

Image

January 13, 2022

```
[32]: import torch
import os
import numpy as np
import pandas as pd
from tqdm import tqdm
import seaborn as sns
from pylab import rcParams
import matplotlib.pyplot as plt
from matplotlib.backends.backend_pdf import PdfPages
from datetime import timedelta
from scipy import signal
from matplotlib import rc
from sklearn.utils import resample
from sklearn.model_selection import train_test_split
from sklearn.metrics import confusion_matrix, classification_report
from torch import nn, optim
from PIL import Image
import torch.nn as nn
import torch.nn.functional as F
from torch.utils.data import DataLoader
import cv2#to make dataset as an image
```

```
[33]: df = pd.read_csv('matrix_Player_15_game_2_QuarterSplit.csv')

chunks = [df[i:i+1000] for i in range(0,df.shape[0],900)]
```

STEPS

1-Make sure dataset store names of the images
2-Access to images through the dataset not the directory
3-See action and try to assign labels to images
4-Store labels so that the machine learning can work(see what are our labels)

```
[34]: counter_train = 0
counter_test = 0
counter = 0

train_id = []
test_id = []
```

```

for chunk in chunks:
    fig = plt.figure()
    plt.plot(chunk.timeLine,chunk.wheelRotationalSpeedX, 'r-', chunk.
    ↵timeLine,chunk.frameRotationalSpeedZ, 'b--')
    if max(chunk.Quarter) < 4:#train
        #plt.plot(chunk.timeLine,chunk.wheelRotationalSpeedX, 'r-', chunk.
        ↵timeLine,chunk.frameRotationalSpeedZ, 'b--')#red line - blue line --
        #plt.show()
        plt.savefig('/data/wheels/notebooks/Alex/PlotImgFolder/Train/' +_
        ↵str(counter_train) + '.png', dpi = 500)#way to differentiate

            #Try to save the name of the photo in the dataframe here so i can
            ↵access throught the image from the csv
            name_train = str(counter_train) + '.png'
            train_id.append(name_train)
            #print(train_id[counter_train]) works
            counter_train += 1

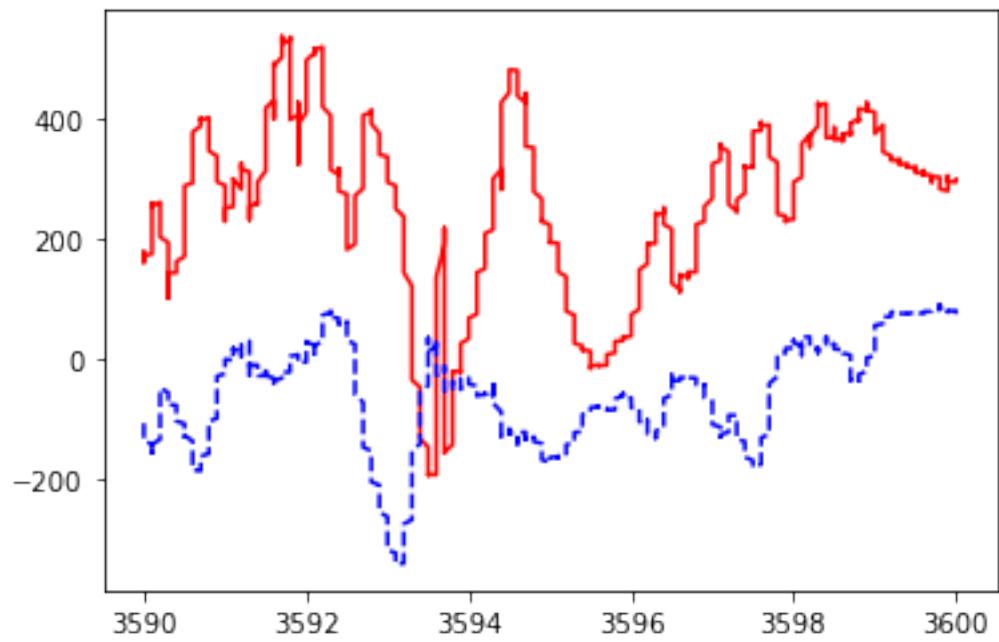
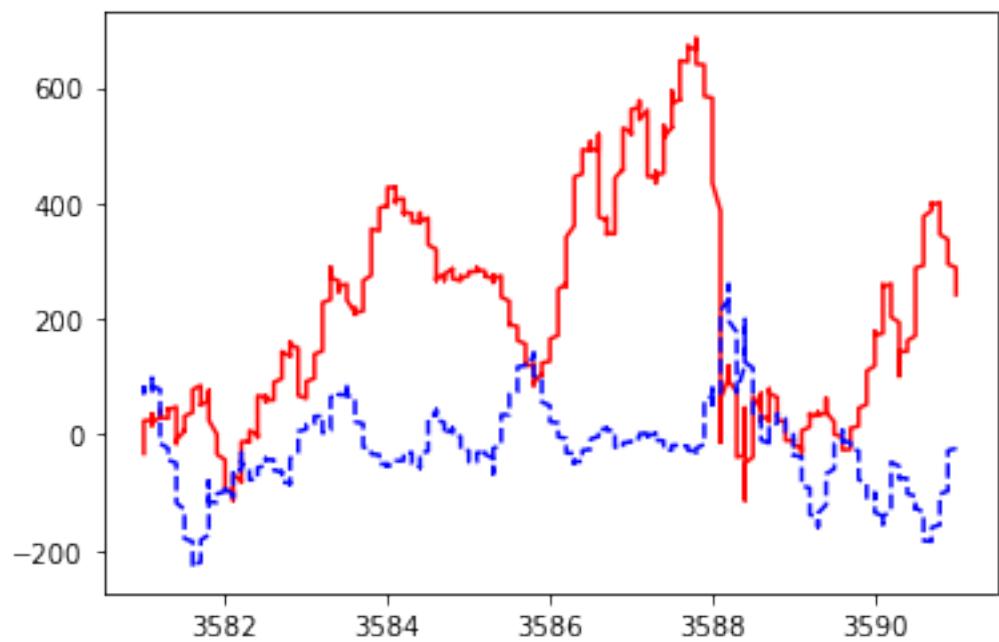
    else:#test
        #plt.plot(chunk.timeLine,chunk.wheelRotationalSpeedX, 'r-', chunk.
        ↵timeLine,chunk.frameRotationalSpeedZ, 'b--')
        #plt.show()
        #now we use fig to save the plot otherwise eith plt would ave nothing
        plt.savefig('/data/wheels/notebooks/Alex/PlotImgFolder/Test/' +_
        ↵str(counter_test) + '.png', dpi = 500)

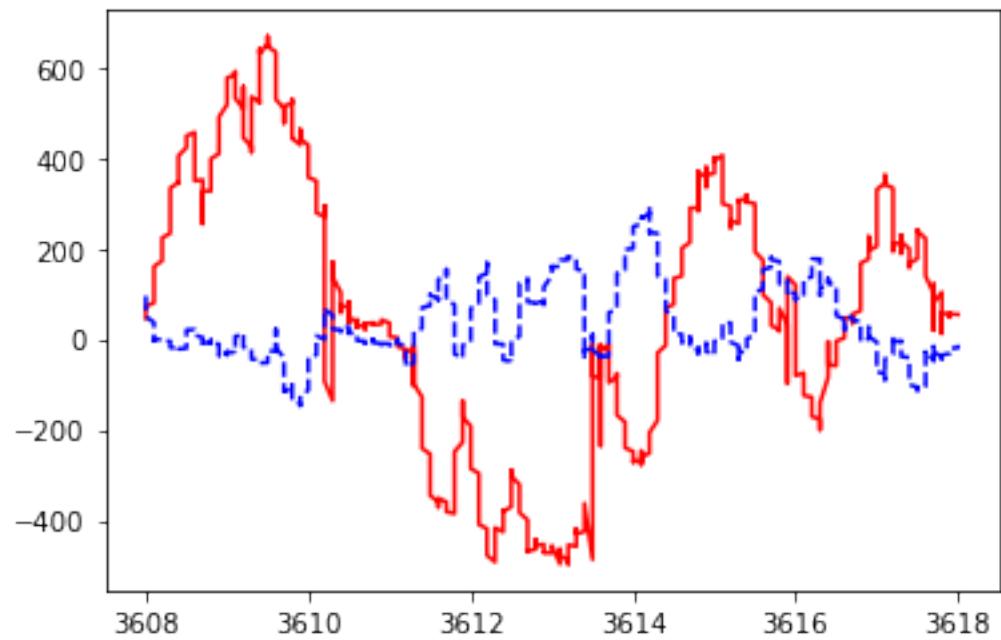
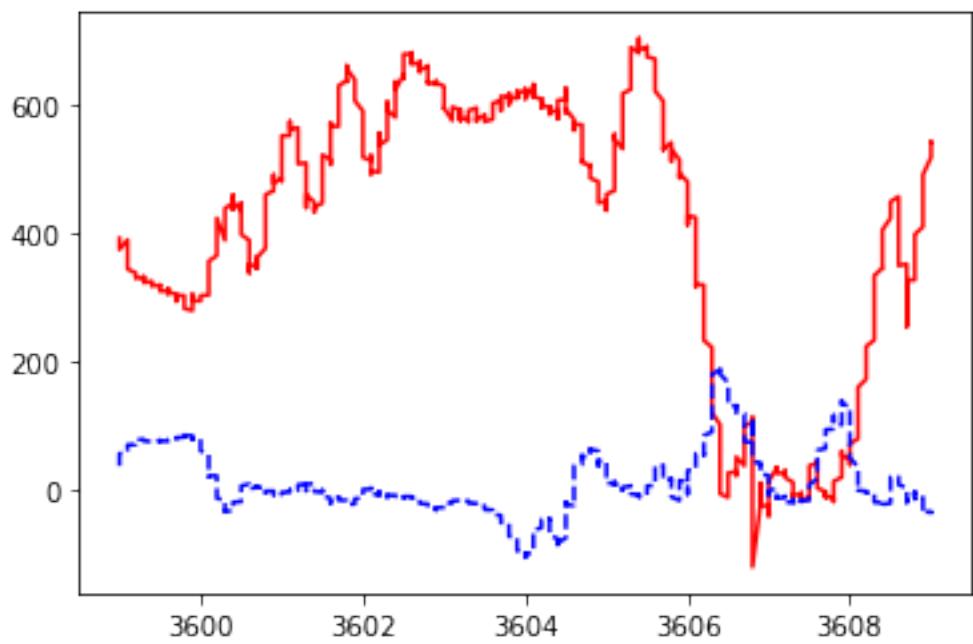
            name_test = str(counter_test) + '.png'
            test_id.append(name_test)
            #print(test_id[counter_test]) works
            counter_test += 1
            #take the img to csv(one csv per thing)

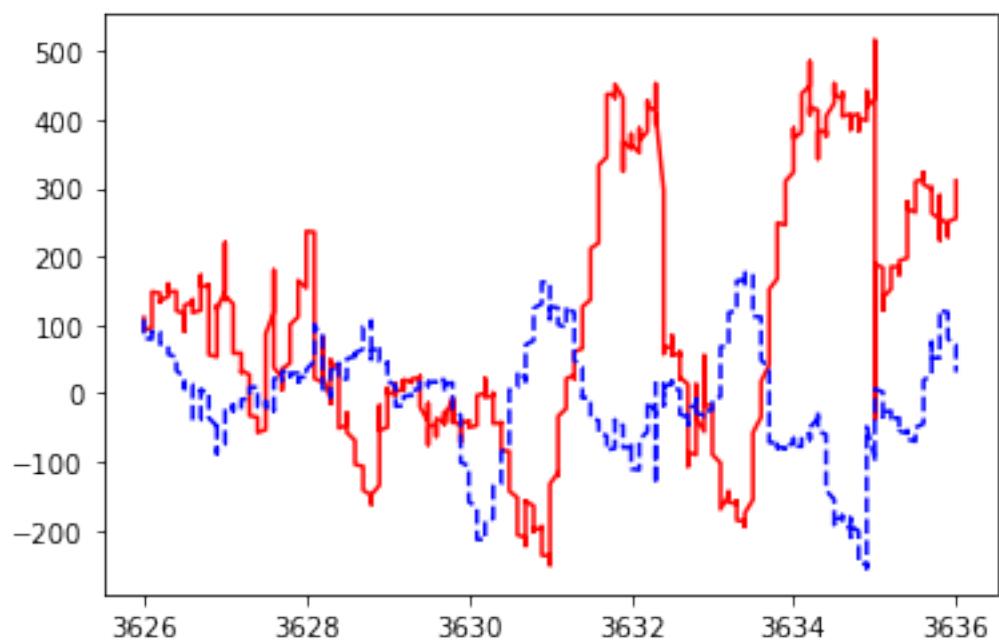
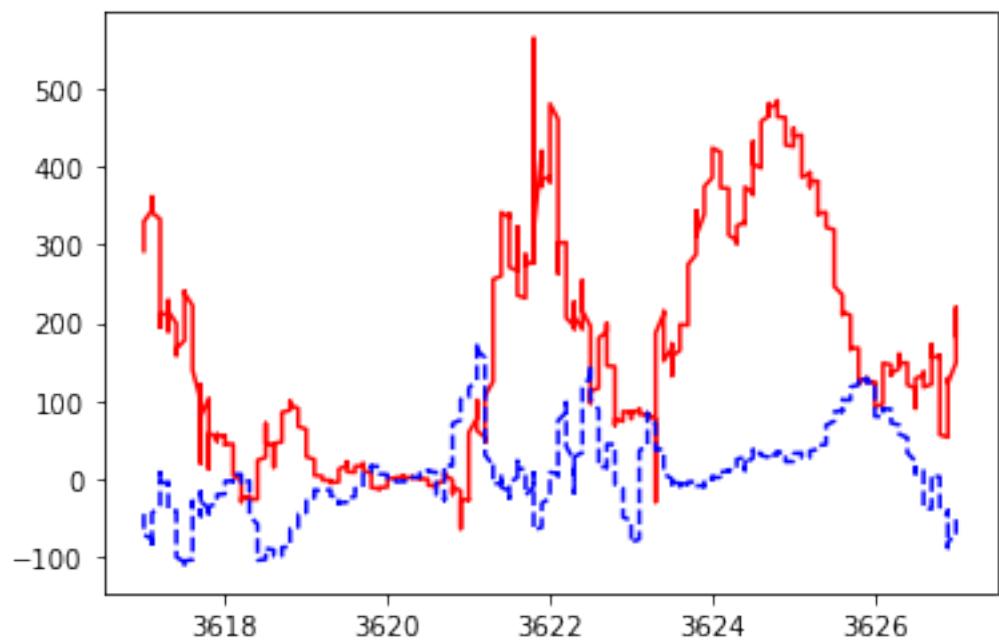
train_id = {'id':[train_id]}
test_id = {'id':[test_id]}
train_df = pd.DataFrame(train_id)
test_df = pd.DataFrame(test_id)

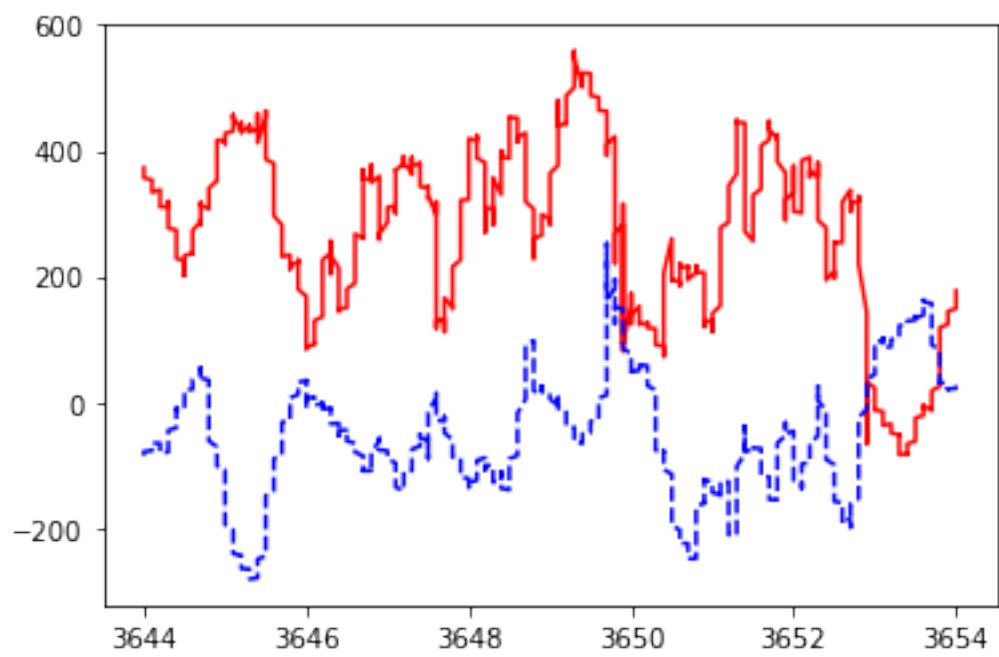
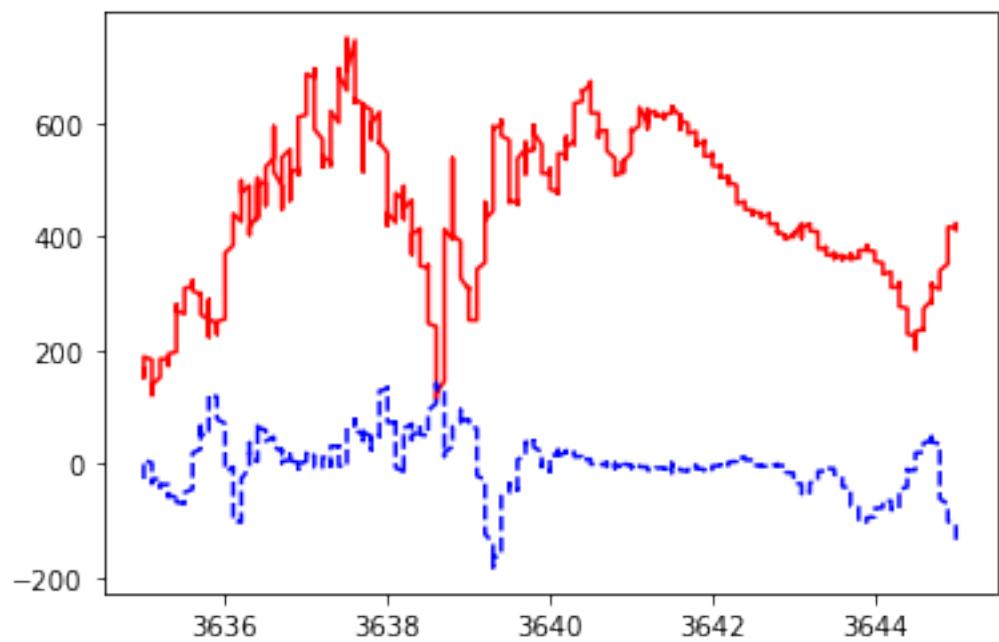
```

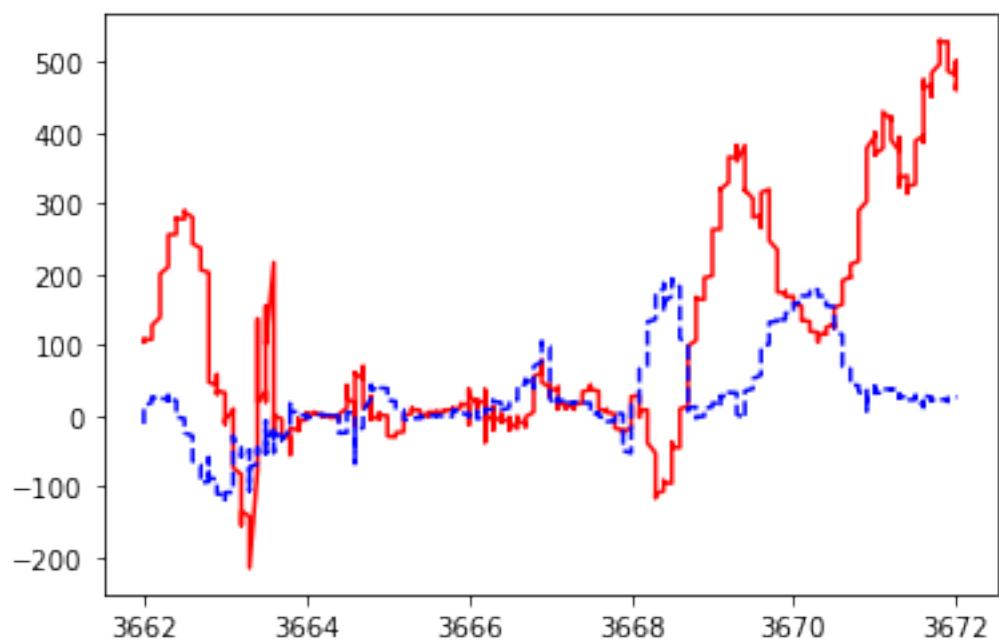
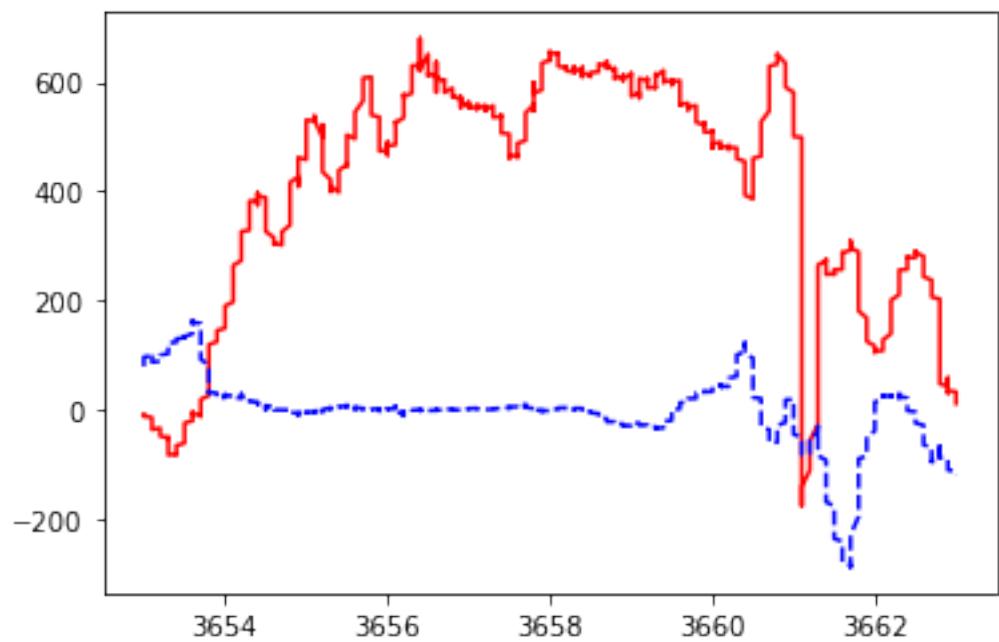
/tmp/ipykernel_48048/2563362130.py:9: RuntimeWarning: More than 20 figures have been opened. Figures created through the pyplot interface (`matplotlib.pyplot.figure`) are retained until explicitly closed and may consume too much memory. (To control this warning, see the rcParam `figure.max_open_warning`).
fig = plt.figure()

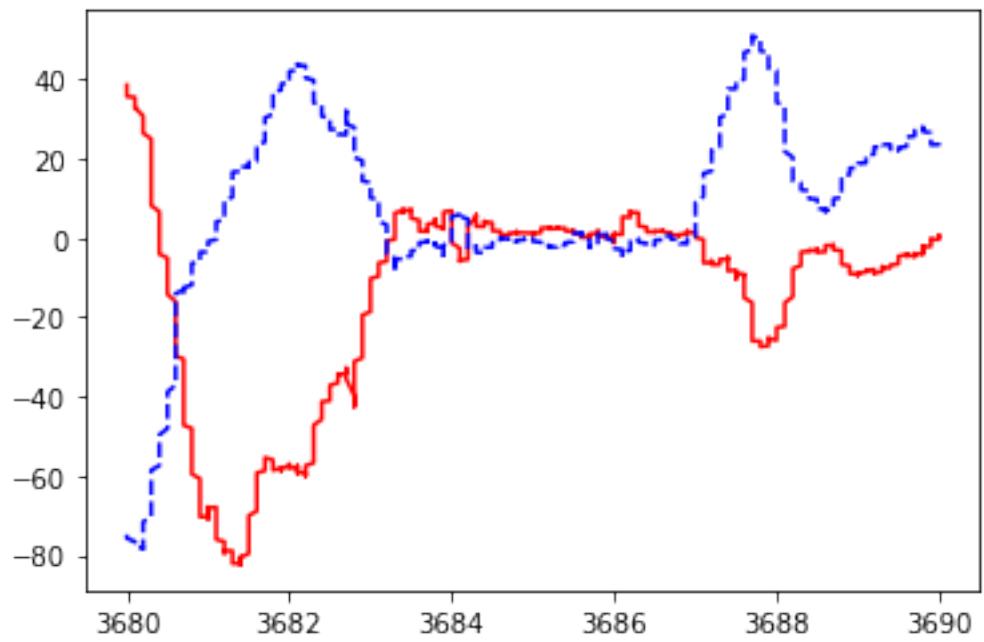
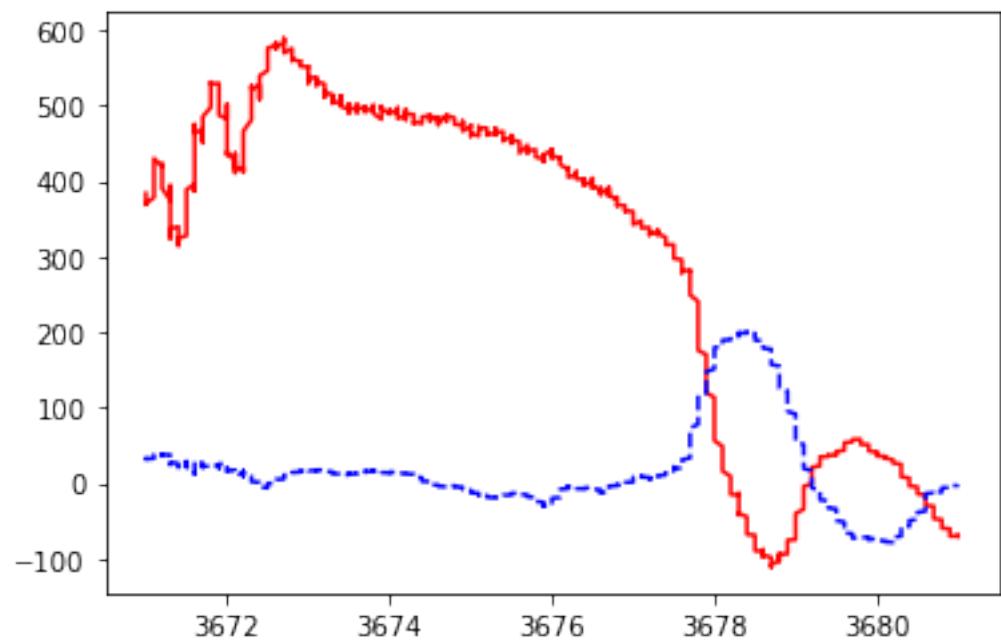


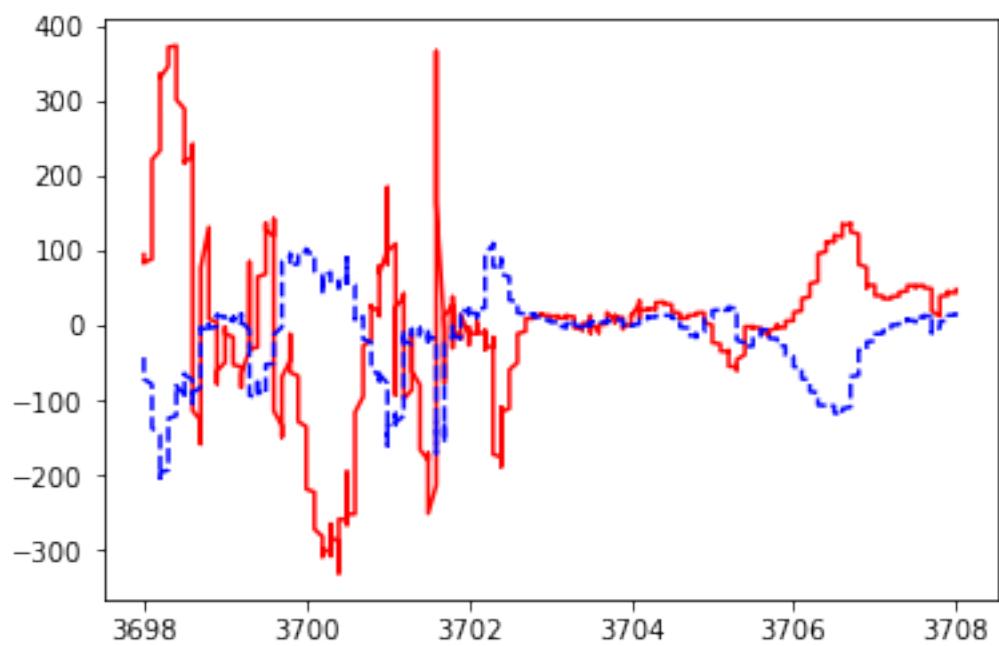
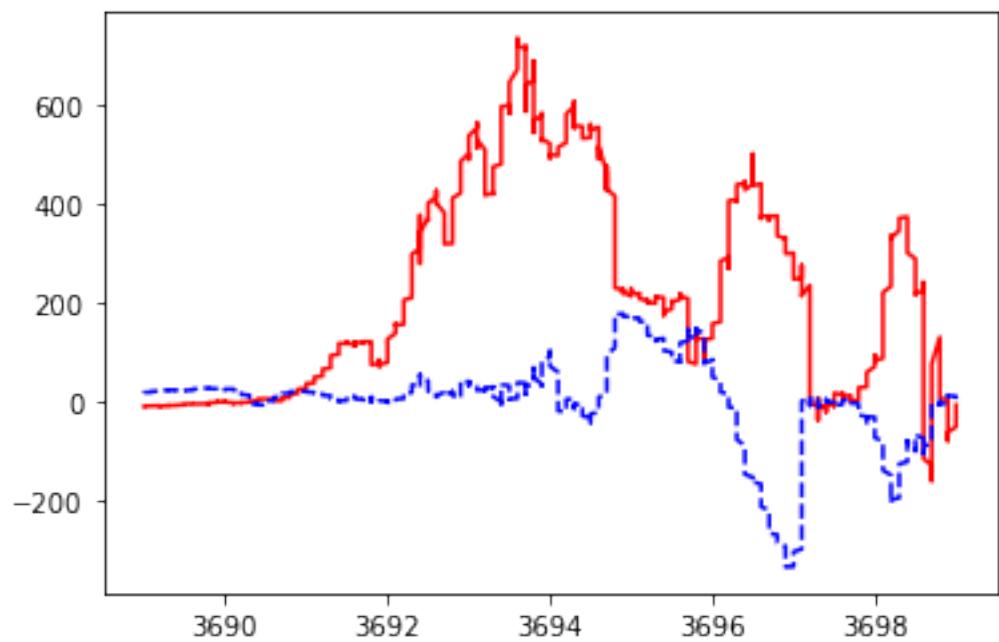


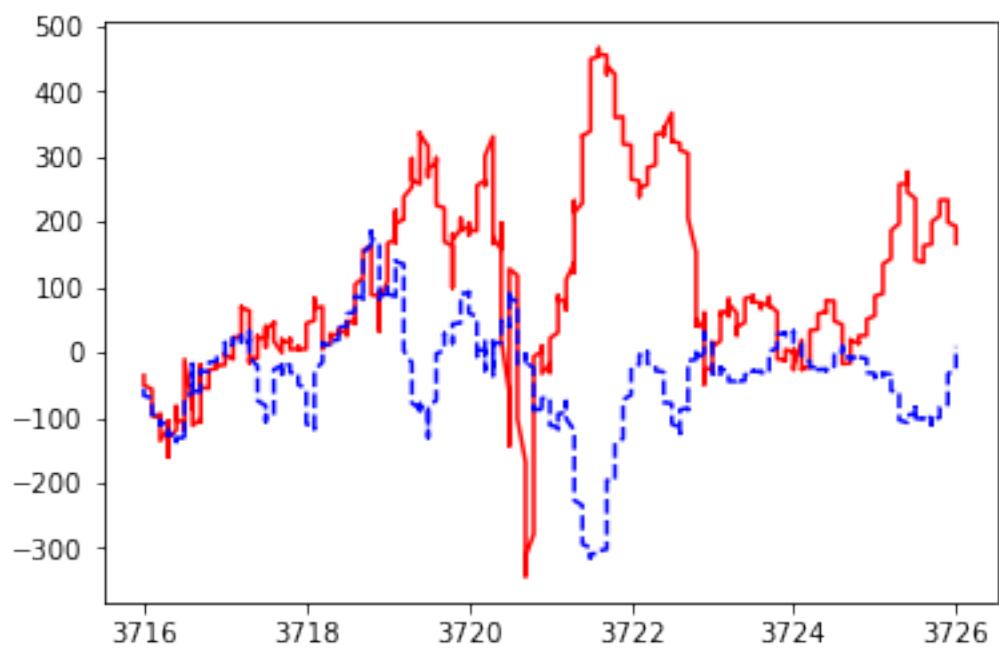
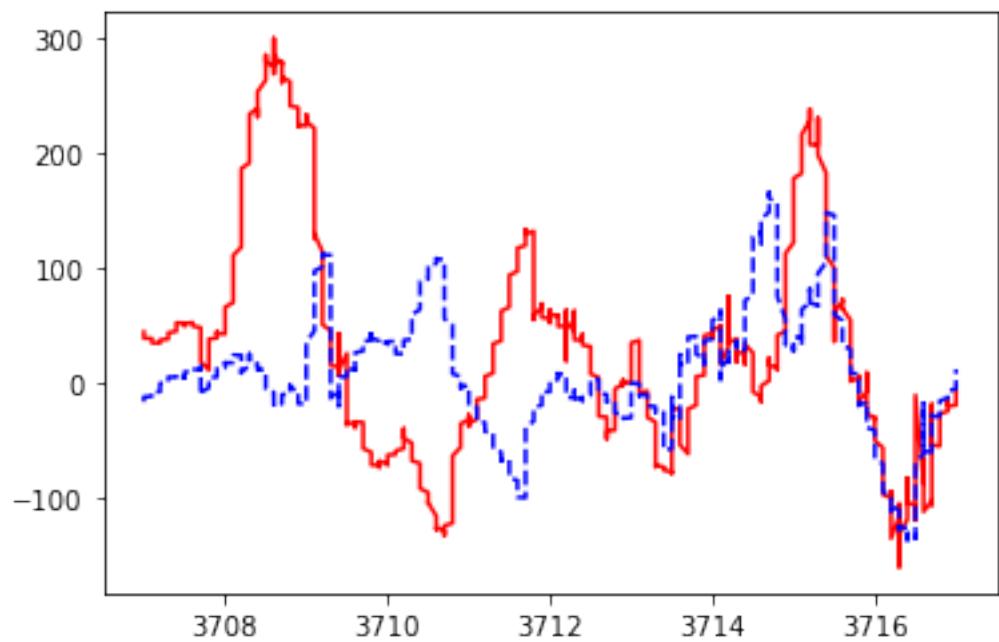


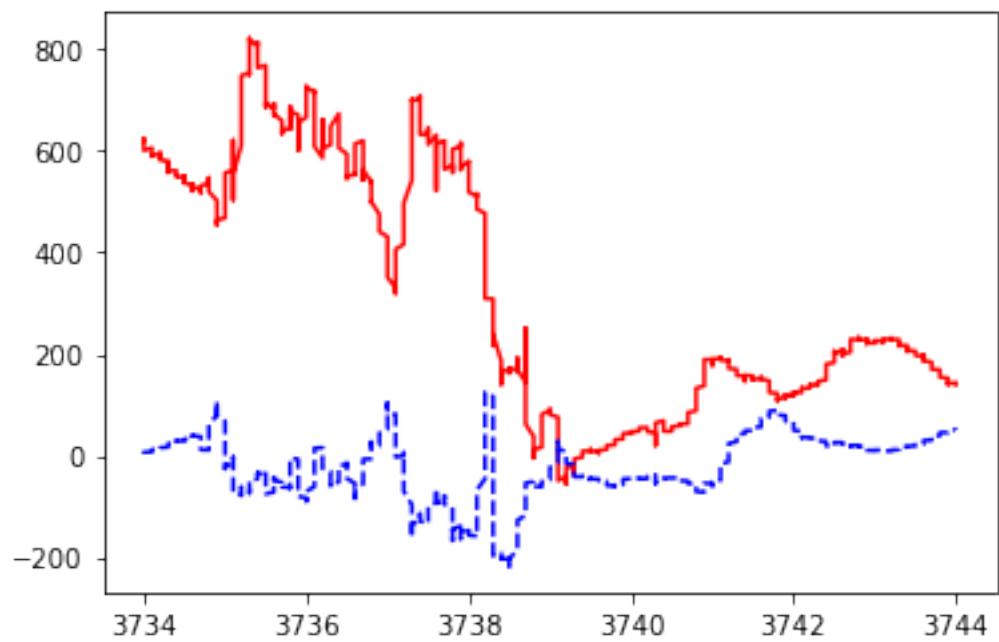
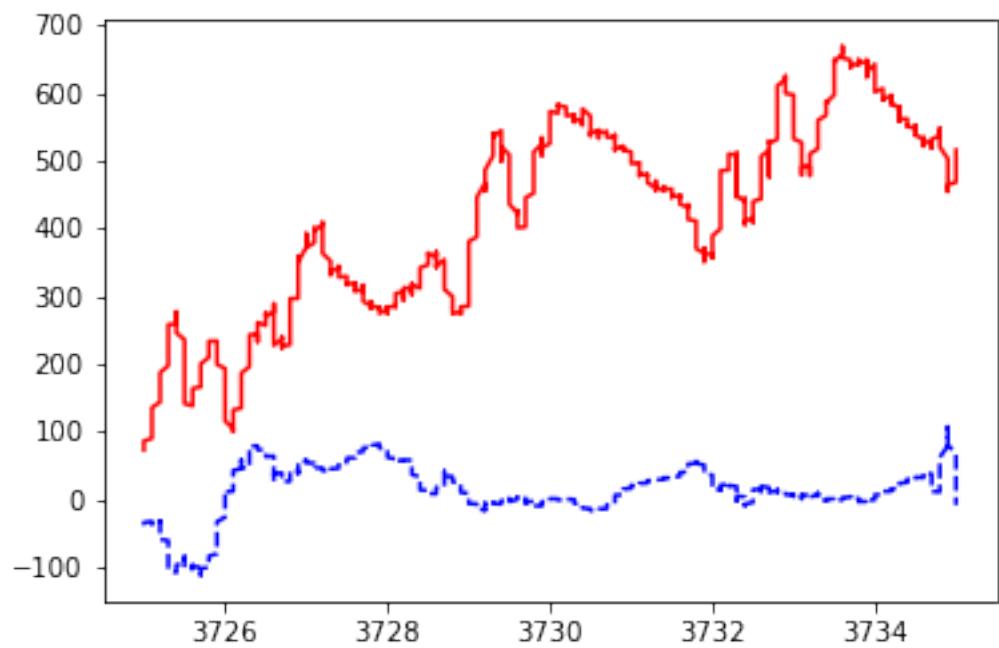


