Change log:

Revision 4 (May 22, 2017) – See OPR 87889

1. Corrected TA aperture name (NRCB5\_TAPSIMG32) in Section 2.2.

Revision 3 (Jan. 10, 2016) – See [OPRs 85576 and 86415](https://www.ess.stsci.edu/prsystem/servlet/prbrowse/pr.85576?format=HTML):

1. Correct issues for PIL Imaging.
2. Add Engineering Imaging aperture information for the ‘M’ filters when using the Grism Time Series subarrays (SUBGRISM256, SUBGRISM128, SUBGRISM64).
3. Strike SUB8FP1 entries from Engineering Imaging (that template doesn’t support the required target acquisition needed to get a source into such small subarrays).
4. Make explicit the apertures to be used for the direct images in the Wide Field Slitless Spectroscopy template.
5. Split science apertures for the Time Series template out from section 2.1.

Revision 2 (Dec. 6, 2016):

1. Remove all the tracked / marked changes that were present in the published version of Revision 1.
2. Fix inconsistencies with SIAF noted in [OPR 86415](https://www.ess.stsci.edu/prsystem/servlet/prbrowse/pr.86415).
3. Note the temporary solution to aperture NRCB5\_TAPSIMG32 being missing in the 2016 Nov. SIAF delivery. See [OPR 85444](https://www.ess.stsci.edu/prsystem/servlet/prbrowse/pr.85444) and section 2.2 below.
4. Removed “\*\*” and “\*\*\*\*” after aper names. See notes 11 and 12 under revision 1.

Revision 1 (**Oct. 4, 2016**); This revision addresses PR 85486 as well as fixing some errors and noting mappings that are unused, or unlikely to be used. This version is consistent with the Oct. 2016 SIAF delivery except as specifically noted.

1. Note entries that are (currently) un-used.
2. Add missing coronagraphic target-acq apertures
   1. 2 ND-square apertures missing for the bar oculters
   2. 5 apertures missing for faint-source TA
3. Fix / add TA apertures for coronagraphic bar oculters to account for filter-dependence
4. Add dependence of coronagraphic science apertures on filter for bar occulters.
5. Add full-frame apertures for coronagraphy
6. Add missing TA apertures for Timeseries and Grism Timeseries
7. Add missing subarray apertures for Grism Timeseries
8. Remove subarrays from entries where modules=ALL
9. Add entries for the new Wide Field Slitless Spectroscopy (WFSS) template.
10. Change DB for subarray from nircam\_template / subarray to nircam\_exposure\_specification / subarray per PR83269
11. “\*\*” after AperName entries indicates places where multiple apertures should be displayed.
12. “\*\*\*\*” after AperName entries indicates places where it is critical that multiple or complex apertures be displayed.
13. Use B5 or A5 aperture, as appropriate, for non-‘P’ subarrays (i.e. for extended-source subarrays) to better represent the actual field of view (using B1 and A1, as it was, only shows < ¼ of the FOV).
14. Use B1 apertures for the ‘P’ subarrays (i.e. for point-source subarrays), since they better define the FOV where users will get both SW and LW data.

Initial version (Mar 10, 2016)

1. Split Appendix H into separate units for each SI as follows:
   1. H1 – MIRI
   2. H2 – NIRCam – THIS DOCUMENT
   3. H3 – NIRSpec
   4. H4 – FGS
   5. H5 – NIRISS
   6. H6 – WFSC
2. Moved NIRCam Engineering Imaging into a separate section
3. Moved Coarse Phasing and Fine Phasing to Appendix H6 (WFSC)

