

Traceability Matrix, PPS Proposal Instructions

Chapter 60 Wavefront Sensing and Control Engineering

Requirement #	Proposal, Visit, Exposure	Comment
60.1 Introduction		
WSC Fine Phasing		
WSC0001	no reqs yet	WSC Fine Phasing Template exists
WSC Commissioning		
WSC0002	681 1	WSC Commissioning Template exists
WSC0003	681 1	Field: Module
WSC0004	681 1	Module, choose A, B, or ALL
WSC0005	681 1	Field: Filter
WSC0006	681 1	Filter, choose from list
WSC0007	681 1	Field: Number of Groups
WSC0008	681 1	Number of Groups, specify number
WSC0009	681 1	Field: Number of Integrations
WSC0010	681 1	Number of Integrations, specify number
WSC0011	681 1	Field: Reacquisition
WSC0012	681 1	Reacquisition, choose REACQ or NOREACQ
WSC Global Alignment		
WSC0013	682 1	WSC Global Alignment Template exists
WSC0014	682 1	Field GA Iteration Type
WSC0015	682 1	GA Iteration Type, select from list
NIRCam Parameters		
WSC0016	682 1	NIRCam Parameters section exists
WSC0017	682 1	Field: Module
WSC0018	682 1	Module, choose A or B
WSC0019	682 1	Field: Filter
WSC0020	682 1	Filter, choose from list
WSC0021	682 1	Field: Number of Groups
WSC0022	682 1	Number of Groups, specify number
WSC0023	682 1	Field: Number of Integrations
WSC0024	682 1	Number of Integrations, specify number
FGS Parameters		
WSC0025	682 1	FGS Parameters section exists
WSC0026	682 1	Field: Number of Groups
WSC0027	682 1	Number of Groups, specify number
WSC0028	682 1	Field: Number of Integrations
WSC0029	682 1	Number of Integrations, specify number
WSC {NIRCAM} Coarse Phasing		
WSC0030	686 1	WSC NIRCam Coarse Phasing Template exists
NIRCam Parameters		
WSC0031	686 1	NIRCam Parameters section exists (only section so not listed as such)
WSC0032	686 1	Field: Module
WSC0033	686 1	Module, choose A or B
MIRI Multi-Instrument, Multi-Field (MIMF) Imaging		
WSC0034	609 1	MIRI Multi-Instrument Multi-Field Template exists
WSC0035	609 1	Field: Target Name
WSC0036	609 1	Target Name, choose from list

WSC0037	609 1	Field: Pattern Type
WSC0038	609 1	Pattern Type, choose from list
WSC0039	609 1	Field: Starting Point
WSC0040	609 1	Starting Point, 1,2,3...310,311
WSC0041	609 1	Field: Number of Points
WSC0042	609 1	Number of Points, 3,4,5
WSC0043	609 1	Field: Pattern Size
WSC0044	609 1	Pattern Size, choose from list
WSC0045	609 1	Field: Subpixel Sampling
WSC0046	609 1	Subpixel Sampling, YES or NO
WSC0047	609 1	Field: Filter
WSC0048	609 1	Filter, choose from list
WSC0049	609 1	Field: Readout Pattern
WSC0050	609 1	Readout Pattern, choose from list
WSC0051	609 1	Field: Number of Groups
WSC0052	609 1	Number of Groups, specify number
WSC0053	609 1	Field: Number of Integrations
WSC0054	609 1	Number of Integrations, specify number
NIRSpec Multi-Instrument, Multi-Field (MIMF) Imaging		
WSC0055	692 1	NIRSpec MIMF Template exists
WSC0056	692 1	Field: Readout Pattern
WSC0057	692 1	Readout Pattern, choose from list
WSC0058	692 1	Field: Number of Groups
WSC0059	692 1	Number of Groups, specify number
WSC0060	692 1	Field: Number of Integrations
WSC0061	692 1	Number of Integrations, specify number
WSC0062	692 1	Field: MIMF Search Option
WSC0063	692 1	MIMF Search Option, SQUARE_AP,MSAQ1,MSAQ2,MSAQ3,MSAQ4
WSC0064	692 1	Field: MSA Configuration Filename
WSC0065	692 1	MSA Configuration Filename, specify filename
NIRISS Multi-Instrument, Multi-Field (MIMF) Imaging		
WSC0066	no regs yet	NIRISS MIMF Template exists
60.2 WSC Fine Phasing		
60.3 WSC Commissioning		
60.3.1 Module		
WSC0067	681 1	A
WSC0068	681 3	B
WSC0069	681 2	ALL
60.3.2 Filters		
60.3.2.1 Filter Name		
WSC0070	not done by PDT	same filter in both modules if both specified
WSC0071	681 1	F200W
WSC0072	681 2	F212N
WSC0073	set by OPGS	long wavelength filter set to F356W
60.3.3 Number of Groups		
WSC0074	681 1	NUMBER OF GROUPS
WSC0075	6816 31, 41	Module A between 1 and 10
	6816 34, 44	illegal
WSC0076	6816 32, 42	Module B between 1 and 10
	6816 35, 45	illegal
WSC0077	6816 33, 43	Module ALL between 1 and 4
	6816 36, 46	illegal
60.3.4 Number of Integrations		