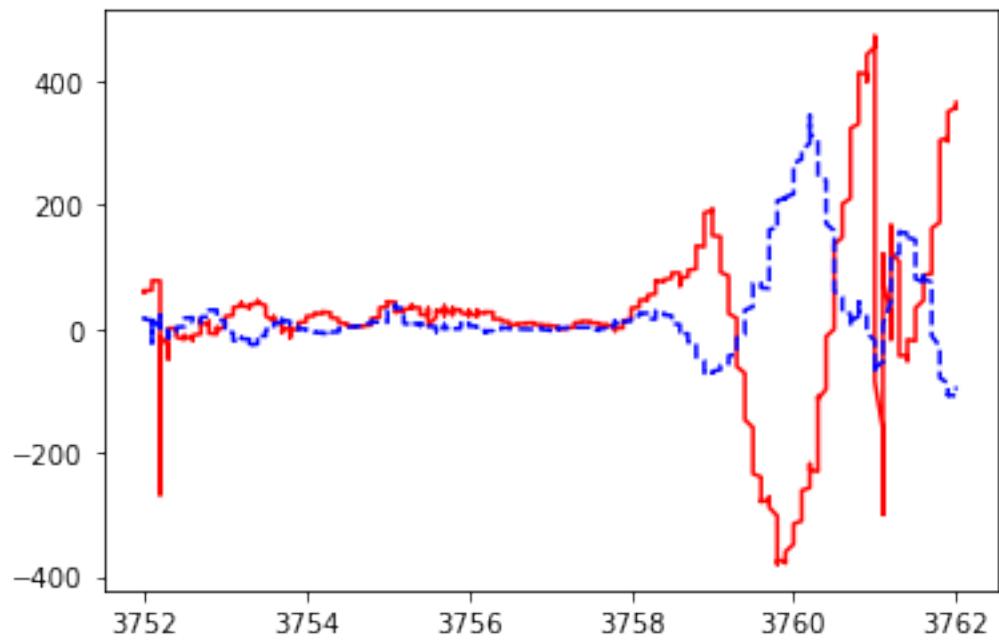
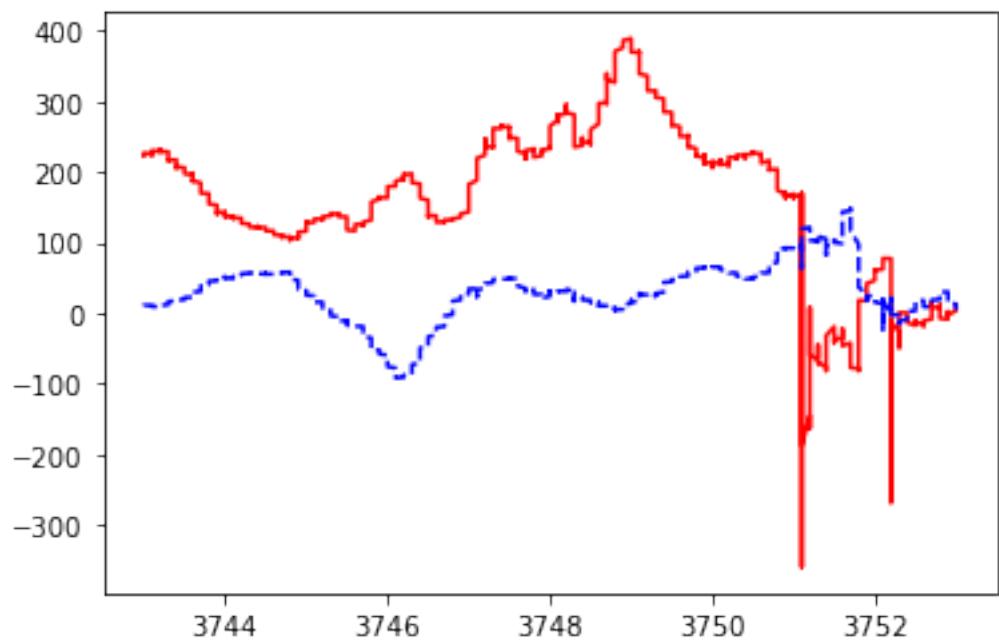


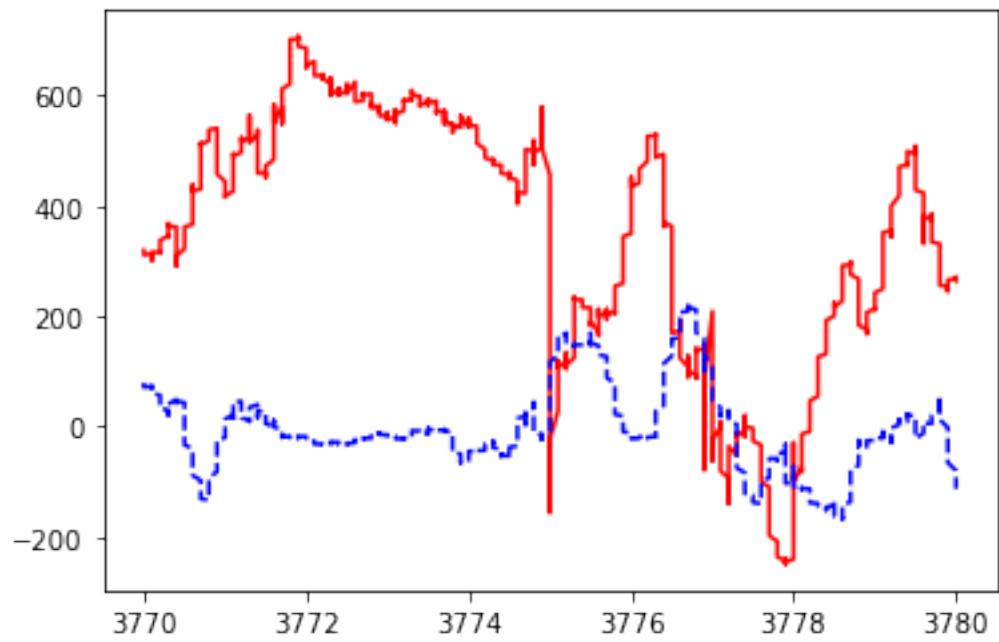
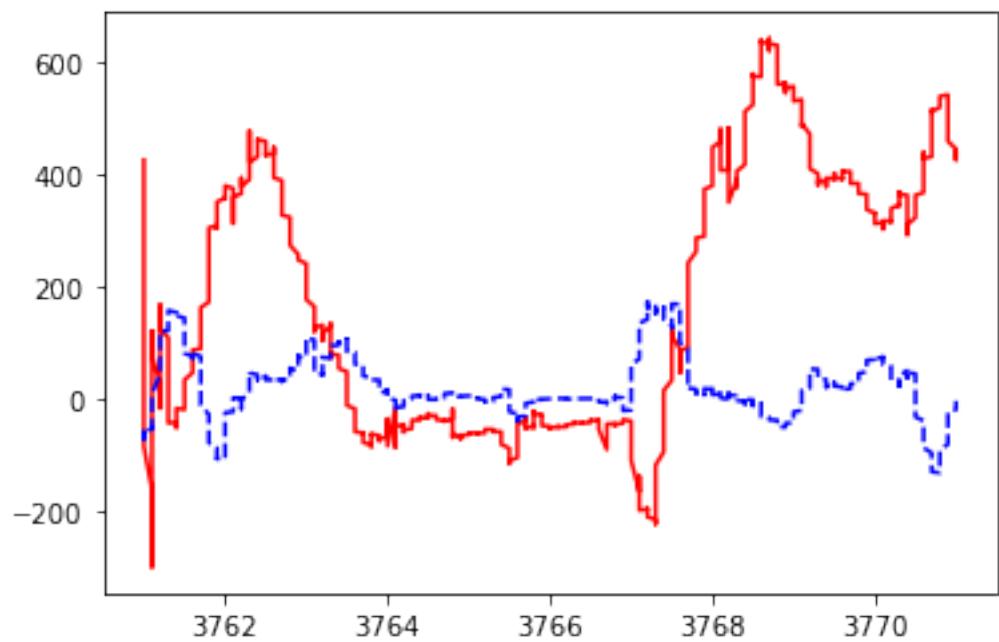


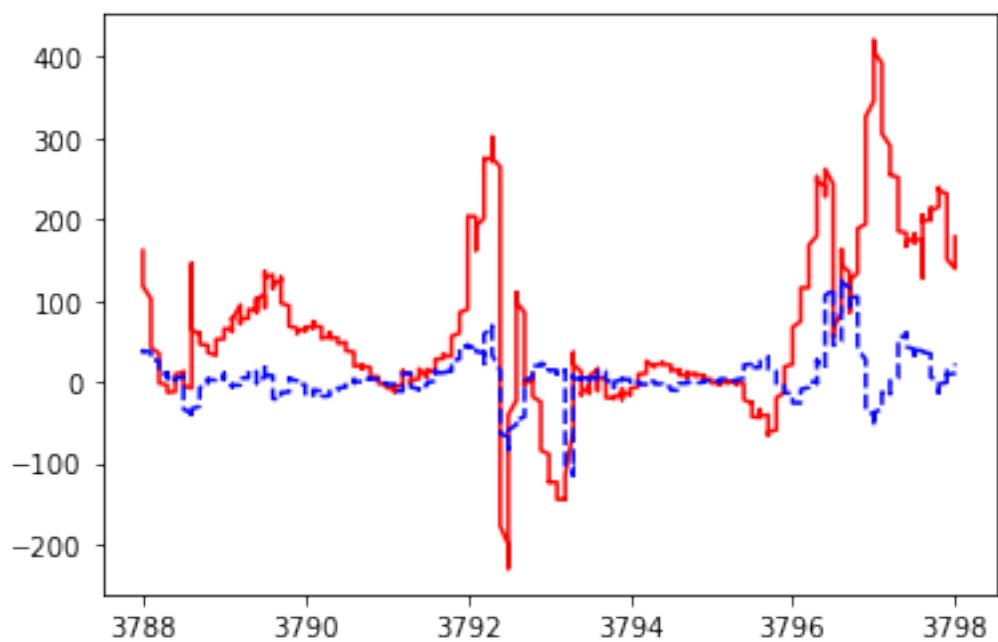
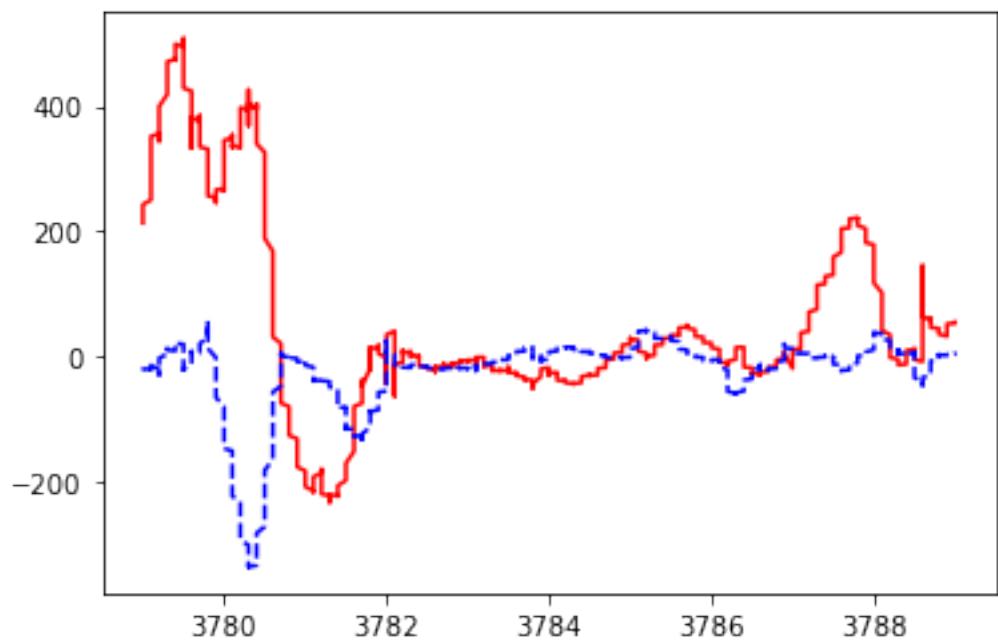


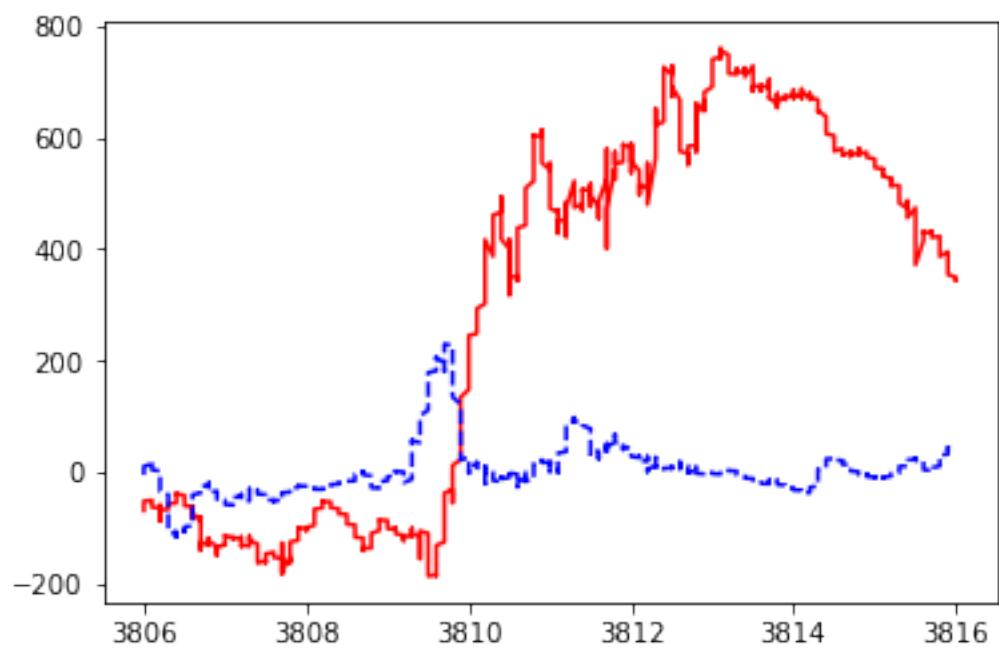
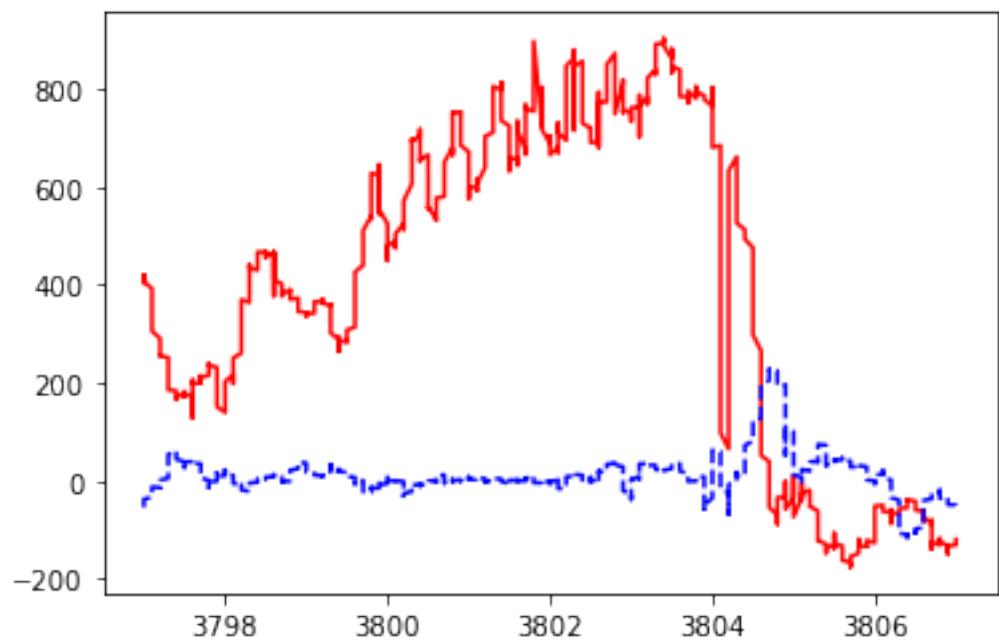


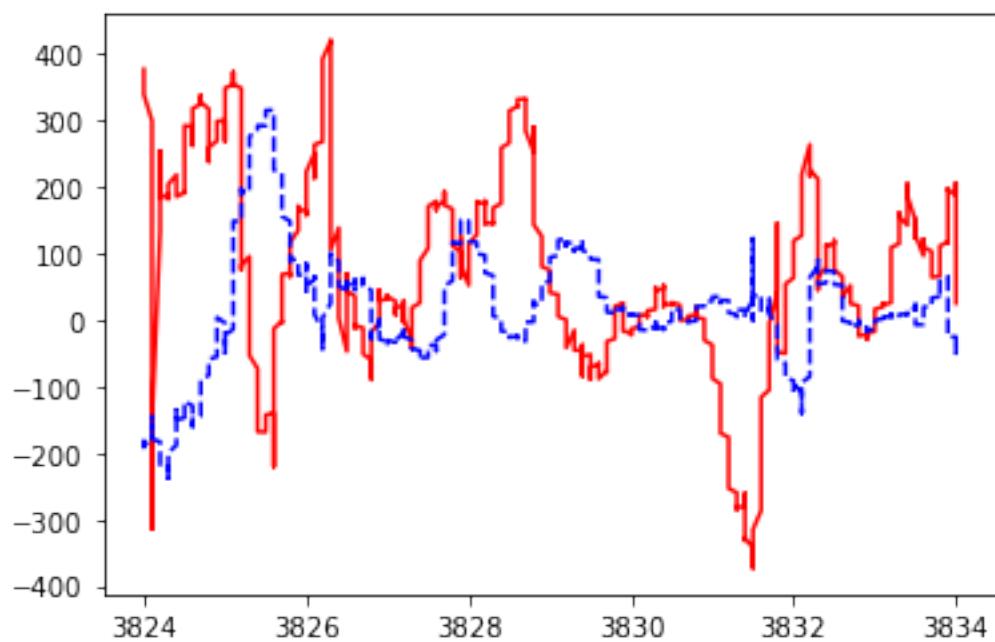
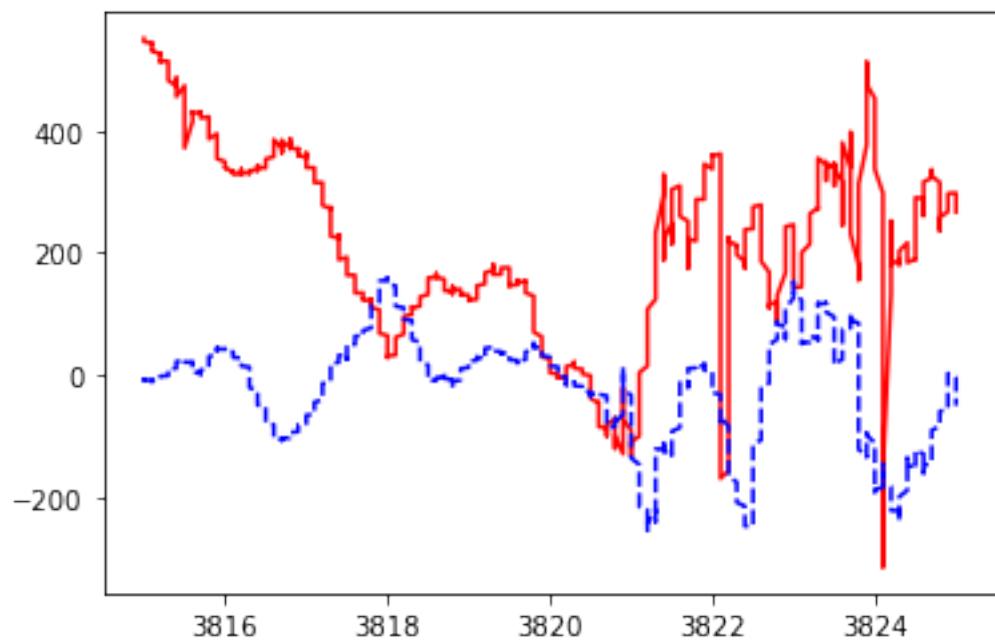


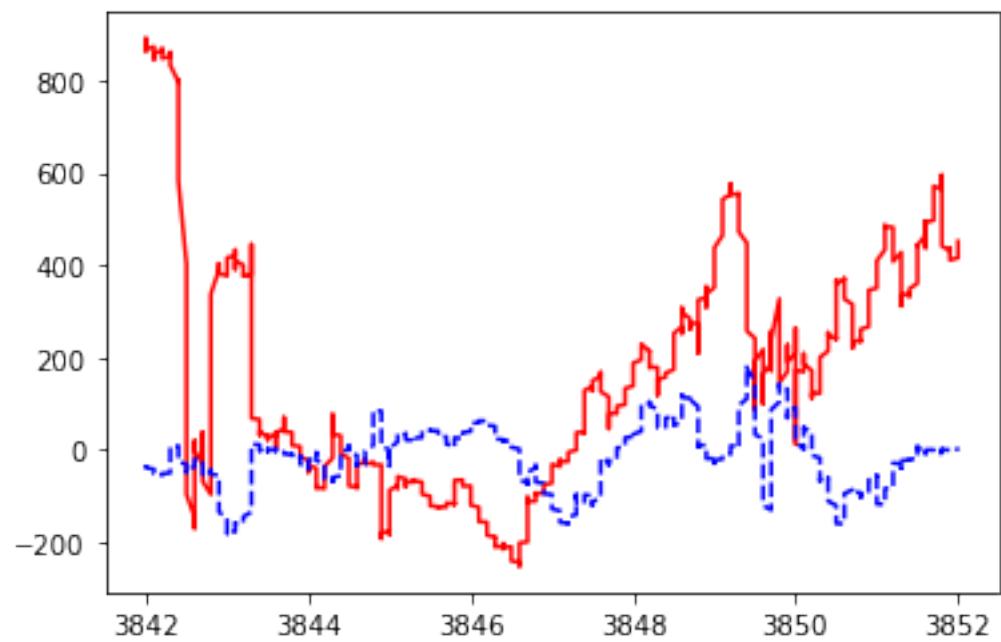
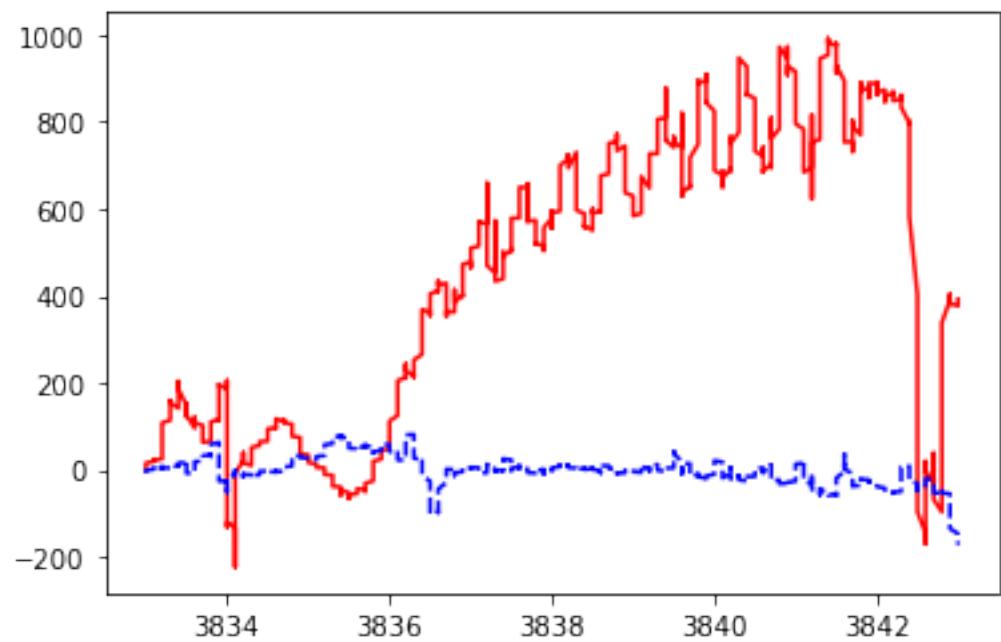


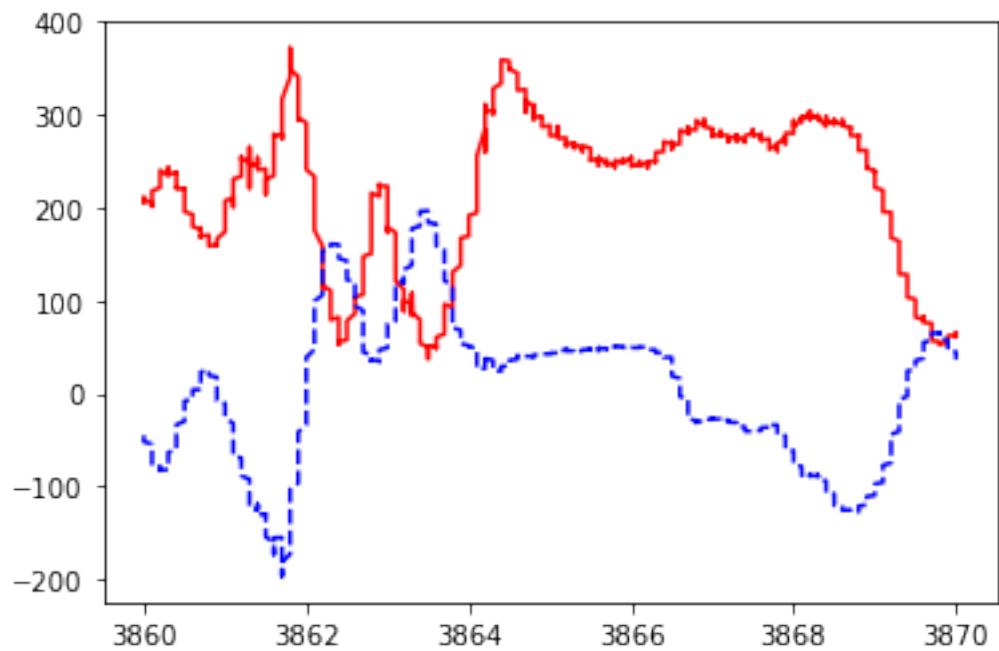
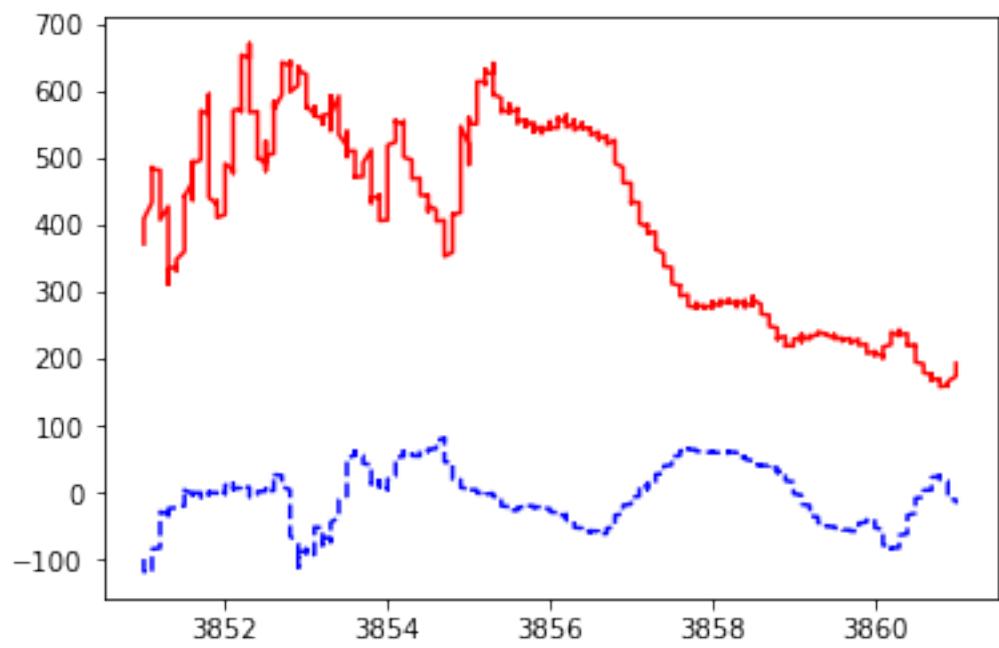


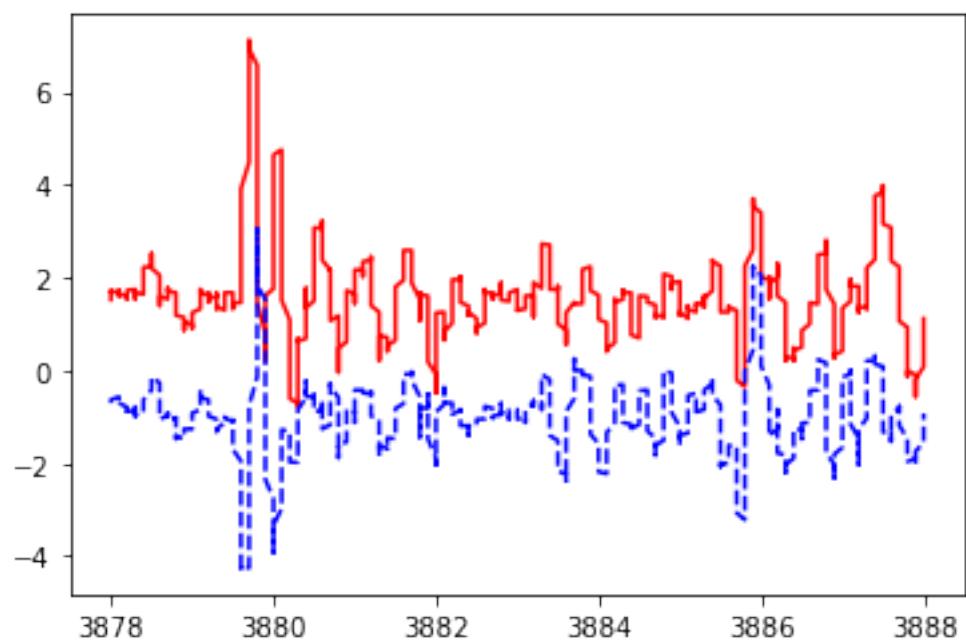
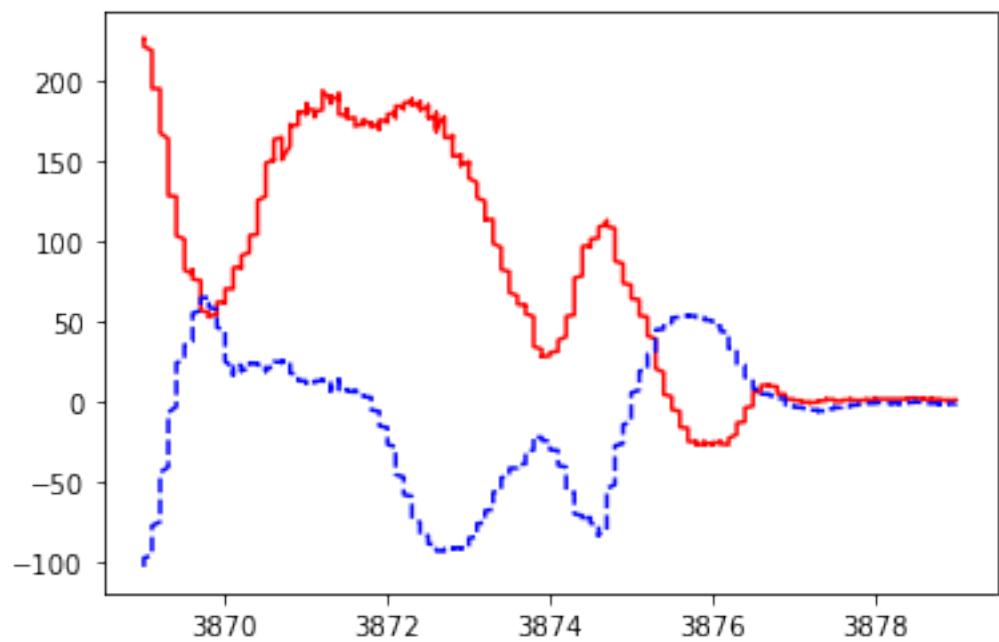


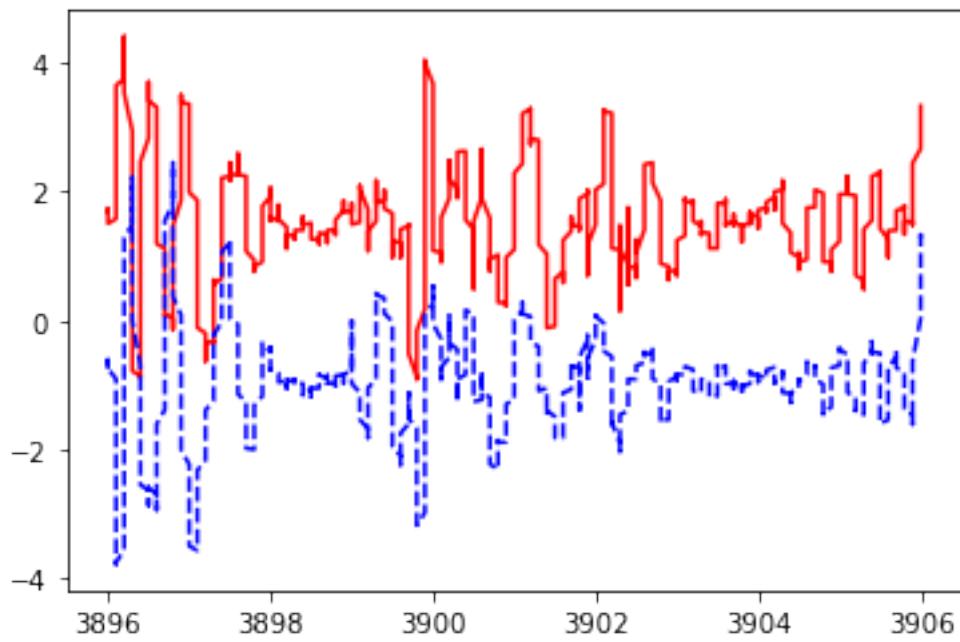
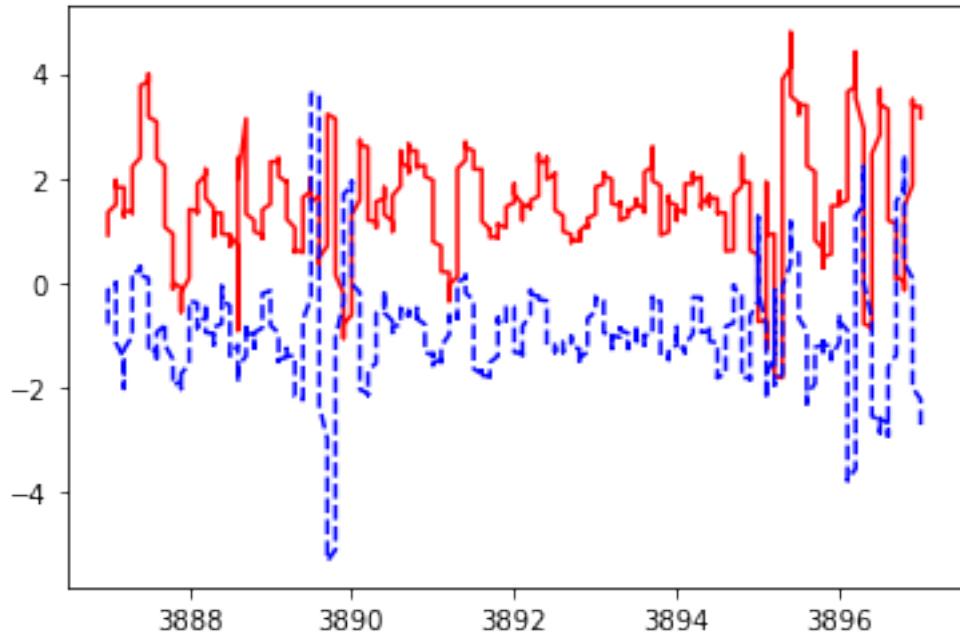