**H2. NIRCam**

Rules for population of ***pointings*** / AperName

2.1 NIRCam Imaging Template / NIRCam External Flat Template

|  |  |
| --- | --- |
| Rules | AperName |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification / subarray** = FULL | NRCAS\_FULL  (this APT option should be going away and become un- used) |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification / subarray** = SUB160 | NRCA5\_SUB160  (module A not currently used for subarray imaging) |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification / subarray** = SUB320 | NRCA5\_SUB320  (module A not currently used for subarray imaging) |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification / subarray** = SUB640 | NRCA5\_SUB640  (module A not currently used for subarray imaging) |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification /** subarray = FULL | NRCBS\_FULL |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification** / subarray = SUB160 | NRCB5\_SUB160 |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification** / subarray = SUB320 | NRCB5\_SUB320 |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification /** subarray = SUB640 | NRCB5\_SUB640 |
| If **nircam\_templates** / modules = ALL and  **nircam\_exposure\_specification /** subarray = FULL | NRCALL\_FULL |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification /** subarray = SUB400P | NRCB1\_SUB400P |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification /** subarray = SUB160P | NRCB1\_SUB160P |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification /** subarray = SUB64P | NRCB1\_SUB64P |

2.2 NIRCam Time-Series Template

Note: This template only allows observers to select Module B.

For Target Acquisition Only:

|  |  |
| --- | --- |
| Rules | AperName |
| If **nircam\_templates** / modules = B | NRCB5\_TAPSIMG32 |

*Note:APT will temporarily use the NRCA5\_TAGRISMTS32 aperture between about 12 / 6 / 2016 and March 2017. Once NRCB5\_TAPSIMG is delivered by SIAF APT will switch to using that aperture instead.*

For Science:

|  |  |
| --- | --- |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification /** subarray = FULL | NRCBS\_FULL |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification /** subarray = SUB400P | NRCB1\_SUB400P |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification /** subarray = SUB160P | NRCB1\_SUB160P |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification /** subarray = SUB64P | NRCB1\_SUB64P |

2.3 NIRCam Grism Time-Series Template

Note: This template only allows observers to select Module A.

For target acquisition:

|  |  |
| --- | --- |
| Rules | AperName |
| If **nircam\_templates** / modules = A | NRCA5\_TAGRISMTS32 |

For science:

|  |  |
| --- | --- |
| Rules | AperName |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification / subarray** = FULL  **nircam\_exposure\_specification** / filter\_long = F322W2 | NRCA5\_GRISM\_F322W2 |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification /** subarray = FULL  **nircam\_exposure\_specification** / filter\_long = F277W | NRCA5\_GRISM\_F277W |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification /** subarray = FULL  **nircam\_exposure\_specification** / filter\_long = F356W | NRCA5\_GRISM\_F356W |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification /** subarray = FULL  **nircam\_exposure\_specification** / filter\_long = F444W | NRCA5\_GRISM\_F444W |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM256 and  **nircam\_exposure\_specification** / filter\_long = F322W2 | NRCA5\_GRISM256\_F322W2 |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM256 and  **nircam\_exposure\_specification** / filter\_long = F277W | NRCA5\_GRISM256\_F277W |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM256 and  **nircam\_exposure\_specification** / filter\_long = F356W | NRCA5\_GRISM256\_F356W |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = SUBGRISM256 and  **nircam\_exposure\_specification** / filter\_long = F444W | NRCA5\_GRISM256\_F444W |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM128 and  **nircam\_exposure\_specification** / filter\_long = F322W2 | NRCA5\_GRISM128\_F322W2 |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM128 and  **nircam\_exposure\_specification** / filter\_long = F277W | NRCA5\_GRISM128\_F277W |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM128 and  **nircam\_exposure\_specification** / filter\_long = F356W | NRCA5\_GRISM128\_F356W |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM128 and  **nircam\_exposure\_specification** / filter\_long = F444W | NRCA5\_GRISM128\_F444W |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM64 and  **nircam\_exposure\_specification** / filter\_long = F322W2 | NRCA5\_GRISM64\_F322W2 |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM64 and  **nircam\_exposure\_specification** / filter\_long = F277W | NRCA5\_GRISM64\_F277W |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM64 and  **nircam\_exposure\_specification** / filter\_long = F356W | NRCA5\_GRISM64\_F356W |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM64 and  **nircam\_exposure\_specification** / filter\_long = F444W | NRCA5\_GRISM64\_F444W |

2.4 NIRCam Coronagraphic Imaging Template

Note: This template only allows observers to select Module A. Information about Module B is included in case we decide later to switch to that module.

