MIRI Imaging

Program, Obs(.Exposure_Spec)	Comment
Template Specific Information	
6582 1	MIRI Imaging Template exists
6582 1	Field: Subarray choose from list
6582 1.02 #1	Field: Dither Type choose from list
6582 1.02 #1	Field: Starting Point 1,2,3…310,311 CYCLING only
6582 1.02 #1	Field: Number of Points 4,5,6… CYCLING only
627 4.01 #1	Field: Points i.e. 3,5,7-9,15-19 SPARSE-CYCLING only
627 1.01 #1	Field: Starting Set 1-10 4-POINT-SETS only
627 1.01 #1	Field: Number of Sets 1-10 4-POINT-SETS only
627 1.01 #1	Field: Optimized For POINT SOURCE, EXTENDED SOURCE 4-POINT-SETS only
627 1.01 #1	Field: Direction POSITIVE,NEGATIVE 4-POINT-SETS only
6582 1.02 #1 627 4.01 #1 6582 1.03 #2	Field: Pattern Size choose from list for CYCLING, SPARSE-CYCLING, or RELEAUX only
6582 1.01	Field: Filter(s) choose from list
6582 1.01	Field: Readout Pattern choose from list
6582 1.01	Field: Number of Groups/Integration number
6582 1.01	Field: Number of Integrations/Exposure number
6582 1.01	Field: Number of Exposures/Dither number
6582 1.01	Field: Dither choose from list
903 49	TSO sr must have NO PARALLEL
Science Exposures	
Subarray	
601 1.01	FULL
601 2.01	BRIGHTSKY
301 3.01	SUB256
301 5.01	SUB128
301 6.01	SUB64
627 12	SLITLESSPRISM (LAP)
Dither Specifications	
Dither Type	
6582 1.01 #1	CYCLING
6582 1.03 #2	REULEAUX
627 3.01 #1	2-POINT
627 1.01 #1	4-POINT-SETS
627 4.01 #1	SPARSE-CYCLING (LAP)
903 25 1.01	PATTERN TYPE: No default, required
Cycling	
6582 37.01 #1 (1) 37.02 #2 (311)	STARTING POINT: 1, 2, 3, … 310, 311

903 26 #1 (0) 26 #3 (312)	illegal cases 0 and 312
6582 1.01 #1	NUMBER OF POINTS: 3,4,5,6…
903 26 #3 (0) 26 #1 (1) 26 #2 (2)	illegal cases 0,1,2
6582 37.02 #2	If STARTING POINT + NUMBER OF POINTS > 311 pattern cycles back to 1, 2, 3, etc
903 #4 (2222)	no explicit maximum for number of points
Reuleaux	
6582 1.03 #2	REULEAUX 12 dither points
2-POINT	
627 3.01 #1	2-POINT 2 point pattern
4-POINT-SETS	
627 1.01 #1	4-POINT-SETS
Optimized For	
627 2.01 #1	POINT SOURCE
903 50 #1	POINT SOURCE (default) target chosen first
627 1.01 #1	EXTENDED SOURCE
903 51 #1	dither created before target no default selected
903 50 #1	target chosen first default is POINT SOURCE
903 52 #1	target chosen first EXTENDED default is EXTENDED SOURCE
903 53 #1	SUBARRAY=SUB64 OPTIMIZED FOR=EXTENDED SOURCE illegal
Direction	
627 1.01 #1	POSITIVE
903 51 #1	POSITIVE (default)
627 1.13 #1	NEGATIVE
627 1.13 #1	NEGATIVE X-offset multiplied by -1
627 1.01 #1 (FULL)	3 sets of 40 SUBARRAY=FULL or BRIGHTSKY
627 1.01 #1	extended sources regardless of filter
FULL scaled for point sources	
627 2.01 #1	F560W
627 2.02 #1	F770W
627 2.03 #1	F1000W
627 2.04 #1	F1130W
627 2.05 #1	F1280W
627 2.06 #1	F1500W
627 2.07 #1	F1800W
627 2.08 #1	F2100W
627 2.09 #1	F2550W
BRIGHTSKY scaled for point sources	
627 9.01 #1	F560W
627 9.02 #1	F770W
627 9.03 #1	F1000W
627 9.04 #1	F1130W
627 9.05 #1	F1280W