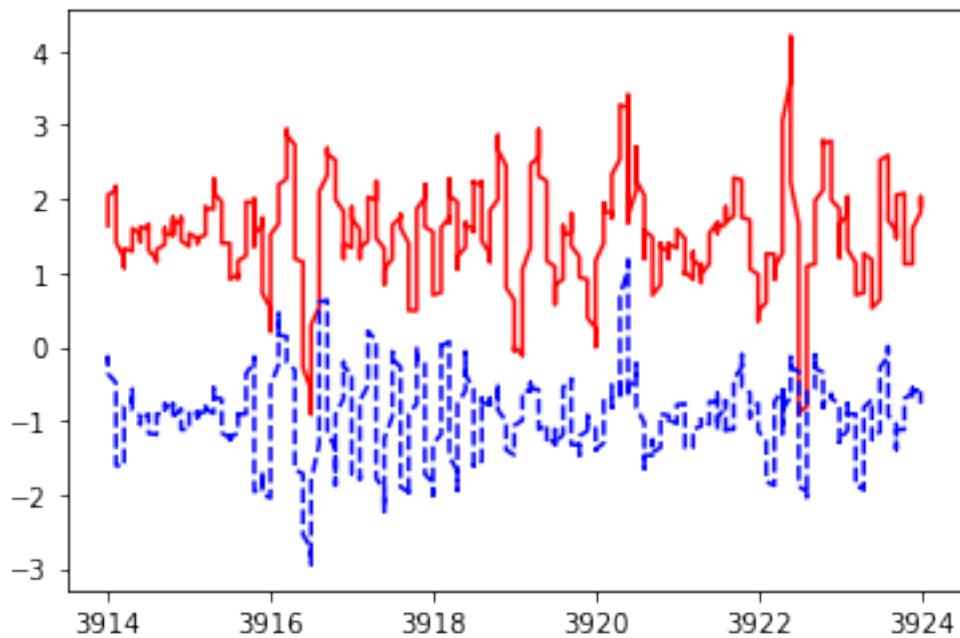
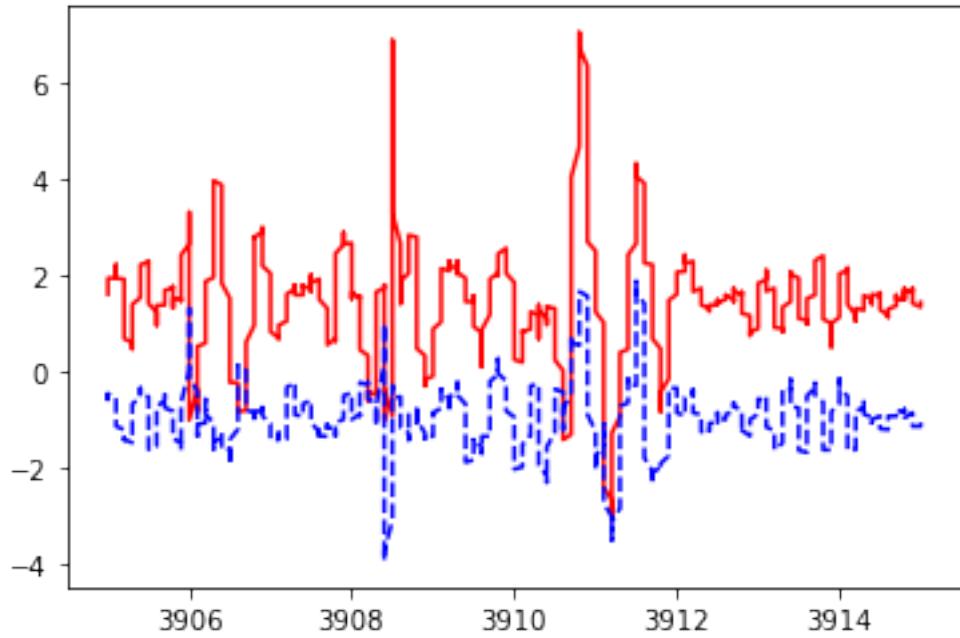


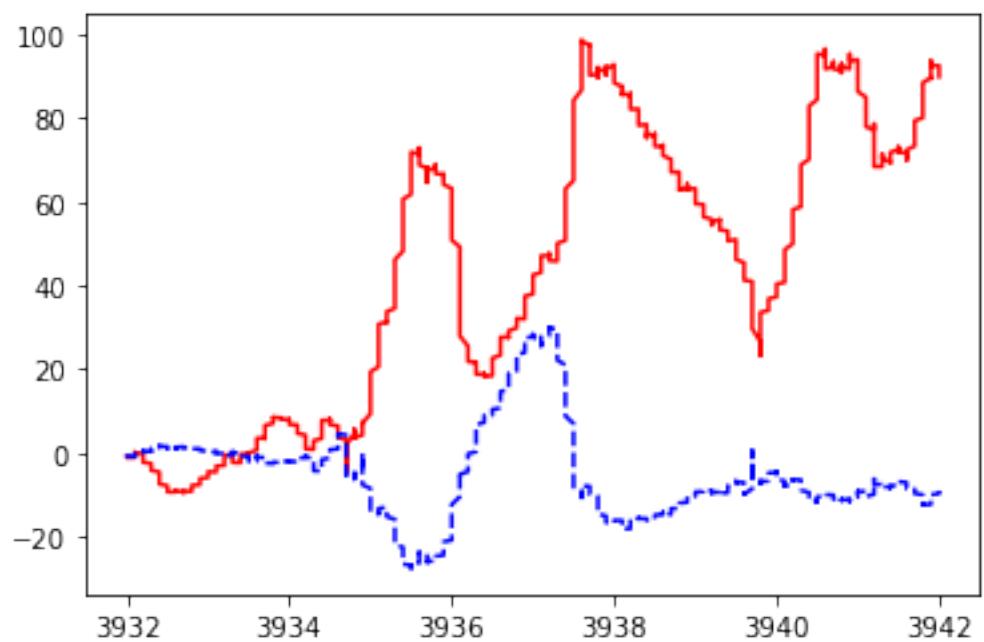
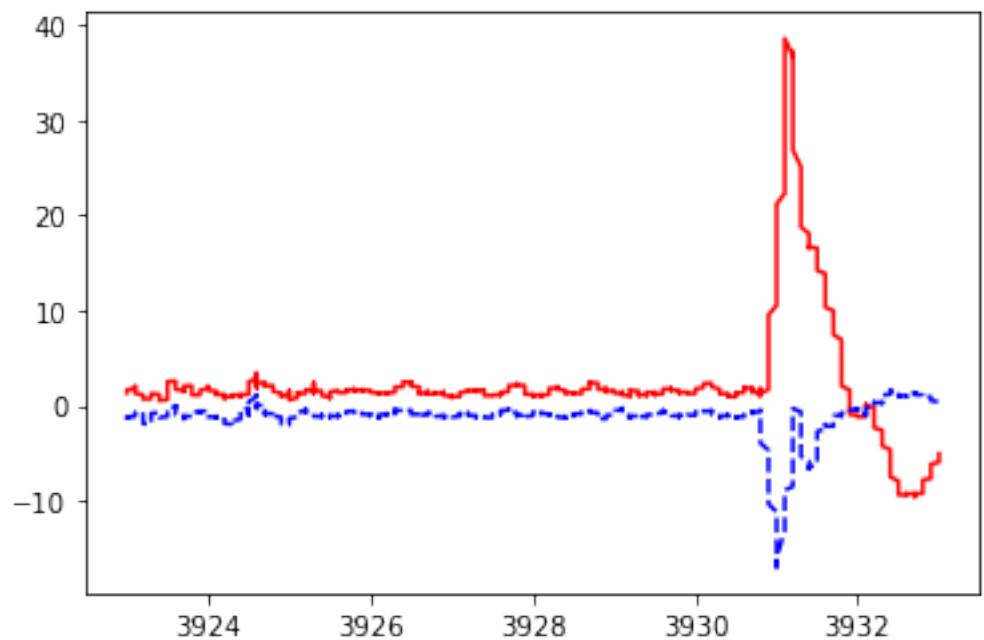


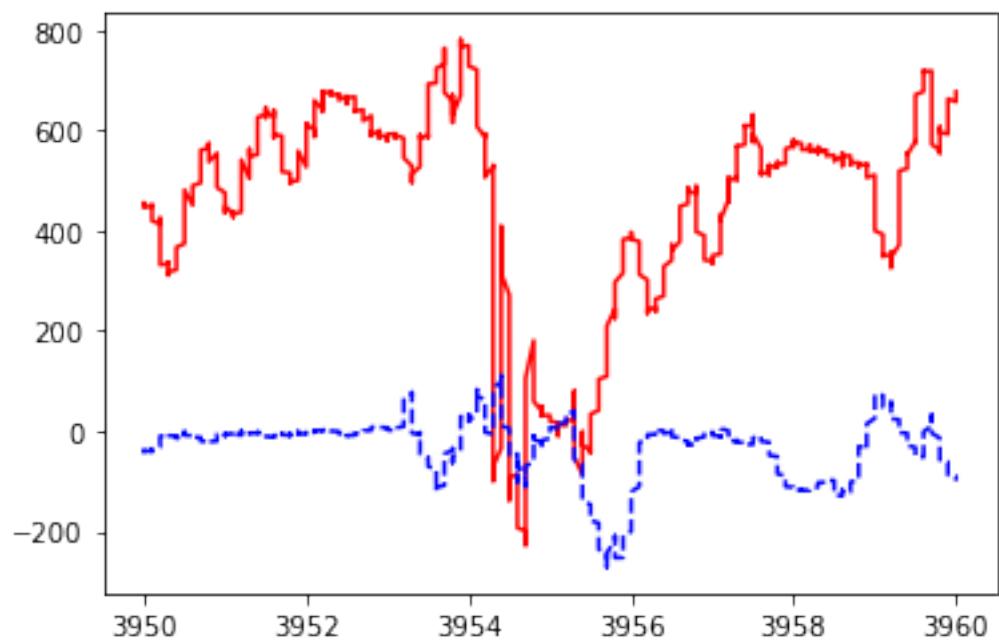
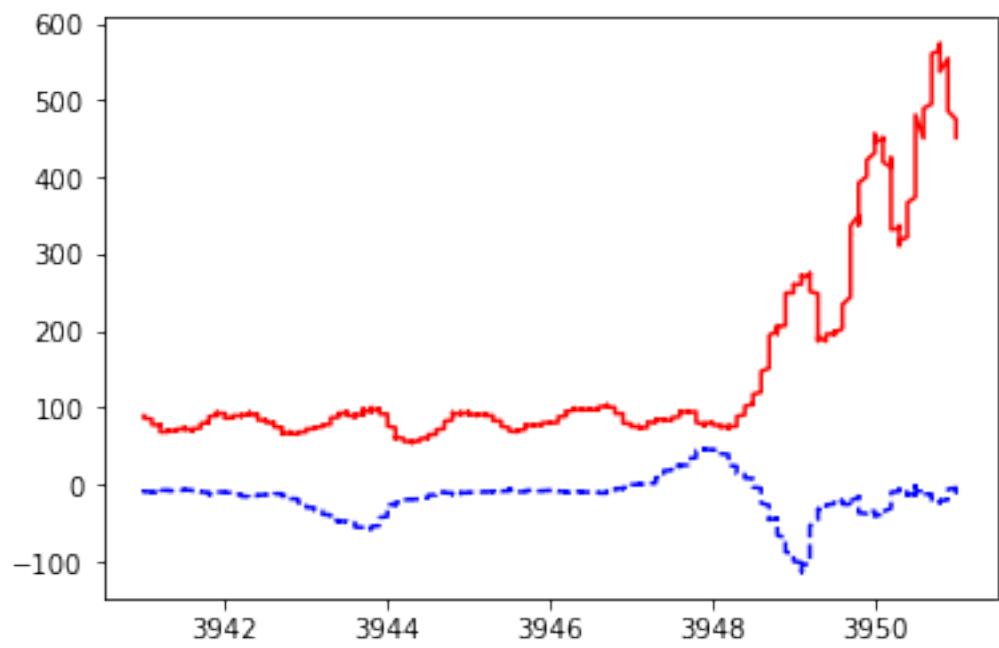


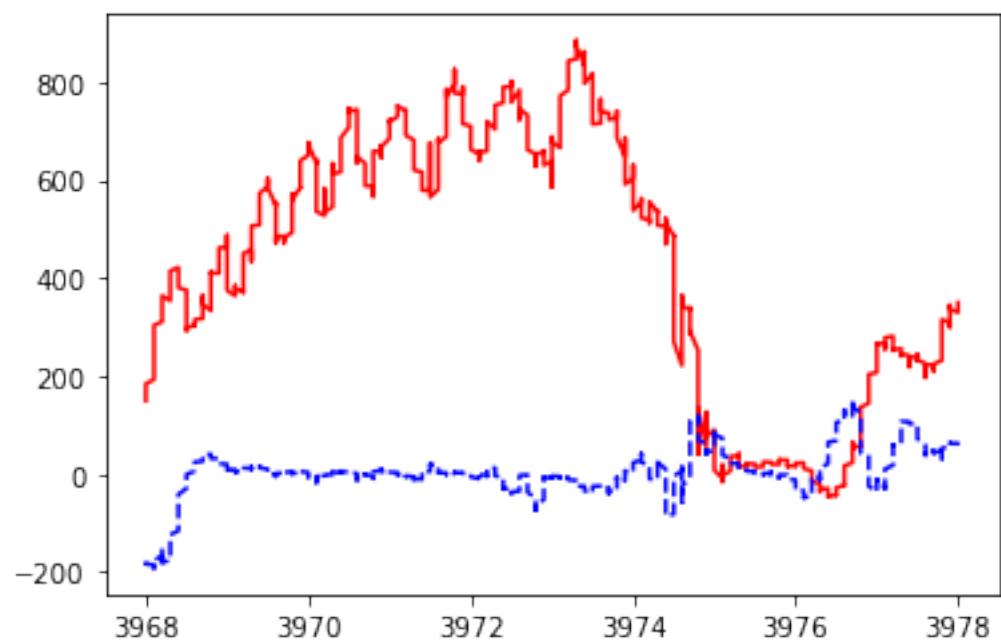
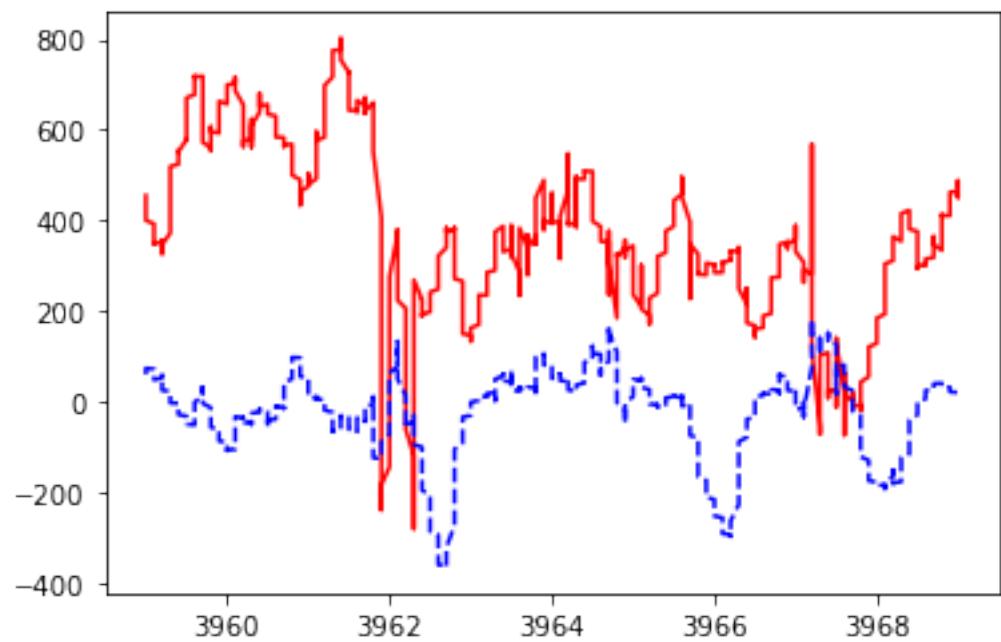


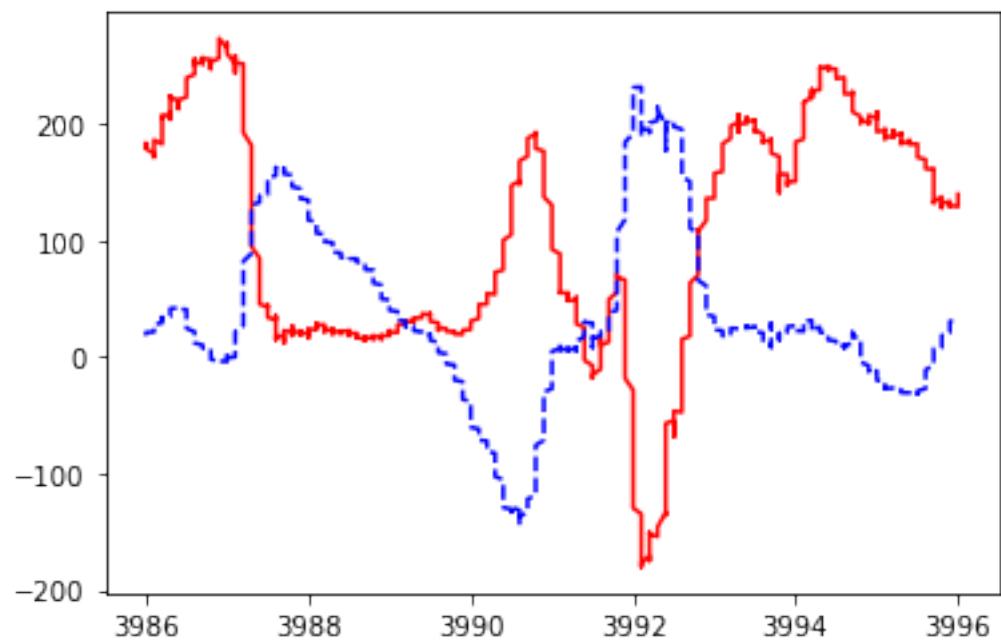
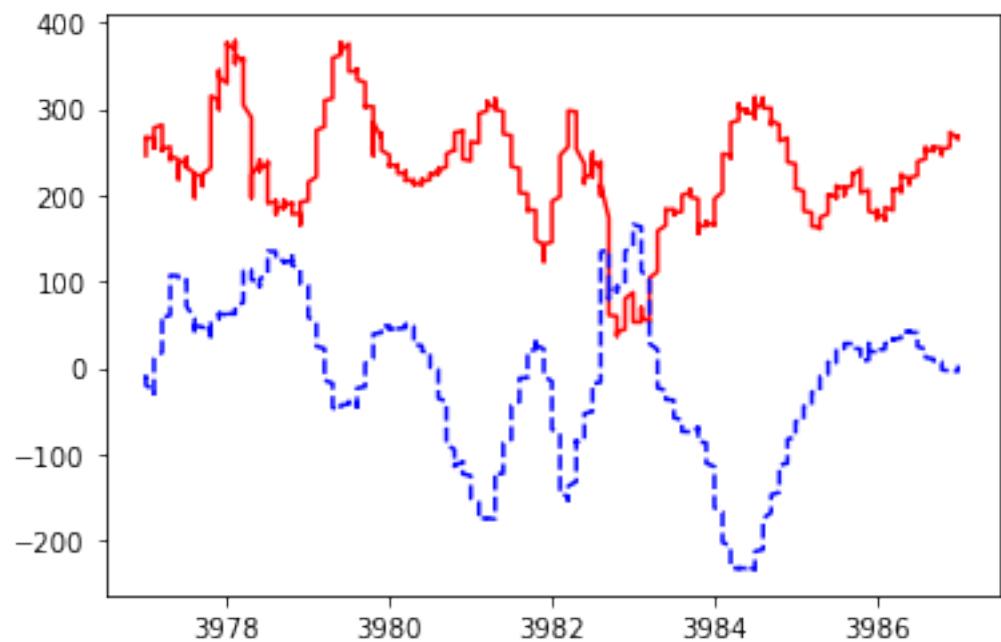


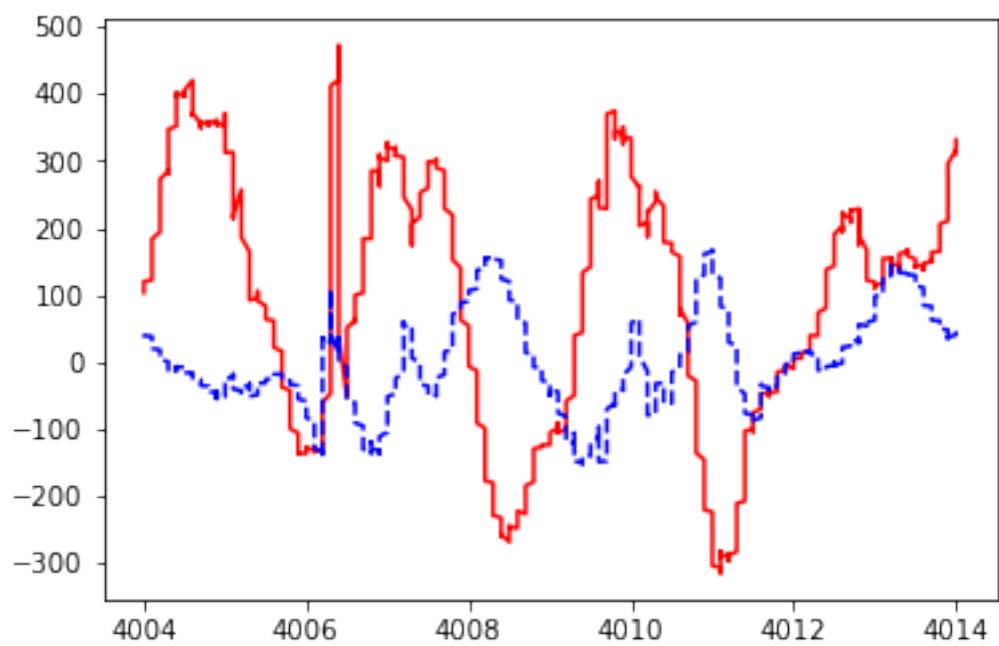
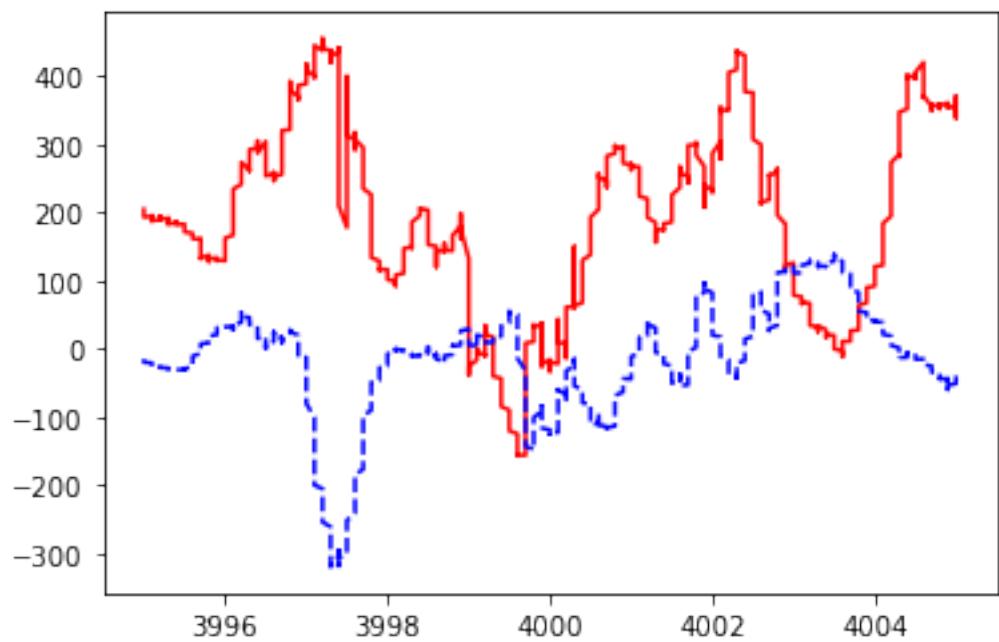


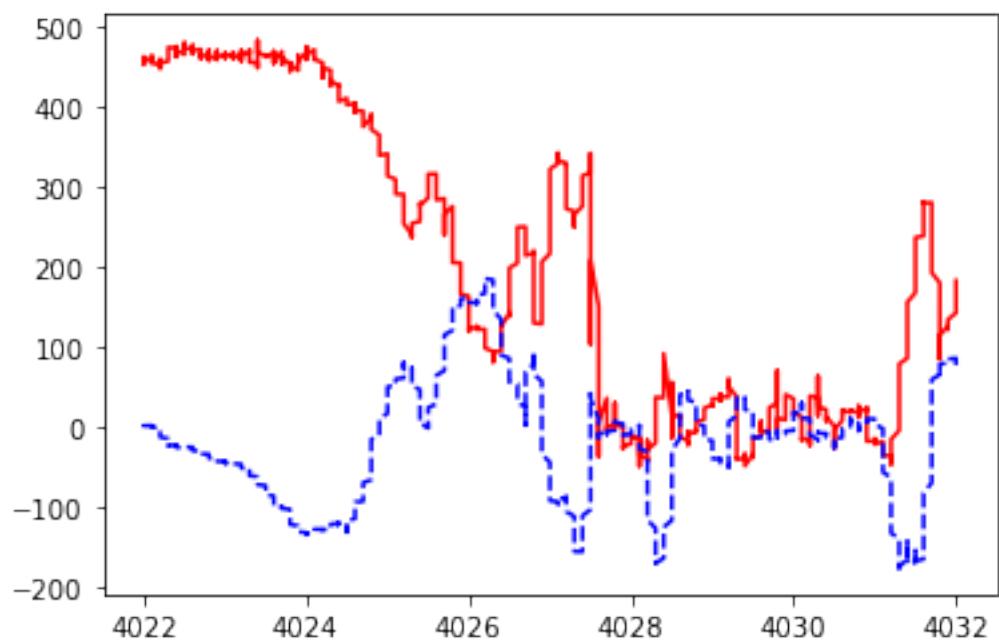
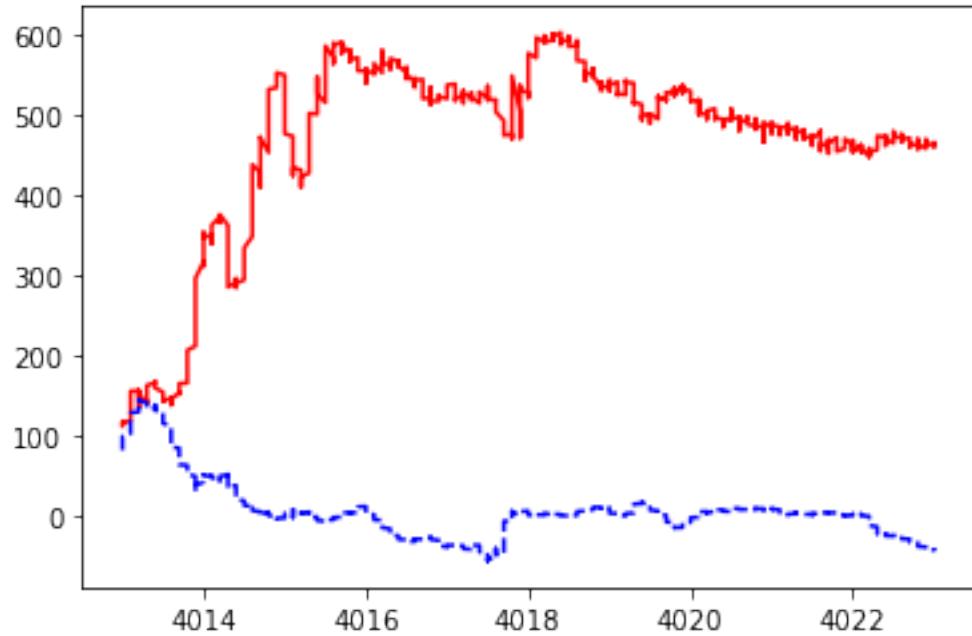


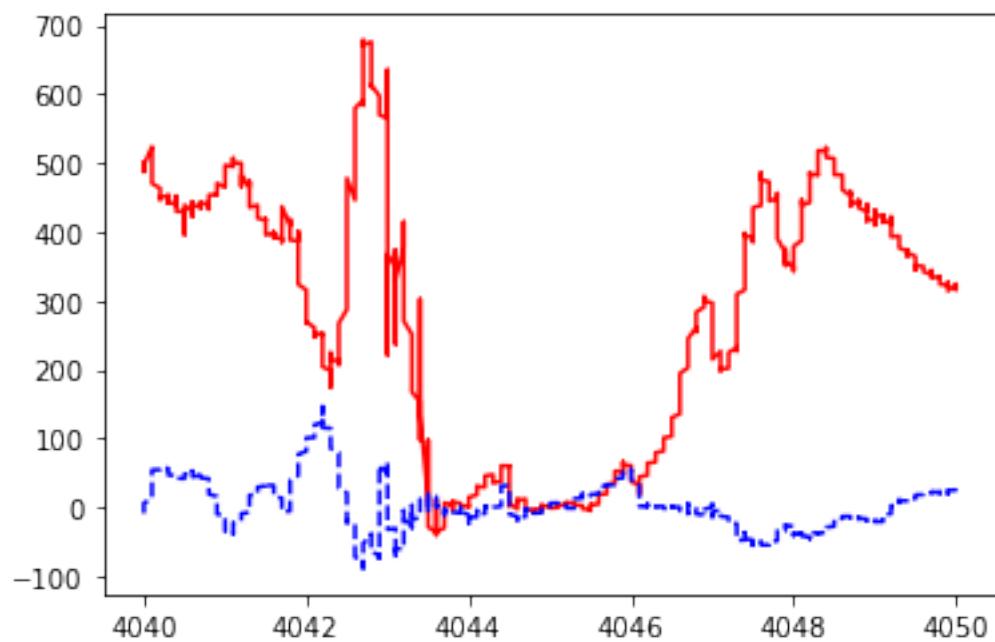
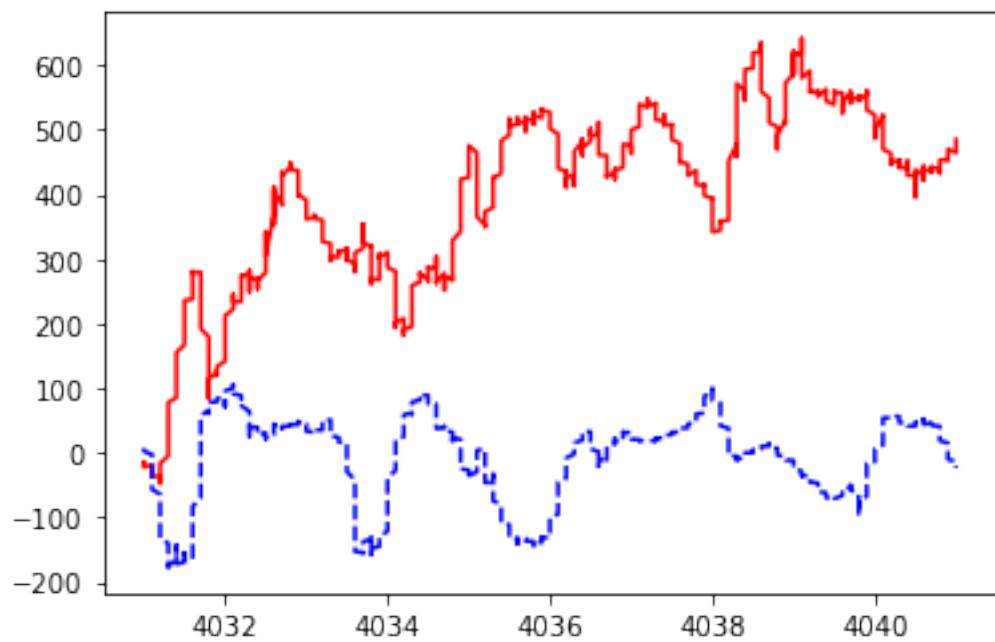


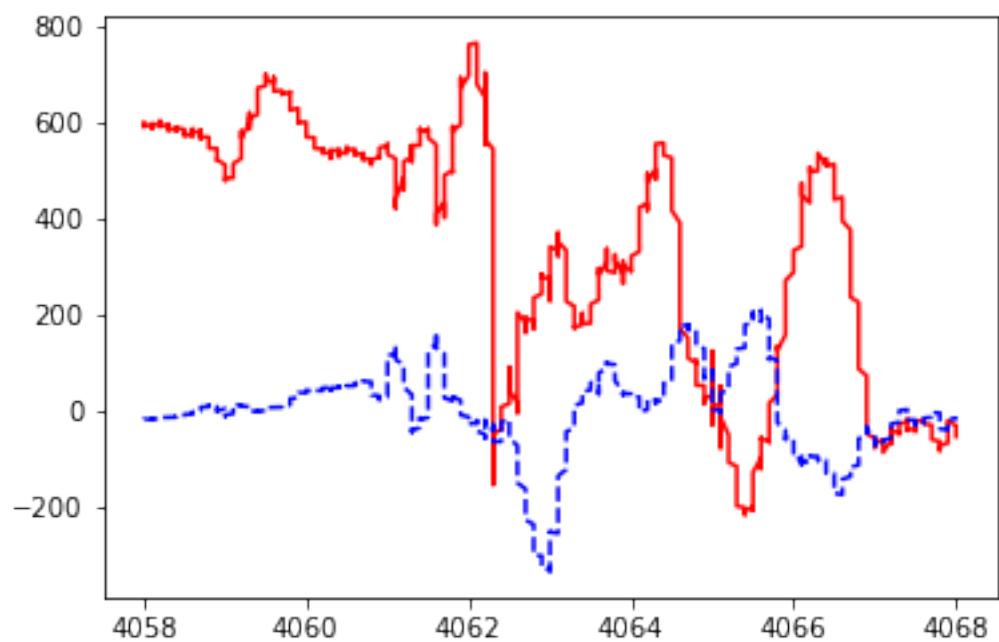
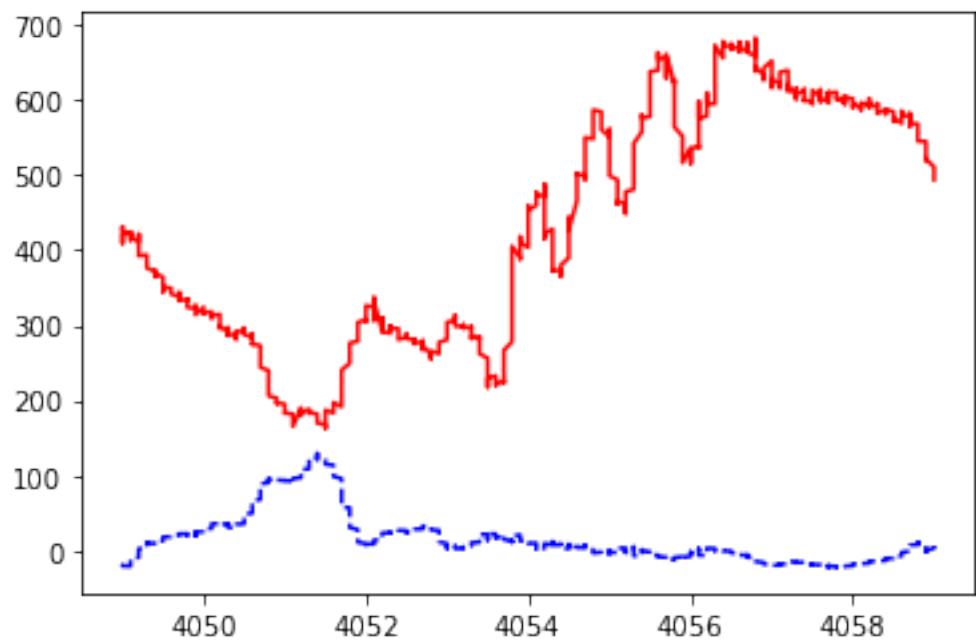


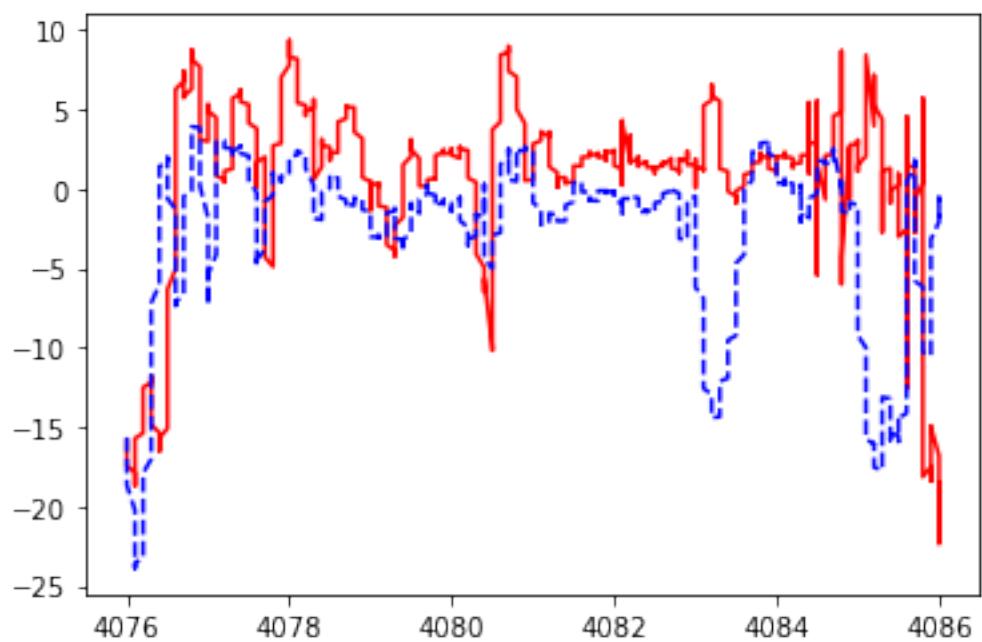
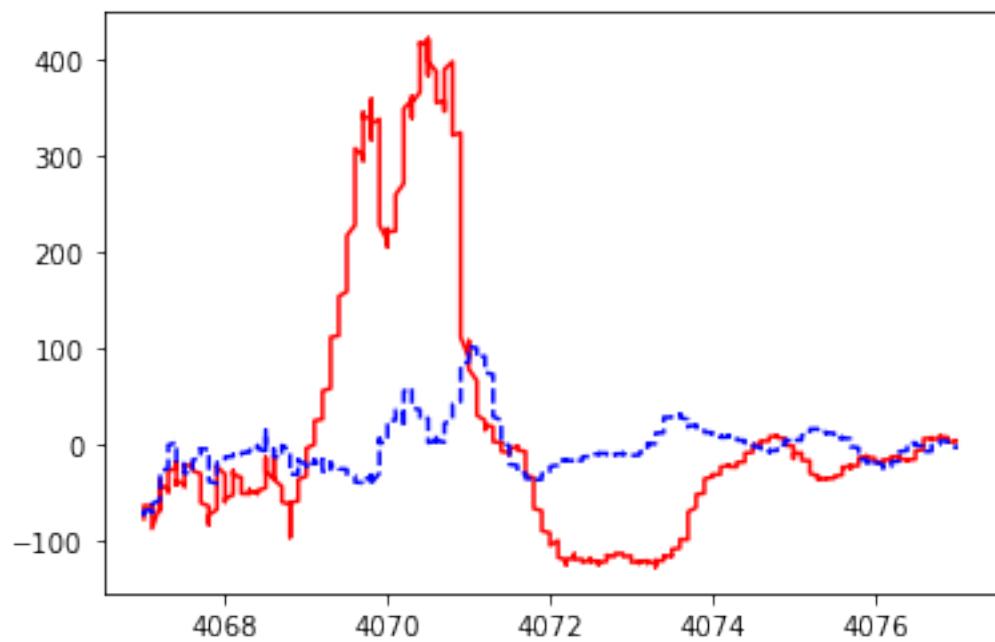


