1.01	Field: Autocal
NRS0308	661 1.01	Autocal, choose DEFAULT, NONE, or WAVECAL
Target Acquisition Exposure		
30.2.1.1 Target Acquisition Filter		
NRS0023	661 1	F140X
NRS0024	661 2	F110W
30.2.1.2 Acquisition Readout Pattern		
NRS0025	661 1	NRS
NRS0026	661 3	NRSRAPID
NRS0028	661 1	NRS integration time 127.2 (value doesn't match APT)
NRS0306	661 3	NRSRAPID integration time 31.8 (value doesn't match APT)
NRS0031	661 1	NINTS=1 (hardcoded, user can't change)
NRS0032	661 1	NGROUPS=3 (hardcoded, user can't change)
NRS0344		SUBARRAY value is FULL for calculating exposure times
30.2.1.3 MSA Acquisition Configuration Filename		
NRS0033	661 9	default is to have all MSA shutters open
NRS0034	661 1	specify MSA Acq Config Filename optional
30.2.1.4 Reference Stars		
NRS0035	904 10	minimum 8

NRS0036	904 11	maximum 20
NRS0035	904 10	maximum 20 is a hard limit, error
NRS0038	904 11	minimum 8 should be warning for now
Science Exposures		
Slit		
NRS0042	661 1	S200A1
NRS0043	661 2	S200A2
NRS0044	661 3	S200B1
NRS0046	661 5	S400A1
		S1600A1 (PR 83158)
NRS0512		S200A1 AND S200A2
NRS0047	661 1	S200A1 default subarray SUBS200A1
NRS0048	661 2	S200A2 default subarray SUBS200A2
NRS0049	661 3	S200B1 default subarray SUBS200B1
NRS0051	661 5	S400A1 default subarray SUBS400A1
		S1600A1 default subarray SUB2048 (PR 83158)
		S200A1 AND S200A2 default subarray ALLSLITS
		legal subarrays per slit (PR 67817)
Subarray		
NRS0052	661 1	DEFAULT
NRS0053	904 3	DEFAULT is default
NRS0054	661 2	ALLSLITS
NRS0055	can't verify	if DEFAULT is chosen then subarray that covers the specified slit will be chosen
Dither Pattern		
NRS0524		Dither pattern does not apply to target acq image
Primary "Down-the-slit" Dither Positions		
NRS0354	661 2	NONE
NRS0355	661 1	2
NRS0356	6582 14	3
NRS0357	6582 13	5
NRS0525	904 1	Primary Dither Position required, no default value
Sub-Pixel Dither Pattern		
NRS0358	661 2	NONE
NRS0359	661 8	SPECTRAL
NRS0360	661 1	SPATIAL
NRS0361	661 5	BOTH
NRS0514		Sub-Pixel Dither Pattern at each Primary position
NRS0068	904 2	Sub-Pixel Dither Pattern required, no default value
Grating/Filter		
NRS0526		For each exposure specify grating/filter, readout pat, #grps, #ints
NRS0527	661 1	can specify multiple grating/filter per observation
Grating/Filter Name		
NRS0056	661 2.02	G140M/F070LP
NRS0057	661 1.01	G140M/F100LP
NRS0058	661 2.03	F235M/F170LP
NRS0059	661 5.01	G395M/G290LP
NRS0060	661 11.01	G140H/F070LP
NRS0061	661 2.01	G140H/F100LP
NRS0062	661 3.01	G235H/F170LP
NRS0063	661 1.02	G395H/F290LP
NRS0064	661 1.03	PRISM/CLEAR
NRS0515		for S200A1 AND S200A2 only high resolution gratings available
NRS0516		For multiple gratings and S200A1 AND S200A2, for each grating observe two slits then move to next grating

NRS0517		For next grating ensure slits are observed in opposite order as previous grating
Science Readout Pattern		
NRS0065	661 1.02	NRS
NRS0066	904 4.01	NRS is default
NRS0067	661 1.01	NRSRAPID
NRS0518		NRSIRS2
NRS0519		NRSIRS2RAPID
NRS0520		SUBARRAY DEFAULT only legal value for IRS2 readout patterns
NRS0521		Error if SUBARRAY not DEFAULT
NRS0522		Warn 5 minute overhead interleaving IRS2 and non-IRS2
Science Number of Groups		
NRS0376	661 1.01	NUMBER OF GROUPS
Science Number of Integrations		
NRS0377	661 1.01	NUMBER OF INTEGRATIONS
NRS0523		for IRS2 NUMBER OF INTEGRATIONS must be 1
Auto Calibration Exposures(s)		
NRS0371	661 14.02	NONE
NRS0370	904 4.01	NONE is default
NRS0372	661 14.03	WAVECAL