

Waterfall Plot

February 2, 2019

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In [1]: %matplotlib inline

In [2]: from blimpy import Filterbank
import matplotlib.pyplot as plt
%matplotlib inline

In [3]: path_to_fil = "spliced_blc0001020304050607_guppi_58100_80372_OUMUAMUA_OFF_0016.gpuspec

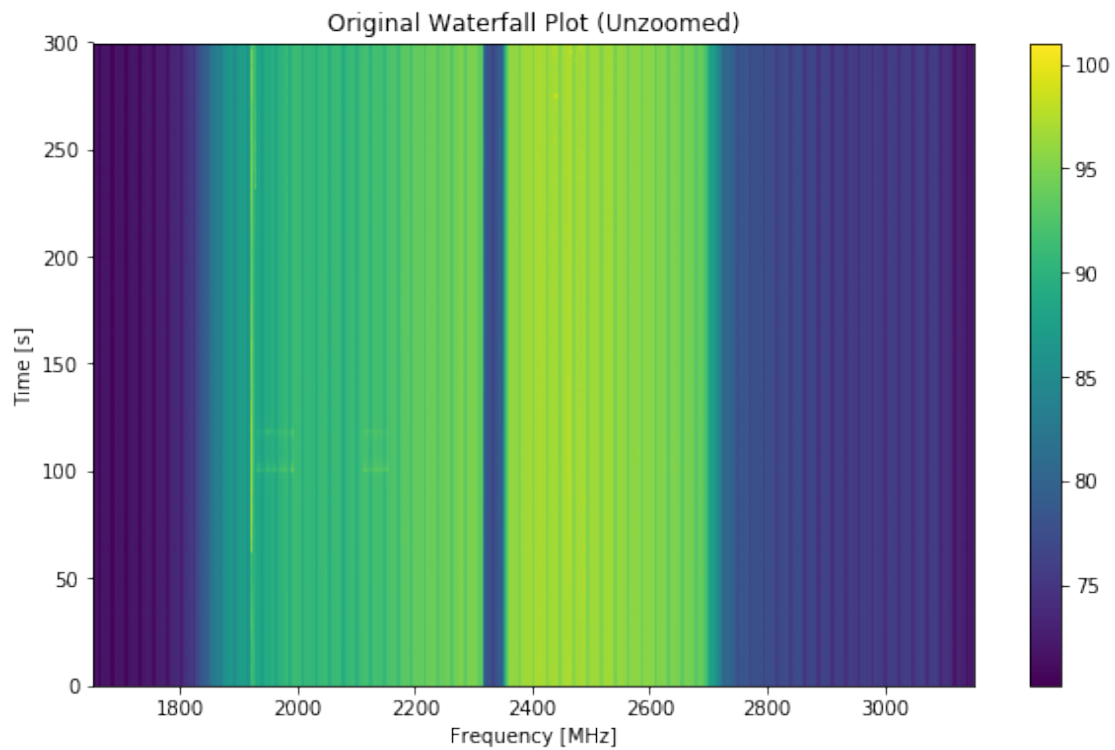
In [4]: obs = Filterbank(path_to_fil)

In [5]: obs.info()