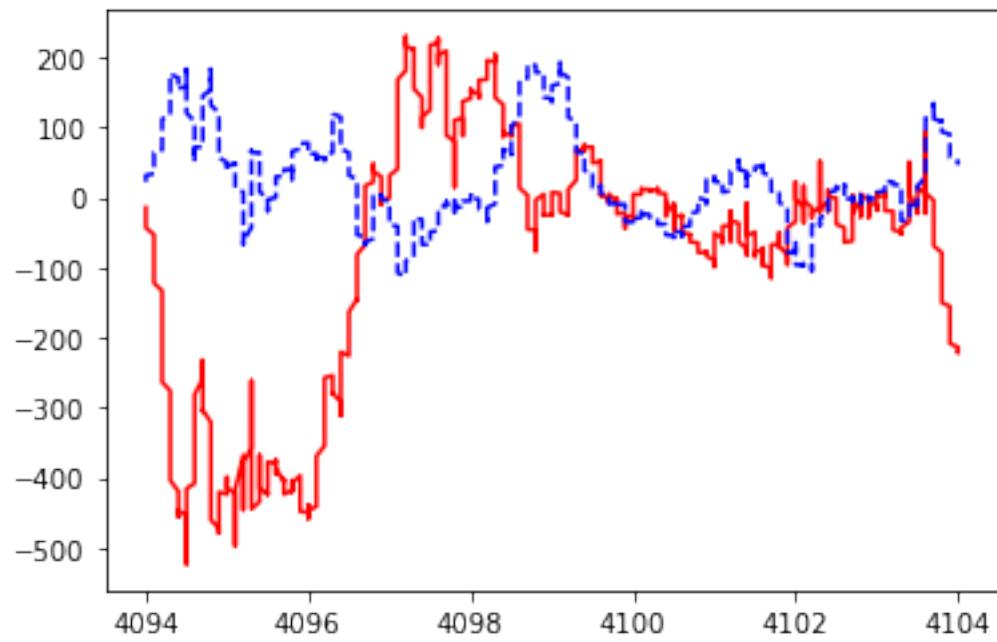
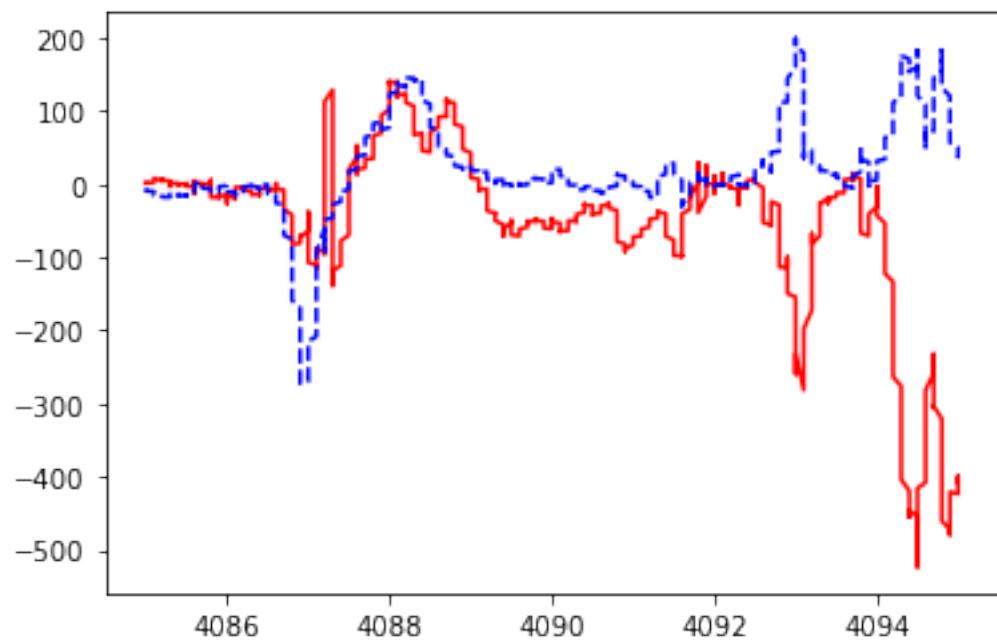


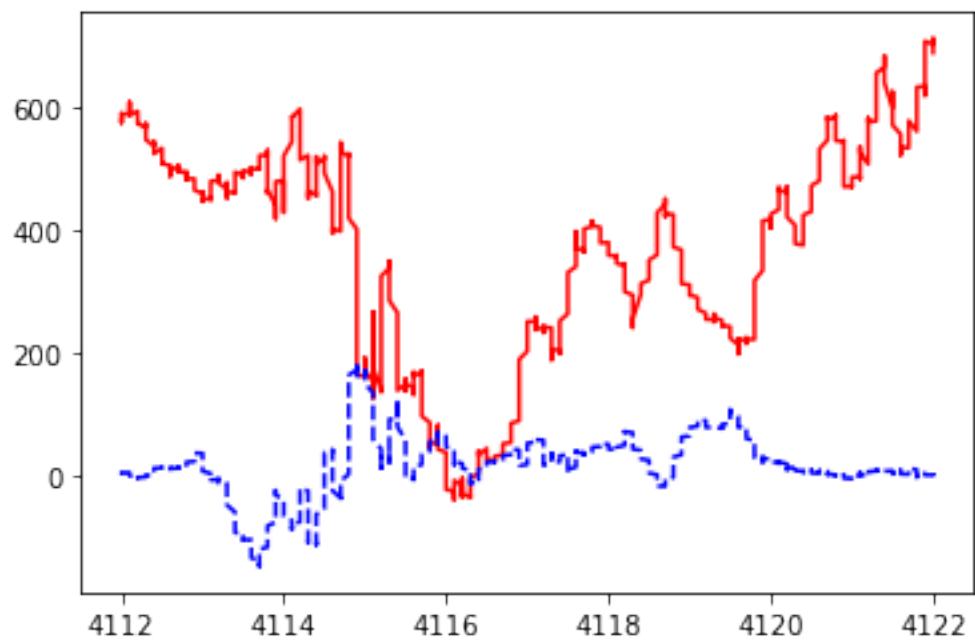
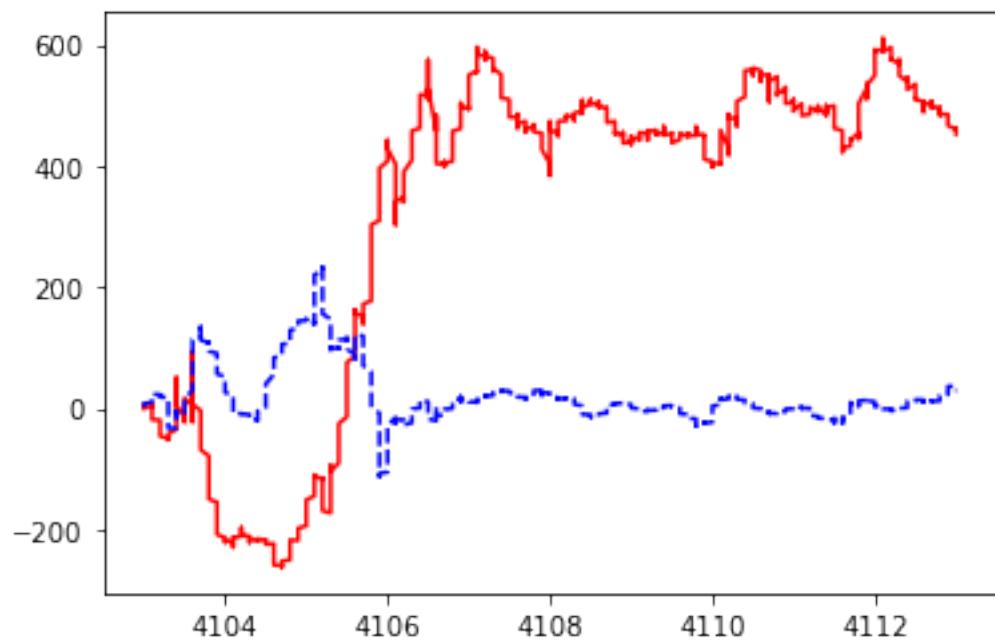


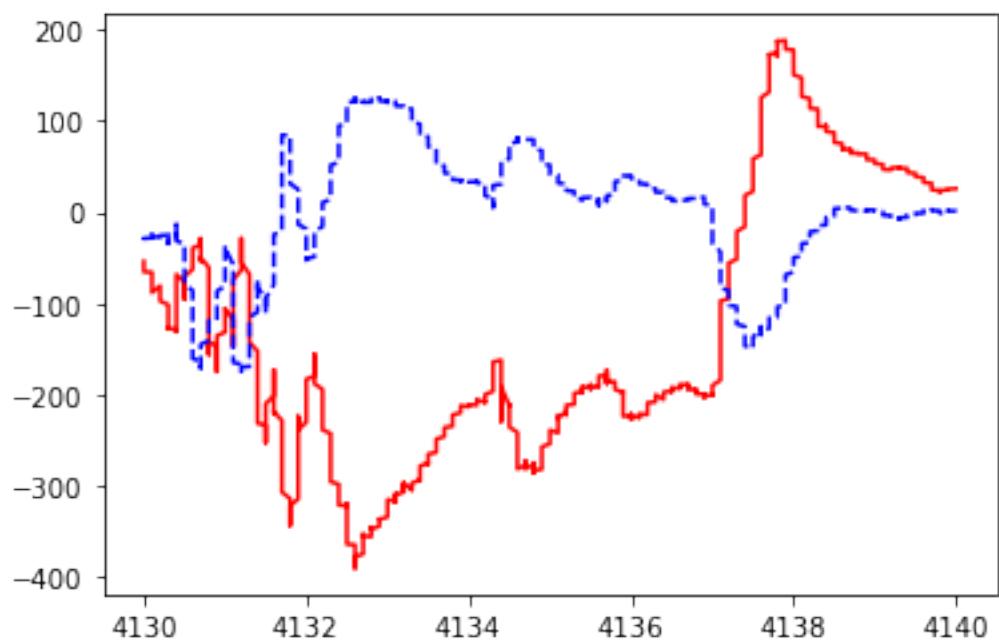
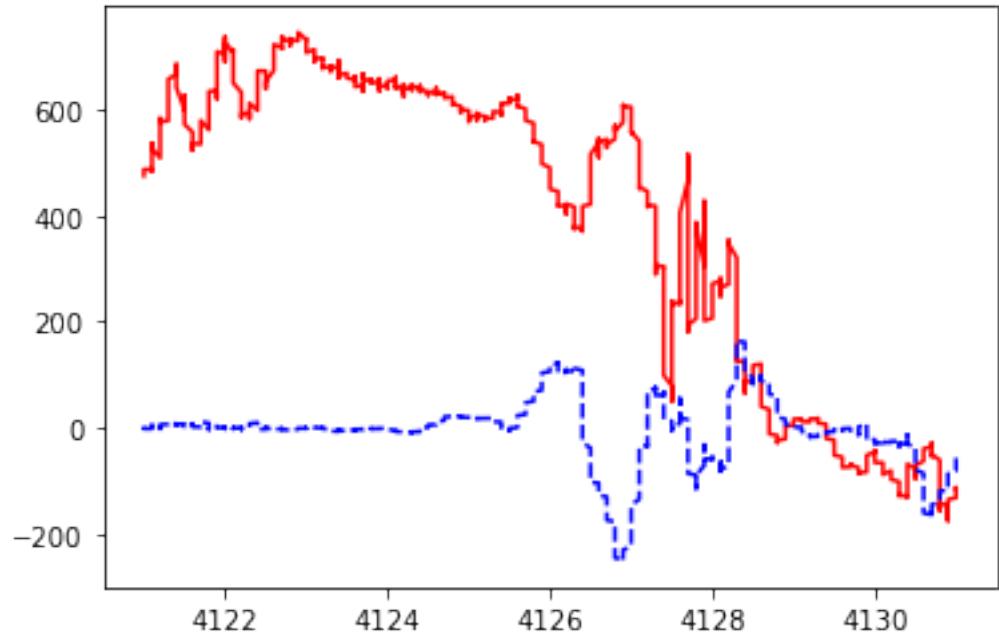


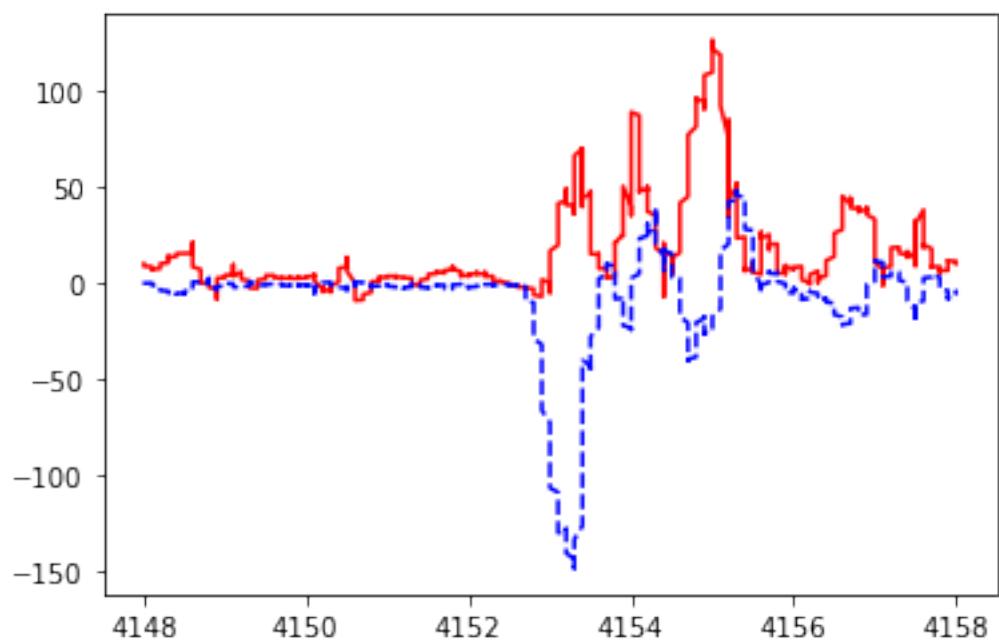
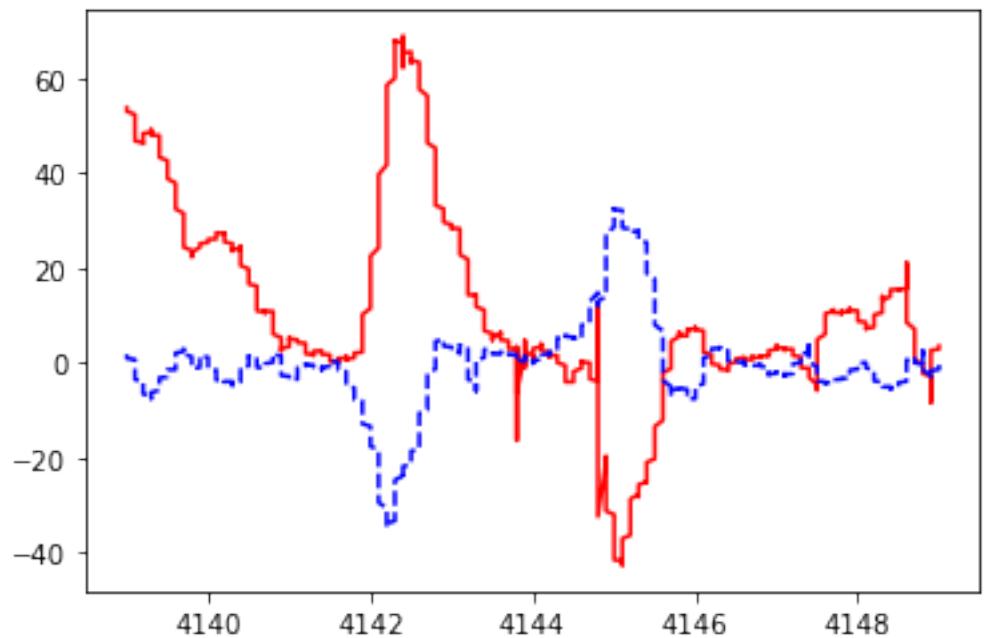


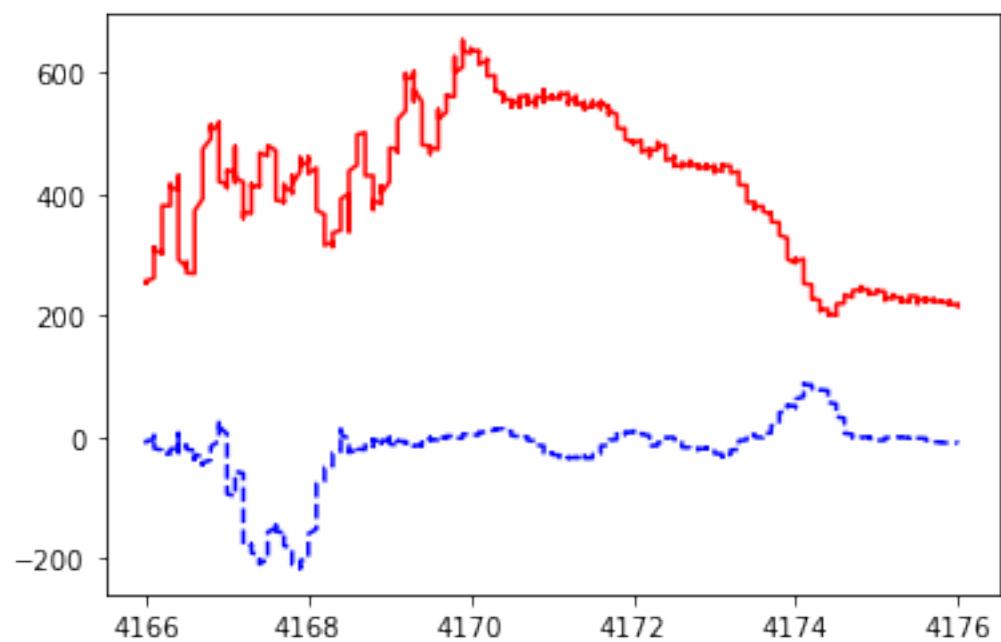
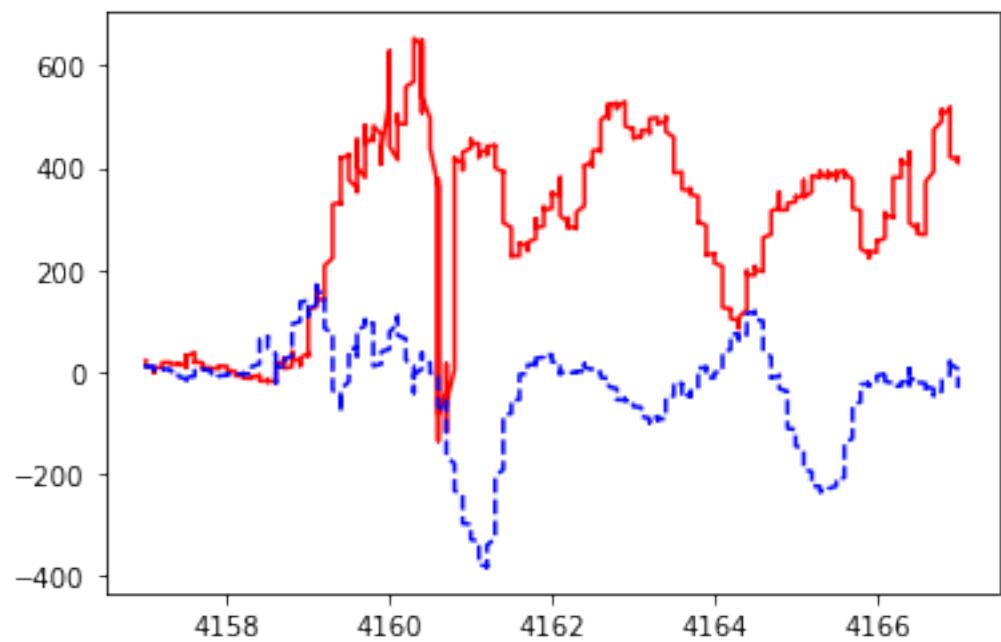


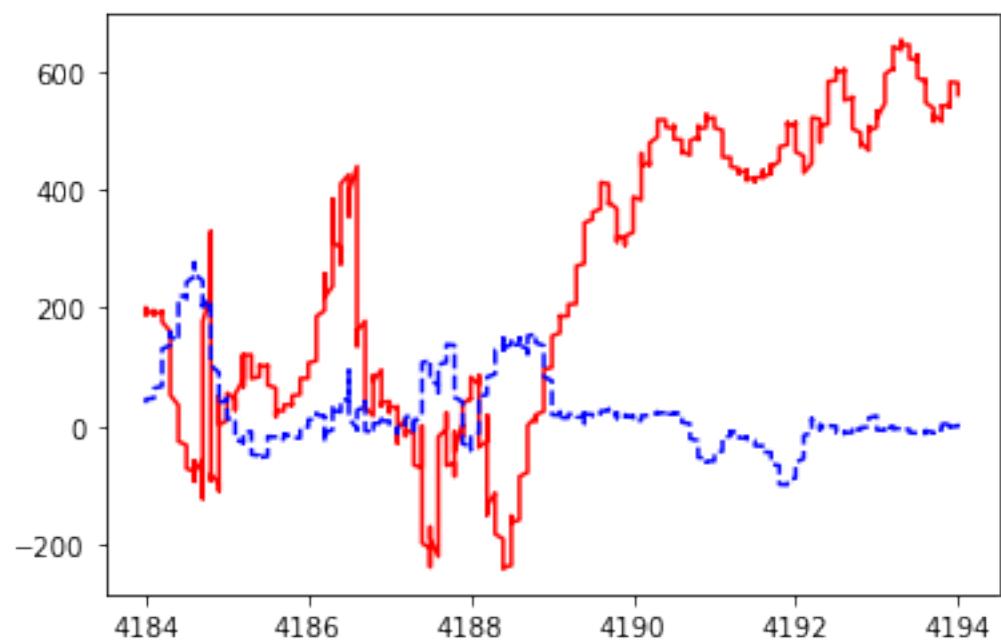
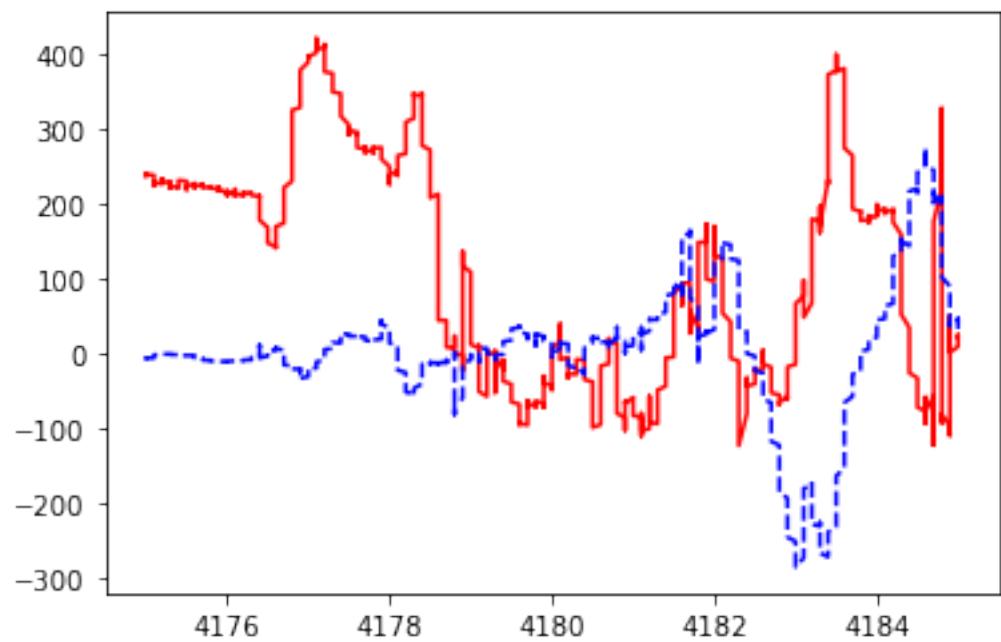


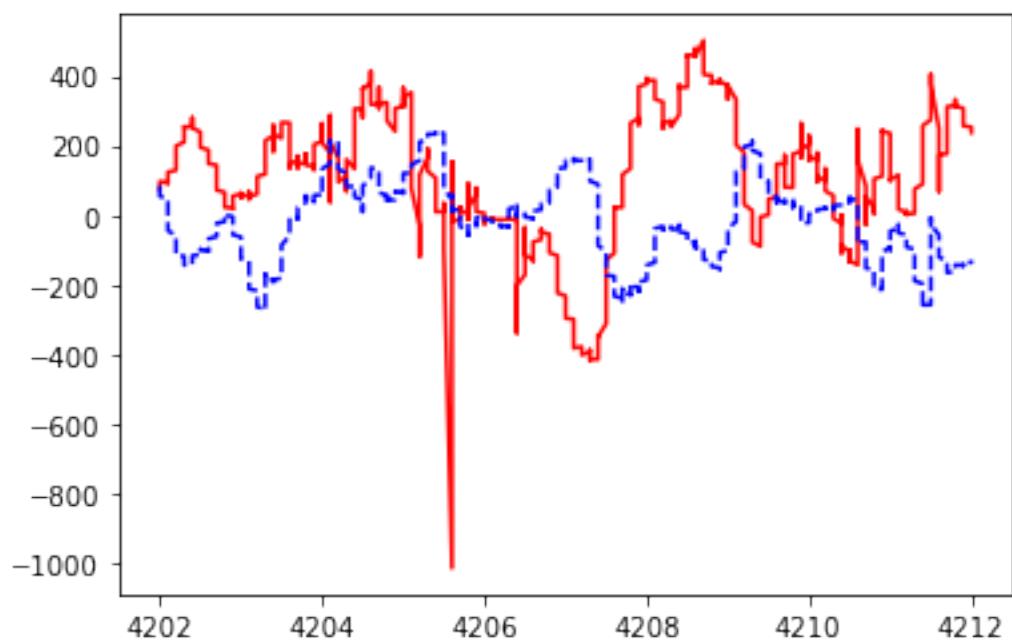
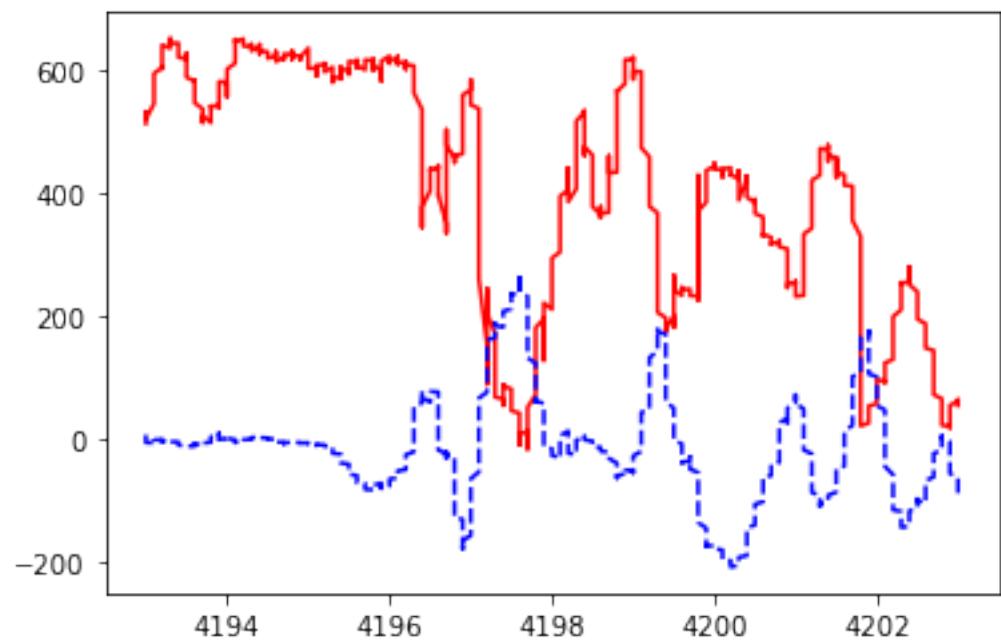


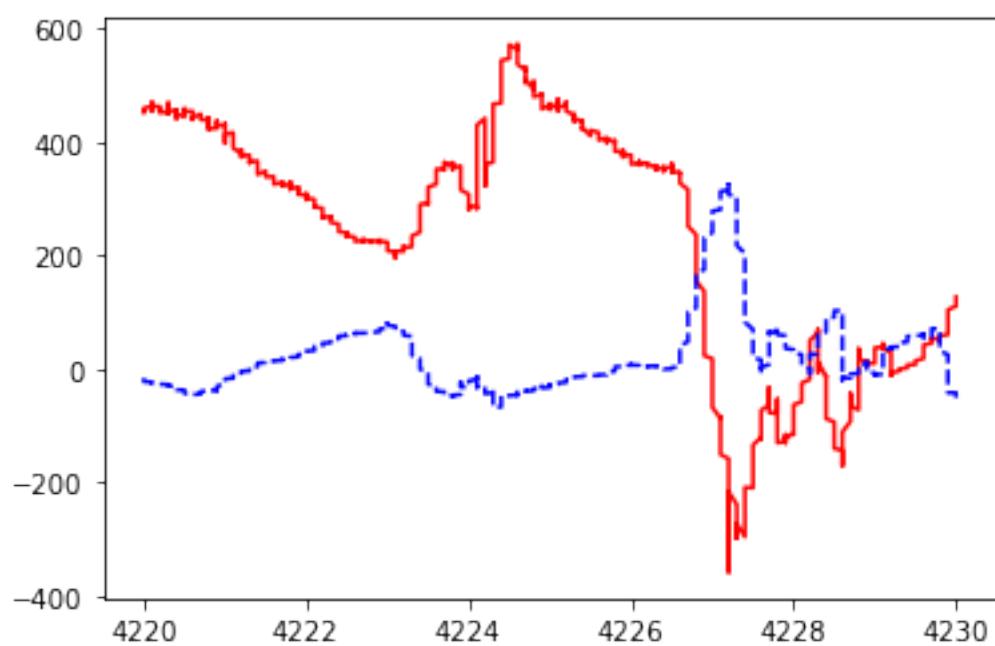
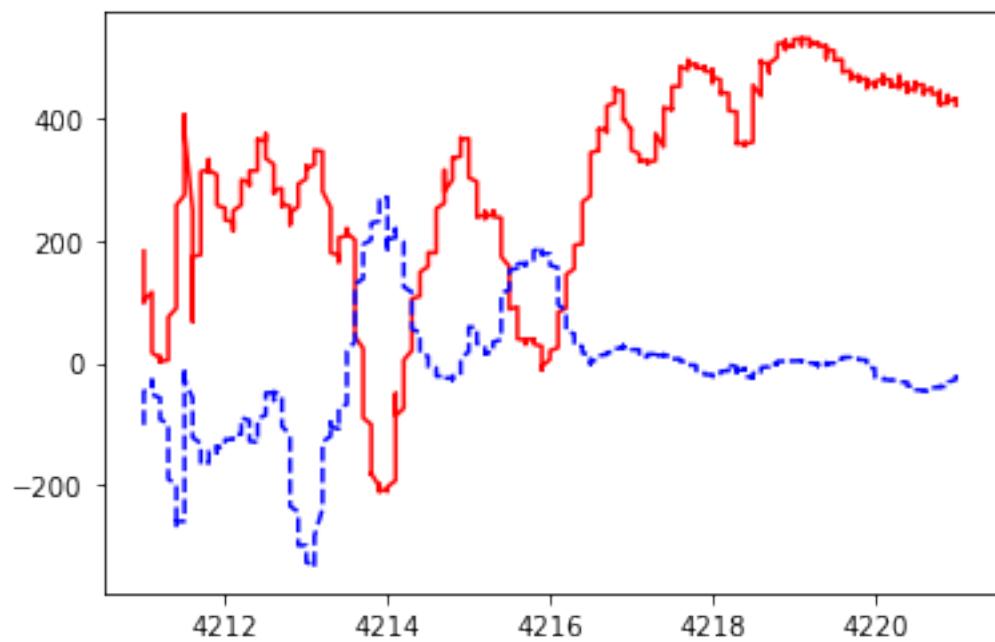


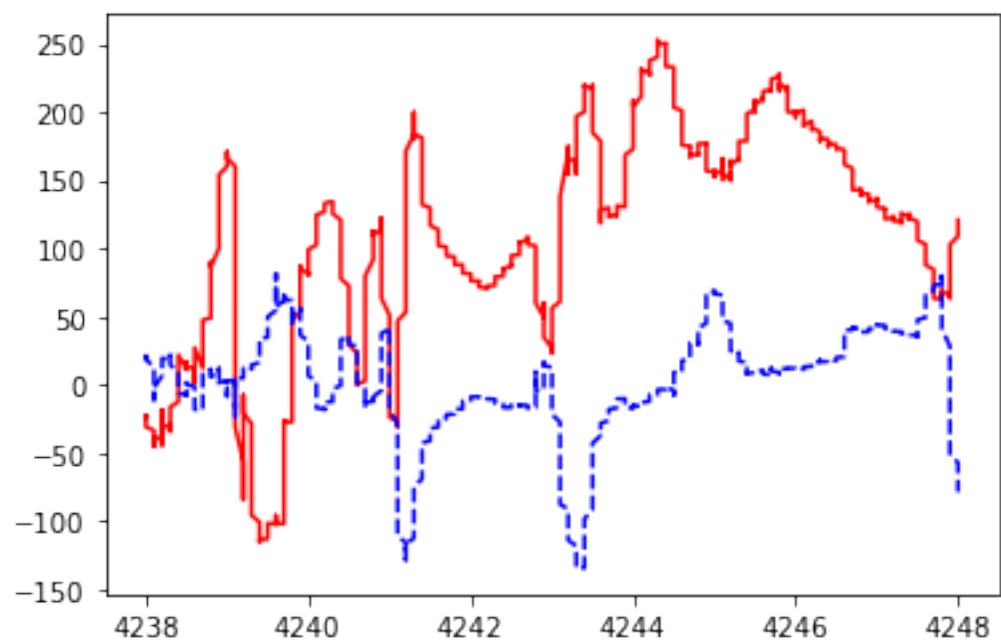
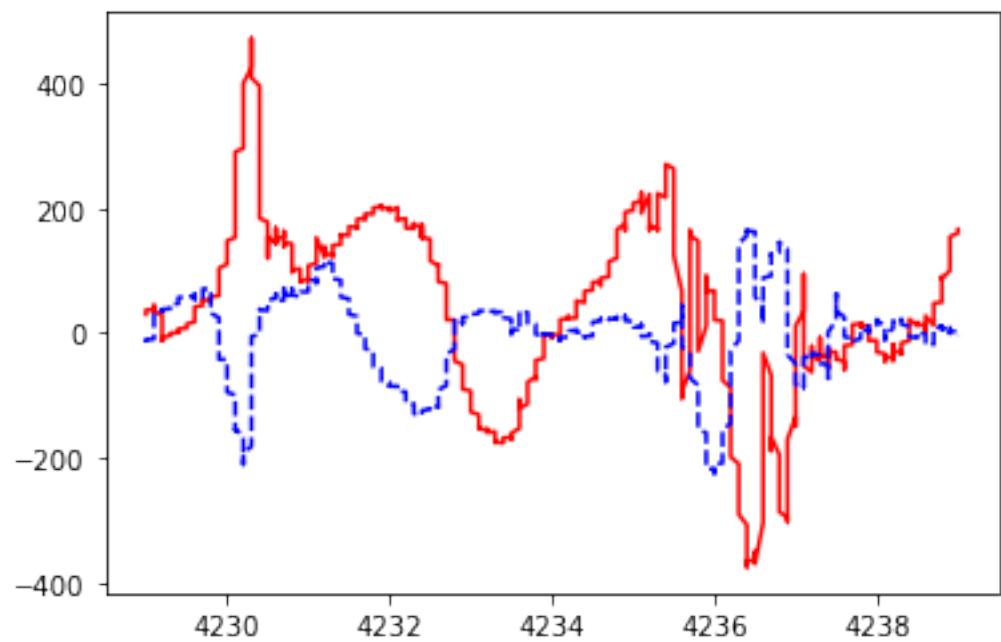