For target acquisition:

|  |  |
| --- | --- |
| Rules | AperName |
| If **nircam\_templates** / coronagraph = MASK210R and  **nircam\_templates** / modules = A and  **nircam\_target\_acq** / acquisition\_mode = BRIGHT | NRCA2\_TAMASK210R |
| If **nircam\_templates** / coronagraph = MASK335R and  **nircam\_templates** / modules = A and  **nircam\_target\_acq** / acquisition\_mode = BRIGHT | NRCA5\_TAMASK335R |
| If **nircam\_templates** / coronagraph = MASK430R and  **nircam\_templates** / modules = A and  **nircam\_target\_acq** / acquisition\_mode = BRIGHT | NRCA5\_TAMASK430R |
| If **nircam\_templates** / coronagraph = MASKSWB and  **nircam\_templates** / modules = A and  **nircam\_nircam\_exposure\_specification /** filter\_short =  [F212N, F200W] and  **nircam\_target\_acq** / acquisition\_mode = BRIGHT | NRCA4\_TAMASKSWB |
| If **nircam\_templates** / coronagraph = MASKSWB and  **nircam\_templates** / modules = A and  **nircam nircam\_exposure\_specification /** filter\_short =  [F182M, F187N, F210M] and  **nircam\_target\_acq** / acquisition\_mode = BRIGHT | NRCA4\_TAMASKSWBS |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_nircam\_exposure\_specification /** filter\_long =  [F444W, F460M, F480M] and  **nircam\_target\_acq** / acquisition\_mode = BRIGHT | NRCA5\_TAMASKLWBL |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_nircam\_exposure\_specification /** filter\_long =  [F250M, F277W, F300M, F335M, F356W, F360M, F410M, F430M] and  **nircam\_target\_acq** / acquisition\_mode = BRIGHT | NRCA5\_TAMASKLWB |
| If **nircam\_templates** / coronagraph = MASK210R and  **nircam\_templates** / modules = A and  **nircam\_target\_acq** / acquisition\_mode = FAINT | NRCA2\_FSTAMASK210R |
| If **nircam\_templates** / coronagraph = MASK335R and  **nircam\_templates** / modules = A and  **nircam\_target\_acq** / acquisition\_mode = FAINT | NRCA5\_FSTAMASKM335R  *(note extra ‘M’ – leaving it rather than asking SIAF to fix)* |
| If **nircam\_templates** / coronagraph = MASK430R and  **nircam\_templates** / modules = A and  **nircam\_target\_acq** / acquisition\_mode = FAINT | NRCA5\_FSTAMASKM430R  *(note extra ‘M’ – leaving it rather than asking SIAF to fix)* |
| If **nircam\_templates** / coronagraph = MASKSWB and  **nircam\_templates** / modules = A and  **nircam\_target\_acq** / acquisition\_mode = FAINT | NRCA4\_FSTAMASKSWB |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_target\_acq** / acquisition\_mode = FAINT | NRCA5\_FSTAMASKLWB |
| If **nircam\_templates** / coronagraph = MASK210R and  **nircam\_templates** / modules = B | NRCB1\_TAMASK210R  (module B not currently used for coronagraphy) |
| If **nircam\_templates** / coronagraph = MASK335R and  **nircam\_templates** / modules = B | NRCB5\_TAMASK335R  (module B not currently used for coronagraphy) |
| If **nircam\_templates** / coronagraph = MASK430R and  **nircam\_templates** / modules = B | NRCB5\_TAMASK430R  (module B not currently used for coronagraphy) |
| If **nircam\_templates** / coronagraph = MASKSWB and  **nircam\_templates** / modules = B | NRCB3\_TAMASKSWB  (module B not currently used for coronagraphy) |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = B | NRCB5\_TAMASKLWB  (module B not currently used for coronagraphy) |

