

AppH2 NIRCcam AperName population rules

Program, Obs(.Exposure_Spec)	Comment
** is what is really populated by APT versus requirements	
NIRCcam Imaging Template	
611 01	nircam_templates.modules=B and nircam_exposure_specification.subarray=FULL NRCBS_FULL
611 02	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB160 NRCB5_SUB160
611 05	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB320 NRCB5_SUB320
611 04	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB640 NRCB5_SUB640
611 03	nircam_templates.modules=ALL and nircam_exposure_specification.subarray=FULL NRCALL_FULL
611 10	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB400P NRCB1_SUB400P
611 09	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB160P NRCB1_SUB160
611 08	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB64P NRCB1_SUB64P
NIRCcam Time Series Template B is only allowed module	
target acq	
617 01	always NRCB5_TAPSIMG32
science	
617 01	nircam_exposure_specification.subarray=FULL NRCBS_FULL **NRCB5_FULLP**
617 02	nircam_exposure_specification.subarray=SUB400P NRCB1_SUB400P
617 03	nircam_exposure_specification.subarray=SUB160P NRCB1_SUB160
617 04	nircam_exposure_specification.subarray=SUB64P NRCB1_SUB64P
NIRCcam Grism Time Series Template module is set to A	
target acq	
622 01	always NRCA5_TAGRISM32
science	
622 05	nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_long=F322W NRCA5_GRISM_F322W

622 19	nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_long=F277W NRCA5_GRISM_F277W
622 09	nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_long=F356W NRCA5_GRISM_F356W
622 01	nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_long=F444W NRCA5_GRISM_F444W
622 12	nircam_exposure_specification.subarray=SUBGRISM256 and nircam_exposure_specification.filter_long=F322W NRCA5_GRISM256_F322W
622 11	nircam_exposure_specification.subarray=SUBGRISM256 and nircam_exposure_specification.filter_long=F277W NRCA5_GRISM256_F277W
622 06	nircam_exposure_specification.subarray=SUBGRISM256 and nircam_exposure_specification.filter_long=F356W NRCA5_GRISM256_F356W
622 13	nircam_exposure_specification.subarray=SUBGRISM256 and nircam_exposure_specification.filter_long=F444W NRCA5_GRISM256_F444W
622 03	nircam_exposure_specification.subarray=SUBGRISM128 and nircam_exposure_specification.filter_long=F322W NRCA5_GRISM128_F322W
622 14	nircam_exposure_specification.subarray=SUBGRISM128 and nircam_exposure_specification.filter_long=F277W NRCA5_GRISM128_F277W
622 15	nircam_exposure_specification.subarray=SUBGRISM128 and nircam_exposure_specification.filter_long=F356W NRCA5_GRISM128_F356W
622 07	nircam_exposure_specification.subarray=SUBGRISM128 and nircam_exposure_specification.filter_long=F444W NRCA5_GRISM128_F444W
622 16	nircam_exposure_specification.subarray=SUBGRISM64 and nircam_exposure_specification.filter_long=F322W NRCA5_GRISM64_F322W
622 04	nircam_exposure_specification.subarray=SUBGRISM64 and nircam_exposure_specification.filter_long=F277W NRCA5_GRISM64_F277W
622 17	nircam_exposure_specification.subarray=SUBGRISM64 and nircam_exposure_specification.filter_long=F356W NRCA5_GRISM64_F356W
622 18	nircam_exposure_specification.subarray=SUBGRISM64 and nircam_exposure_specification.filter_long=F444W NRCA5_GRISM64_F444W
NIRCam Coronagraphic Imaging Template module is set to A When filter list first filter for Science not Confirmation Images target acq	