627 9.06 #1	F1500W
627 9.07 #1	F1800W
627 9.08 #1	F2100W
627 9.09 #1	F2550W
627 7.01 #1 F560W 627 7.02 #1 F2550W	OPTIMIZED FOR=EXTENDED SOURCE SUBARRAY=SUB128
627 6.01 #1 F560W 627 6.02 #1 F2550W	OPTIMIZED FOR=EXTENDED SOURCE SUBARRAY=SUB256
627 8.01 #1	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB64 F560W
627 8.02 #1	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB64 F770W
627 8.03 #1	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB64 F1000W
627 8.04 #1	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB64 F1130W
627 7.03 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB128 F560W
627 7.04 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB128 F770W
627 7.05 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB128 F1000W
627 7.06 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB128 F1130W
627 6.03 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB256 F560W
627 6.04 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB256 F770W
627 6.05 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB256 F1000W
627 6.06 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB256 F1130W
627 8.05 #1	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB64 F1280W
627 8.06 #1	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB64 F1500W
627 8.07 #1	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB64 F1800W
627 8.08 #1	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB64 F2100W
627 8.09 #1	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB64 F2100W
627 7.07 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB128 F1280W
627 7.08 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB128 F1500W
627 7.09 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB128 F1800W
627 7.10 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB128 F2100W
627 7.11 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB128 F2100W
627 6.07 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB256 F1280W
627 6.08 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB256 F1500W
627 6.09 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB256 F1800W
627 6.10 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB256 F2100W
627 6.11 #2	OPTIMIZED FOR=POINT SOURCE SUBARRAY=SUB256 F2100W
903 53 #1	OPTIMIZED FOR=EXTENDED SOURCE SUBARRAY=64 illegal
Starting Set	
903 54 #1,#2 (1,10)	STARTING SET 1-10
903 54 #3,#4 (0,11)	STARTING SET 0,11 illegal
Number of Sets	
903 54 #1,#2 (1,10)	NUMBER OF SETS 1-10
903 54 #3,#4 (0,11)	NUMBER OF SETS 0,11 illegal
627 1.01 #1	If combo STARTING SET and NUMBER OF SETS exceeds 11 pattern cycles back to use sets 1,2,3…
Sparse Cycling	
627 4.01 #1	SPARSE CYCLING POINTS i.e. 3,5,7-9,15-19
Pattern Size	
903 25 #1	PATTERN SIZE: required (Note size is Default by default)
6582 1.05 #4	PATTERN SIZE: DEFAULT

6582 1.02 #1	PATTERN SIZE: SMALL
6582 1.03 #2	PATTERN SIZE: MEDIUM
6582 1.04 #3	PATTERN SIZE: LARGE
Allowed Dither Types and Pattern Sizes by Subarray	
301 1.05 #5, 1.01 #1, 1.13 #9	FULL SMALL: Reuleaux, Cycling, Sparse Cycling
301 1.06 #6, 1.02 #2, 1.14 #10	FULL MEDIUM: Reuleaux, Cycling, Sparse Cycling
301 1.07 #7, 1.03 #3, 1.15 #11	FULL LARGE: Reuleaux, Cycling, Sparse Cycling
301 2.05 #5, 2.01 #1, 2.13 #9	BRIGHTSKY SMALL: Reuleaux, Cycling, Sparse Cycling
301 2.06 #6, 2.02 #2, 2.14 #10	BRIGHTSKY MEDIUM: Reuleaux, Cycling, Sparse Cycling
301 2.07 #7, 2.03 #3, 2.15 #11	BRIGHTSKY LARGE: Reuleaux, Cycling, Sparse Cycling
301 3.05 #5, 3.01 #1, 3.13 #9	SUB256 SMALL: Releaux, Cycling, Sparse Cycling
301 3.06 #6, 3.02 #2, 3.14 #10	SUB256 MEDIUM: Reuleaux, Cycling, Sparse Cycling
301 3.07 #7, 3.03 #3, 3.15 #11	SUB256 LARGE: Reuleaux, Cycling, Sparse Cycling
301 5.03 #3, 3.01 #1, 3.07 #7	SUB128 SMALL: Reuleaux, Cycling, Sparse Cycling
301 5.04 #4	SUB128 MEDIUM: Reuleaux
301 5.05 #5	SUB128 LARGE: Reuleaux
301 6.01 #1, 603 #3, 6.06 #6	SUB64 SMALL: Reuleaux, Cycling, Sparse Cycling
301 6.04 #4	SUB64 MEDIUM: Reuleaux
301 7.05 #5, 7.01 #1, 7.13 #9	SLITLESSPRISM SMALL: Reuleaux, Cycling, Sparse Cycling
301 7.06 #6, 7.02 #2, 7.14 #10	SLITLESSPRISM MEDIUM: Reuleaux, Cycling, Sparse Cycling
301 7.07 #7, 7.03 #3, 7.15 #11	SLITLESSPRISM LARGE: Reuleaux, Cycling, Sparse Cycling
Default Pattern Sizes	
628 1.01 #1, 1.02 #2, 1.03 #3	FULL default LARGE Cycling, Sparse Cycling, Reuleaux
628 2.01 #1, 2.02 #2, 2.03 #3	BRIGHTSKY default LARGE Cycling, Sparse Cycling, Reuleaux
628 3.01 #1, 3.02 #2, 3.03 #3	SUB256 default LARGE Cycling, Sparse Cycling, Reuleaux
628 5.01 #1, 5.02 #2	SUB128 SMALL Cycling, Sparse Cycling
628 6.01 #1, 6.02 #2	SUB64 SMALL Cycling, Spase Cycling
Reuleaux SUB128 defaults by filter	
628 7.01 #1	F560W: DEFAULT -> LARGE
628 7.02 #1	F770W: DEFAULT -> LARGE