For science:

|  |  |
| --- | --- |
| Rules | AperName |
| If **nircam\_templates** / coronagraph = MASK210R and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = not FULL | NRCA2\_MASK210R |
| If **nircam\_templates** / coronagraph = MASK335R and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = not FULL | NRCA5\_MASK335R |
| If **nircam\_templates** / coronagraph = MASK430R and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray =not FULL | NRCA5\_MASK430R |
| If **nircam\_templates** / coronagraph = MASKSWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = not FULL and  **nircam\_exposure\_specification** / filter\_short = F182M | NRCA4\_MASKSWB\_F182M |
| If **nircam\_templates** / coronagraph = MASKSWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = not FULL and  **nircam\_exposure\_specification** / filter\_short = F187N | NRCA4\_MASKSWB\_F187N |
| If **nircam\_templates** / coronagraph = MASKSWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = not FULL and  **nircam\_exposure\_specification** / filter\_short = F210M | NRCA4\_MASKSWB\_F210M |
| If **nircam\_templates** / coronagraph = MASKSWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = not FULL and  **nircam\_exposure\_specification** / filter\_short = F212N | NRCA4\_MASKSWB\_F212N |
| If **nircam\_templates** / coronagraph = MASKSWB and  **nircam\_templates** / modules = A and  nircam\_exposure\_specification / subarray = not FULL and  **nircam\_exposure\_specification** / filter\_short = F200W | NRCA4\_MASKSWB\_F200W |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = not FULL and  **nircam\_exposure\_specification** / filter\_long = F250M | NRCA5\_MASKLWB\_F250M |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = not FULL and  **nircam\_exposure\_specification** / filter\_long = F300M | NRCA5\_MASKLWB\_F300M |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = not FULL and  **nircam\_exposure\_specification** / filter\_long = F277W | NRCA5\_MASKLWB\_F277W |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = not FULL and  **nircam\_exposure\_specification** / filter\_long = F335M | NRCA5\_MASKLWB\_F335M |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = not FULL and  **nircam\_exposure\_specification** / filter\_long = F360M | NRCA5\_MASKLWB\_F360M |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = not FULL and  **nircam\_exposure\_specification** / filter\_long = F356W | NRCA5\_MASKLWB\_F356W |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = not FULL and  **nircam\_exposure\_specification** / filter\_long = F410M | NRCA5\_MASKLWB\_F410M |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = not FULL and  **nircam\_exposure\_specification** / filter\_long = F430M | NRCA5\_MASKLWB\_F430M |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = not FULL and  **nircam\_exposure\_specification** / filter\_long = F460M | NRCA5\_MASKLWB\_F460M |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = not FULL and  **nircam\_exposure\_specification** / filter\_long = F480M | NRCA5\_MASKLWB\_F480M |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = not FULL and  **nircam\_exposure\_specification** / filter\_long = F444W | NRCA5\_MASKLWB\_F444W |
| If **nircam\_templates** / coronagraph = MASK210R and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL | NRCA2\_FULL\_MASK210R |
| If **nircam\_templates** / coronagraph = MASK335R and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL | NRCA5\_FULL\_MASK335R |
| If **nircam\_templates** / coronagraph = MASK430R and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL | NRCA5\_FULL\_MASK430R |
| If **nircam\_templates** / coronagraph = MASKSWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL and  **nircam\_exposure\_specification** / filter\_short = F182M | NRCA4\_FULL\_MASKSWB\_F182M |
| If **nircam\_templates** / coronagraph = MASKSWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL and  **nircam\_exposure\_specification** / filter\_short = F187N | NRCA4\_FULL\_MASKSWB\_F187N |
| If **nircam\_templates** / coronagraph = MASKSWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL and  **nircam\_exposure\_specification** / filter\_short = F210M | NRCA4\_FULL\_MASKSWB\_F210M |
| If **nircam\_templates** / coronagraph = MASKSWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL and  **nircam\_exposure\_specification** / filter\_short = F212N | NRCA4\_FULL\_MASKSWB\_F212N |
| If **nircam\_templates** / coronagraph = MASKSWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL and  **nircam\_exposure\_specification** / filter\_short = F200W | NRCA4\_FULL\_MASKSWB\_F200W |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL and  **nircam\_exposure\_specification** / filter\_long = F250M | NRCA5\_FULL\_MASKLWB\_F250M |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL and  **nircam\_exposure\_specification** / filter\_long = F300M | NRCA5\_FULL\_MASKLWB\_F300M |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL and  **nircam\_exposure\_specification** / filter\_long = F277W | NRCA5\_FULL\_MASKLWB\_F277W |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL and  **nircam\_exposure\_specification** / filter\_long = F335M | NRCA5\_FULL\_MASKLWB\_F335M |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL and  **nircam\_exposure\_specification** / filter\_long = F360M | NRCA5\_FULL\_MASKLWB\_F360M |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL and  **nircam\_exposure\_specification** / filter\_long = F356W | NRCA5\_FULL\_MASKLWB\_F356W |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL and  **nircam\_exposure\_specification** / filter\_long = F410M | NRCA5\_FULL\_MASKLWB\_F410M |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL and  **nircam\_exposure\_specification** / filter\_long = F430M | NRCA5\_FULL\_MASKLWB\_F430M |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL and  **nircam\_exposure\_specification** / filter\_long = F460M | NRCA5\_FULL\_MASKLWB\_F460M |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL and  **nircam\_exposure\_specification** / filter\_long = F480M | NRCA5\_FULL\_MASKLWB\_F480M |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = FULL and  **nircam\_exposure\_specification** / filter\_long = F444W | NRCA5\_FULL\_MASKLWB\_F444W |
| If **nircam\_templates** / coronagraph = MASK210R and  **nircam\_templates** / modules = B | NRCB1\_MASK210R  (not currently used) |
| If **nircam\_templates** / coronagraph = MASK335R and  **nircam\_templates** / modules = B | NRCB5\_MASK335R  (not currently used) |
| If **nircam\_templates** / coronagraph = MASK430R and  **nircam\_templates** / modules = B | NRCB5\_MASK430R  (not currently used) |
| If **nircam\_templates** / coronagraph = MASKSWB and  **nircam\_templates** / modules = B | NRCB3\_MASKSWB  (not currently used) |
| If **nircam\_templates** / coronagraph = MASKLWB and  **nircam\_templates** / modules = B | NRCB5\_MASKLWB  (not currently used) |

