

NIRCam External Flat

Program, Obs(.Exposure_Spec)	Comment
Template Specific Information	
614 1	NIRCam External Flat Template exists
614 1	Field: Pointing Type PRIME or PARALLEL
614 1	Field: Module A, B, ALL
614 1	Field: Subarray choose from list
614 1	Field: Primary Dither Type choose from list
614 8	Field: Primary Dithers choose from list FULL
614 4	Field: Primary Dithers choose from list INTRAMODULE
614 5	Field: Primary Dithers choose from list INTRASCA
614 5	Field: Dither Size choose from list INTRASCA only
614 1	Field: Subpixel Positions 1,2,3....
614 1.01	Field: Pupils choose from list
614 1.01	Field: Filters choose from list
614 1.01	Field: Readout Pattern choose from list
614 1.01	Field: Number of Groups/Integration number
614 1.01	Field: Number of Integrations/Exposure number
Science Exposures	
Pointing Type	
614 1.01	PARALLEL
901 13	PARALLEL default
614 4	PRIME
901 14	PRIME target name required make default None Selected
614 4	PRIME remove NONE option
901 15	PRIME give error if PARALLEL sr present
614 1.01	PARALLEL set target NONE not changeable
614 1.01	PARALLEL set PRIMARY DITHER TYPE=NONE SUBPIXEL POSITIONS=1
901 24	PARALLEL error if PARALLEL sr not present
Module	
614 1	A
614 2	B
614 4	ALL
Subarray	
614 1	FULL
614 2	SUB160
614 8	SUB320
614 6	SUB640
614 3	SUB400P
614 10	SUB160P
614 5	SUB64P
614 1,4 (A, ALL) 614 2 (B)	subarrays only allowed with Module B
Dither Patterns	
Primary Dither Type	
614 1	None

614 8	FULL
614 4	INTRAMODULE
614 5	INTRASCA
901 14	Primary Dither Type required field (for PRIME)
901 14	Primary Dither Type no default (don't make NONE) (PRIME)
Full Primary Dithers	
614 9	3TIGHT
614 8	3
614 18	6
614 15	9
6587 10	15
614 7	21
614 17	27
614 19	36
64 10	45
Intramodule Primary Dithers	
614 11	3
6587 11	4
6587 12	6
614 12	8
6587 13	12
614 4	16
Intrasca Primary Dithers	
614 5	2
6587 14	3
6587 15	4
6587 16	5
6587 17	7
614 7	9
6587 18	13
6587 19	17
614 6	25
Dither Size	
614 7	8" (SMALL)
614 5	16" (MEDIUM)
614 6	24" (LARGE)
614 5-7	DB gets SMALL, MEDIUM, LARGE
Subpixel Positions	
614 1	1
901 13, 15,16,25,34	1 is default (PARALLEL, PRIME)
614 4	2
614 8	3
614 6	4
614 11	5
6587 11	7
614 21	9
6587 4	12
6587 16	16
6587 5	20

6587 17	24
6587 6	30
6587 16	36
6587 15	48
6587 14	64
6587 1	secondary dither points allowed for all dithers including NONE
Pupils	
901 24	if PARALLEL only one long and one short pupil may be selected
Short Camera Pupil Name	
614 6.01	CLEAR
614 7.01	MASKRND
614 1.01	MASKBAR
614 2.01	MASKIPR
614 4.01	F162M
614 8.01	F164N
614 3.01	GDHS0
614 10.01	GDHS60
can't choose	PINHOLES
614 9.01	WLP8
614 5.01	WLM8
Long Camera Pupil Name	
614 1.01	CLEAR
614 10.01	MASKRND
614 8.02	MASKBAR
614 9.01	MASKIPR
614 8.01	F323N
614 7.01	F405N
614 7.02	F466N
614 6.01	F470N
614 4.01	GRISMR
614 3.01	GRISMC
can't choose	PINHOLES
Short Camera Filter Name	
614 6.01	F070W
614 7.02	F090W
614 8.02	F115W
614 8.01	150W
614 3.01	F150W2
614 15.01	F200W
614 10.01	F140M
614 1.01	F182M
614 7.01	F210M
614 5.01	F187N
614 2.01	F212N
614 9.01	WLP4
Long Camera Filter Name	
614 3.01	F277W
614 4.01	F322W2
614 10.01	F356W