WSC0078	681 1	NUMBER OF INTEGRATIONS
WSC0079	6816 31, 41 6816 34, 44	Module A between 1 and 10 illegal
WSC0080	6816 32, 42 6816 35, 45	Module B between 1 and 10 illegal
WSC0081	6816 33, 43 6816 36, 46	Module ALL must be 1 illegal
60.3.4 Reacquisition		
WSC0082	681 1	REACQ
WSC0083	681 3	NOREACQ
WSC0084	681 1	should be marked as WFS in DB; visit.wavefront_sensing='SENSING_CONTROL'
60.4 WSC Global Alignment		
60.4.1 Global Alignment Iteration Type		
WSC0086	682 1	ADJUST1
WSC0087	682 5	ADJUST2
WSC0088	682 4	BSCORRECT
WSC0089	682 2	CORRECT
WSC0090	682 3	CORRECT+ADJUST
60.4.2 NIRCam Parameters		
60.4.2.1 Module		
WSC0091	682 1	A
WSC0092	682 2	B
60.4.2.2 Filter		
WSC0093	682 1	F200W
WSC0094	682 3	F212N
WSC0095	set by OPGS	long wavelength filter set to F323N/F356W
60.4.2.3 Number of Groups		
WSC0096	682 1	NUMBER OF GROUPS
WSC0097	6816 37, 48 6816 39, 50	between 1 and 10 illegal
60.4.2.4 Number of Integrations		
WSC0098	682 1	NUMBER OF ITERATIONS
WSC0099	6816 38, 47 6816 40, 49	between 1 and 10 illegal
60.4.3 FGS Parameters		
WSC0100	682 1	NUMBER OF GROUPS
WSC0101	682 1	NUMBER OF ITERATIONS
WSC0102	682 1	should be marked as WFS in DB; visit.wavefront_sensing='SENSING_CONTROL'
60.5 WSC {NIRCam} Coarse Phasing		
WSC0157	686 1	each imaging step is 2 exps separated by small dither - pointings rpt
WSC0158	686 1	all exps of given type use the same exposure parameters
WSC0159	686 1	all 3 types of exposures must be specified
WSC0160	686 1	default sr Wavefront Sensing SENSING_CONTROL
WSC0161	686 1	cannot be used in parallel
WSC0162	686 1	cannot have parallels attached
WSC0163	686 1	default sr PCS MODE TRACK
WSC0164	686 1	warning is user overrides TRACK
60.5.1 Module		
WSC0103	686 1	A
WSC0104	686 2	B
60.5.2 In-Focus Imaging Parameters		

WSC0171	686 1	Parameters section exists
60.5.2.1 Filters		
WSC0165	686 1	CLEAR-F212N-F405N-F444W
WSC0166	686 1 686 2	SUFBP1A SUBFP1B
60.5.2.2 Readout Pattern		
WSC0167	686 1	RAPID
WSC0168	686 2	BRIGHT1
60.5.2.3 Number of Groups		
WSC0169	686 1	NUMBER OF GROUPS
60.5.2.4 Number of Integrations		
WSC0170	686 1	NUMBER OF ITERATIONS
60.5.3 DHS Imaging Parameters		
WSC0172	686 1	Parameters section exists
60.5.3.1 Filters		
WSC0173	686 1	GDHS0-F150W2-F405N-F444W-FULL
WSC0174	686 1	GDHS0-F150W2-F405N-F444W-FULL
WSC0175	686 1	GDHS60-F150W2-F405N-F444W-FULL
WSC0176	686 1	GDHS60-F150W2-F405N-F444W-FULL
60.5.3.2 Readout Pattern		
WSC0177	686 1	RAPID
WSC0178	686 2	BRIGHT1
60.5.3.3 Number of Groups		
WSC0179	686 1	NUMBER OF GROUPS
60.5.3.4 Number of Integrations		
WSC0180	686 1	NUMBER OF ITERATIONS
60.5.4 Plus/Minus 8 Waves Defocus Imaging Parameters		
WSC0181	686 1	Parameters section exists
60.5.4.1 Filters		
WSC0182	686 1	WLP8-F212N-F405N-F444W-FULL
WSC0183	686 1	WLM8-F212N-F405N-F444W-FULL
60.5.4.2 Readout Pattern		
WSC0184	686 2	RAPID
WSC0185	686 1	BRIGHT1
60.5.4.3 Number of Groups		
WSC0186	686 1	NUMBER OF GROUPS
60.5.4.4 Number of Integrations		
WSC0187	686 1	NUMBER OF ITERATIONS
60.6 MIRI Multi-Instrument, Multi-Field (MIMF) Imaging		
5 Points-of-Light		
WSC0105	609 1	entire dither pattern at each point of light
WSC0106	609 1	point 1
WSC0107	609 1	point 2
WSC0108	609 1	point 3
WSC0109	609 1	point 4
WSC0110	609 1	point 5
WSC0111	609 1	canned mosaic, no further mosaic parameters allowed
WSC0112	908 17	APT should default to include NO PARALLEL sr
WSC0113	908 18	NO PARALLEL sr should be user removable
60.6.1 Target Name		
WSC0114	609 1	Target Name
60.6.2 Dither Pattern		
WSC0115	609 1	entire dither pattern at each point of light
60.6.2.1 Pattern Type		

