# test_pysiaf

September 22, 2020

[1]:
```
import pysiaf
import pandas as pd
import pdb
import matplotlib.pyplot as plt
import numpy as np
from astropy.io import ascii, fits
from astropy.table import Table

siaf = pysiaf.Siaf('NIRCam')
```

[14]:
```
def reversibility(orig='sci',new='tel'):
    """ Test the reversibility  """
    orig_x = np.array([1, 2048, 2048,    1,   1024])
    orig_y = np.array([1,    1, 2048, 2048,   1024])
    print("Original coordinates:")
    print('x=',orig_x)
    print('y=',orig_y)
    ap = siaf['NRCA1_FULL']

    method_forward = "{}_to_{}".format(orig,new)
    method_to_call = getattr(ap,method_forward)
    x2, y2 = method_to_call(orig_x,orig_y)

    method_reverse = "{}_to_{}".format(new,orig)
    method_to_call = getattr(ap,method_reverse)
    new_x, new_y = method_to_call(x2,y2)

    print("Recovered coordinates")
    print('x=',new_x)
    print('y=',new_y)

    print("Differences:")
    print('x=',orig_x - new_x)
    print('y=',orig_y - new_y)
```

[15]:
```
reversibility()
```

```
Original coordinates:
```

```
x= [   1 2048 2048    1 1024]
y= [   1    1 2048 2048 1024]
Recovered coordinates
x= [1.03026888e+00 2.04800328e+03 2.04800496e+03 9.99656836e-01
 1.02402855e+03]
y= [1.01644015e+00 1.00788993e+00 2.04797420e+03 2.04797712e+03
 1.02397426e+03]
Differences:
x= [-0.03026888 -0.00327687 -0.00496319  0.00034316 -0.02854925]
y= [-0.01644015 -0.00788993  0.02580439  0.02287835  0.02574322]
```

[16]:
```
pysiaf.JWST_PRD_VERSION
```

[16]:
```
'PRDOPSSOC-029'
```

[ ]:
```

```