2.5 NIRCam Focus Template

|  |  |
| --- | --- |
| Rules | AperName |
| If **nircam\_templates** / module = A | NRCA3\_DHSPIL |
| If **nircam\_templates** / module = B | NRCB4\_DHSPIL |

*Note:* [*OPR 86355*](https://www.ess.stsci.edu/prsystem/servlet/prbrowse/pr.86355) *requests addition of apertures NRCA3\_DHSPIL\_SUB96 and NRCB4\_DHSPIL\_SUB96 for use with this template. They should become available c. 2016 March…*

2.6 NIRCam PIL Imaging Template

|  |  |
| --- | --- |
| Rules | AperName |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / filter\_short does not match  MASKRND\* and  **nircam\_exposure\_specification** / filter\_short does not match  MASKBAR\* and  **nircam\_exposure\_specification** / filter\_short does not match  MASKIPR\* | NRCA3\_DHSPIL |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / filter\_short matches  MASKRND\* or  **nircam\_exposure\_specification** / filter\_short matches  MASKBAR\* or  **nircam\_exposure\_specification** / filter\_short matches  MASKIPR\* | NRCA3\_DHSPIL\_WEDGES |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification** / filter\_short does not match  MASKRND\* and  **nircam\_exposure\_specification** / filter\_short does not match  MASKBAR\* and  **nircam\_exposure\_specification** / filter\_short does not match  MASKIPR\* | NRCB4\_DHSPIL |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification** / filter\_short matches  MASKRND\* or  **nircam\_exposure\_specification** / filter\_short matches  MASKBAR\* or  **nircam\_exposure\_specification** / filter\_short matches  MASKIPR\* | NRCB4\_DHSPIL\_WEDGES |