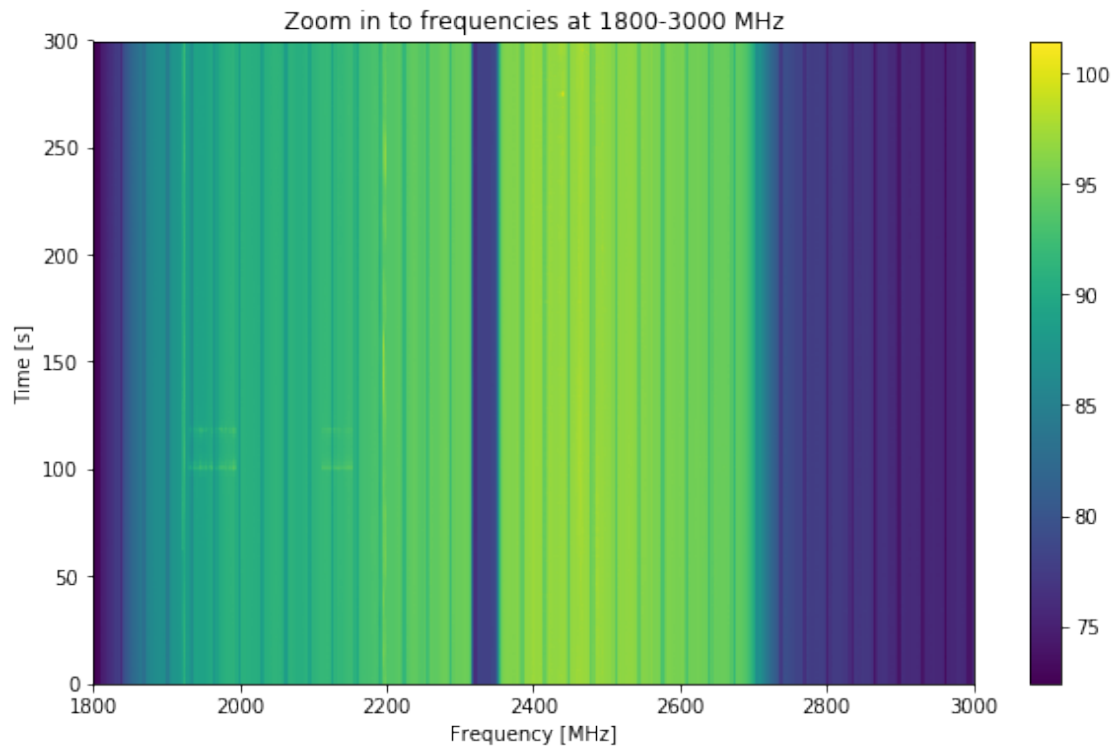
b'machine_id' : 20
b'telescope_id' : 6
b'data_type' : 1
b'fch1' : 3151.4634132385254
b'foff' : -0.00286102294921875
b'nchans' : 524288
b'source_name' : b'OUMUAMUA'
b'src_raj' : 23:21:03.84
b'src_dej' : 7:36:30.24
b'az_start' : 0.0
b'za_start' : 0.0
b'nbits' : 32
tstart (ISOT) : 2017-12-13T22:19:32.000
tstart (MJD) : 58100.930231481485
b'tsamp' : 1.0737418239999998 s
b'nifs' : 1

Num ints in file : 279
Data shape : (279, 1, 524288)
Start freq (MHz) : 3151.4634132385254
Stop freq (MHz) : 1651.4662742614746

In [6]: plt.figure(figsize=(10,6))
obs.plot_waterfall()
title = plt.title("Original Waterfall Plot (Unzoomed)")
```

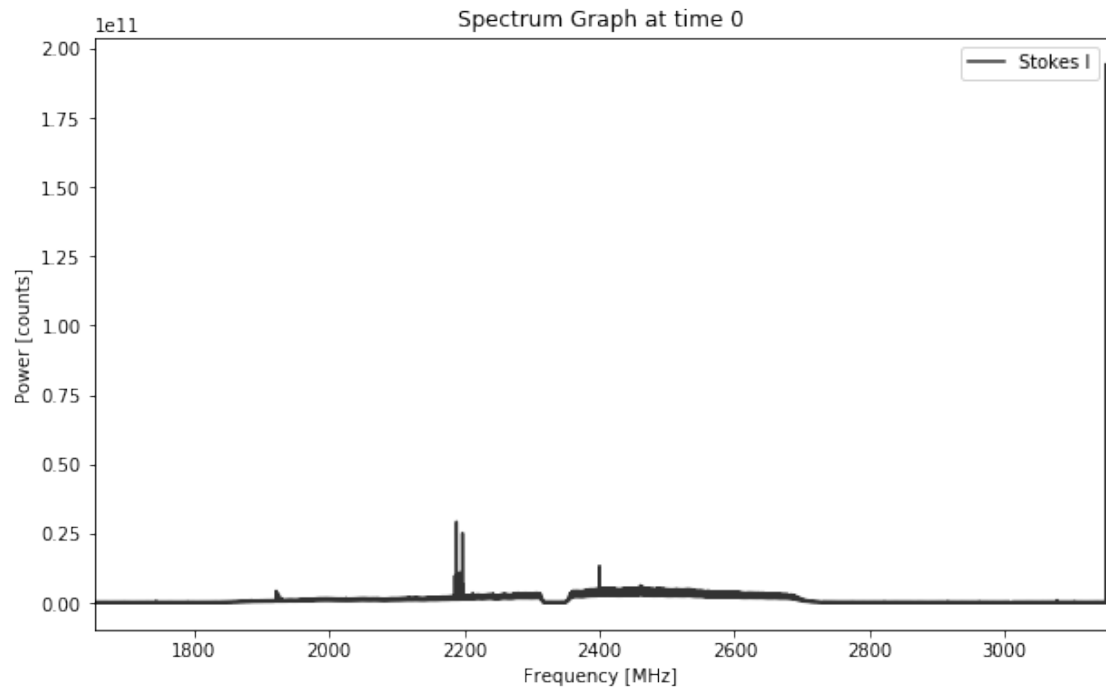


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In [7]: plt.figure(figsize=(10,6))
obs.plot_waterfall(f_start=1800, f_stop=3000)
title = plt.title("Zoom in to frequencies at 1800-3000 MHz")
```