612 14	nircam_templates.coronagraph=MASK210R and nircam_target_acq.acquisition_mode=BRIGHT NRCA2_TAMASK210R
612 08	nircam_templates.coronagraph=MASK335R and nircam_target_acq.acquisition_mode=BRIGHT NRCA5_TAMASK335R
612 04	nircam_templates.coronagraph=MASK430R and nircam_target_acq.acquisition_mode=BRIGHT NRCA5_TAMASK430R
612 02 (F200W) 612 17 (F212N)	nircam_templates.coronagraph=MASKSWB and nircam.exposure_specification.filter_short in [F212N,F200W] nircam_target_acq.acquisition_mode=BRIGHT NRCA4_TAMASKSWB
612 19 (F182M) 612 20 (F187N) 612 21 (F210M)	nircam_templates.coronagraph=MASKSWB and nircam.exposure_specification.filter_short in [F182M,F187N,F210M] nircam_target_acq.acquisition_mode=BRIGHT NRCA4_TAMASKSWBS
612 35 (F444W) 612 36 (F460M) 612 37 (F480M)	nircam_templates.coronagraph=MASKLWB and nircam.exposure_specification.filter_long in [F444W,F460M,F480M] nircam_target_acq.acquisition_mode=BRIGHT NRCA5_TAMASKLWBL
612 22 (F250M) 612 06 (F277W) 612 24 (F300M) 612 25 (F335M) 612 26 (F356W) 612 27 (F360M) 612 10 (F410M) 612 29 (F430M)	nircam_templates.coronagraph=MASKLWB and nircam.exposure_specification.filter_long in [F250M,F277W,F300M,F335M,F356W,F360M,F410M,F430M] nircam_target_acq.acquisition_mode=BRIGHT NRCA5_TAMASKLWB
612 01	nircam_templates.coronagraph=MASK210R and nircam_target_acq.acquisition_mode=FAINT NRCA2_FSTAMASK210R
612 03	nircam_templates.coronagraph=MASK335R and nircam_target_acq.acquisition_mode=FAINT NRCA5_FSTAMASK335R (extra M was removed, fixed here)
612 32	nircam_templates.coronagraph=MASK430R and nircam_target_acq.acquisition_mode=FAINT NRCA5_FSTAMASK430R (extra M was removed, fixed here)
612 33	nircam_templates.coronagraph=MASKSWB and nircam_target_acq.acquisition_mode=FAINT NRCA4_FSTAMASKSWB
612 05	nircam_templates.coronagraph=MASKLWB and nircam_target_acq.acquisition_mode=FAINT NRCA5_FSTAMASKLWB
science	

612 38 (SUB640)	nircam_templates.coronagraph=MASK210R and nircam_exposure_specification.subarray!=FULL NRCA2_MASK210R
612 08 (SUB320)	nircam_templates.coronagraph=MASK335R and nircam_exposure_specification.subarray!=FULL NRCA5_MASK335R
612 4 (SUB320)	nircam_templates.coronagraph=MASK430R and nircam_exposure_specification.subarray!=FULL NRCA5_MASK430R
612 41	nircam_templates.coronagraph=MASKSWB and nircam_exposure_specification.subarray!=FULL and nircam_exposure_specification.filter_short=F182M NRCA4_MASKSWB_F182M
612 42	nircam_templates.coronagraph=MASKSWB and nircam_exposure_specification.subarray!=FULL and nircam_exposure_specification.filter_short=F187N NRCA4_MASKSWB_F187N
612 43	nircam_templates.coronagraph=MASKSWB and nircam_exposure_specification.subarray!=FULL and nircam_exposure_specification.filter_short=F210M NRCA4_MASKSWB_F210M
612 44	nircam_templates.coronagraph=MASKSWB and nircam_exposure_specification.subarray!=FULL and nircam_exposure_specification.filter_short=F212N NRCA4_MASKSWB_F212N
612 45	nircam_templates.coronagraph=MASKSWB and nircam_exposure_specification.subarray!=FULL and nircam_exposure_specification.filter_short=F200W NRCA4_MASKSWB_F200W
612 46	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray!=FULL and nircam_exposure_specification.filter_long=F250M NRCA5_MASKLWB_F250M
612 47	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray!=FULL and nircam_exposure_specification.filter_long=F300M NRCA5_MASKLWB_F300M
612 48	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray!=FULL and nircam_exposure_specification.filter_long=F277W NRCA5_MASKLWB_F277W
612 49	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray!=FULL and nircam_exposure_specification.filter_long=F335M NRCA5_MASKLWB_F335M
612 50	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray!=FULL and nircam_exposure_specification.filter_long=F360M NRCA5_MASKLWB_F360M

612 51	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray!=FULL and nircam_exposure_specification.filter_long=F356W NRCA5 MASKLWB F356W
612 52	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray!=FULL and nircam_exposure_specification.filter_long=410M NRCA5 MASKLWB F410M
612 53	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray!=FULL and nircam_exposure_specification.filter_long=430M NRCA5 MASKLWB F430M
612 54	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray!=FULL and nircam_exposure_specification.filter_long=460M NRCA5 MASKLWB F460M
612 55	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray!=FULL and nircam_exposure_specification.filter_long=480M NRCA5 MASKLWB F480M
612 56	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray!=FULL and nircam_exposure_specification.filter_long=444W NRCA5 MASKLWB F444W
612 57	nircam_templates.coronagraph=MASK210R and nircam_exposure_specification.subarray=FULL NRCA2 FULL_MASK210R
612 58	nircam_templates.coronagraph=MASK335R and nircam_exposure_specification.subarray=FULL NRCA5 FULL_MASK335R
612 59	nircam_templates.coronagraph=MASK430R and nircam_exposure_specification.subarray=FULL NRCA5 FULL_MASK430R
612 60	nircam_templates.coronagraph=MASKSWB and nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_short=F182M NRCA4 FULL_MASKSWB F182M
612 61	nircam_templates.coronagraph=MASKSWB and nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_short=F187N NRCA4 FULL_MASKSWB F187N
612 62	nircam_templates.coronagraph=MASKSWB and nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_short=F210M NRCA4 FULL_MASKSWB F210M
612 63	nircam_templates.coronagraph=MASKSWB and nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_short=F212N NRCA4 FULL_MASKSWB F212N