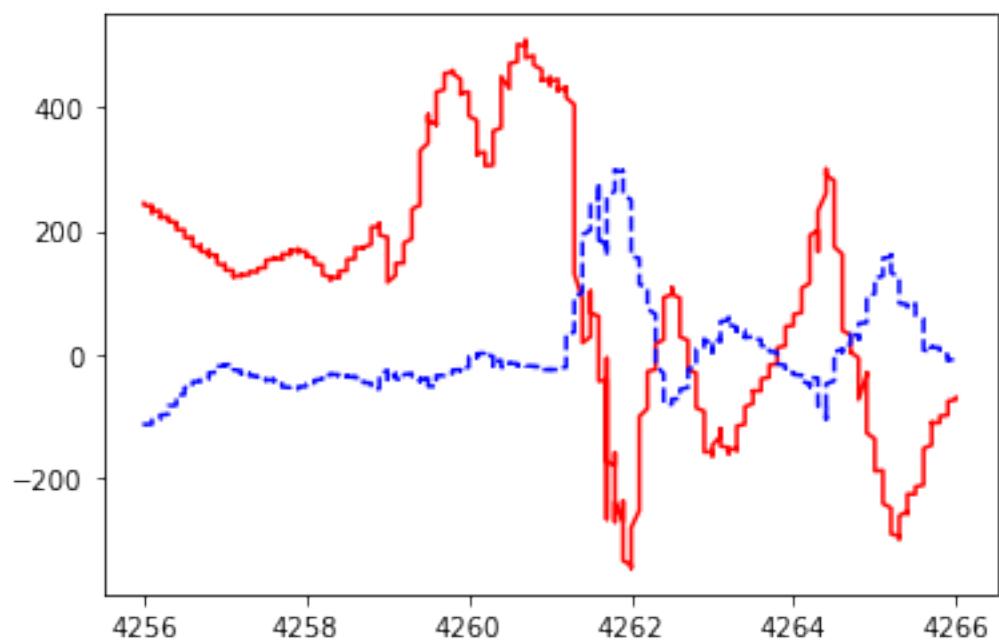
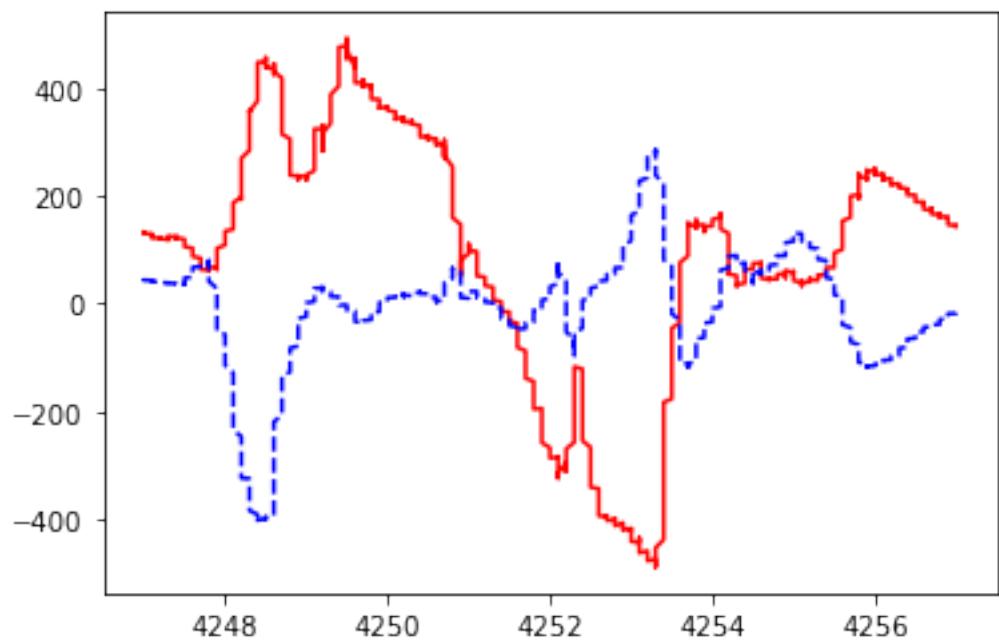


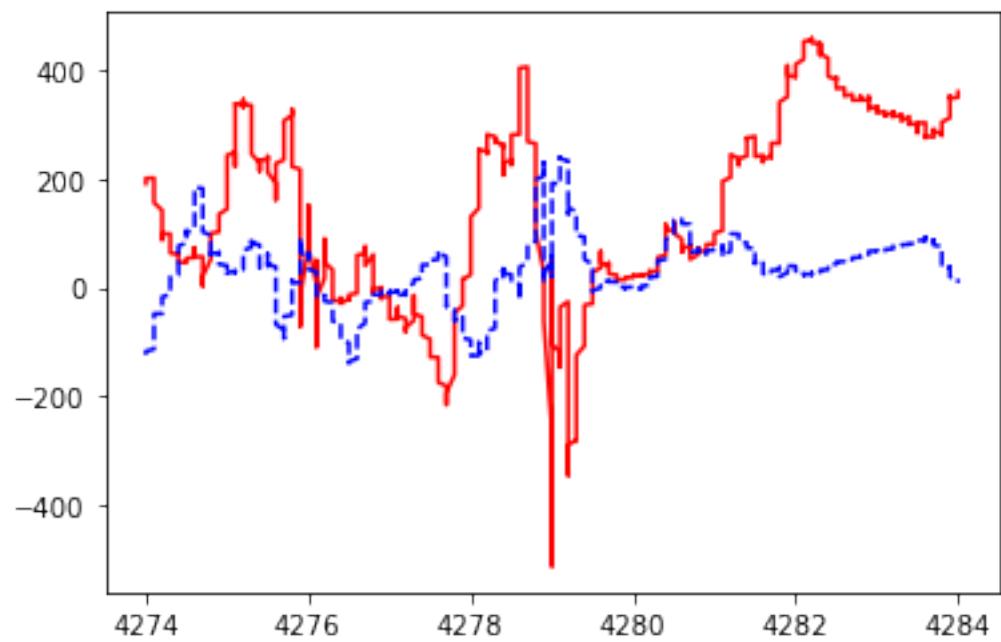
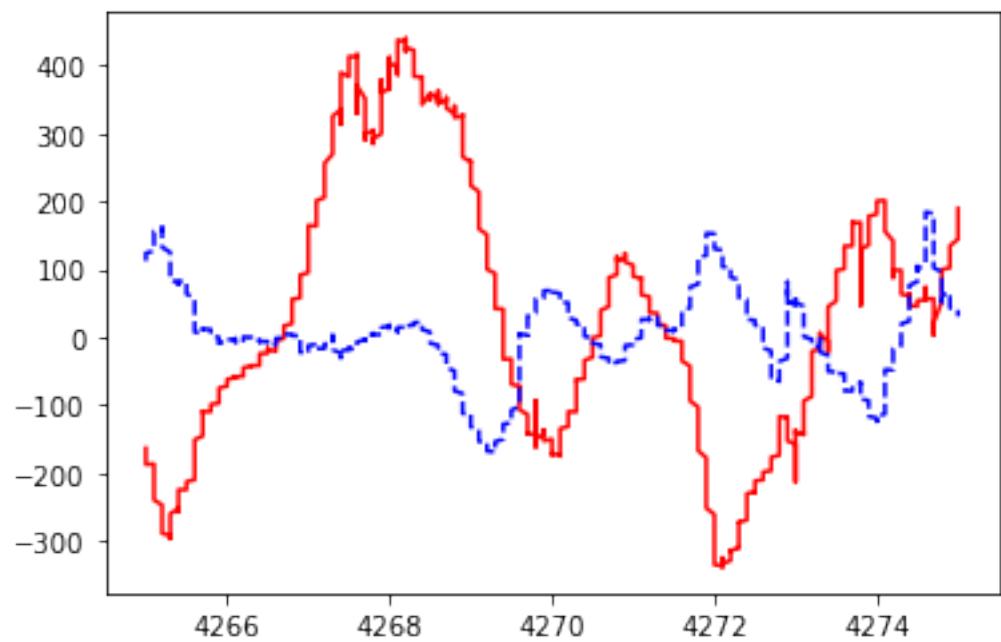


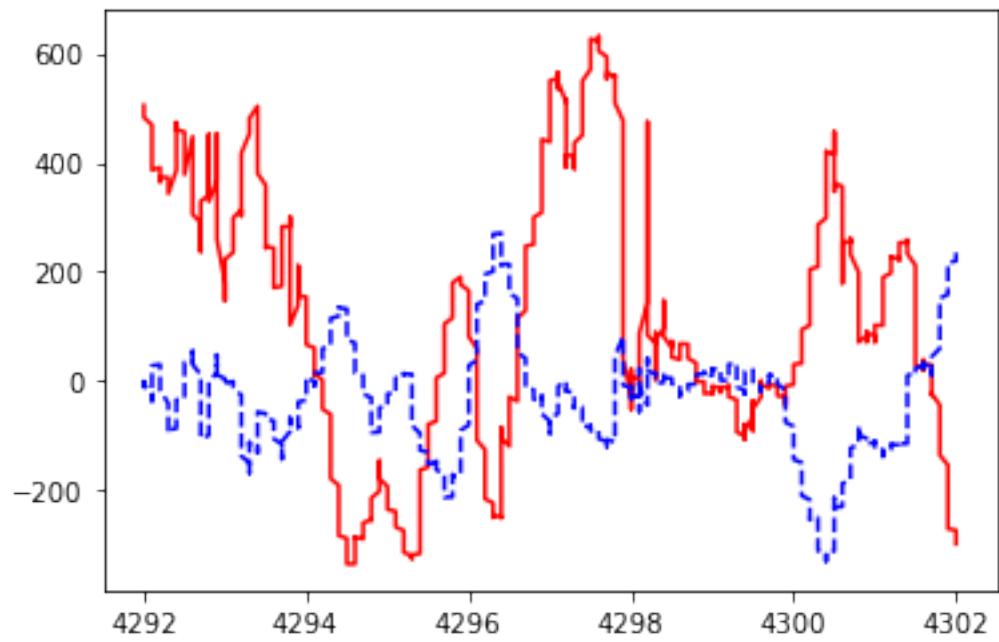
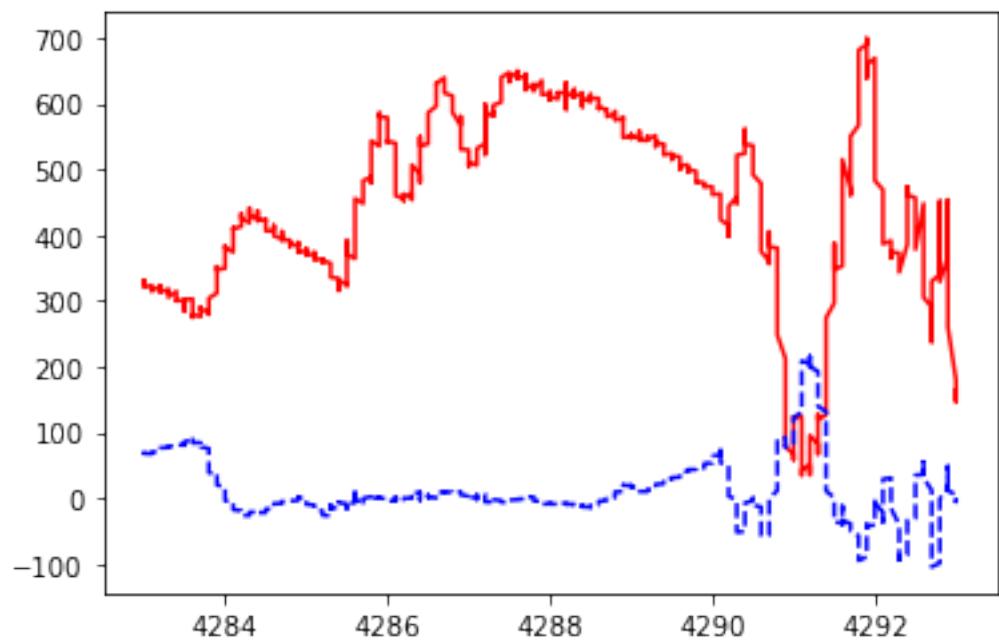


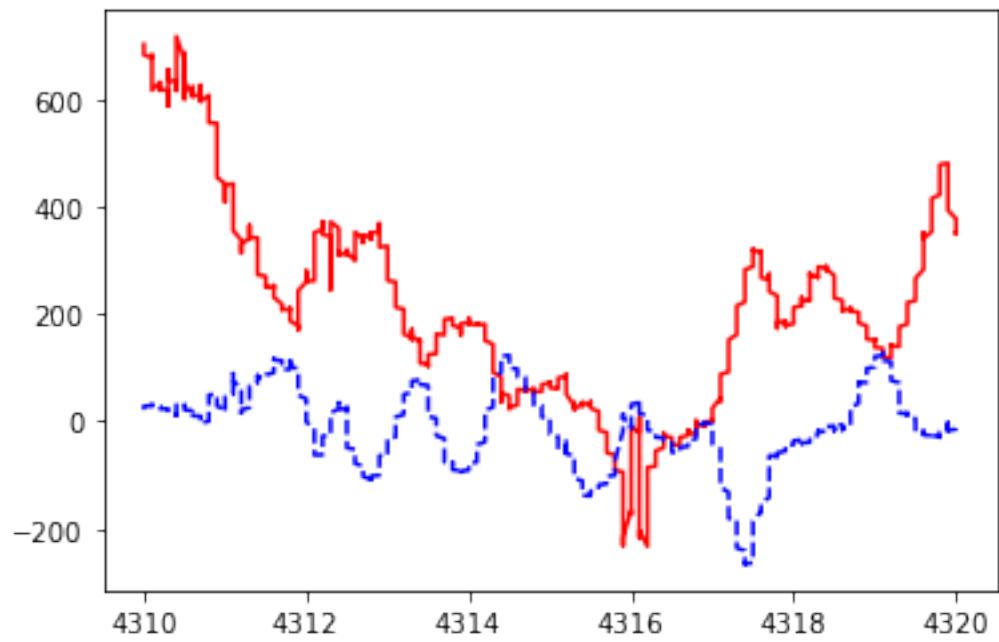
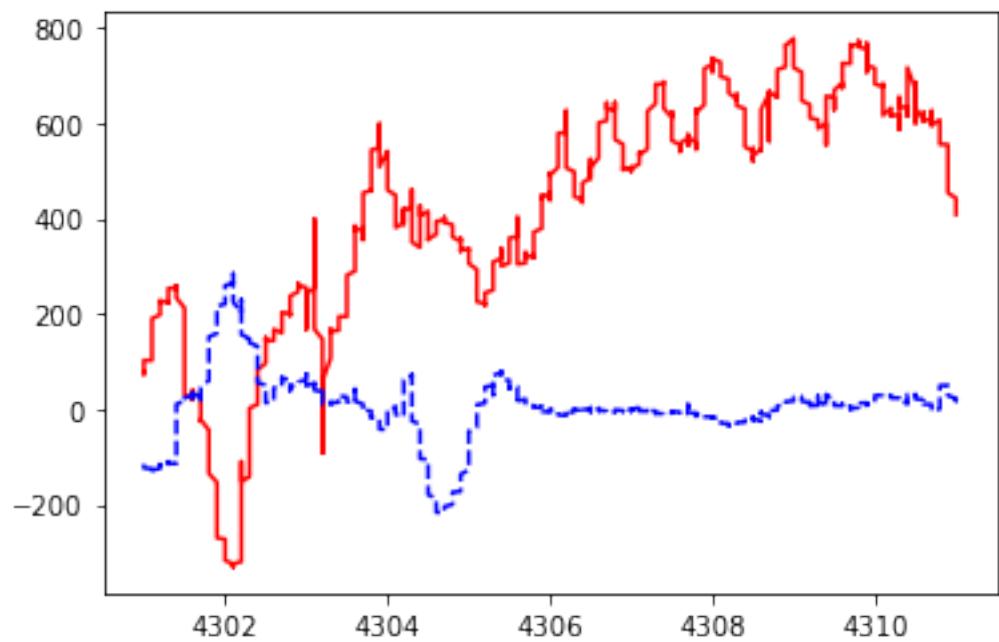


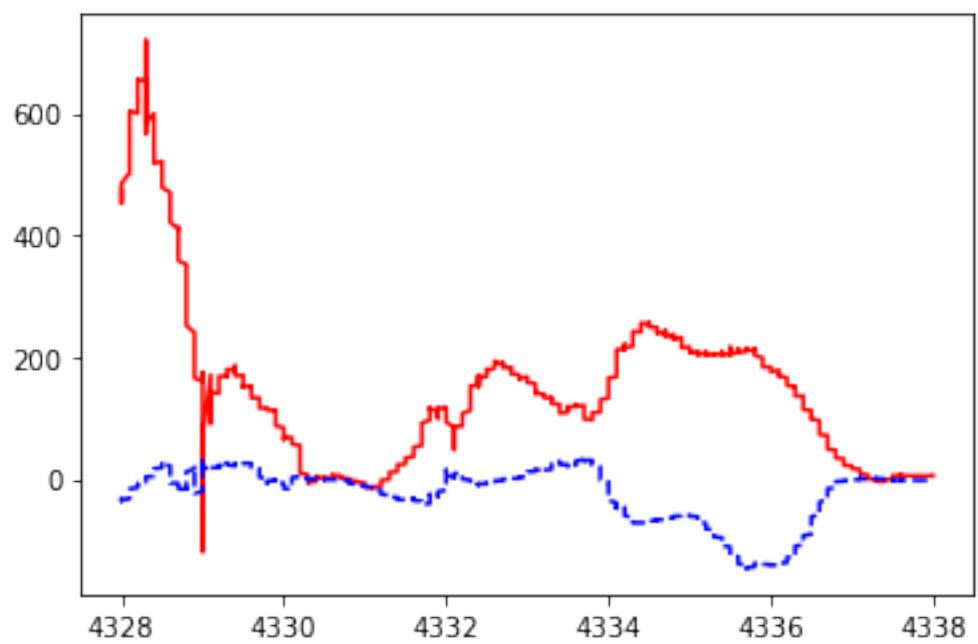
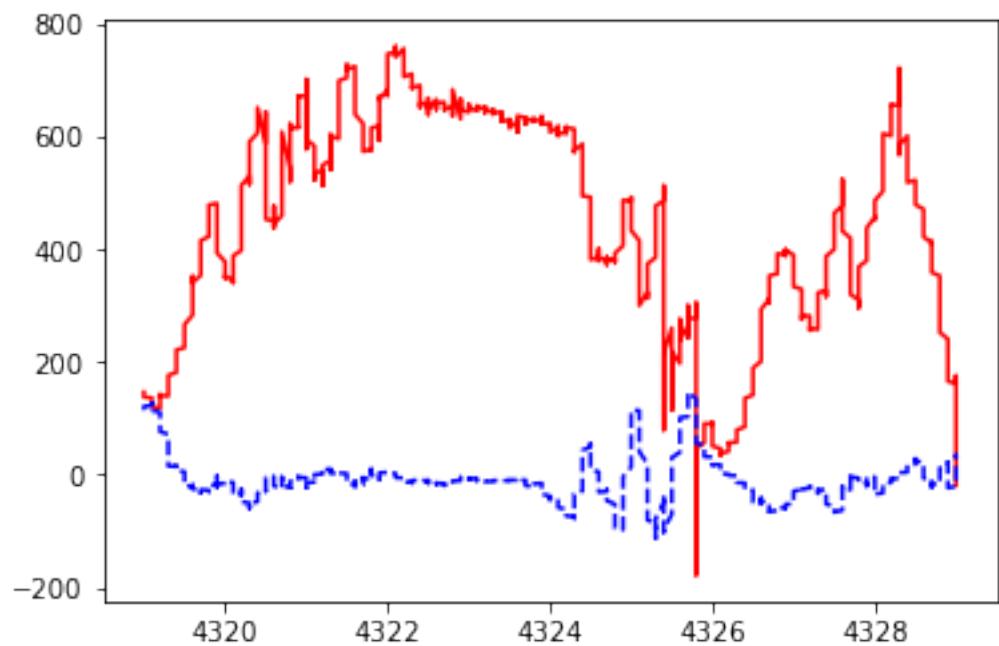


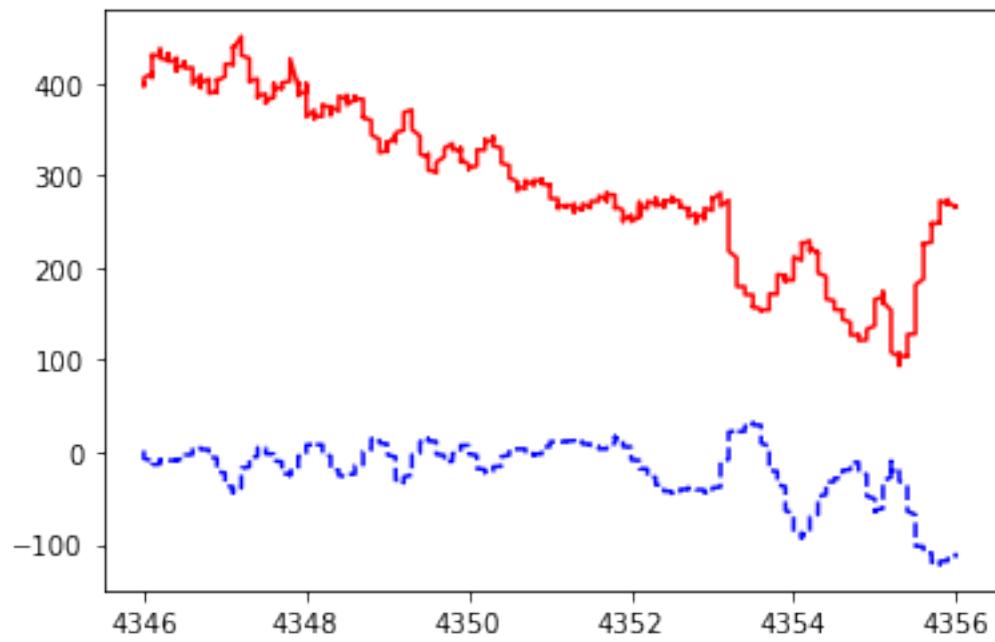
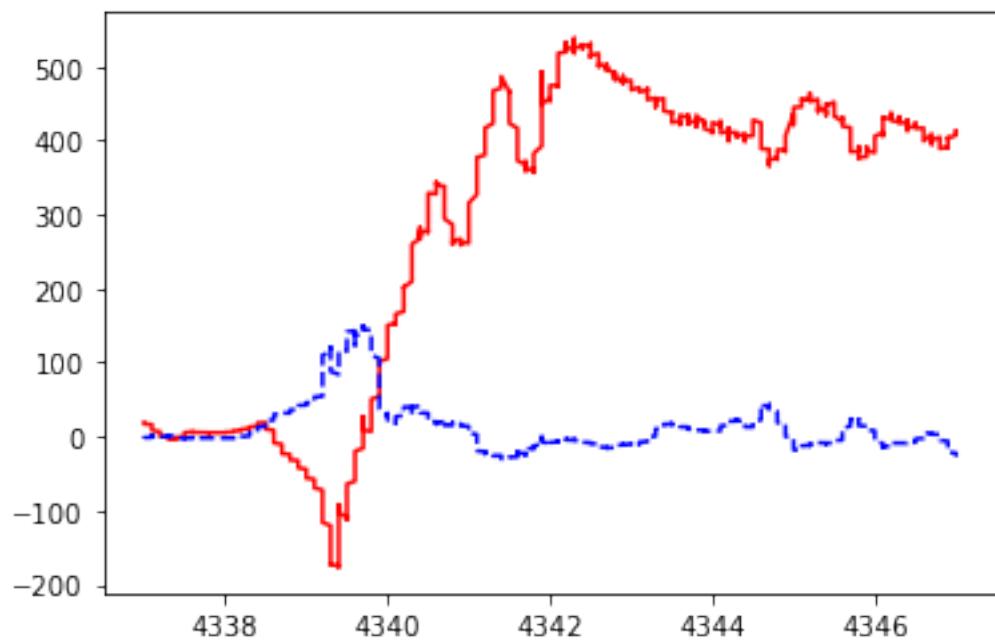


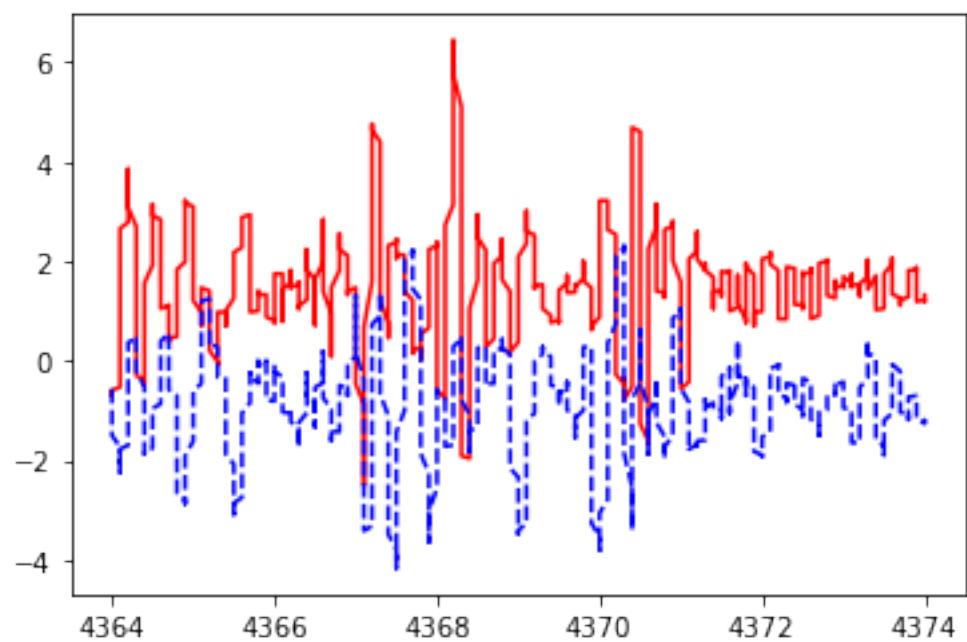
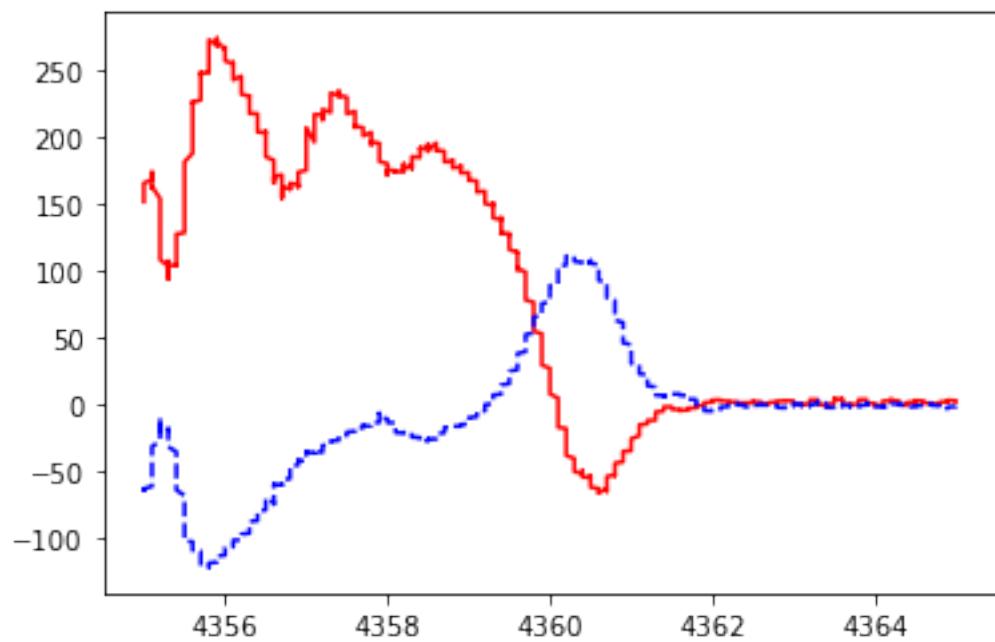


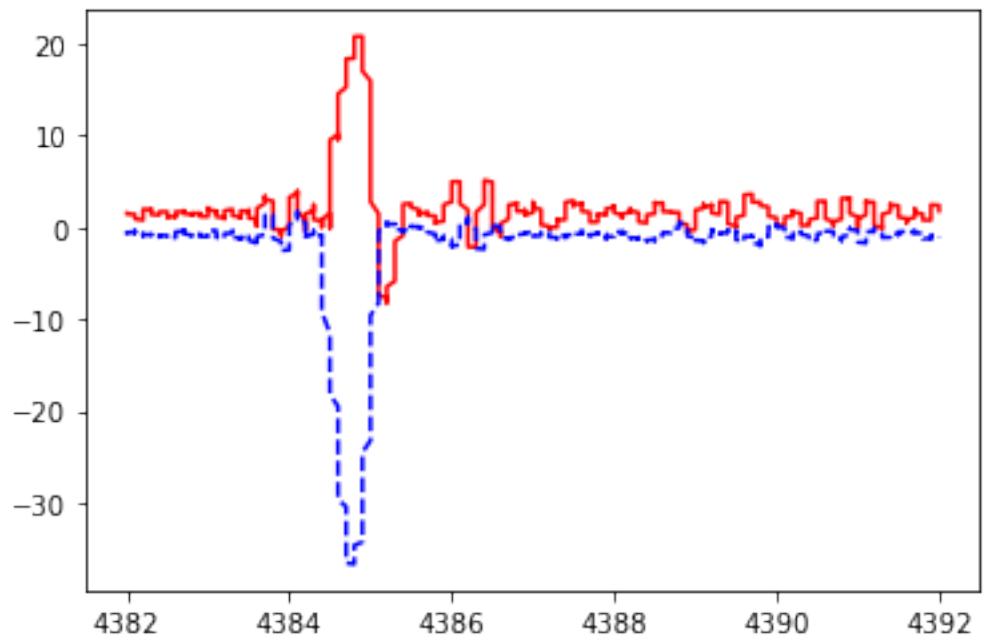
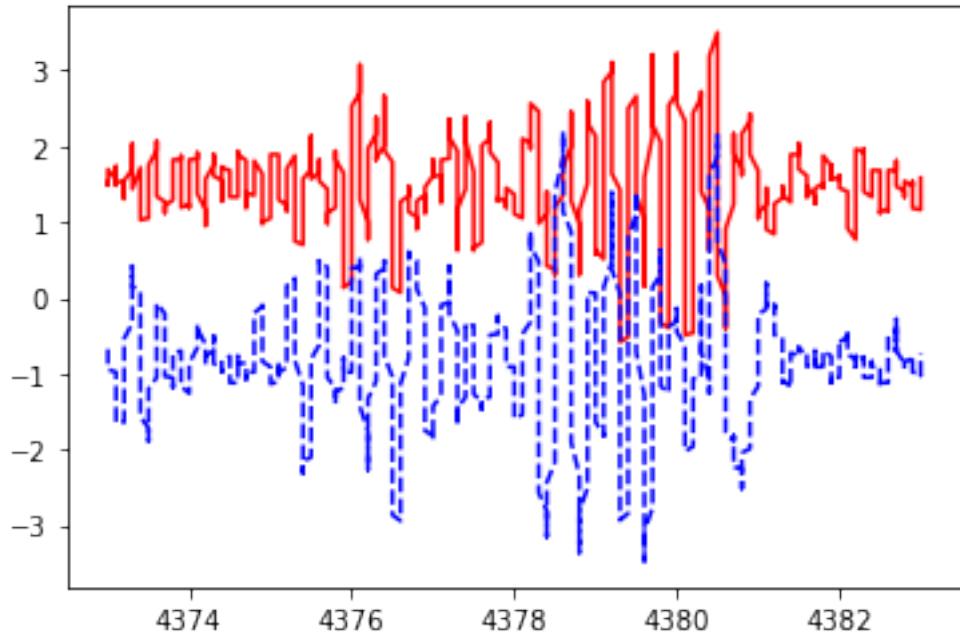


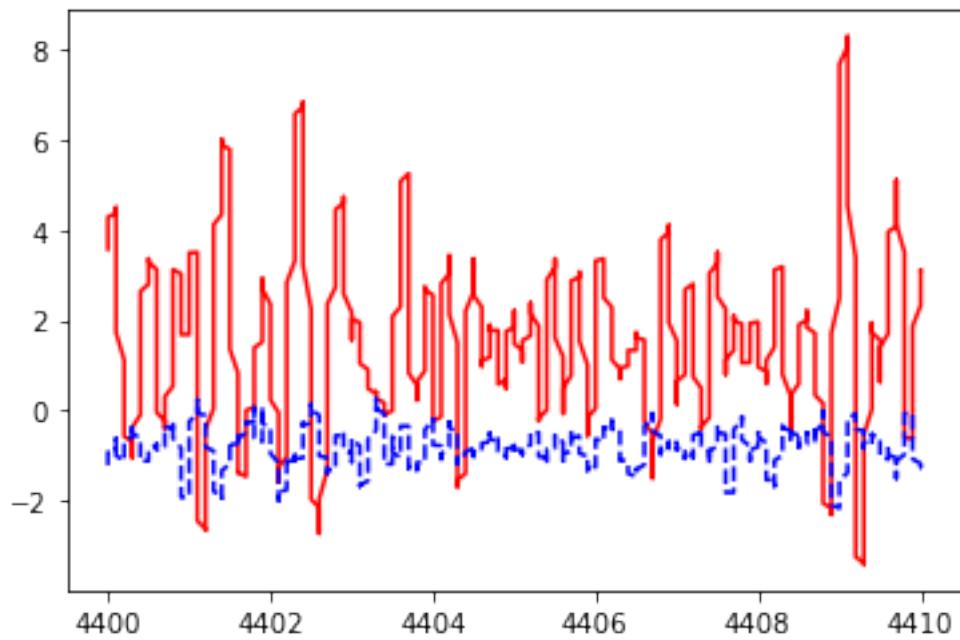
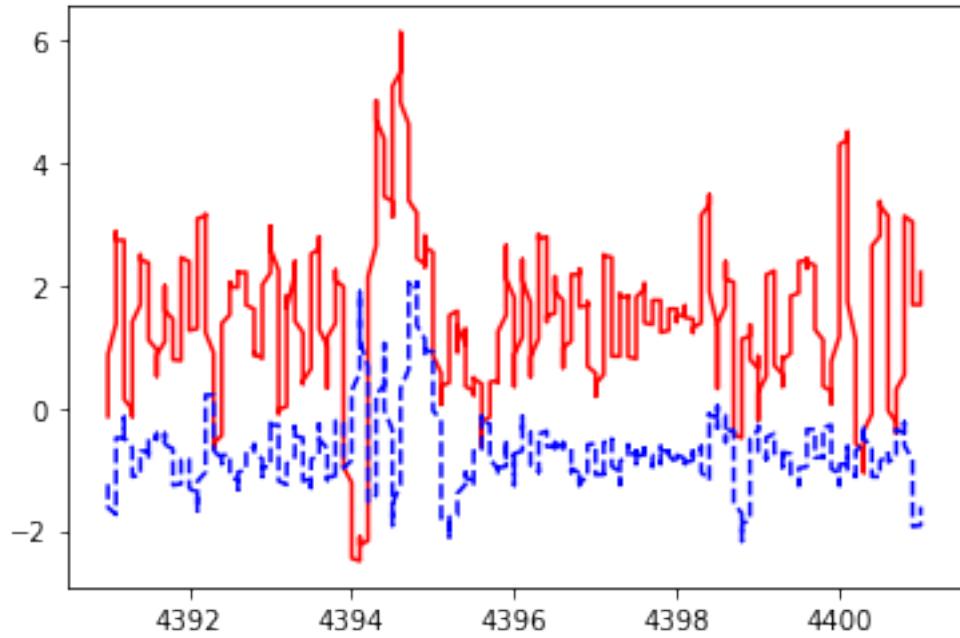


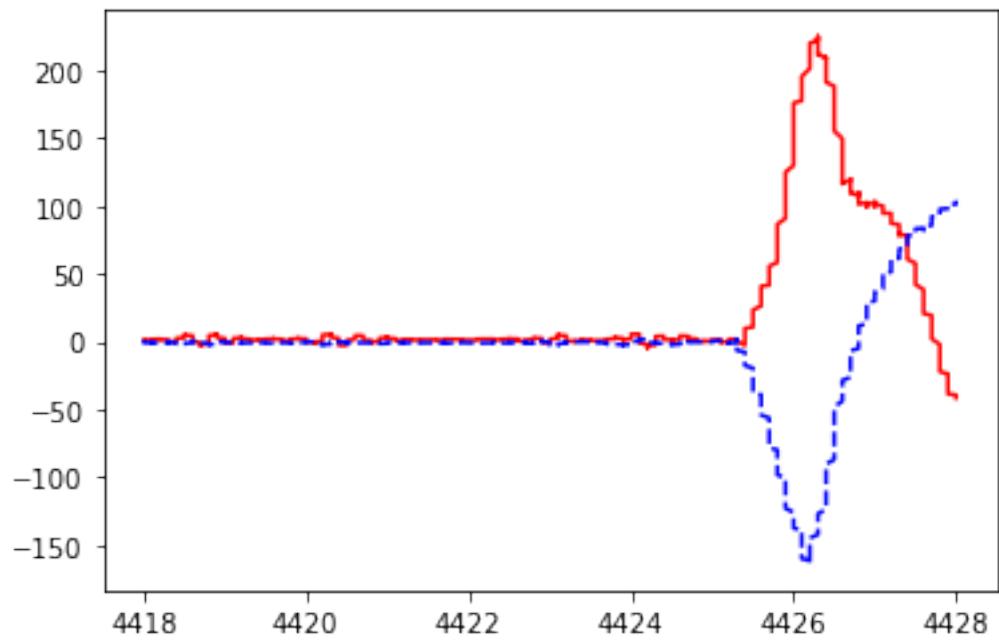
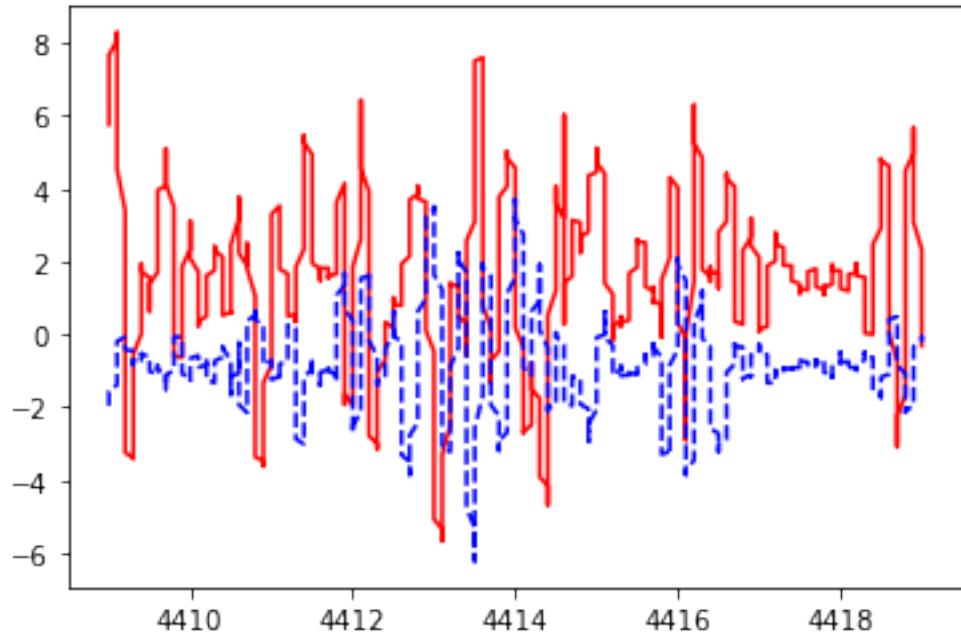


