

Test Case DMS-TP-431: CRDS: Reference files are validated [Version : 1]

Author: gunning - 01/28/2016 10:45:02

Summary:

This test procedure will verify DMS requirements DMS-680 and DMS-546.

DMS-680 - CRDS shall validate the format of required input files.

DMS-546 - Reference files shall include in their headers information in the form of header comments that describe the procedure for making the reference file or point to a reference that describes that procedure.

All reference files must pass CRDS certification before ingestion into the database.

Preconditions:

Pythonpath set according to the DMS Build 5.0 SDN. See DMS-TP-404

Permission to write to /ifs/int/jwst/test_data/DMS_TP_test_data

Environment variable \$CRDS_PATH set according to the DMS Build 5.0 SDN. See DMS-TP-404

#:	Step actions:	Expected Results:
1	Create a working directory for this procedure on any of the DMS Build 5.0 machines	Directory for this procedure will be made
2	Navigate to the new directory	Current working directory will now be the directory created for testing this procedure
3	Copy jwst_niriss_flat_0003.fits from \$CRDS_PATH/references/jwst/ to the current working directory	jwst_niriss_flat_0003.fits is copied into the current working directory
4	Make a copy of jwst_niriss_flat_0003.fits and rename it jwst_niriss_flat_bad_header_tp431.fits > cp jwst_niriss_flat_0003.fits jwst_niriss_flat_bad_header_tp431.fits	Two files now exist: jwst_niriss_flat_0003.fits jwst_niriss_flat_bad_header_tp431.fits
5	Start Python > python	Python will start and the following will print to the terminal: Python 2.7.3 (default, Sep 3 2013, 15:26:46) [GCC 4.4.6 20120305 (Red Hat 4.4.6-4)] on linux2 Type "help", "copyright", "credits" or "license" for more information.
6	Import delval from astropy >>> from astropy.io.fits import delval	No error messages or warnings
7	Delete all instances of HISTORY keyword >>> delval('jwst_niriss_flat_bad_header_tp431.fits','HISTORY',ext=0)	No error messages or warnings
8	Exit python >>> exit()	No error messages or warnings
9	Ensure access to crds scripts > eval `\$_UR_BASEDIR/\$_UR_VERSION/bin/ur-setup-real -csh`	No error messages or warnings
		The following will print to the terminal: CRDS : DEBUG Command: ['certify.py', '--dump-provenance', 'jwst_niriss_flat_0003.fits'] CRDS : DEBUG Defaulting comparison context to latest operational CRDS context. CRDS : DEBUG CRDS JSON RPC get_server_info () --> CRDS : DEBUG RPC OK CRDS : DEBUG Connected to server at 'https://jwst-crds-b5it.stsci.edu' CRDS : DEBUG READONLY CACHE Using cached configuration and default context. CRDS : DEBUG Using CACHED CRDS reference assignment rules last updated on '2016-01-27 12:20:58.947121' CRDS : DEBUG READONLY CACHE skipping config update. CRDS : INFO ##### CRDS : INFO Certifying '/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits' (1/1) as 'FITS' relative to context 'jwst_0104.pmap' CRDS : INFO FITS file 'jwst_niriss_flat_0003.fits' conforms to FITS standards. CRDS : DEBUG Adding validator key ('all_all.tpn', '/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits') CRDS : DEBUG Adding validator key ('niriss_all.tpn', '/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits')