628 7.03 #1	F1000W: DEFAULT -> LARGE
628 7.04 #1	F1130W: DEFAULT -> LARGE
628 7.05 #1	F1280W: DEFAULT -> MEDIUM
628 7.06 #1	F1500W: DEFAULT -> MEDIUM
628 7.07 #1	F1800W: DEFAULT -> MEDIUM
628 7.08 #1	F2100W: DEFAULT -> MEDIUM
628 7.09 #1	F2550W: DEFAULT -> MEDIUM
Reuleaux SUB64 defaults by filter	
628 8.01 #1	F560W: MEDIUM
628 8.02 #1	F770W: MEDIUM
628 8.03 #1	F1000W: SMALL
628 8.04 #1	F1130W: SMALL
628 8.05 #1	F1280W: SMALL
628 8.06 #1	F1500W: SMALL
628 8.07 #1	F1800W: SMALL
628 8.08 #1	F2100W: SMALL
can't pick in gui	F2550W: not recommended
628 4.01 #1, 4.02 #2, 4.03 #3	SLITLESSPRISM DEFAULT -> SMALL Cycling, Sparse Cycling, Reuleaux
Filter Name	
601 1.01	F560W
601 1.02	F770W
601 1.03	F1000W
601 1.04	F1130W
601 1.05	F1280W
601 1.06	F1500W
601 1.07	F1800W
601 1.08	F2100W
601 1.09	F2550W
Readout Pattern	
301 27.01	FAST
903 51.01	FAST default
301 27.02	SLOW
301 27.03	FASTGRPAVG LAP
903 27.01	SLOW only allowed with SUBARRAY=FULL Explanation: Readout pattern SLOW can only be used when subarray is FULL.
628 1.01, 9.01 no warning in APT	if both SLOW and one of the FAST time delay - warning
Number of Groups/Integration	
601 1.01	must be > 2 legal, illegal
903 1.02	FASTGRPAVG, recommended at least 4
903 54.01-03	SLOW 2-4 allowed but not recommended
903 54.04-06	FAST 2-4 allowed but not recommended
Number of Integrations/Exposure	
6582 1.01	number
903 51.01	default 1
Number of Exposures/Dither	
6582 1.01	number

903 51.01	default 1
903 54.01	> 1 NO PARALLEL sr required
201 1.01 PRIME 203 1.01 PARALLEL	coordinated parallel PRIME or PARALLEL must be 1 - grayed out
336 5.01	pure parallel must be 1
Dither	
206 1.01 no dither table in APT	NONE required when coordpar with NIRISS WFSS
903 55.01	NONE required with TSO sr
903 56.01 GO prop	NONE allowed SUBARRAY=SUB64
903 51.01	required field, no default value
628 15.01	NONE should be available in LAP