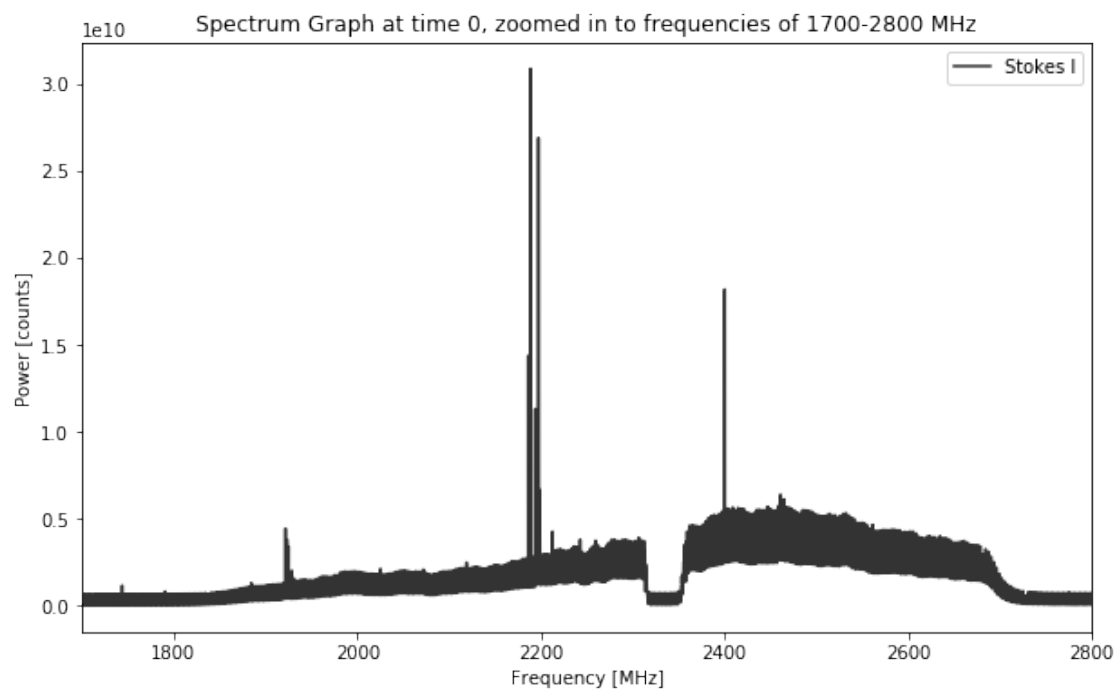


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In [8]: plt.figure(figsize=(10,6))
        obs.plot_spectrum()
        title = plt.title("Spectrum Graph at time 0")
```

extracting integration 0...



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In [9]: plt.figure(figsize=(10,6))
        obs.plot_spectrum(f_start=1700, f_stop=2800)
        title = plt.title("Spectrum Graph at time 0, zoomed in to frequencies of 1700-2800 MHz")
        extracting integration 0...
```



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In [ ]:
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