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> python -m crds.certify --dump-provenance jwst niriss flat 0003.fits
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CRDS : DEBUG Adding validator key ('niriss_flat.tpn',
'/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits')
CRDS : DEBUG No unique row parameters, skipping table row checks.
CRDS : DEBUG
File='/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits'
class='Character' keyword='META.INSTRUMENT.NAME' value='NIRISS' is in
['FGS', 'MIRI', 'NIRCAM', 'NIRISS', 'NIRSPEC']
CRDS : DEBUG
File='/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits'
class='Character' keyword='META.TELESCOPE' value='JWST' is in ['JWST']
CRDS : DEBUG Optional parameter 'META.REFFILE.USEAFTER' is
missing.
CRDS : DEBUG
File='/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits'
class='Jwstdate' keyword='META.REFFILE.USEAFTER' value=None is
optional or excluded.
CRDS : DEBUG Optional parameter 'META.REFFILE.PEDIGREE' is
missing.
CRDS : DEBUG
File='/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits'
class='Pedigree' keyword='META.REFFILE.PEDIGREE' value=None is
optional or excluded.
CRDS : DEBUG Optional parameter 'META.REFFILE.AUTHOR' is missing.
CRDS : DEBUG
File='/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits'
class='Character' keyword='META.REFFILE.AUTHOR' value=None is optional
or excluded.
CRDS : DEBUG Optional parameter 'META.REFFILE.DESCRPTION' is
missing.
CRDS : DEBUG
File='/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits'
class='Character' keyword='META.REFFILE.DESCRPTION' value=None is
optional or excluded.
CRDS : DEBUG Optional parameter 'HISTORY' is missing.
CRDS : DEBUG
File='/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits'
class='Character' keyword='HISTORY' value=None is optional or excluded.
CRDS : DEBUG
File='/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits'
class='Character' keyword='META.INSTRUMENT.NAME' value='NIRISS' is in
['NIRISS']
CRDS : DEBUG
File='/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits'
class='Character' keyword='META.INSTRUMENT.PUPIL' value='CLEARP' is in
['CLEARP', 'F090W', 'F115W', 'F140M', 'F150W', 'F158M', 'F200W',
'GR700XD', 'N/A', 'NRM']
CRDS : DEBUG
File='/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits'
class='Character' keyword='META.INSTRUMENT.DETECTOR' value='NIS' is
in ['N/A', 'NIS']
CRDS : DEBUG Optional parameter 'META.EXPOSURE.READPATT' is
missing.
CRDS : DEBUG
File='/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits'
class='Character' keyword='META.EXPOSURE.READPATT' value=None is
optional or excluded.
CRDS : DEBUG
File='/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits'
class='Character' keyword='META.EXPOSURE.TYPE' value='NIS_IMAGE' is
in ['ANY', 'N/A', 'NIS_AMI', 'NIS_DARK', 'NIS_FOCUS', 'NIS_IMAGE',
'NIS_LAMP', 'NIS_SOSS', 'NIS_WFSS']
CRDS : DEBUG
File='/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits'
class='Character' keyword='META.INSTRUMENT.FILTER' value='CLEAR' no
.tpn values defined.
CRDS : INFO [0] AUTHOR Michael A. Wolfe, Kevin Volk
CRDS : INFO [0] DESCRIP This is a pixel flat reference file.-----
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CRDS : INFO [0] HISTORY This file is being delivered because it is the
pixel flat reference file
CRDS : INFO [0] HISTORY . This file was created from the python scripts
convert_niriss_pxl_fit_c
CRDS : INFO [0] HISTORY mdv.py and ref_pxl_fit.py and fits file provided
by Kevin Volk. Document
CRDS : INFO [0] HISTORY ation describing the strategy and algorithms is
found in "Description of
CRDS : INFO [0] HISTORY the NIRISS Pixel Flat Reference File." Python
scripts can be found at /
CRDS : INFO [0] HISTORY
witserv/data17/mwolfe/niriss/test_comdev/test/test_pixel_flat and there
CRDS : INFO [0] HISTORY is no version number for the scripts. The data
used to create the refere
CRDS : INFO [0] HISTORY nce file are:
CRDS : INFO [0] HISTORY frame35signal1230nm_pixelflat1.fits
CRDS : INFO [0] HISTORY frame35signal1230nm_pixelflat1_dq1.fits
CRDS : INFO [0] HISTORY frame35signal1230nm_pixelflat1_error.fits
CRDS : INFO [0] PEDIGREE GROUND
CRDS : INFO [0] USEAFTER Jan 24 2015 22:00:00