614 6.01	F444W
614 9.02	F250M
614 10.02	F300M
614 9.01	F335M
614 10.03	F360M
614 5.01	F410M
614 2.01	F430M
614 8.03	F460M
614 1.01	F480M
614 8.01	ok table elements can be selected
614 9.01	W elements will generate warning
901 1.02	E elements will generate error
901, see below	D elements are disallowed and can't be selected
	F070W
901 1.01	Clear ok
	Flatfield/Dark D
901 1.02	MASKRND E
901 1.03	MASKBAR E
901 1.06	F164N E
901 1.05	F162M E
	PINHOLES D
901 1.09	WLP8 W
901 1.10	WLM8 W
901 1.07	GDHS0 E
901 1.08	GDHS60 E
901 1.04	MASKIPR W
	F090W
901 2.01	Clear ok
	Flatfield/Dark D
901 2.02	MASKRND E
901 2.03	MASKBAR E
901 2.06	F164N E
901 2.05	F162M E
	PINHOLES D
901 2.09	WLP8 W
901 2.10	WLM8 W
901 2.07	GDHS0 E
901 2.08	GDHS60 E
901 2.04	MASKIPR W
	F115W
901 3.01	Clear ok
	Flatfield/Dark D
901 3.02	MASKRND E
901 3.03	MASKBAR E
901 3.06	F164N E
901 3.05	F162M E
	PINHOLES D
901 3.09	WLP8 W
901 3.10	WLM8 W

901 3.07	GDHS0 W
901 3.08	GDHS60 W
901 3.04	MASKIPR W
	F150W
901 4.01	Clear ok
	Flatfield/Dark D
901 4.02	MASKRND E
901 4.03	MASKBAR E
901 4.06	F164N ok
901 4.05	F162M E
	PINHOLES D
901 4.09	WLP8 W
901 4.10	WLM8 W
901 4.07	GDHS0 W
901 4.08	GDHS60 W
901 4.04	MASKIPR W
	F200W
901 5.01	Clear ok
	Flatfield/Dark D
901 5.02	MASKRND ok
901 5.03	MASKBAR ok
901 5.06	F164N E
901 5.05	F162M E
	PINHOLES D
901 5.09	WLP8 W
901 5.10	WLM8 W
901 5.07	GDHS0 W
901 5.08	GDHS60 W
901 5.04	MASKIPR W
	F212N
901 6.01	Clear ok
	Flatfield/Dark D
901 6.02	MASKRND ok
901 6.03	MASKBAR ok
901 6.06	F164N E
901 6.05	F162M E
	PINHOLES D
901 6.09	WLP8 ok
901 6.10	WLM8 ok
901 6.07	GDHS0 W
901 6.08	GDHS60 W
901 6.04	MASKIPR ok
	WLP4
901 7.01	Clear ok
	Flatfield/Dark D
901 7.02	MASKRND E
901 7.03	MASKBAR E
901 7.06	F164N E
901 7.05	F162M E