WSC0116	609 1	CYCLING
WSC0117	609 3	REULEAUX
60.6.2.1.1 Cycling		
WSC0118	908 17	PATTERN SIZE: required (Note size is Default by default)
60.6.2.1.1.1 Starting Point		
WSC0119	609 1 908 19, 20 908 21, 22	STARTING POINT: 1, 2, 3, ... 310, 311 legal: 1, 311 illegal: 0, 312
60.6.2.1.1.2 Number of Points		
WSC0120	609 1 908 19 908 20, 21, 22	NUMBER OF POINTS: 3, 4, 5, ... legal: 3 illegal: 0, 1, 2
WSC0121	609 8	If STARTING POINT + NUMBER OF POINTS > 311 pattern cycles back to 1, 2, 3, etc
WSC0122	908 23 has 500	no explicit maximum for number of points
60.6.2.1.2 Reuleaux		
WSC0123	908 24	PATTERN SIZE: required (Note size is Default by default)
60.6.2.2 Pattern Size		
WSC0124	609 1	DEFAULT
WSC0125	908 17, 24	DEFAULT is default
WSC0126	609 4	SMALL
WSC0127	609 2	MEDIUM
WSC0128	609 3	LARGE
WSC0129	609 7	F560W REULEAUX: DEFAULT -> SMALL
WSC0130	609 6	F770W REULEAUX: DEFAULT -> SMALL
WSC0131	609 1	F560W CYCLING: DEFAULT -> SMALL
WSC0132	609 5	F770W CYCLING: DEFAULT -> MEDIUM
60.6.2.3 Subpixel Sampling		
WSC0133	609 2	YES
WSC0134	609 1	NO
60.6.3 Filter Name		
WSC0135	609 1	F560W
WSC0136	609 2	F770W
60.6.4 Readout Pattern		
WSC0137	609 2	SLOW
WSC0138	609 1	FAST
60.6.5 Number of Groups		
WSC0139	609 1	NUMBER OF GROUPS
60.6.5 Number of Integrations		
WSC0140	609 1	NUMBER OF INTEGRATIONS
60.7 NIRCам Multi-Instrument, Multi-Field (MIMF) Imaging		
60.8 NIRSspec Multi-Instrument, Multi-Field (MIMF) Imaging		
60.8.1 Exposure Duration		
60.8.1.1 Readout Pattern		
WSC0141	692 1	NRS
WSC0142		NRS is default
WSC0143	692 3	NRSRAPID
60.8.1.2 Number of Groups		
WSC0144	692 1	NUMBER OF GROUPS
60.8.1.3 Number of Integrations		
WSC0145	692 1	NUMBER OF INTEGRATIONS
60.8.2 NIRSspec Multi-Instrument, Multi-Field search		
WSC0146	692 2	SQUARE_AP

WSC0147	692 5	MSAQ1
WSC0148	692 3	MSAQ2
WSC0149	692 1	MSAQ3
WSC0150	692 4	MSAQ4
WSC0151	662 2	IF MIMFSEARCH=SQUARE AP 13 images taken seen in Total Photon Collect Duration
WSC0152	662 1,3,4,5	ELSE 10 images taken
60.8.1 MSA Configuration Filename		
WSC0153	PR 79404	default all shutters open if using MSA quadrant
WSC0154	PR 79404	optional MSA Configuration Filename if using MSA quadrant
WSC0155	692 2	SUBARRAY is SUB32 for SQUARE_AP
WSC0156	692 1,3,4,5	SUBARRAY IS FULL for MSA quadrants
60.9 NIRISS Multi-Instrument, Multi-Field (MIMF) Imaging		