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		<pre> CRDS : INFO [0] USEAFTER Jan 01 2015 00:00:00 CRDS : INFO META.TELESCOPE = 'JWST' CRDS : INFO META.INSTRUMENT.DETECTOR = 'NIS' CRDS : INFO META.INSTRUMENT.NAME = 'NIRISS' CRDS : INFO META.INSTRUMENT.FILTER = 'CLEAR' CRDS : INFO META.EXPOSURE.TYPE = 'NIS_IMAGE' CRDS : INFO META.INSTRUMENT.PUPIL = 'CLEARP' CRDS : INFO ##### CRDS : INFO 0 errors CRDS : INFO 0 warnings CRDS : INFO 25 infos </pre> <p>Completion of this step partly verifies DMS requirement DMS-546.</p>
11	Verify from the output of step 10 that CRDS certify validated the reference file.	<p>Excerpt from the step 10 output that shows validation:</p> <pre> CRDS : INFO ##### CRDS : INFO Certifying '/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits' (1/1) as 'FITS' relative to context 'jwst_0104.pmap' CRDS : INFO FITS file 'jwst_niriss_flat_0003.fits' conforms to FITS standards. CRDS : DEBUG Adding validator key ('all_all.tpn', '/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits') CRDS : DEBUG Adding validator key ('niriss_all.tpn', '/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits') CRDS : DEBUG Adding validator key ('niriss_flat.tpn', '/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits') CRDS : DEBUG No unique row parameters, skipping table row checks. </pre> <p>Completion of this step verifies DMS requirement DMS-680. The message</p> <pre> "CRDS : INFO Certifying '/ifs/int/jwst/ref/build5/crds/cache/references/jwst/jwst_niriss_flat_0003.fits' (1/1) as 'FITS' relative to context 'jwst_0104.pmap' " </pre> <p>Confirms that CRDS performs certification which validates the reference file format as required by the requirement.</p>
12	<p>Verify a warning message will occur if file is missing HISTORY by executing crds.certify.</p> <pre>> python -m crds.certify --comparison-context=jwst_0104.pmap --dump-provenance ./jwst_niriss_flat_bad_header_tp431.fits</pre> <p>Note: Verifying a warning will be issued is key to ensuring ALL reference files will have HISTORY which describes the procedure for</p>	<p>The following will print to the terminal:</p> <pre> CRDS : DEBUG Command: ['certify.py', '--comparison-context=jwst_0104.pmap', '--dump-provenance', '/jwst_niriss_flat_bad_header_tp431.fits'] CRDS : INFO ##### CRDS : INFO Certifying './jwst_niriss_flat_bad_header_tp431.fits' (1/1) as 'FITS' relative to context 'jwst_0104.pmap' CRDS : INFO FITS file 'jwst_niriss_flat_bad_header_tp431.fits' conforms to FITS standards. CRDS : DEBUG Adding validator key ('all_all.tpn', '/jwst_niriss_flat_bad_header_tp431.fits') CRDS : DEBUG Adding validator key ('niriss_all.tpn', '/jwst_niriss_flat_bad_header_tp431.fits') CRDS : DEBUG Adding validator key ('niriss_flat.tpn', '/jwst_niriss_flat_bad_header_tp431.fits') CRDS : DEBUG No unique row parameters, skipping table row checks. CRDS : DEBUG File='./jwst_niriss_flat_bad_header_tp431.fits' class='Character' keyword='META.INSTRUMENT.NAME' value='NIRISS' is in ['FGS', 'MIRI', 'NIRCAM', 'NIRISS', 'NIRSPEC'] CRDS : DEBUG File='./jwst_niriss_flat_bad_header_tp431.fits' class='Character' keyword='META.TELESCOPE' value='JWST' is in ['JWST'] CRDS : DEBUG Optional parameter 'META.REFFILE.USEAFTER' is missing. CRDS : DEBUG File='./jwst_niriss_flat_bad_header_tp431.fits' class='Jwstdate' keyword='META.REFFILE.USEAFTER' value=None is optional or excluded. CRDS : DEBUG Optional parameter 'META.REFFILE.PEDIGREE' is missing. CRDS : DEBUG File='./jwst_niriss_flat_bad_header_tp431.fits' class='Pedigree' keyword='META.REFFILE.PEDIGREE' value=None is optional or excluded. CRDS : DEBUG Optional parameter 'META.REFFILE.AUTHOR' is missing. CRDS : DEBUG File='./jwst_niriss_flat_bad_header_tp431.fits' class='Character' keyword='META.REFFILE.AUTHOR' value=None is optional or excluded. CRDS : DEBUG Optional parameter 'META.REFFILE.DESCRPTION' is missing. CRDS : DEBUG File='./jwst_niriss_flat_bad_header_tp431.fits' class='Character' keyword='META.REFFILE.DESCRPTION' value=None is optional or excluded. CRDS : DEBUG Optional parameter 'HISTORY' is missing. CRDS : DEBUG File='./jwst_niriss_flat_bad_header_tp431.fits' class='Character' keyword='HISTORY' value=None is optional or excluded. CRDS : DEBUG File='./jwst_niriss_flat_bad_header_tp431.fits' class='Character' keyword='META.INSTRUMENT.NAME' value='NIRISS' is in ['NIRISS'] CRDS : DEBUG File='./jwst_niriss_flat_bad_header_tp431.fits' class='Character' keyword='META.INSTRUMENT.PUPIL' value='CLEARP' is in </pre>

