



NIRSpec Technical Note NTN-2013-001

Authors: P. Ferruit
Date of Issue: 19.03.2013
Version: 1

The JWST python tools and library

Abstract:

We provide a brief overview of the new structure of the JWST python tools and library as well as an updated set of instructions to properly configure your environment.

Change log		
Version	Date	Description
draft	19.03.2013	PF: Creation
1	22.0.3.2013	PF: Minor updates and release.

1 INTRODUCTION AND SCOPE OF THE NOTE

The JWST python tools and library have been developed continuously during the last 10 years initially at CRAL and then at ESA and MPIA. They have been used for the development of the NIRSpec instrument model and of the NIRSpec processing pipeline (B. Dorner).

We have recently updated the structure of the repository, aiming at providing a clear separation between the library and the tools. In this technical note we provide a brief description of the new structure as well as an updated set of configuration instructions.

2 REPOSITORY STRUCTURE

2.1 Library and tools

Old structure:

So far the JWST python library and tools have been grouped in the same CVS repository under the *JWST_Python* folder. When retrieving the JWST software from the CVS repository, this folder is created at the same level than the IDL (*JWST_IDL*) and C (*JWST_C*) folders.

[home of JWST software]/JWST_Python

For most people, *[home of JWST software] = ~/Library/Software*

The python library is contained in the *lib* sub-folder. The tools are contained in the other sub-folders (*MSA, IFU, extraction...*).

New structure:

The JWST python tools and library are now in two different repositories:

[home of JWST software]/JWST_Python

[home of JWST software]/JWST_Python_lib

The *JWST_Python* folder contains the tools (no change there) and its *lib* sub-folder is no longer used (it will NOT be updated and will progressively become obsolete). It will be deleted when we move from the CVS repository to the SVN one.

The *JWST_Python_lib* folder is completely new and the library classes and functions can be found in the *JWSTpylib* sub-folder. Note that this new structure allows the creation of a standalone JWSTpylib python package.

3 UPDATED CONFIGURATION INSTRUCTIONS

3.1 Making sure you have all the necessary libraries

Please have a look at the latest version of Stephan's NTN-2011-007 to make sure you have all the necessary libraries installed (in particular the "cosmology" one).

3.2 The PYTHONPATH variable

The changes are limited to the contents of the PYTHONPATH environment variable.

Old value:

PYTHONPATH: [home of JWST software]/JWST_Python/lib

or

PYTHONPATH: ../lib

New value:

PYTHONPATH: [home of JWST software]/JWST_Python_lib; [home of JWST software]/JWST_Python_lib/JWSTpylib

3.3 Using the library in your python procedures

It will still be possible to use the python JWST library classes by calling them directly using an import command (e.g. *import c_coordinateTransform*) **but this is now deprecated.**

You should now use the following two commands (still using *c_coordinateTransform* class as an example):

```
import JWSTpylib
```

```
import JWSTpylib.c_coordinateTransform as c_coordinateTransform
```

(... the code to call the class is unchanged)

You can also use the following more compact version:

```
from JWSTpylib import c_coordinateTransform
```

(... the code to call the class is unchanged)