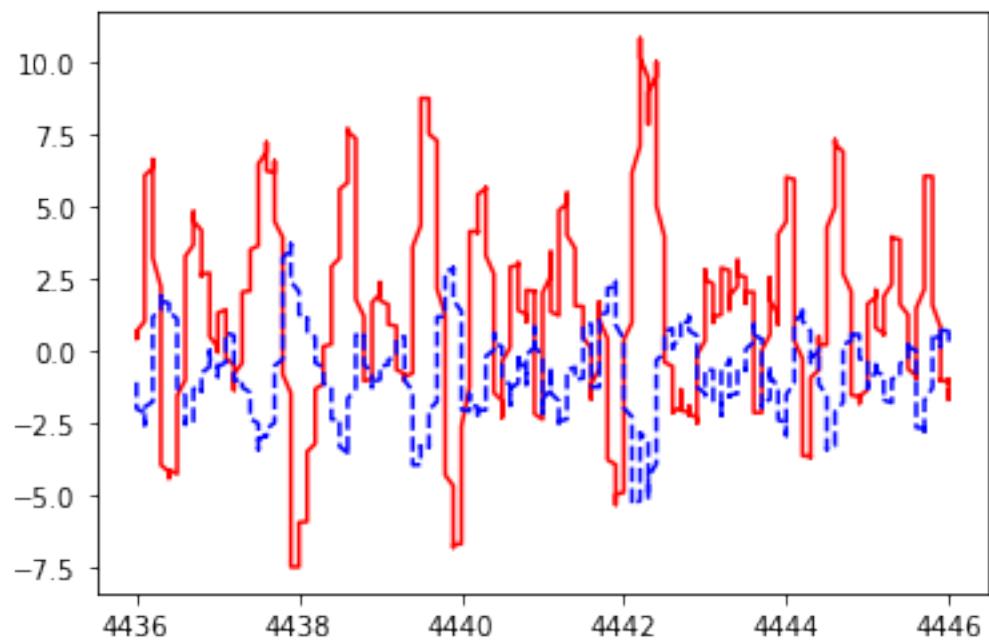
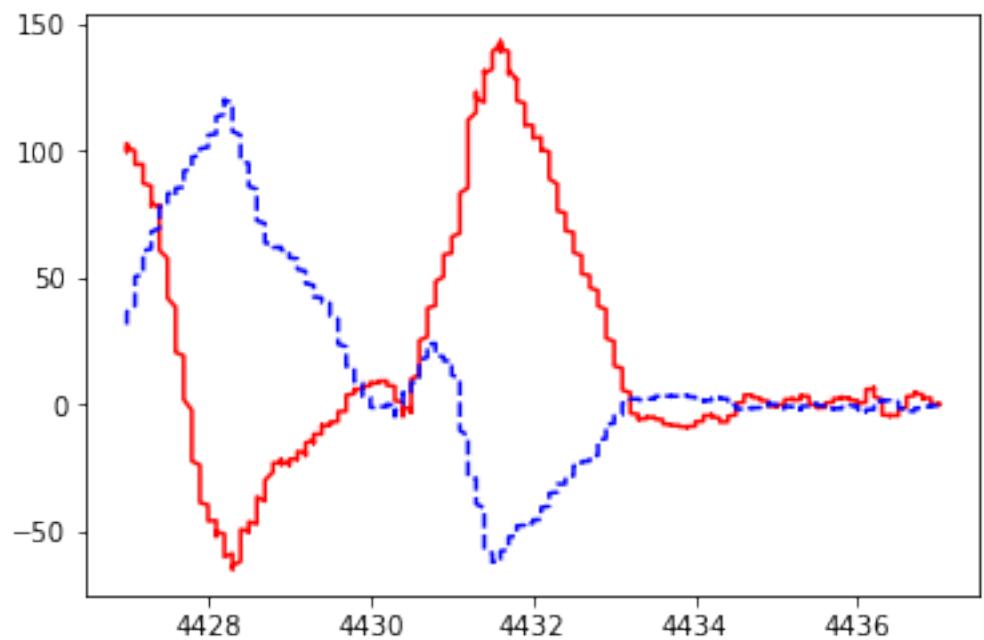


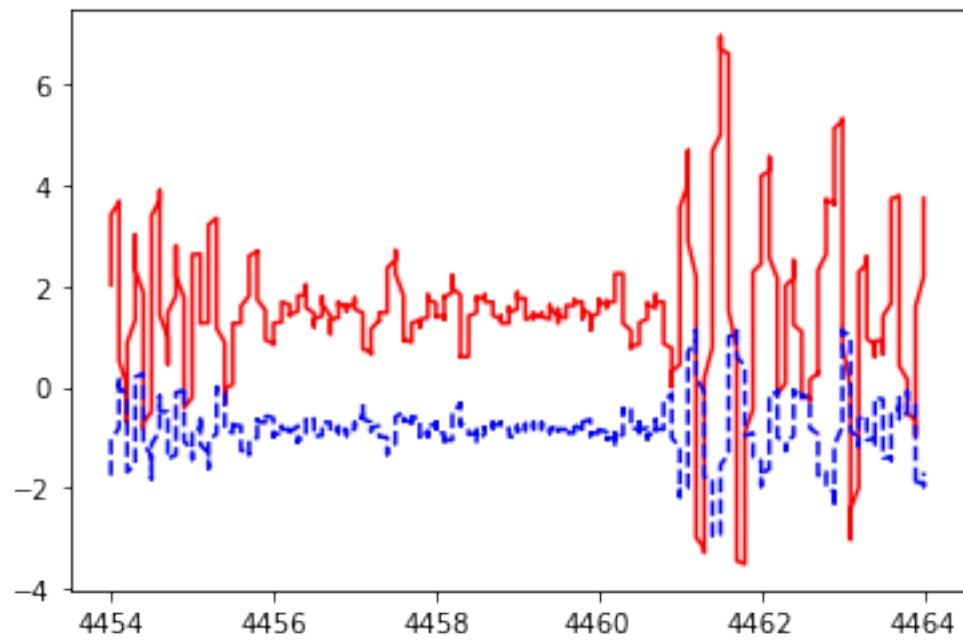
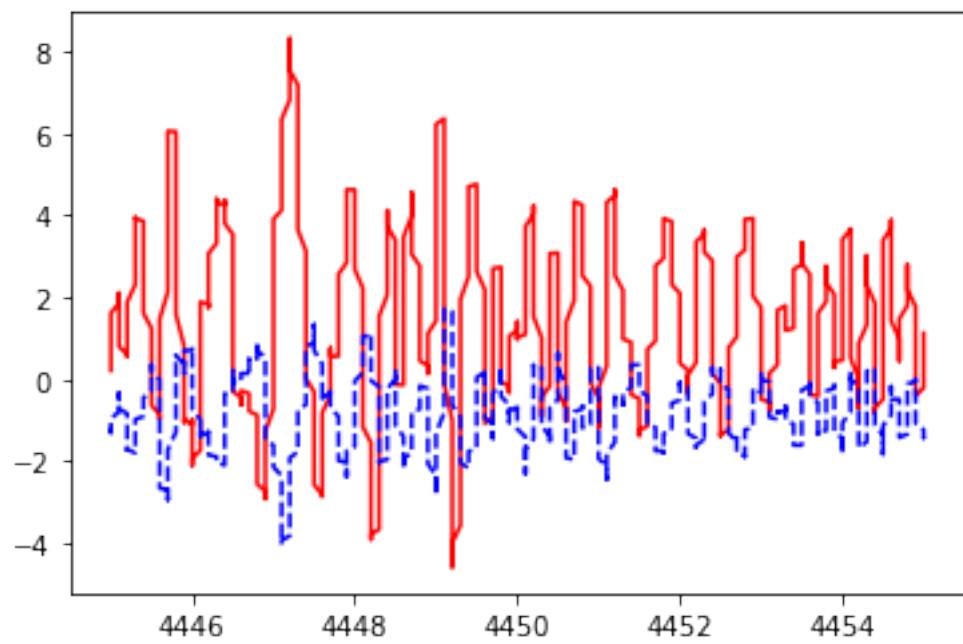


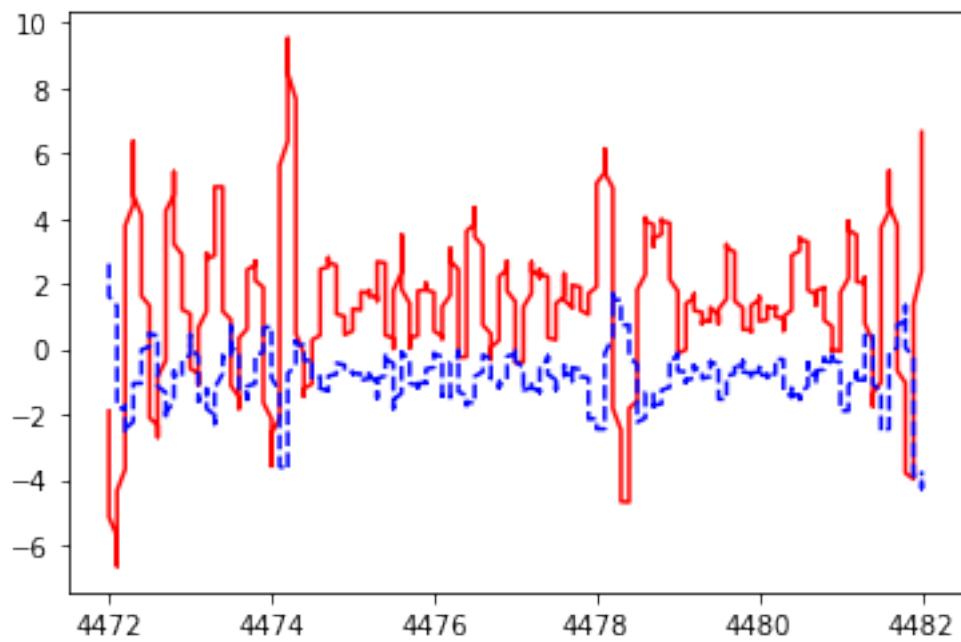
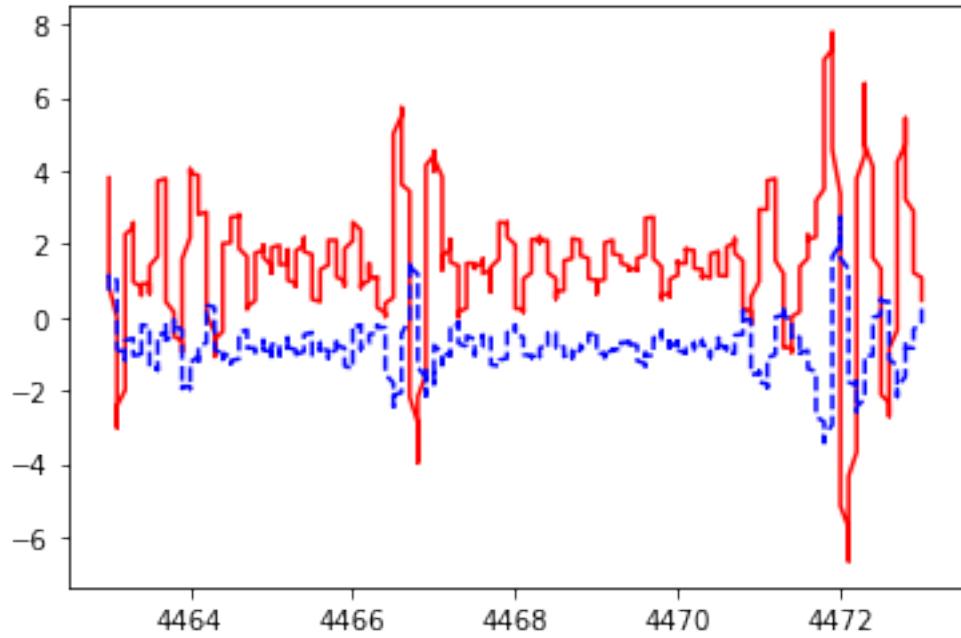


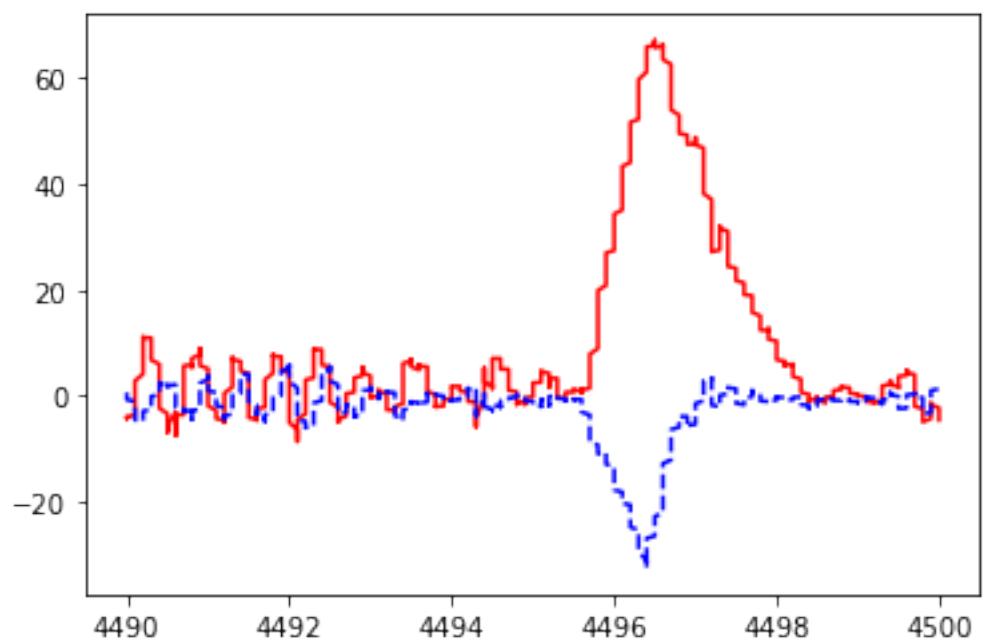
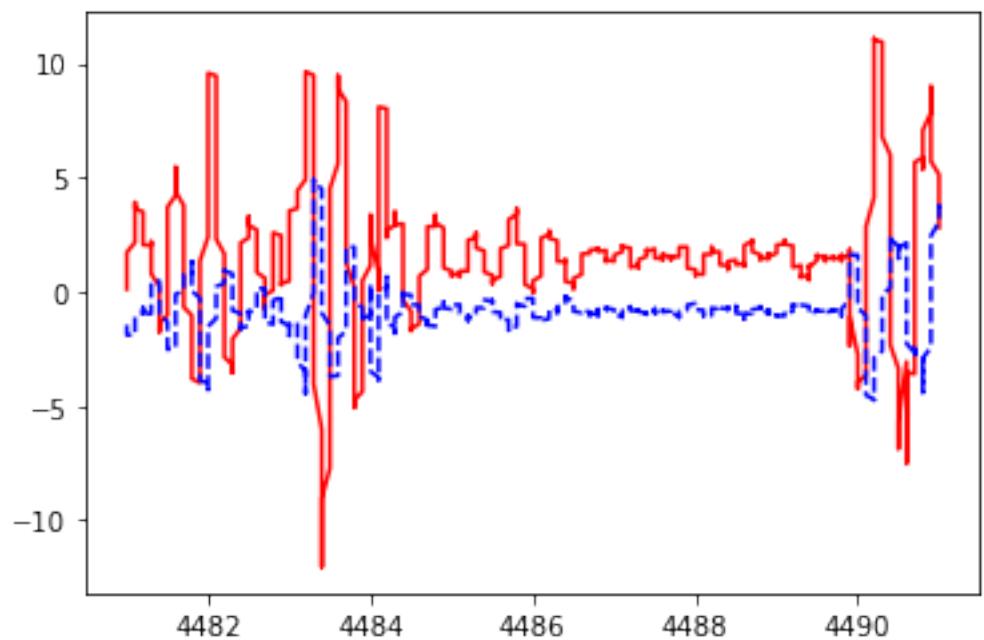


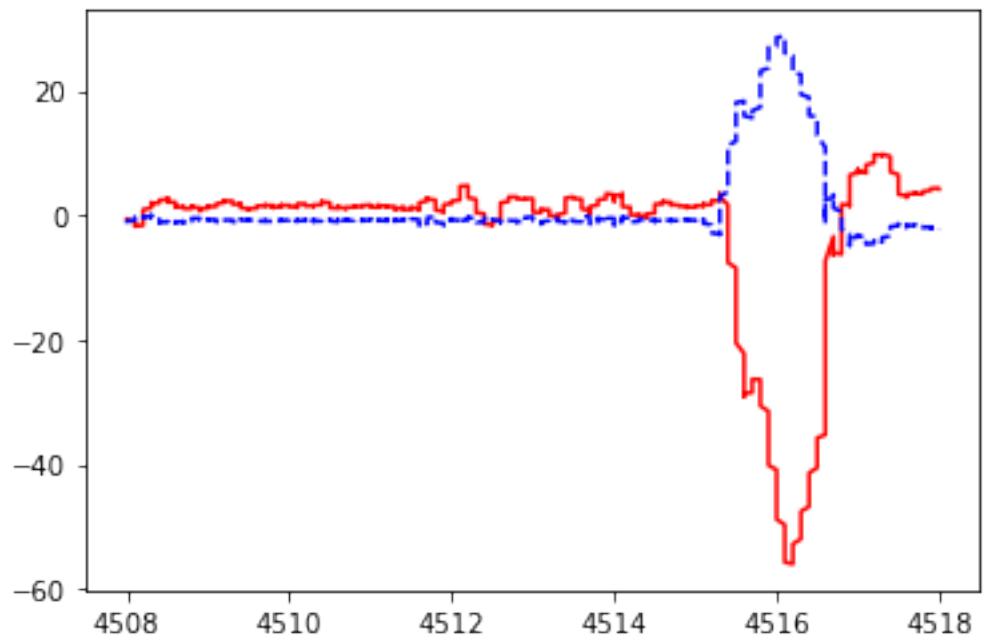
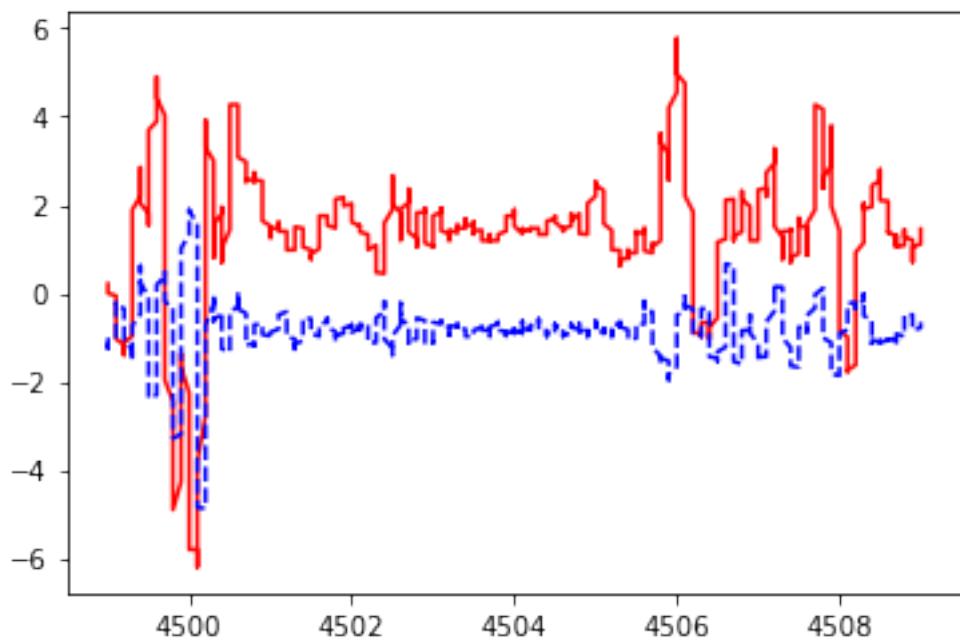


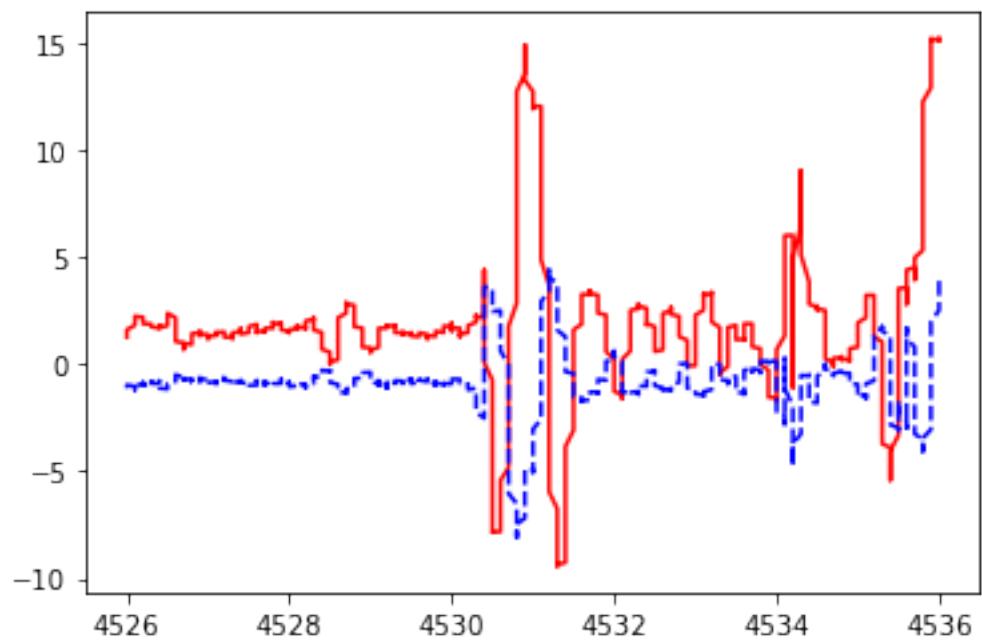
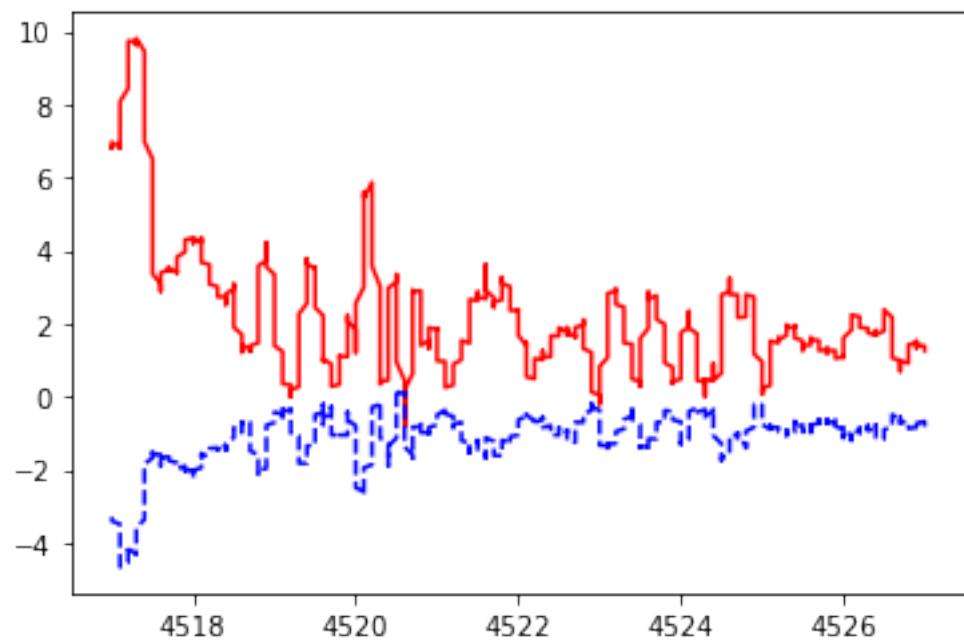


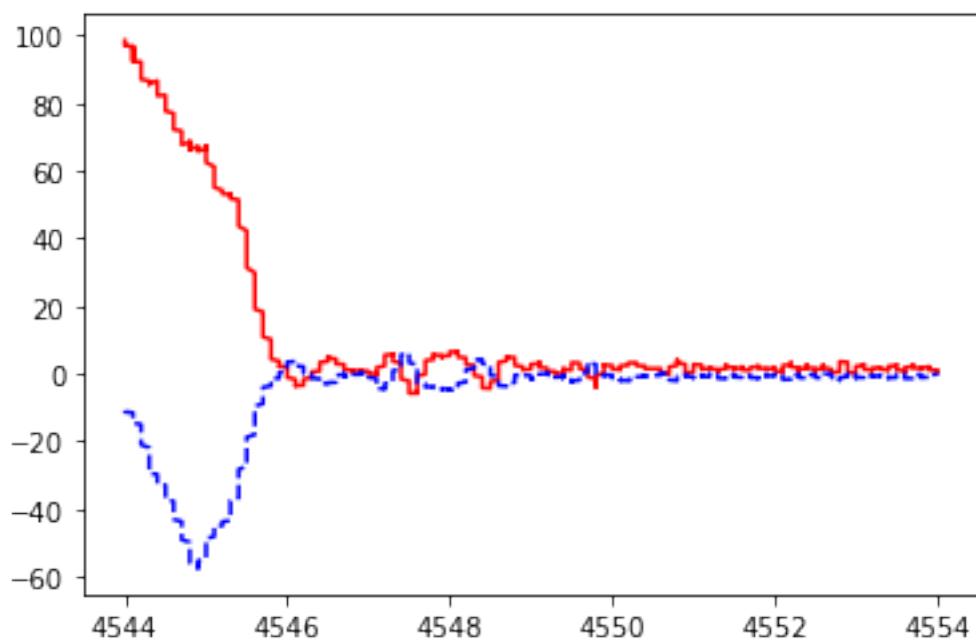
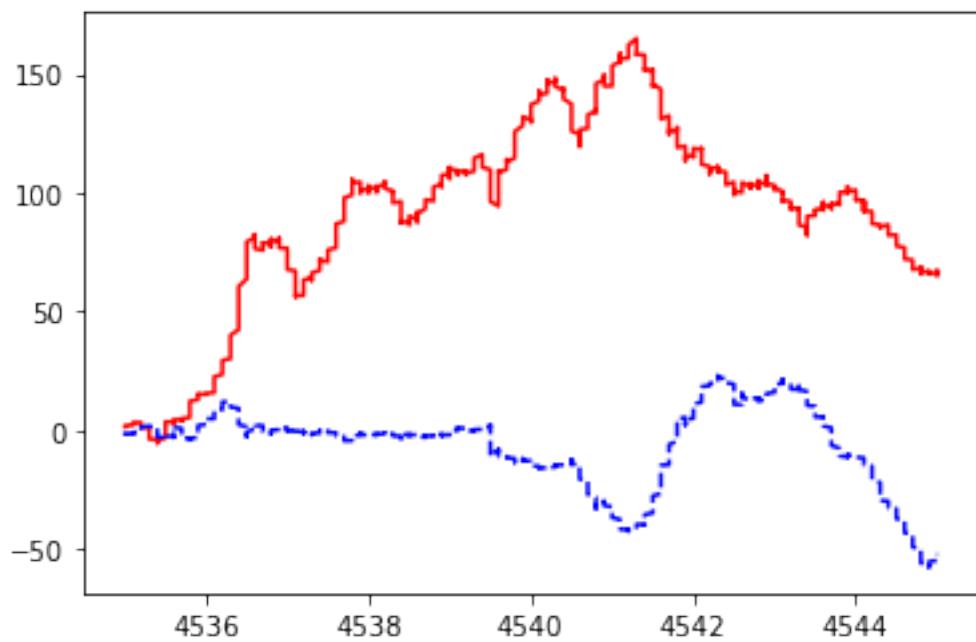


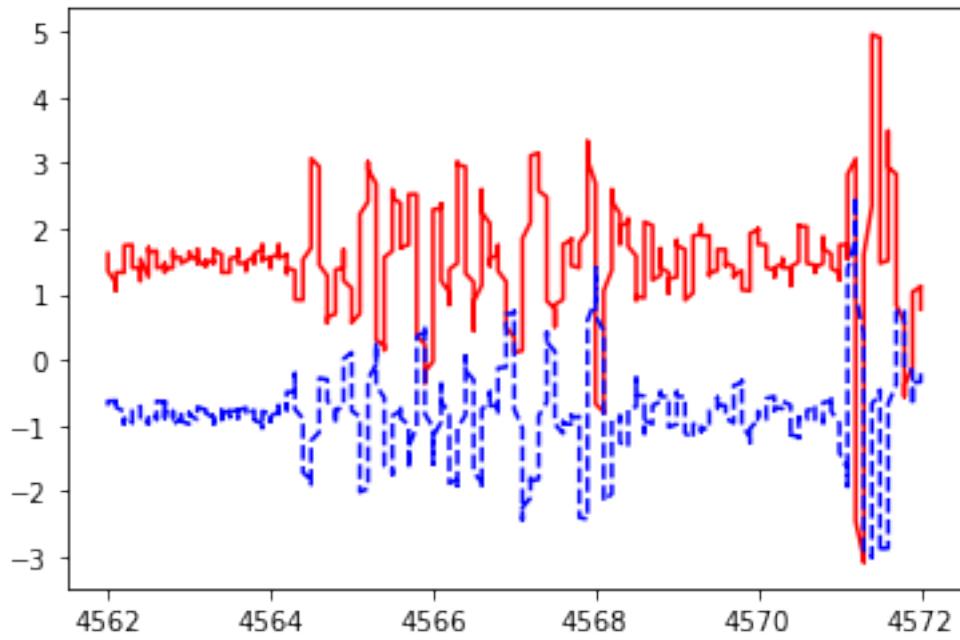
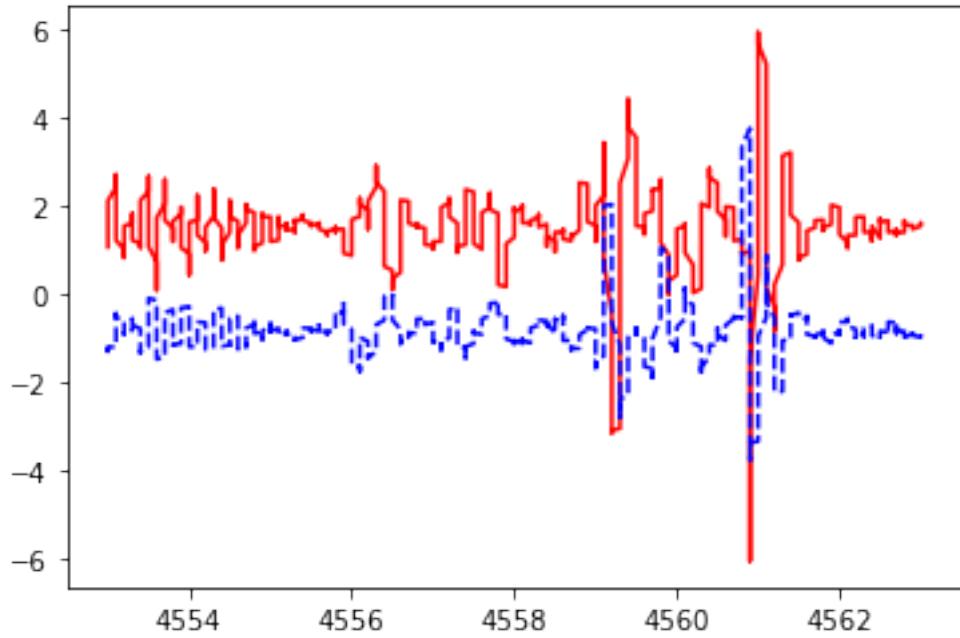


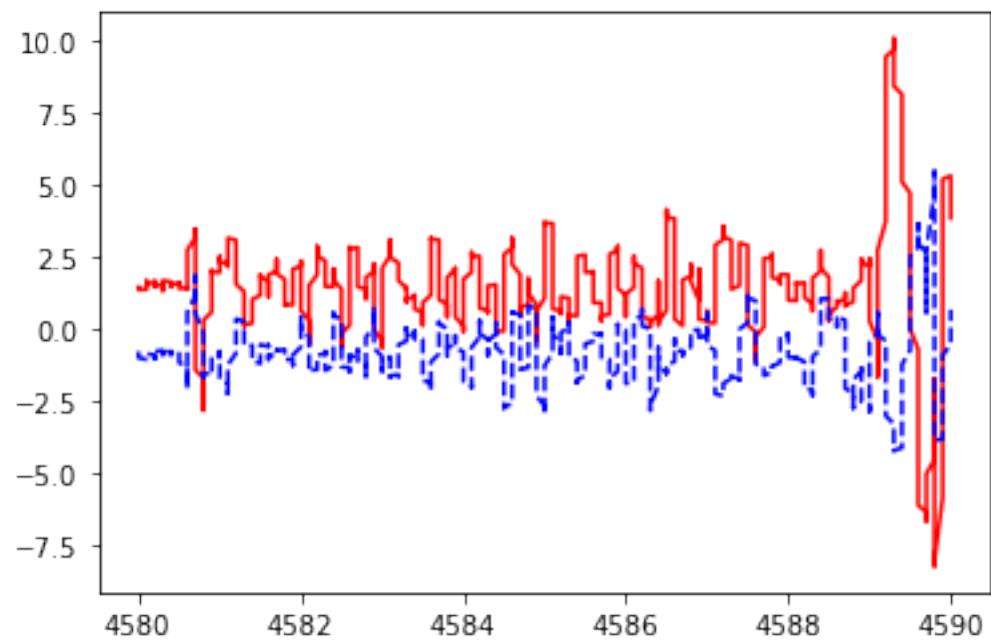
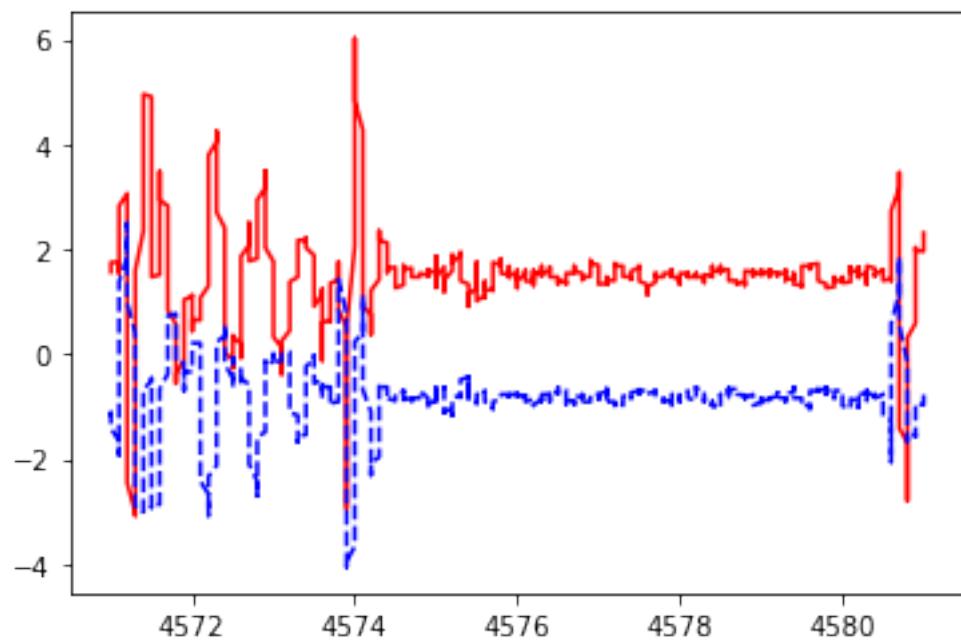