	<p>making the reference file.</p> <pre> ['CLEARP', 'F090W', 'F115W', 'F140M', 'F150W', 'F158M', 'F200W', 'GR700XD', 'N/A', 'NRM'] CRDS : DEBUG File='.jwst_niriss_flat_bad_header_tp431.fits' class='Character' keyword='META.INSTRUMENT.DETECTOR' value='NIS' is in ['N/A', 'NIS'] CRDS : DEBUG Optional parameter 'META.EXPOSURE.READPATT' is missing. CRDS : DEBUG File='.jwst_niriss_flat_bad_header_tp431.fits' class='Character' keyword='META.EXPOSURE.READPATT' value=None is optional or excluded. CRDS : DEBUG File='.jwst_niriss_flat_bad_header_tp431.fits' class='Character' keyword='META.EXPOSURE.TYPE' value='NIS_IMAGE' is in ['ANY', 'N/A', 'NIS_AMI', 'NIS_DARK', 'NIS_FOCUS', 'NIS_IMAGE', 'NIS_LAMP', 'NIS_SOSS', 'NIS_WFSS'] CRDS : DEBUG File='.jwst_niriss_flat_bad_header_tp431.fits' class='Character' keyword='META.INSTRUMENT.FILTER' value='CLEAR' no .tpn values defined. CRDS : INFO [0] AUTHOR Michael A. Wolfe, Kevin Volk CRDS : INFO [0] DESCRIP This is a pixel flat reference file.----- ----- CRDS : INFO [0] PEDIGREE GROUND CRDS : INFO [0] USEAFTER Jan 01 2015 00:00:00 CRDS : INFO META.TELESCOPE = 'JWST' CRDS : INFO META.INSTRUMENT.DETECTOR = 'NIS' CRDS : INFO META.INSTRUMENT.NAME = 'NIRISS' CRDS : INFO META.INSTRUMENT.FILTER = 'CLEAR' CRDS : INFO META.EXPOSURE.TYPE = 'NIS_IMAGE' CRDS : INFO META.INSTRUMENT.PUPIL = 'CLEARP' CRDS : WARNING Missing keyword 'HISTORY'. CRDS : INFO ##### CRDS : INFO 0 errors CRDS : INFO 1 warnings CRDS : INFO 14 infos Note: WARNING message must be present. Completion of this step completes the verification of DMS requirement DMS- 546. The missing keyword 'HISTORY' warning ensures that the reference file will not be delivered into the system without information on how the reference file was created, as specified in the requirement. </pre>
<u>Execution type:</u>	Manual
<u>Estimated exec. duration (min):</u>	
<u>Importance:</u>	Medium
Cautionary Statement:	n/a
Facility:	STScI
Environment:	JWST DMS Build 5.0
Run Date:	n/a
Inputs:	jwst_niriss_flat_0003.fits
Outputs:	jwst_niriss_flat_bad_header_tp431.fits
Test Case(s):	DMS-TC-3920 DMS-TC-3922
Prerequisites:	n/a
Notes:	
Post Condition:	Archive generated test data
QA Approval Date:	
<u>Requirements</u>	DMS-546: Metadata Requirements for Reference Data DMS-680: CRDS Input File Format Validation
<u>Keywords:</u>	CRDS Draft Build 5