*Note: The “\*” characters in this table represented wild-card. E.G. a value of MASKRND\_F150W matches MASKRND\*.*

2.7 NIRCam IPR Imaging Template

|  |  |
| --- | --- |
| Rules | AperName |
| If **nircam\_templates** / modules = A | NRCAS\_FULL |
| If **nircam\_templates** / modules = B | NRCBS\_FULL |

2.8 NIRCam Engineering Imaging Template

Note (2017-01-10): The APT 25 template allows access to the grism time-series subarrays on module B, but the SIAF mapping for that is intentionally being deferred at this time. A placholder entry has been added below assigning aperture NRCAS\_FULL for all such configurations (which is the existing but incorrect APT mapping).

|  |  |
| --- | --- |
| Rules | AperName |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification / subarray** = FULL | NRCAS\_FULL |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification / subarray** = SUB160 | NRCA5\_SUB160 |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification / subarray** = SUB320 | NRCA5\_SUB320 |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification / subarray** = SUB640 | NRCA5\_SUB640 |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification / subarray** = FULL | NRCBS\_FULL |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification / subarray** = SUB160 | NRCB5\_SUB160 |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification / subarray** = SUB320 | NRCB5\_SUB320 |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification / subarray** = SUB640 | NRCB5\_SUB640 |
| If **nircam\_templates** / modules = ALL and  **nircam\_exposure\_specification / subarray** = FULL | NRCALL\_FULL |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification / subarray** = SUB400P | NRCA3\_SUB400P |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification / subarray** = SUB160P | NRCA3\_SUB160P |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification / subarray** = SUB64P | NRCA3\_SUB64P |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification / subarray** = SUB400P | NRCB1\_SUB400P |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification / subarray** = SUB160P | NRCB1\_SUB160P |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification / subarray** = SUB64P | NRCB1\_SUB64P |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM256 and  **nircam\_exposure\_specification** / filter\_long = F322W2 | NRCA5\_GRISM256\_F322W2 |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM256 and  **nircam\_exposure\_specification** / filter\_long = any of  [F250M, F300M, F335M, F360M] | NRCA5\_GRISM256\_F322W2 |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM256 and  **nircam\_exposure\_specification** / filter\_long = F277W | NRCA5\_GRISM256\_F277W |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM256 and  **nircam\_exposure\_specification** / filter\_long = F356W | NRCA5\_GRISM256\_F356W |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = SUBGRISM256 and  **nircam\_exposure\_specification** / filter\_long = F444W | NRCA5\_GRISM256\_F444W |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = SUBGRISM256 and  **nircam\_exposure\_specification** / filter\_long = any of  [F410M, F430M, F460M, F480M] | NRCA5\_GRISM256\_F444W |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM128 and  **nircam\_exposure\_specification** / filter\_long = F322W2 | NRCA5\_GRISM128\_F322W2 |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM128 and  **nircam\_exposure\_specification** / filter\_long = any of  [F250M, F300M, F335M, F360M] | NRCA5\_GRISM128\_F322W2 |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM128 and  **nircam\_exposure\_specification** / filter\_long = F277W | NRCA5\_GRISM128\_F277W |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM128 and  **nircam\_exposure\_specification** / filter\_long = F356W | NRCA5\_GRISM128\_F356W |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM128 and  **nircam\_exposure\_specification** / filter\_long = F444W | NRCA5\_GRISM128\_F444W |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = SUBGRISM128 and  **nircam\_exposure\_specification** / filter\_long = any of  [F410M, F430M, F460M, F480M] | NRCA5\_GRISM128\_F444W |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM64 and  **nircam\_exposure\_specification** / filter\_long = F322W2 | NRCA5\_GRISM64\_F322W2 |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM64 and  **nircam\_exposure\_specification** / filter\_long = any of  [F250M, F300M, F335M, F360M] | NRCA5\_GRISM64\_F322W2 |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM64 and  **nircam\_exposure\_specification** / filter\_long = F277W | NRCA5\_GRISM64\_F277W |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM64 and  **nircam\_exposure\_specification** / filter\_long = F356W | NRCA5\_GRISM64\_F356W |
| If **nircam\_templates** / modules = A and  **nircam\_templates /** subarray = SUBGRISM64 and  **nircam\_exposure\_specification** / filter\_long = F444W | NRCA5\_GRISM64\_F444W |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification** / subarray = SUBGRISM64 and  **nircam\_exposure\_specification** / filter\_long = any of  [F410M, F430M, F460M, F480M] | NRCA5\_GRISM64\_F444W |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification** / subarray matches SUBGRISM\* | NRCAS\_FULL  (APT 25 Placeholder Entry) |
| If **nircam\_templates** / modules = A and  **nircam\_exposure\_specification / subarray** = SUB96DHSPILA | NRCA3\_DHSPIL\_SUB96 |
| If **nircam\_templates** / modules = B and  **nircam\_exposure\_specification / subarray** = SUB96DHSPILB | NRCB4\_DHSPIL\_SUB96 |
| ~~If~~ **~~nircam\_templates~~** ~~/ modules = A and~~  **~~nircam\_exposure\_specification / subarray~~** ~~= SUB8FP1A~~ | ~~NRCA3\_FP1\_SUB8~~ |
| ~~If~~ **~~nircam\_templates~~** ~~/ modules = B and~~  **~~nircam\_exposure\_specification / subarray~~** ~~= SUB8FP1B~~ | ~~NRCB4\_FP1\_SUB8~~ |