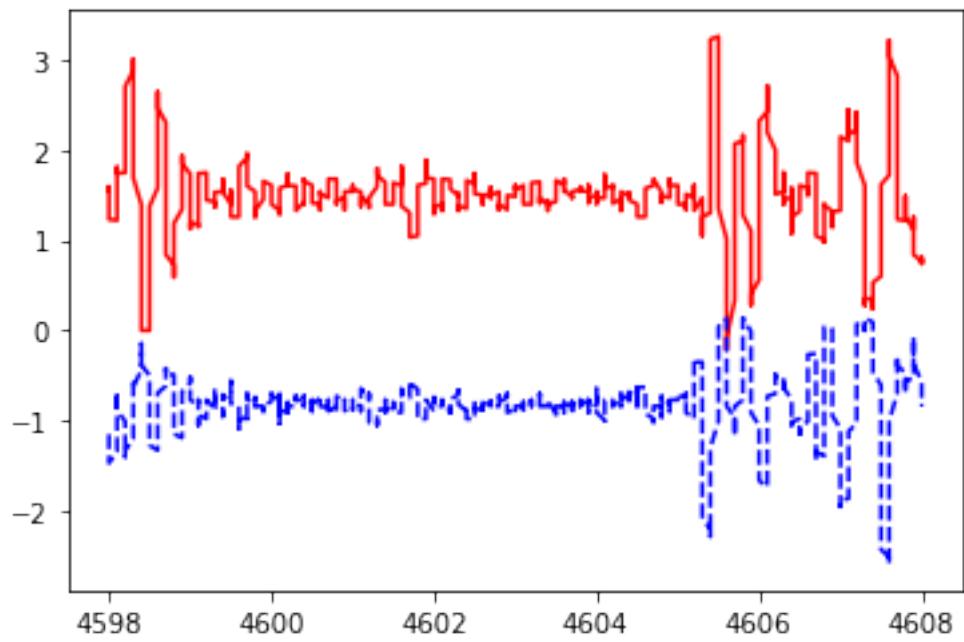
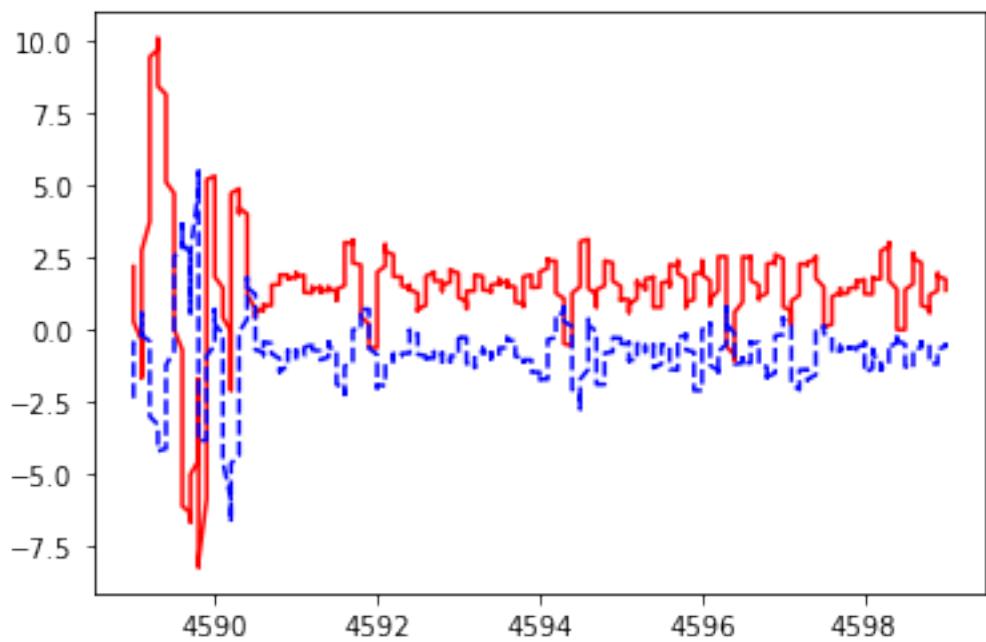


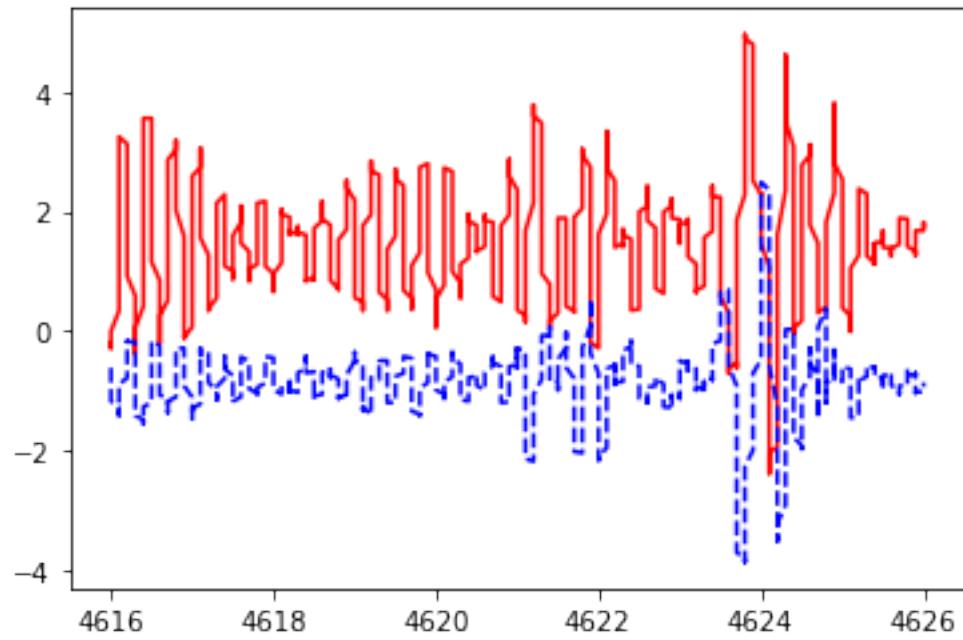
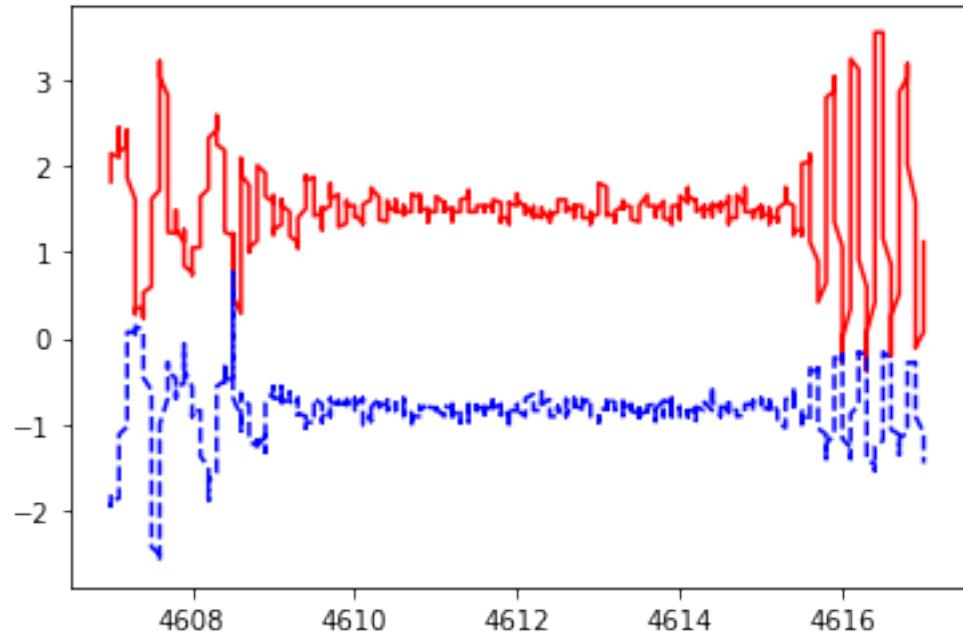


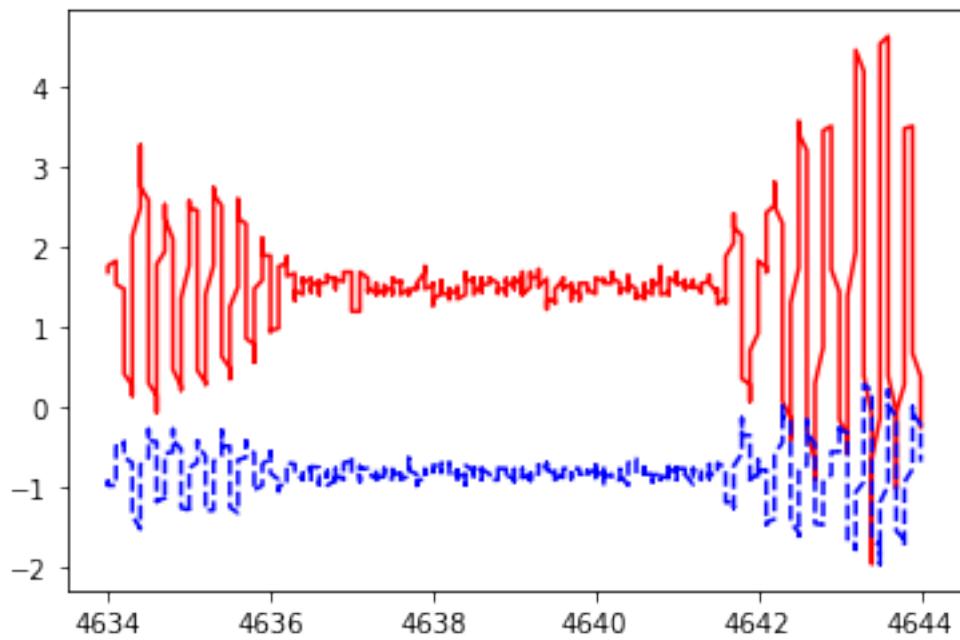
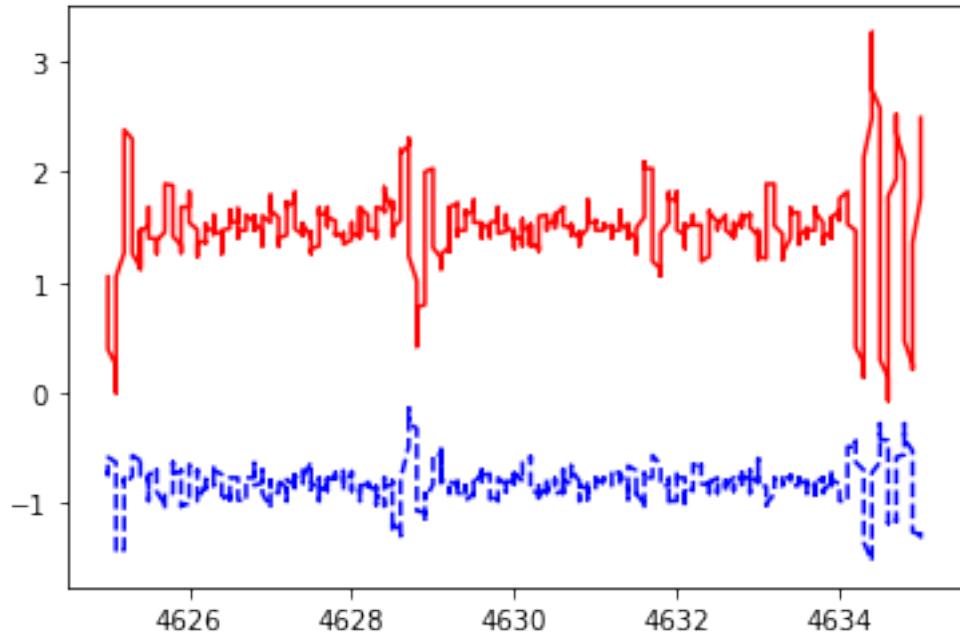


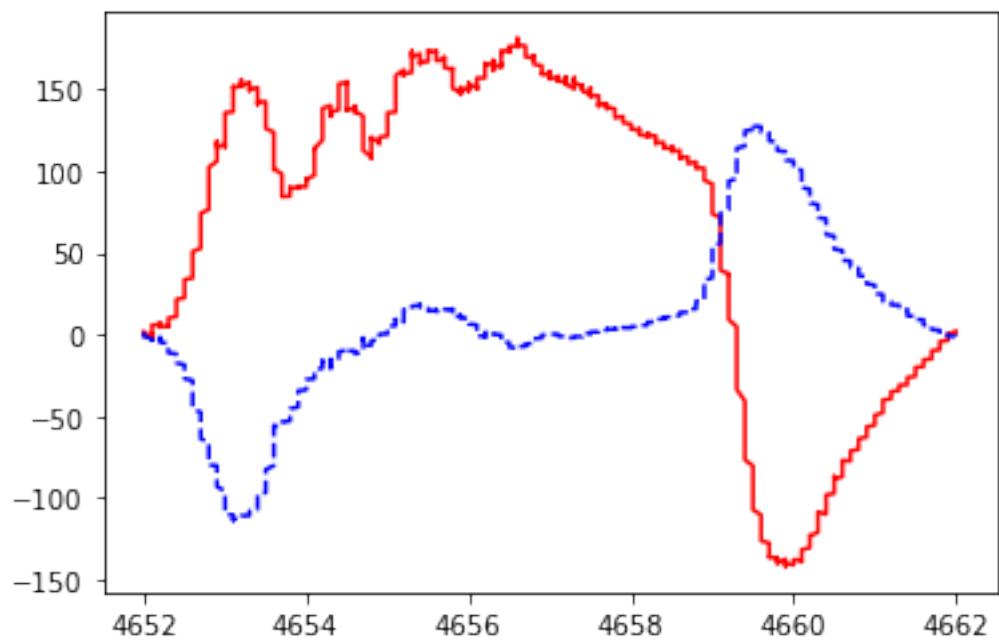
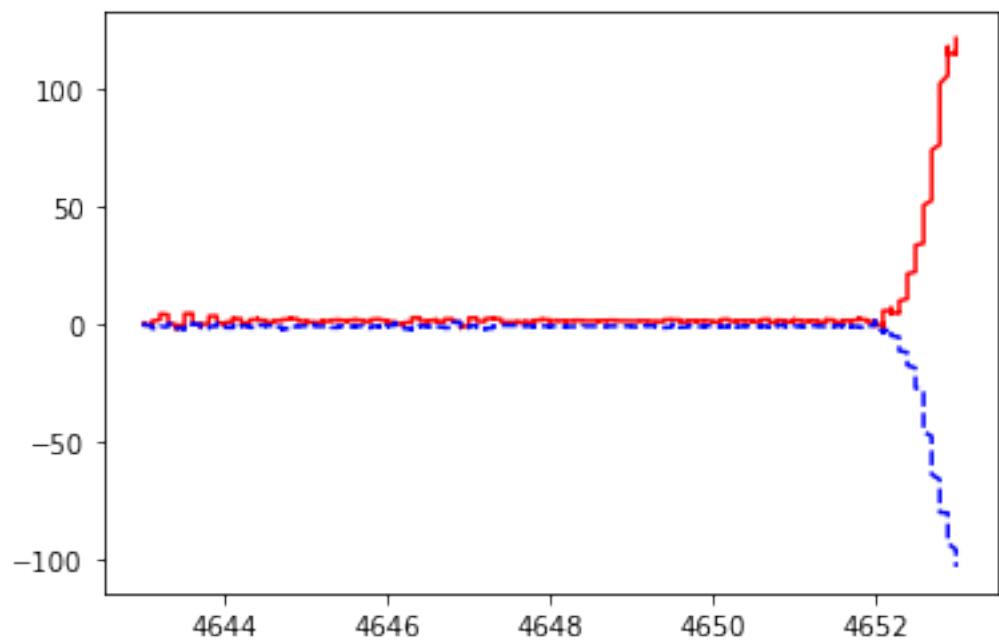


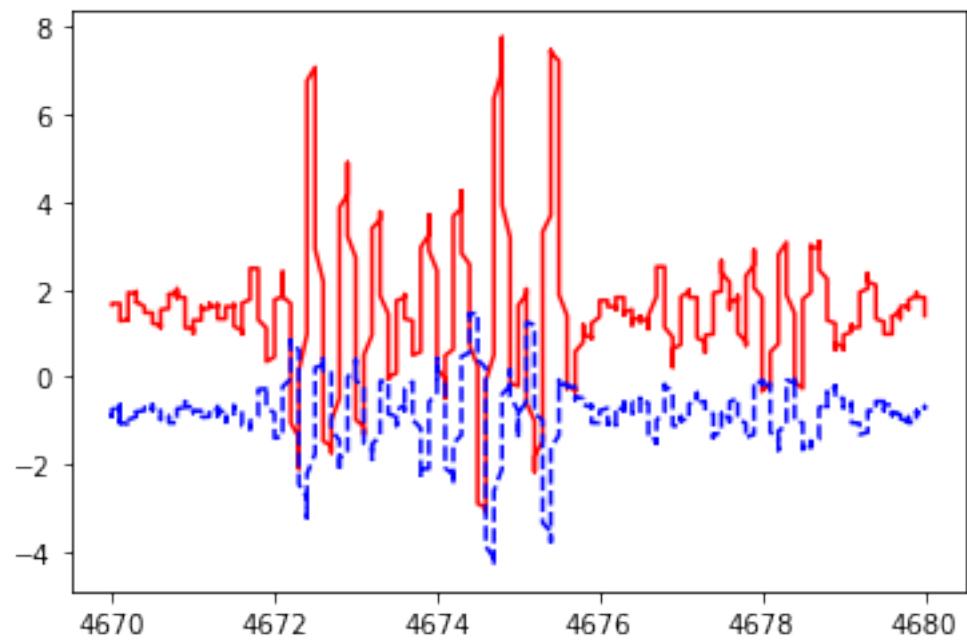
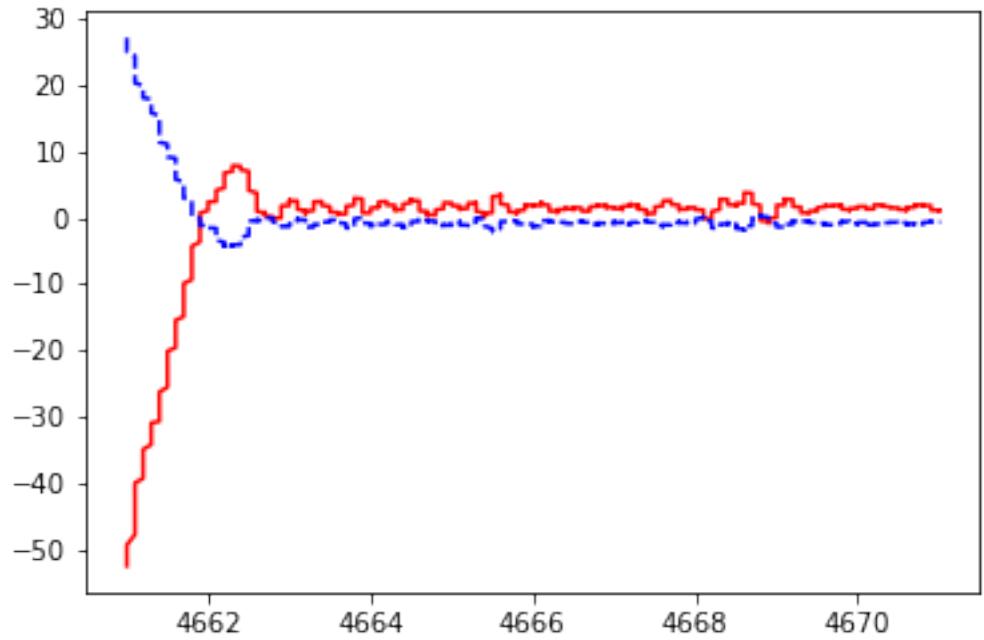


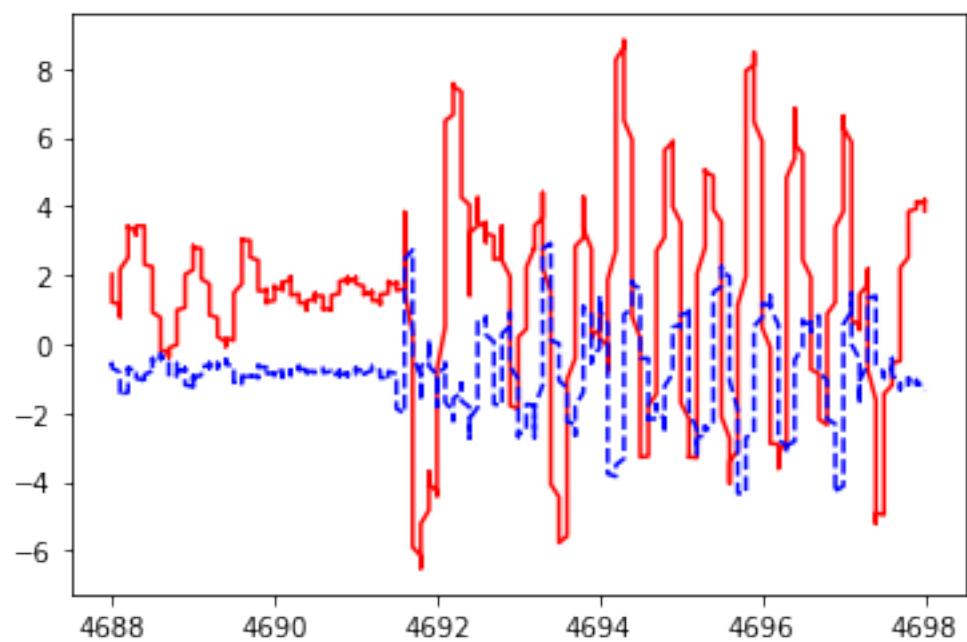
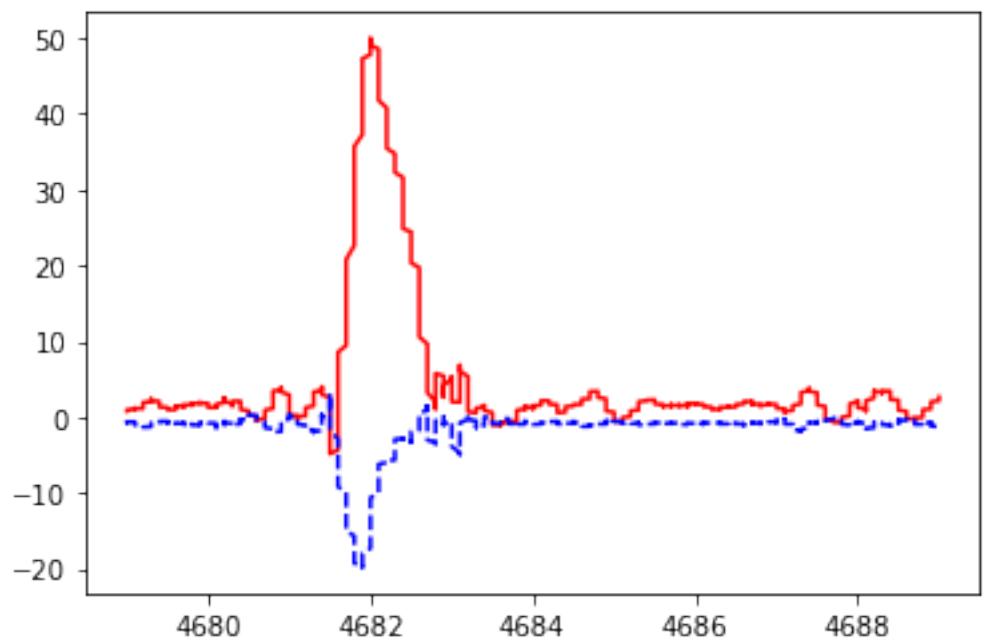


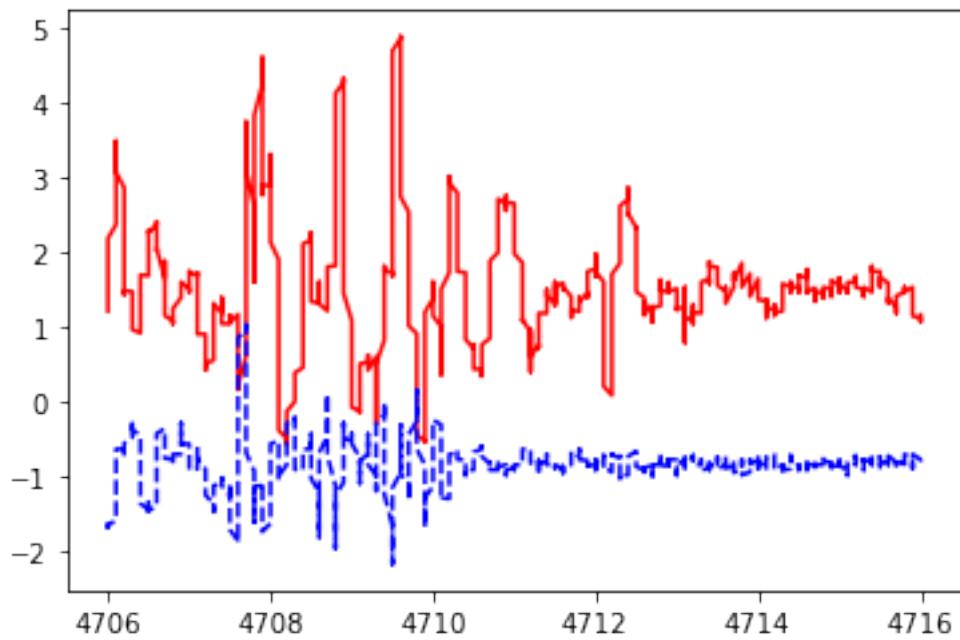
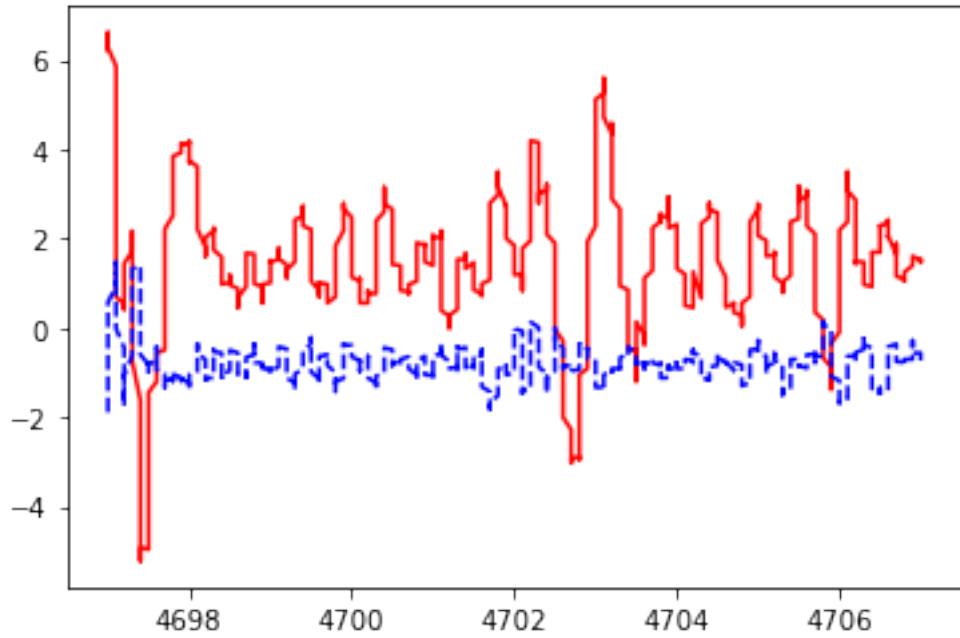


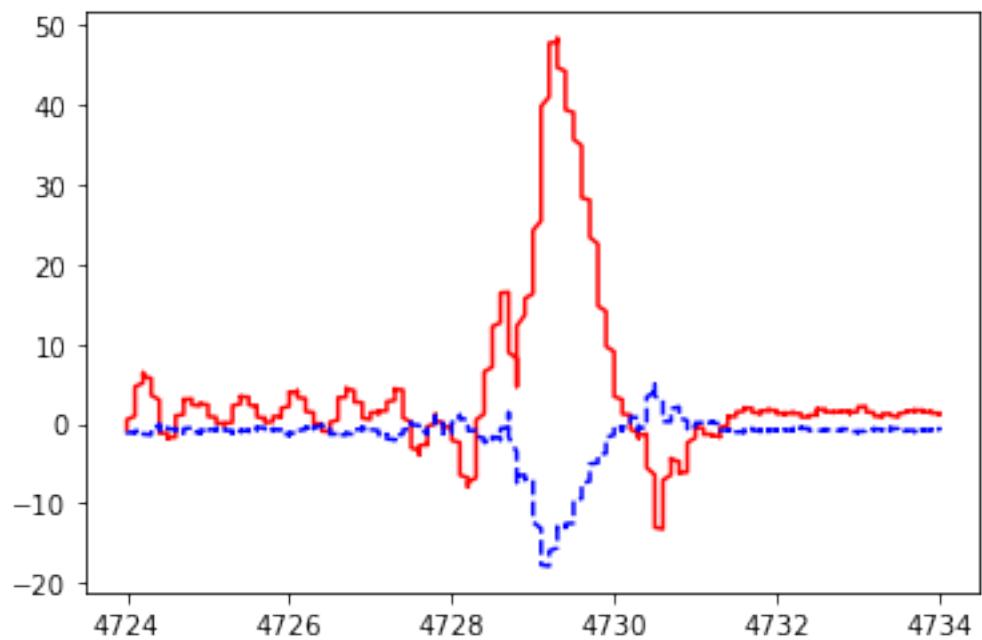
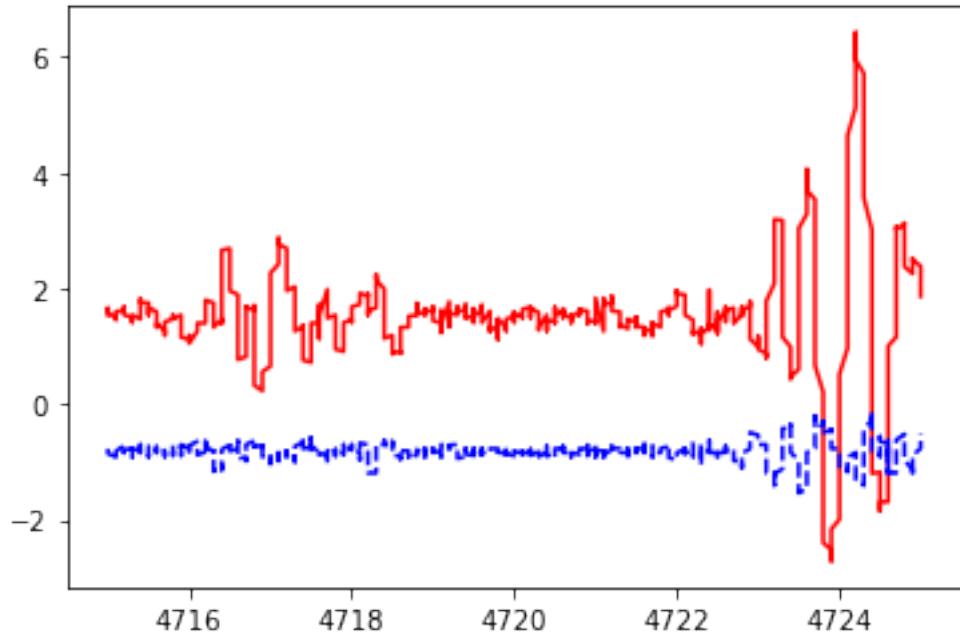


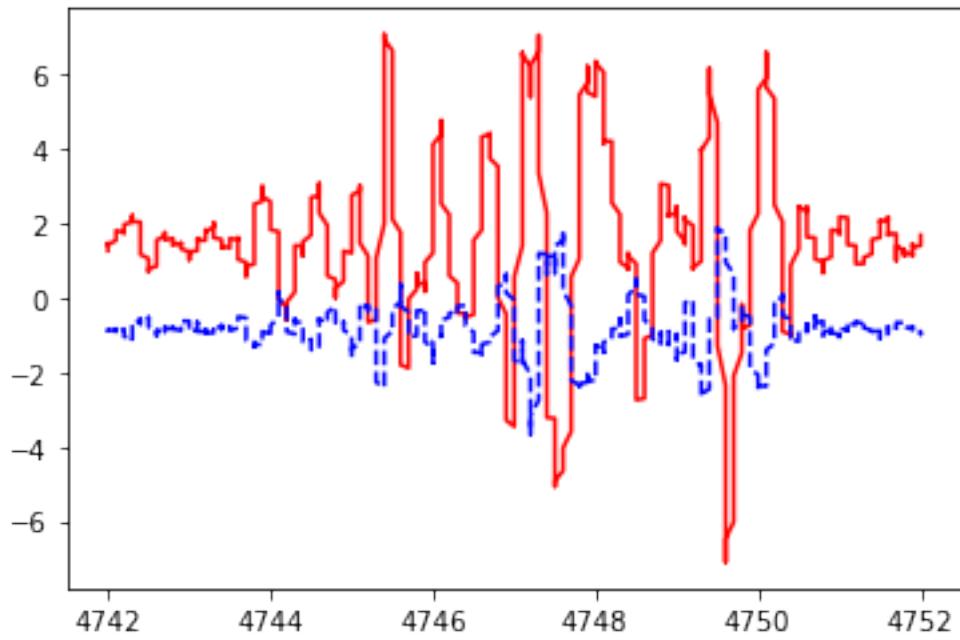
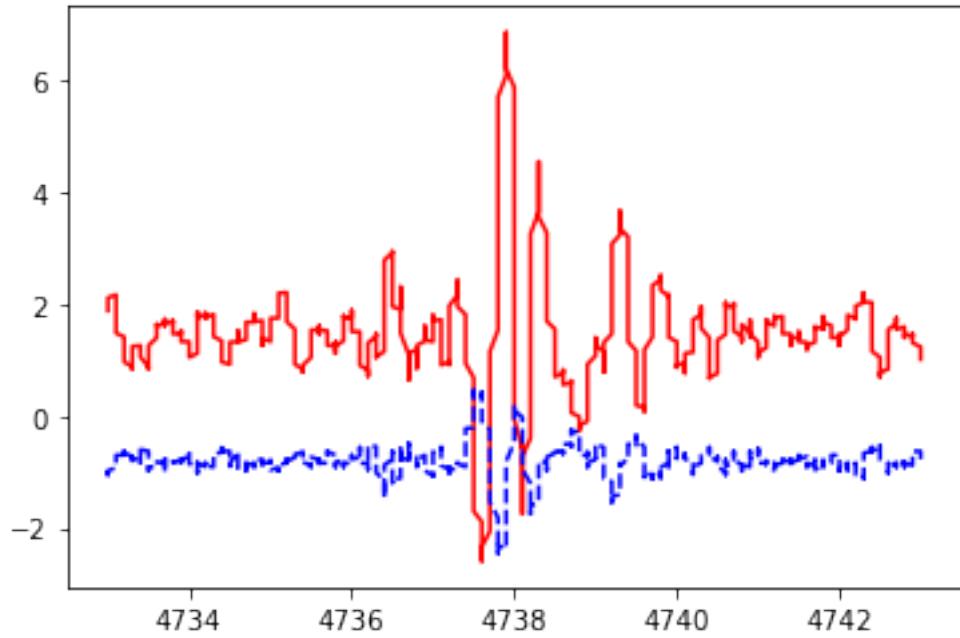


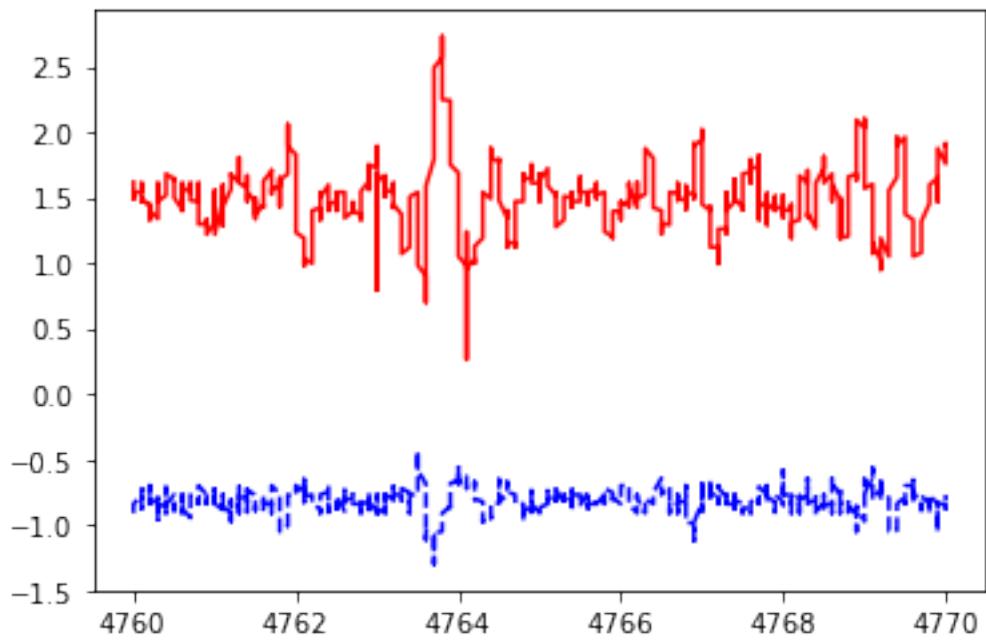
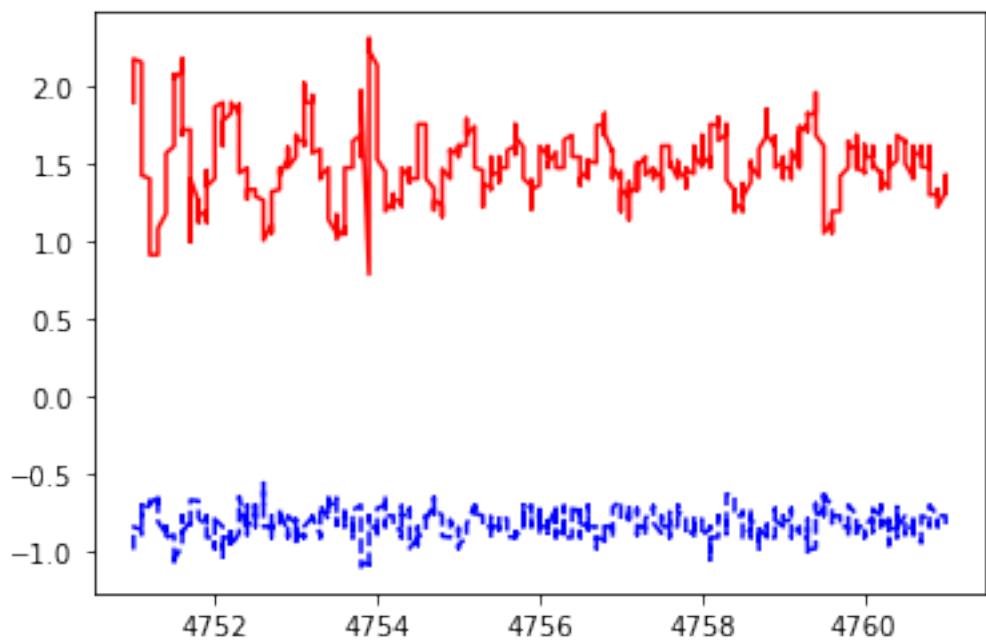