	PINHOLES D
901 7.09	WLP8 ok
901 7.10	WLM8 ok
901 7.07	GDHS0 E
901 7.08	GDHS60 E
901 7.04	MASKIPR ok
	F187N
901 8.01	Clear ok
	Flatfield/Dark D
901 8.02	MASKRND ok
901 8.03	MASKBAR ok
901 8.06	F164N E
901 8.05	F162M E
	PINHOLES D
901 8.09	WLP8 ok
901 8.10	WLM8 ok
901 8.07	GDHS0 W
901 8.08	GDHS60 W
901 8.04	MASKIPR W
	F210M
901 9.01	Clear ok
	Flatfield/Dark D
901 9.02	MASKRND ok
901 9.03	MASKBAR ok
901 9.06	F164N E
901 9.05	F162M E
	PINHOLES D
901 9.09	WLP8 W
901 9.10	WLM8 W
901 9.07	GDHS0 W
901 9.08	GDHS60 W
901 9.04	MASKIPR W
	F182M
901 10.01	Clear ok
	Flatfield/Dark D
901 10.02	MASKRND ok
901 10.03	MASKBAR ok
901 10.06	F164N E
901 10.05	F162M E
	PINHOLES D
901 10.09	WLP8 W
901 10.10	WLM8 W
901 10.07	GDHS0 W
901 10.08	GDHS60 W
901 10.04	MASKIPR W
	F140M
901 11.01	Clear ok
	Flatfield/Dark D
901 11.02	MASKRND E

901 11.03	MASKBAR E
901 11.06	F164N E
901 11.05	F162M E
	PINHOLES D
901 11.09	WLP8 W
901 11.10	WLM8 W
901 11.07	GDHS0 ok
901 11.08	GDHS60 ok
901 11.04	MASKIPR W
	F150W2
901 12.01	Clear ok
	Flatfield/Dark D
901 12.02	MASKRND E
901 12.03	MASKBAR E
901 12.06	F164N ok
901 12.05	F162M ok
	PINHOLES D
901 12.09	WLP8 W
901 12.10	WLM8 W
901 12.07	GDHS0 ok
901 12.08	GDHS60 ok
901 12.04	MASKIPR W
	F277W
901 1.01	Clear ok
	Flatfield/Dark D
901 1.02	MASKRND W
901 1.10	MASKBAR ok
901 1.04	F323N E
901 1.05	F405N E
901 1.06	F466N E
901 1.07	F470N E
	Pinholes D
901 1.08	GRISMR ok
901 1.09	GRISMC ok
901 1.03	MASKIPR W
	F356W
901 2.01	Clear ok
	Flatfield/Dark D
901 2.02	MASKRND ok
901 2.10	MASKBAR ok
901 2.04	F323N ok
901 2.05	F405N E
901 2.06	F466N E
901 2.07	F470N E
	PINHOLES D
901 2.08	GRISMR ok
901 2.09	GRISMC ok
901 2.03	MASKIPR W
	F444W

901 3.01	Clear ok
	Flatfield/Dark D
901 3.02	MASKRND ok
901 3.10	MASKBAR ok
901 3.04	F323N E
901 3.05	F405N ok
901 3.06	F466N ok
901 3.07	F470N ok
	PINHOLES D
901 3.08	GRISMR ok
901 3.09	GRISMC ok
901 3.03	MASKIPR W
	F300M
901 4.01	Clear ok
	Flatfield/Dark D
901 4.02	MASKRND ok
901 4.10	MASKBAR ok
901 4.04	F323N E
901 4.05	F405N E
901 4.06	F466N E
901 4.07	F470N E
	PINHOLES D
901 4.08	GRISMR W
901 4.09	GRISMC W
901 4.03	MASKIPR W
	F480M
901 5.01	Clear ok
	Flatfield/Dark D
901 5.02	MASKRND E
901 5.10	MASKBAR ok
901 5.04	F323N E
901 5.05	F405N E
901 5.06	F466N W
901 5.07	F470N W
	PINHOLES D
901 5.08	GRISMR W
901 5.09	GRISMC W
901 5.03	MASKIPR W
	F410M
901 6.01	Clear ok
	Flatfield/Dark D
901 6.02	MASKRND ok
901 6.10	MASKBAR ok
901 6.04	F323N E
901 6.05	F405N W
901 6.06	F466N E
901 6.07	F470N E
	PINHOLES D
901 6.08	GRISMR ok