612 64	nircam_templates.coronagraph=MASKSWB and nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_short=F200W NRCA4 FULL MASKSWB F200W
612 65	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_long=F250M NRCA5 FULL MASKLWB F250M
612 66	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_long=F300M NRCA5 FULL MASKLWB F300M
612 67	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_long=F277W NRCA5 FULL MASKLWB F277W
612 68	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_long=F335M NRCA5 FULL MASKLWB F335M
612 69	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_long=F360M NRCA5 FULL MASKLWB F360M
612 70	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_long=F356W NRCA5 FULL MASKLWB F356W
612 71	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_long=410M NRCA5 FULL MASKLWB F410M
612 72	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_long=430M NRCA5 FULL MASKLWB F430M
612 73	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_long=460M NRCA5 FULL MASKLWB F460M
612 74	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray=FULL and nircam_exposure_specification.filter_long=480M NRCA5 FULL MASKLWB F480M
612 75	nircam_templates.coronagraph=MASKLWB and nircam_exposure_specification.subarray!=FULL and nircam_exposure_specification.filter_long=444W NRCA5 MASKLWB F444W
NIRCam Focus Template	
616 01	nircam_templates.modules=A NRCA3_DHSPIL
616 02	nircam_templates.modules=B NRCB4_DHSPIL

NIRCam PIL Imaging Template	
619 01.01	nircam_templates.modules=A and nircam_exposure_specification.filter_short not like MASKRND*, MASKBAR*, or MASKIPR* NRCA3_DHSPIL
619 04.04, 04.02, 04.09	nircam_templates.modules=A and nircam_exposure_specification.filter_short like MASKRND*, MASKBAR*, or MASKIPR* NRCA3_DHSPIL_WEDGES
619 02.01	nircam_templates.modules=B and nircam_exposure_specification.filter_short not like MASKRND*, MASKBAR*, or MASKIPR* NRCB4_DHSPIL
619 05.04, 05.02 05.09	nircam_templates.modules=B and nircam_exposure_specification.filter_short like MASKRND*, MASKBAR*, or MASKIPR* NRCB4_DHSPIL_WEDGES
NIRCam IPR Imaging Template requirements missing ALL and *s	
618 02	nircam_templates.modules=ALL NRCALL_FULL
618 05 (ALONG) 618 13 (A) 618 14 (ASHORT)	nircam_templates.modules like A* (but not ALL) NRCAS_FULL
618 03 (B) 618 06 (BSHORT) 618 20 (BLONG)	nircam_templates.modules like B* NRCBS_FULL
NIRCam Engineering Imaging Template	
620 01	nircam_templates.modules=A and nircam_exposure_specification.subarray=FULL NRCAS_FULL
620 05	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUB160 NRCA5_SUB160
620 12	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUB320 NRCA5_SUB320
620 23	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUB640 NRCA5_SUB640
620 22	nircam_templates.modules=B and nircam_exposure_specification.subarray=FULL NRCBS_FULL
620 17	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB160 NRCB5_SUB160
620 04	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB320 NRCB5_SUB320
620 02	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB640 NRCB5_SUB640
620 03	nircam_templates.modules=ALL and nircam_exposure_specification.subarray=FULL NRCALL_FULL

620 06	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUB400P NRCA3_SUB400P
620 16	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUB160P NRCA3_SUB160P
620 18	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUB64P NRCA3_SUB64P
620 14	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB400P NRCB1_SUB400P
620 07	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB160P NRCB1_SUB160P
620 08	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB64P NRCB1_SUB64P
620 28.02	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM256 and nircam_exposure_specification.filter_long=F322W NRCA5_GRISM256_F322W
620 28.05 (F250M) 620 28.06 (F300M) 620 28.07 (F335M) 620 28.08 (F360M)	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM256 and nircam_exposure_specification.filter_long in [F250M,F300M,F335M,F360M] NRCA5_GRISM256_F322W
620 28.01	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM256 and nircam_exposure_specification.filter_long=F277W NRCA5_GRISM256_F277W
620 28.03	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM256 and nircam_exposure_specification.filter_long=F356W NRCA5_GRISM256_F356W
620 28.04	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM256 and nircam_exposure_specification.filter_long=F444W NRCA5_GRISM256_F444W
620 28.09 (F410M) 620 28.10 (F430M) 620 28.11 (F460M) 620 28.12 (F480M)	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM256 and nircam_exposure_specification.filter_long in [F410M,F430M,F460M,F480M] NRCA5_GRISM256_F444W
620 27.02	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM128 and nircam_exposure_specification.filter_long=F322W NRCA5_GRISM128_F322W