Note: In the APT 25 placeholder entry (modules=B, subarray one of the grism time series subarrays) the string “SUBGRISM\*” should be interpreted as matching any of SUBGRISM256, SUBGRISM128, SUBGRISM64.

2.9 NIRCam Wide Field Slitless Spectroscopy (WFSS) Template

|  |  |
| --- | --- |
| Rules | AperName |
| If **nircam\_templates** / modules = A and  nircam\_exposure\_specification / pupil\_long = GRISMR | NRCA5\_GRISMR\_WFSS |
| If **nircam\_templates** / modules = A and  nircam\_exposure\_specification / pupil\_long = CLEAR  and the closest ***previous*** exposure with a LW grism used  nircam\_exposure\_specification / pupil\_long = GRISMR | NRCA5\_GRISMR\_WFSS |
| If **nircam\_templates** / modules = A and  nircam\_exposure\_specification / pupil\_long = GRISMC | NRCA5\_GRISMC\_WFSS |
| If **nircam\_templates** / modules = A and  nircam\_exposure\_specification / pupil\_long = CLEAR  and the closest ***previous*** exposure with a LW grism used  nircam\_exposure\_specification / pupil\_long = GRISMC | NRCA5\_GRISMC\_WFSS |
| If **nircam\_templates** / modules = ALL and  nircam\_exposure\_specification / pupil\_long = GRISMR | NRCALL\_GRISMR\_WFSS |
| If **nircam\_templates** / modules = ALL and  nircam\_exposure\_specification / pupil\_long = CLEAR  and the closest ***previous*** exposure with a LW grism used  nircam\_exposure\_specification / pupil\_long = GRISMR | NRCALL\_GRISMR\_WFSS |
| If **nircam\_templates** / modules = ALL and  nircam\_exposure\_specification / pupil\_long = GRISMC | NRCALL\_GRISMC\_WFSS |
| If **nircam\_templates** / modules = ALL and  nircam\_exposure\_specification / pupil\_long = CLEAR  and the closest ***previous*** exposure with a LW grism used  nircam\_exposure\_specification / pupil\_long = GRISMC | NRCALL\_GRISMC\_WFSS |