901 6.09	GRISMC ok
901 6.03	MASKIPR W
	F360M
901 7.01	Clear ok
	Flatfield/Dark D
901 7.02	MASKRND ok
901 7.10	MASKBAR ok
901 7.04	F323N E
901 7.05	F405N E
901 7.06	F466N E
901 7.07	F470N E
	PINHOLES D
901 7.08	GRISMR W
901 7.09	GRISMC W
901 7.03	MASKIPR W
	F430M
901 8.01	Clear ok
	Flatfield/Dark D
901 8.02	MASKRND ok
901 8.10	MASKBAR ok
901 8.04	F323N E
901 8.05	F405N E
901 8.06	F466N E
901 8.07	F470N E
	PINHOLES D
901 8.08	GRISMR W
901 8.09	GRISMC W
901 8.03	MASKIPR W
	F460M
901 9.01	Clear ok
	Flatfield/Dark D
901 9.02	MASKRND ok
901 9.10	MASKBAR ok
901 9.04	F323N E
901 9.05	F405N E
901 9.06	F466N W
901 9.07	F470N E
	PINHOLES D
901 9.08	GRISMR W
901 9.09	GRISMC W
901 9.03	MASKIPR W
	F250M
901 10.01	Clear ok
	Flatfield/Dark D
901 10.02	MASKRND W
901 10.10	MASKBAR ok
901 10.04	F323N E
901 10.05	F405N E
901 10.06	F466N E

901 10.07	F470N E
	PINHOLES D
901 10.08	GRISMR W
901 10.09	GRISMC W
901 10.03	MASKIPR W
	F335M
901 11.01	Clear ok
	Flatfield/Dark D
901 11.02	MASKRND ok
901 11.10	MASKBAR ok
901 11.04	F323N W
901 11.05	F405N E
901 11.06	F466N E
901 11.07	F470N E
	PINHOLES D
901 11.08	GRISMR W
901 11.09	GRISMC W
901 11.03	MASKIPR W
	F322W2
901 12.01	Clear ok
	Flatfield/Dark D
901 12.02	MASKRND W
901 12.10	MASKBAR W
901 12.04	F323N ok
901 12.05	F405N E
901 12.06	F466N E
901 12.07	F470N E
	PINHOLES D
901 12.08	GRISMR ok
901 12.09	GRISMC ok
901 12.03	MASKIPR W
Readout Pattern	
614 2.01	RAPID
614 3.01	BRIGHT1
614 4.01	BRIGHT2
614 5.01	SHALLOW2
614 6.01	SHALLOW4
614 7.02	MEDIUM2 (default)
614 1.01	MEDIUM8
714 8.01	DEEP2
614 9.01	DEEP8
Number of Groups/Integration	
614 1.01	number
Number of Integrations/Exposure	
614 1.01	number
Legal GROUPS INTS max (min is always 1 except for ALL exceptions)	
901 28, 29	RAPID 10, 10
901 32	RAPID ALL 2, 2
901 32	RAPID ALL 1, 20

901 28, 29	BRIGHT1 10, 10
901 28, 29	BRIGHT2 10, 10
901 32 33	BRIGHT2 ALL 2-10, 10
901 28, 29	SHALLOW2 10, 10
901 28, 29	SHALLOW4 10, 10
901 28, 29	MEDIUM2 10, 10
901 28, 29	MEDIUM8 10, 10
901 28, 29	DEEP2 20, 10
901 28, 29	DEEP8 20, 10
Illegal GROUPS INTS max (min is always 0)	
901 27, 26	RAPID 11, 11
901 30	RAPID ALL 2, 3
901 30	RAPID ALL 1, 21
901 27, 26	BRIGHT1 11, 11
901 27, 26	BRIGHT2 11, 11
901 30	BRIGHT2 ALL 2-11, 11
901 27, 26	SHALLOW2 11, 11
901 27, 26	SHALLOW4 11, 11
901 27, 26	MEDIUM2 11, 11
901 27, 26	MEDIUM8 11, 11
901 27, 26	DEEP2 21, 11
901 27, 26	DEEP8 21, 11