620 27.05 (F250M) 620 27.06 (F300M) 620 27.07 (F335M) 620 27.08 (F360M)	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM128 and nircam_exposure_specification.filter_long in [F250M,F300M,F335M,F360M] NRCA5 GRISM128 F322W
620 27.01	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM128 and nircam_exposure_specification.filter_long=F277W NRCA5 GRISM128 F277W
620 27.03	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM128 and nircam_exposure_specification.filter_long=F356W NRCA5 GRISM128 F356W
620 27.04	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM128 and nircam_exposure_specification.filter_long=F444W NRCA5 GRISM128 F444W
620 27.09 (F410M) 620 27.10 (F430M) 620 27.11 (F460M) 620 27.12 (F480M)	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM128 and nircam_exposure_specification.filter_long in [F410M,F430M,F460M,F480M] NRCA5 GRISM128 F444W
620 29.02	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM64 and nircam_exposure_specification.filter_long=F322W NRCA5_GRISM64_F322W
620 29.05 (F250M) 620 29.06 (F300M) 620 29.07 (F335M) 620 29.08 (F360M)	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM64 and nircam_exposure_specification.filter_long in [F250M,F300M,F335M,F360M] NRCA5_GRISM64_F322W
620 29.01	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM64 and nircam_exposure_specification.filter_long=F277W NRCA5_GRISM64_F277W
620 29.03	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM64 and nircam_exposure_specification.filter_long=F356W NRCA5_GRISM64_F356W
620 29.04	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM64 and nircam_exposure_specification.filter_long=F444W NRCA5_GRISM64_F444W
620 29.09 (F410M) 620 29.10 (F430M) 620 29.11 (F460M) 620 29.12 (F480M)	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUBGRISM64 and nircam_exposure_specification.filter_long in [F410M,F430M,F460M,F480M] NRCA5_GRISM64_F444W
620 19, 20, 21 (SUBGRISM64, 128 256)	if nircam_templates.modules=B and nircam_exposure_specification.subarray matches SUBGRISM* NRCAS_FULL (placeholder APT 25)

620 15	nircam_templates.modules=A and nircam_exposure_specification.subarray=SUB96DHSPILA NRCA3_DHSPIL_SUB96
620 11	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB96DHSPILB NRCB4_DHSPIL_SUB96
NIRCam WFSS Template	
624 01.01	nircam_templates.modules=A and nircam_exposure_specification.pupil_long=GRISMR NRCA5_GRISMR_WFSS
624 01.02	nircam_templates.modules=A and nircam_exposure_specification.pupil_long=CLEAR and the closest previous exposure with LW grism used nircam_exposure_specification.pupil_long=GRISMR NRCA5_GRISMR_WFSS
624 03.04	nircam_templates.modules=A and nircam_exposure_specification.pupil_long=GRISMC NRCA5_GRISMC_WFSS
624 03.05,06	nircam_templates.modules=A and nircam_exposure_specification.pupil_long=CLEAR and the closest previous exposure with LW grism used nircam_exposure_specification.pupil_long=GRISMC NRCA5_GRISMC_WFSS
624 04.01	nircam_templates.modules=ALL and nircam_exposure_specification.pupil_long=GRISMR NRCALL_GRISMR_WFSS
624 04.02	nircam_templates.modules=ALL and nircam_exposure_specification.pupil_long=CLEAR and the closest previous exposure with LW grism used nircam_exposure_specification.pupil_long=GRISMR NRCALL_GRISMR_WFSS
624 02.01	nircam_templates.modules=ALL and nircam_exposure_specification.pupil_long=GRISMC NRCALL_GRISMC_WFSS
624 02.02,03	nircam_templates.modules=ALL and nircam_exposure_specification.pupil_long=CLEAR and the closest previous exposure with LW grism used nircam_exposure_specification.pupil_long=GRISMC NRCALL_GRISMC_WFSS
NIRCam External Flat Template (missing from requirements)	
614 04	nircam_templates.modules=ALL and nircam_exposure_specification.subarray=FULL NRCALL_FULL
614 11	nircam_templates.modules=A and nircam_exposure_specification.subarray=FULL NRCAS_FULL
614 07	nircam_templates.modules=B and nircam_exposure_specification.subarray=FULL NRCBS_FULL
614 18	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB160 NRCB5_SUB160

614 08	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB320 NRCB5_SUB320
614 06	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB640 NRCB5_SUB640
614 17	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB400P NRCB1_SUB400P
614 10	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB160P NRCB1_SUB160P
614 05	nircam_templates.modules=B and nircam_exposure_specification.subarray=SUB64P NRCB1_SUB64P