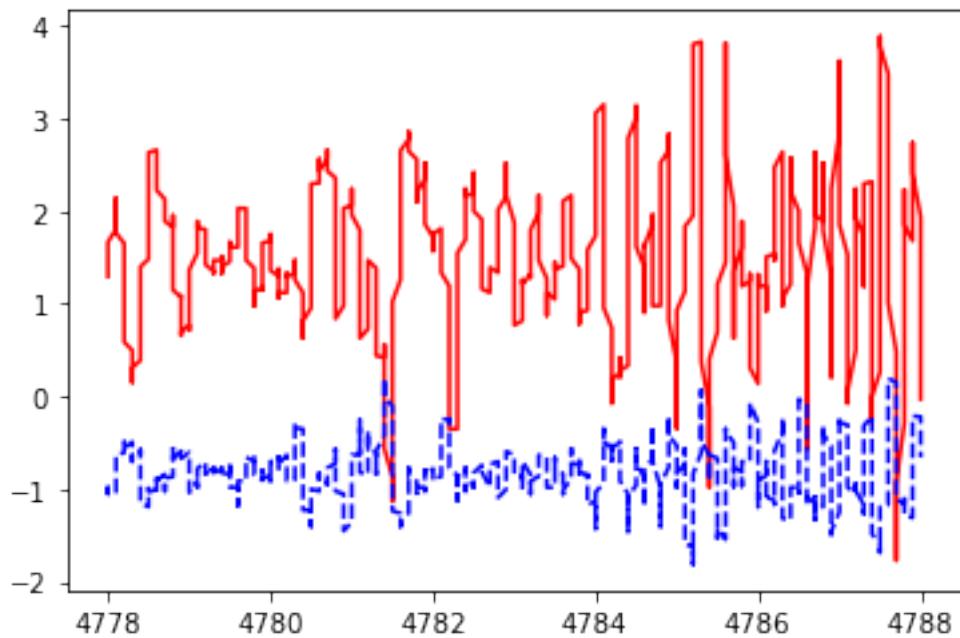
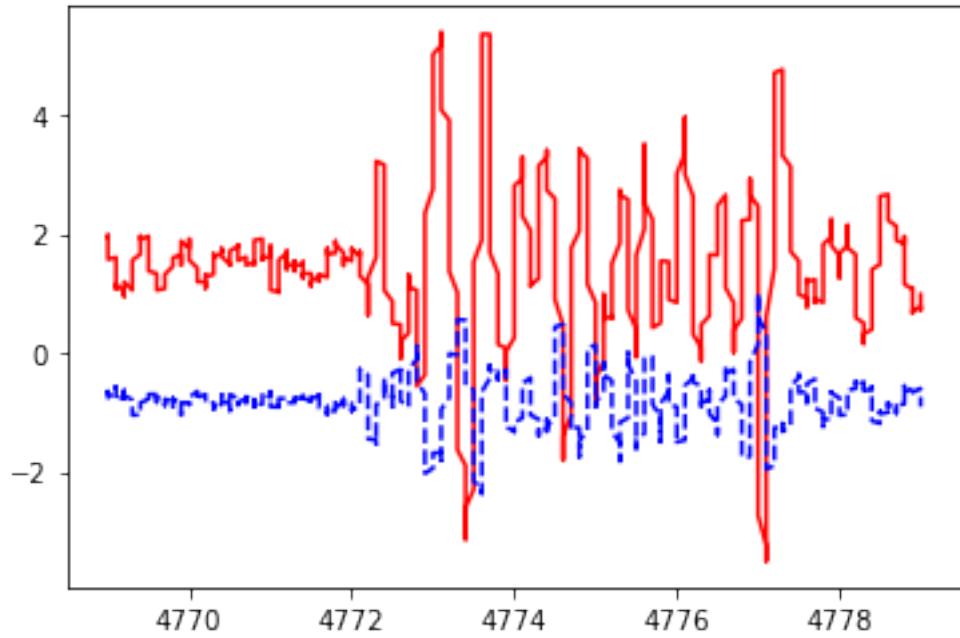


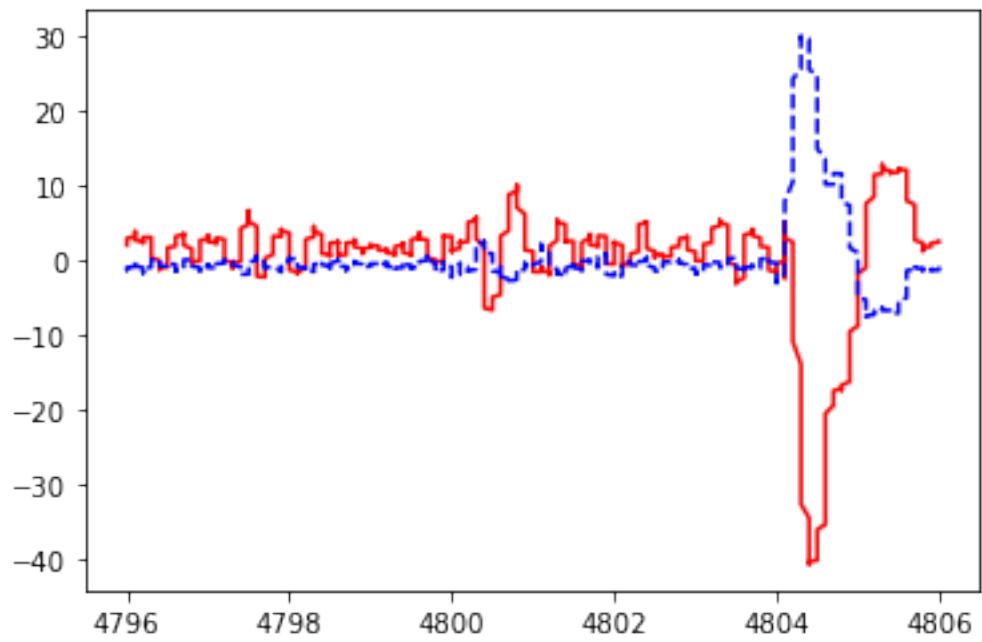
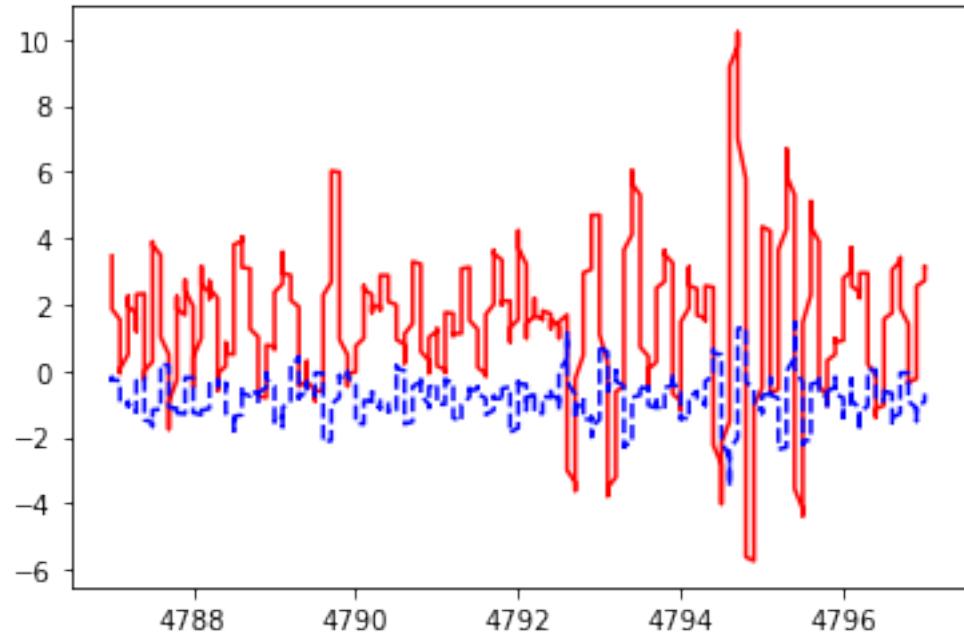


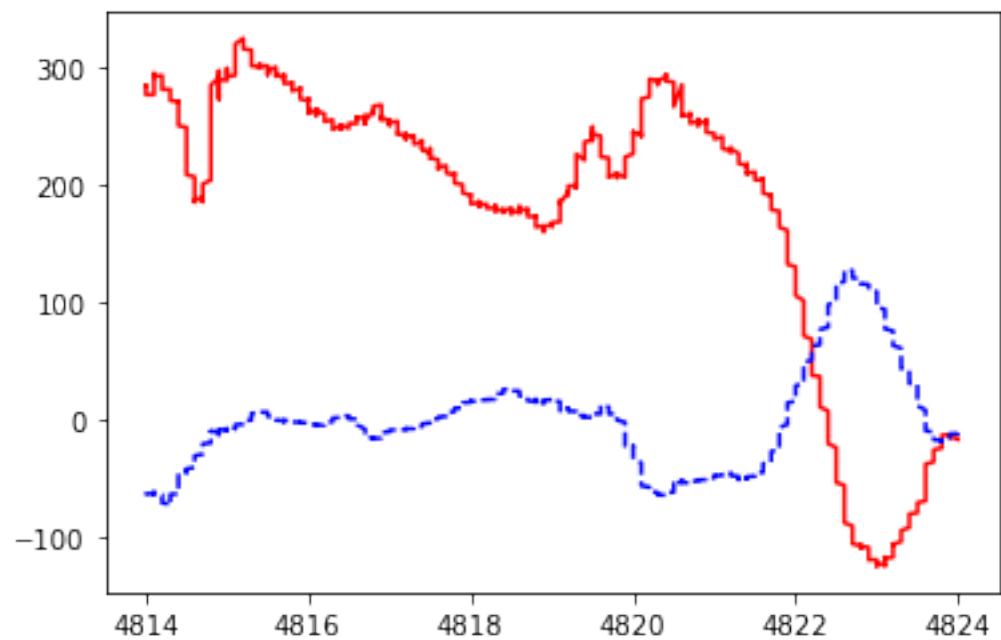
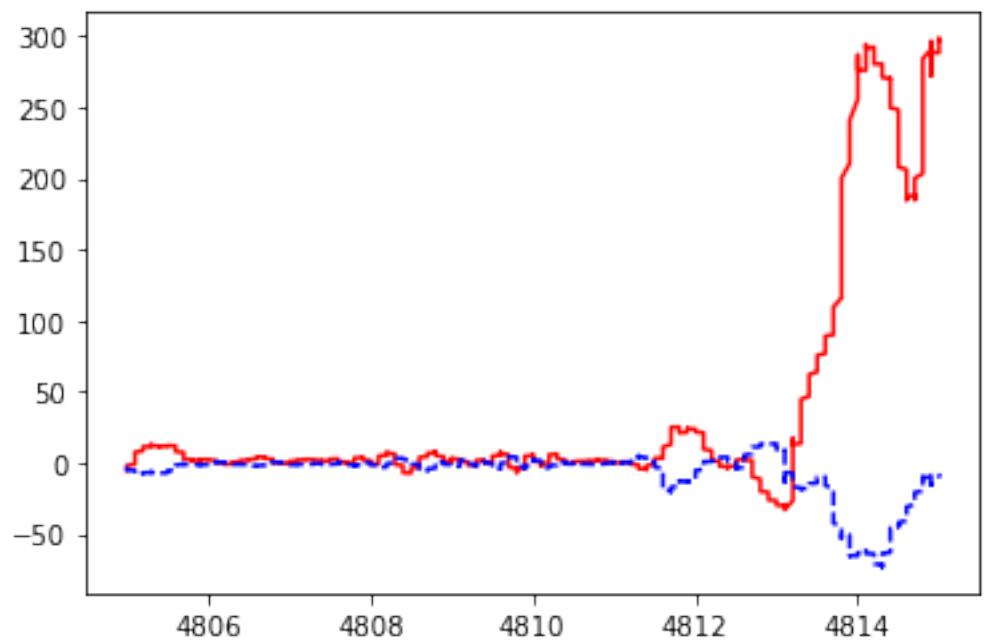


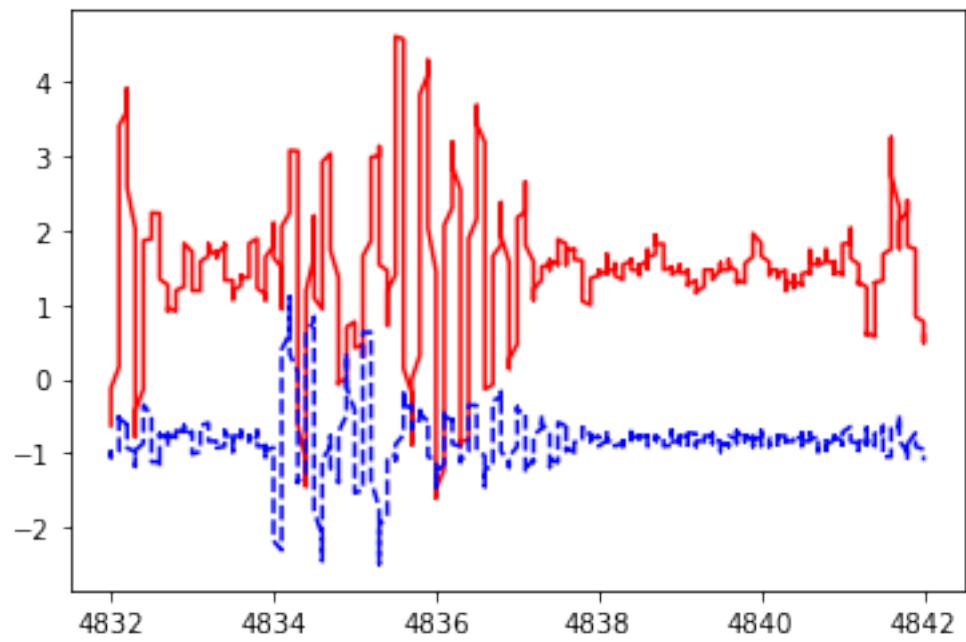
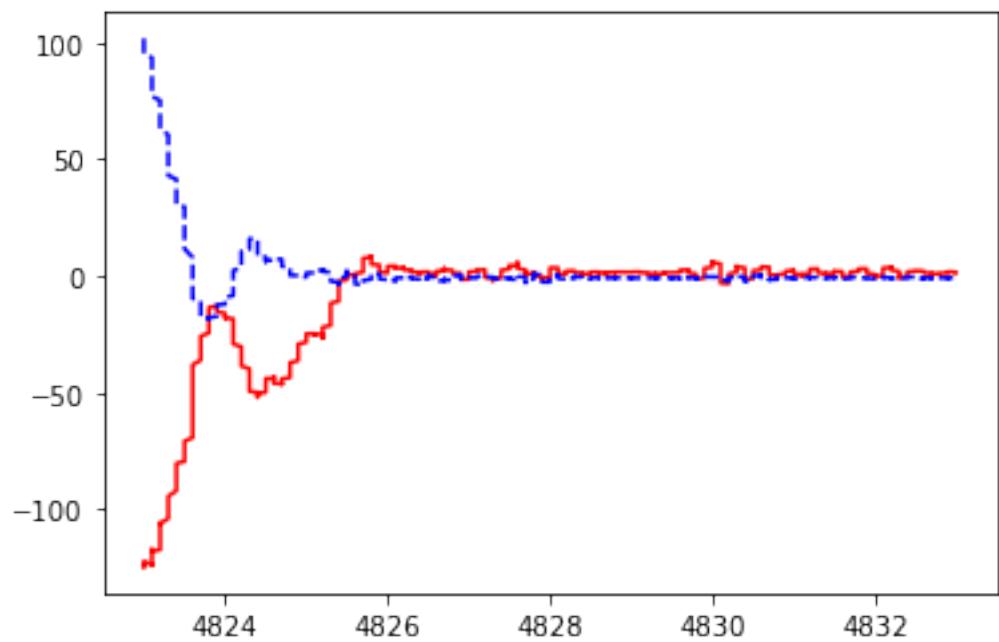


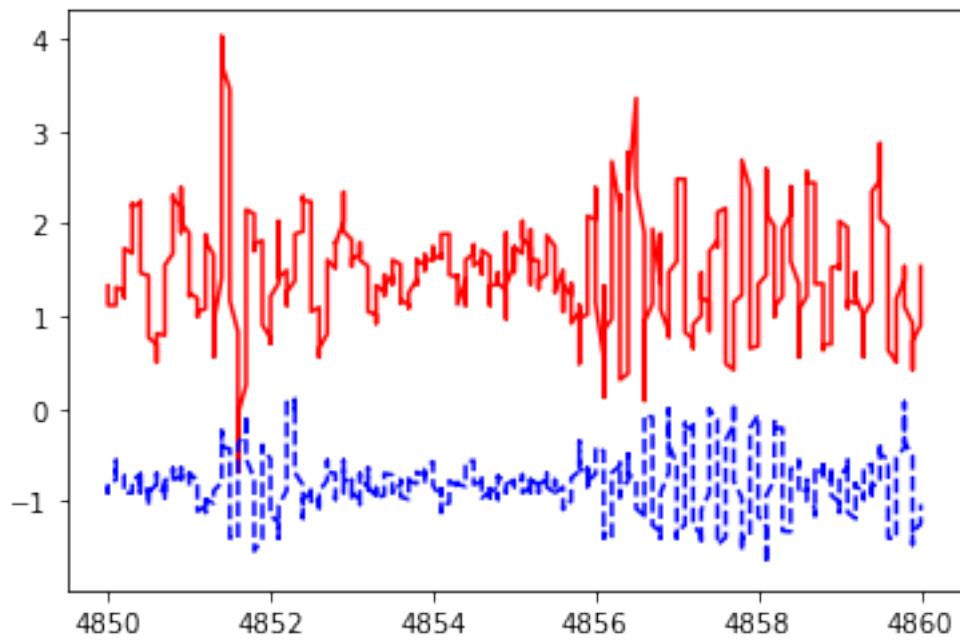
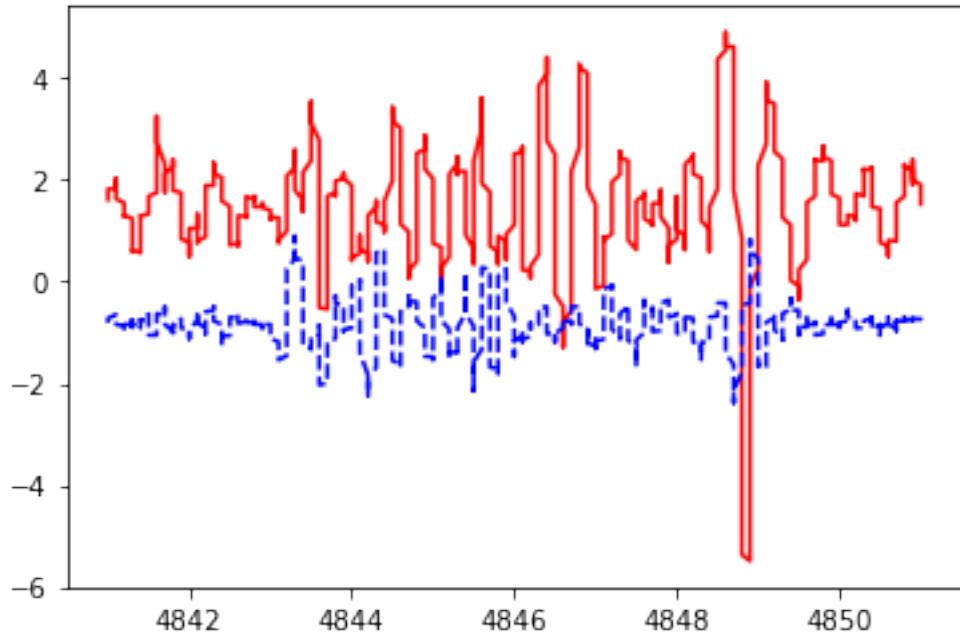


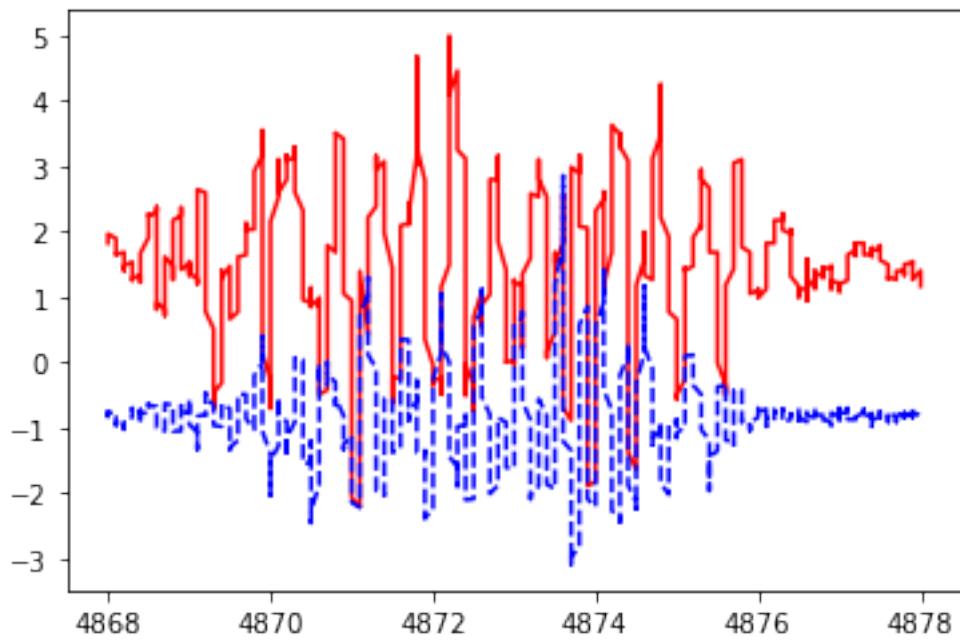
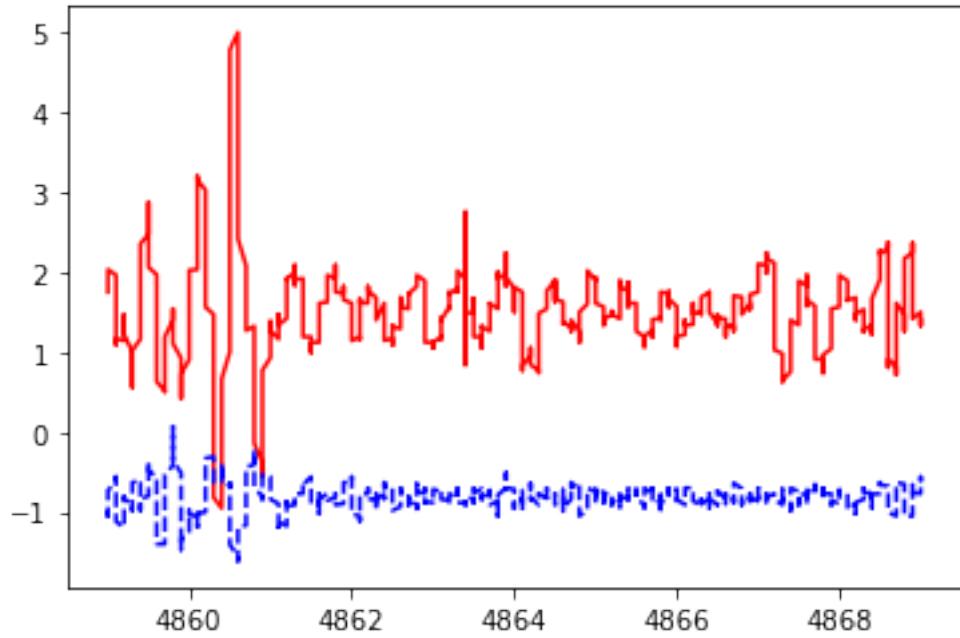


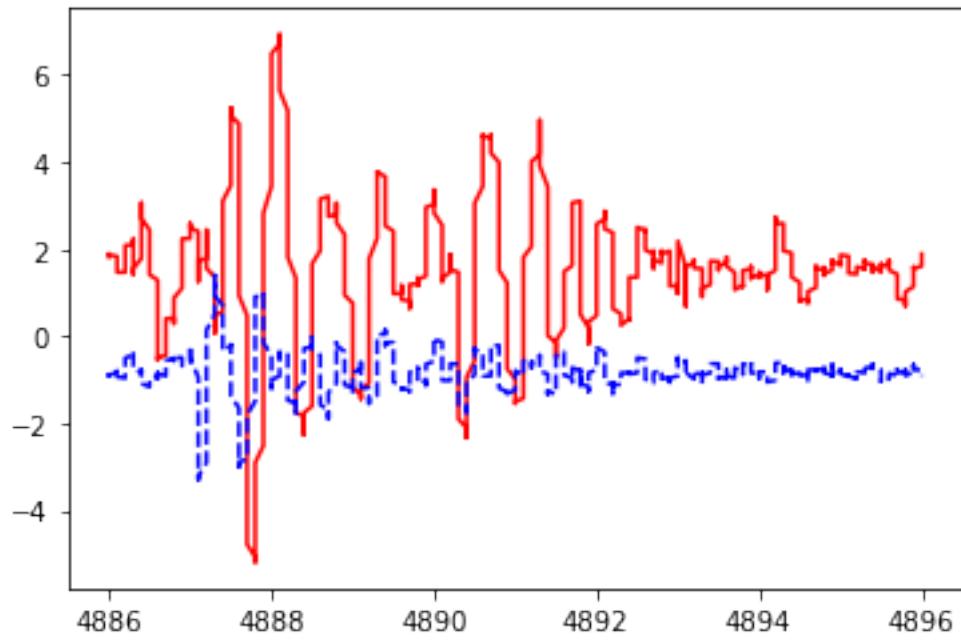
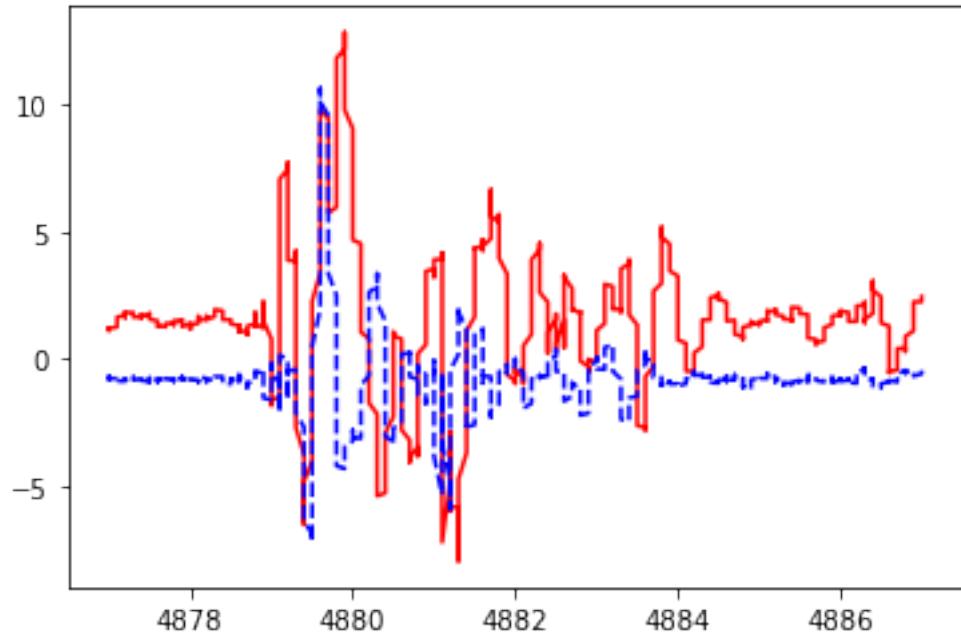


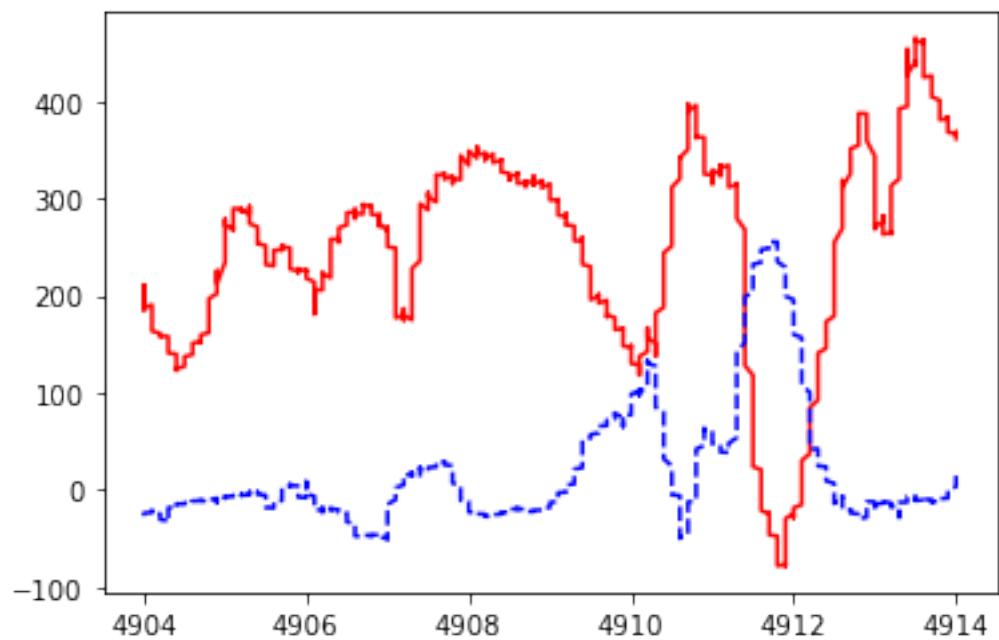
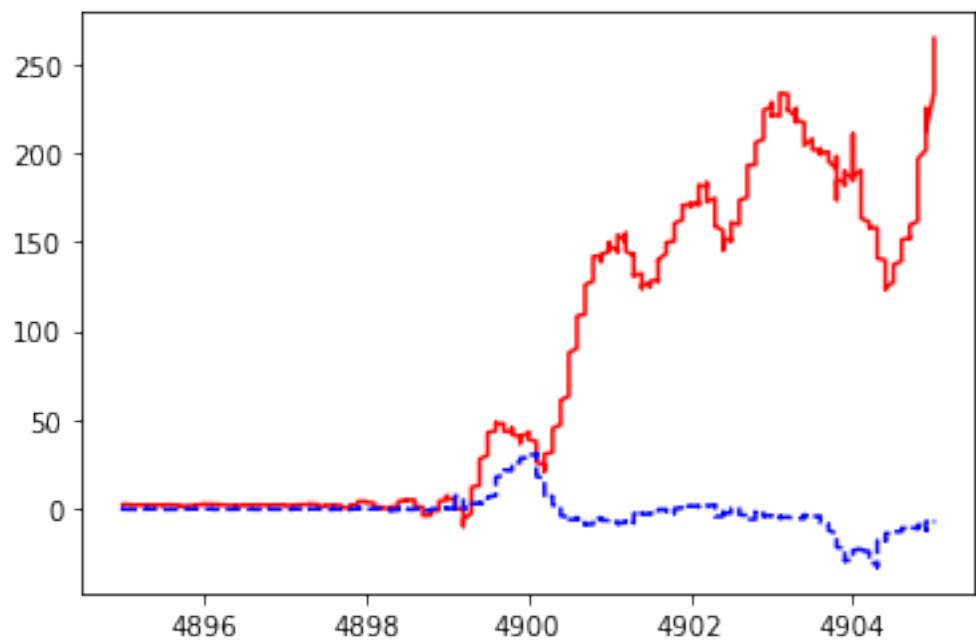


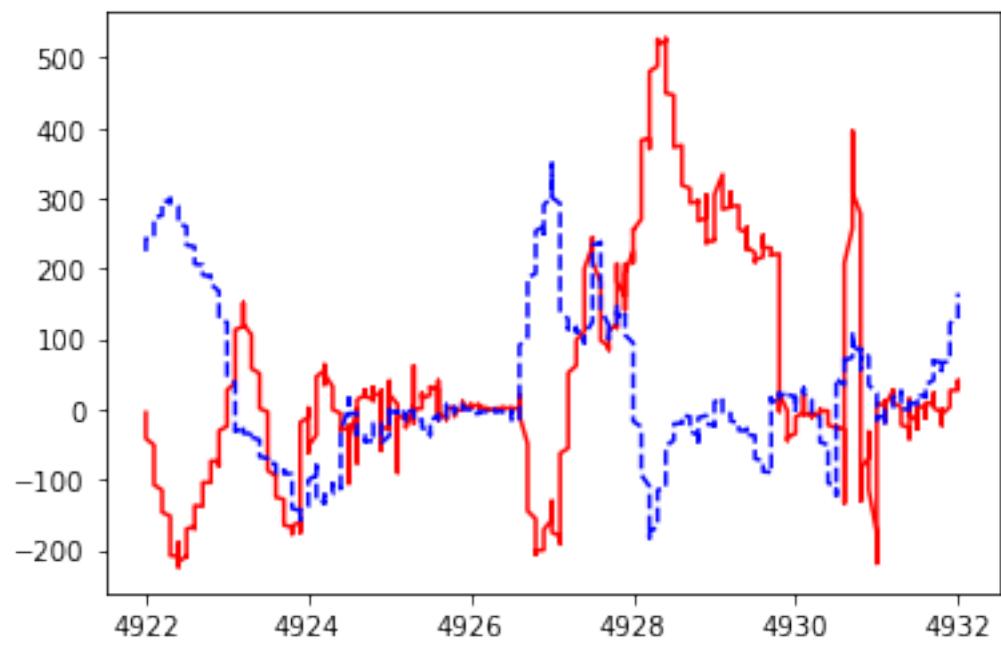
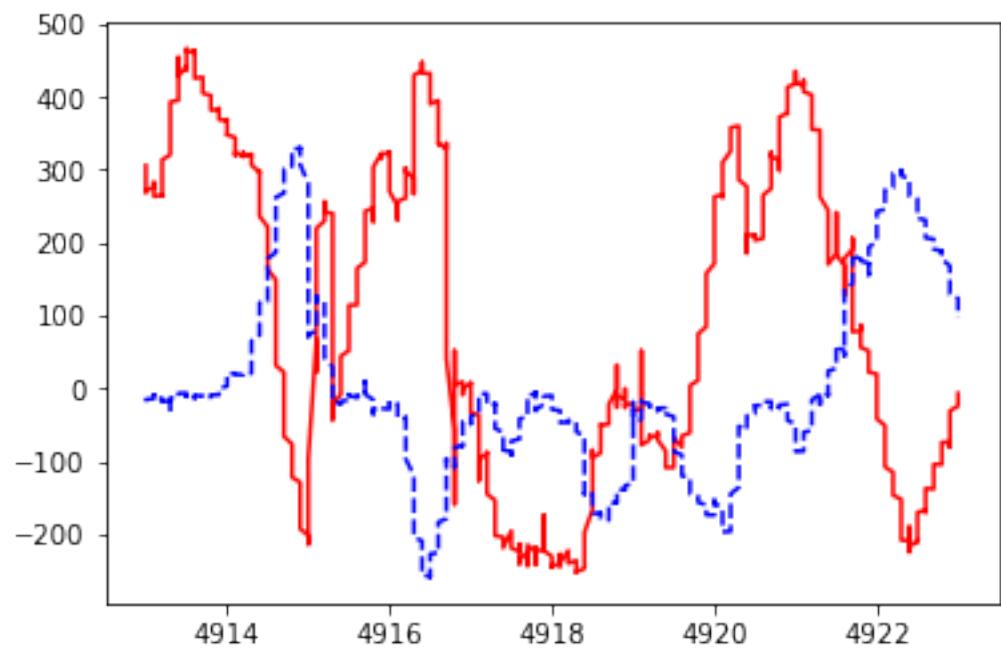


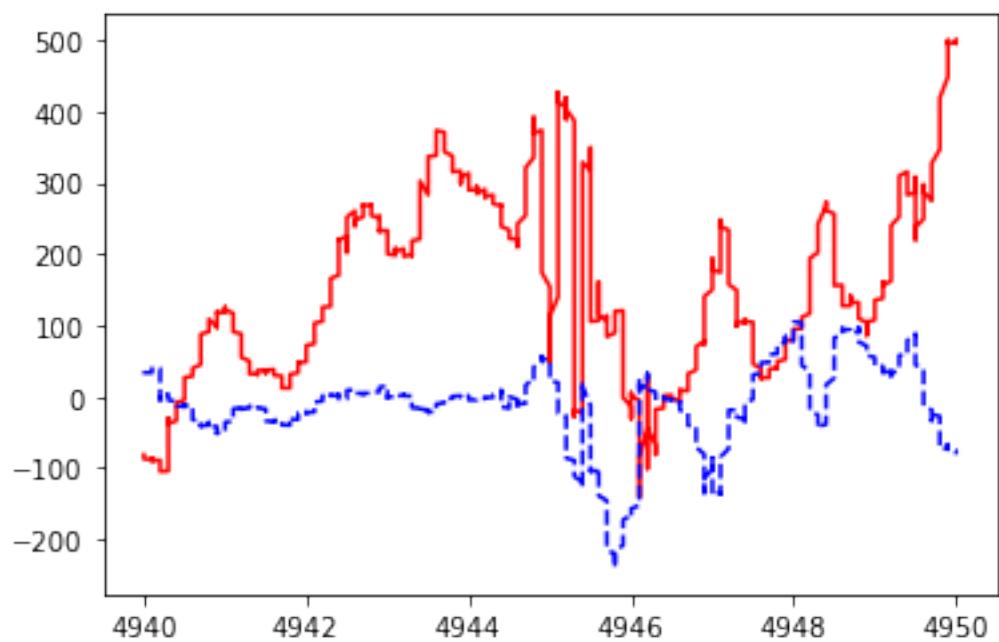
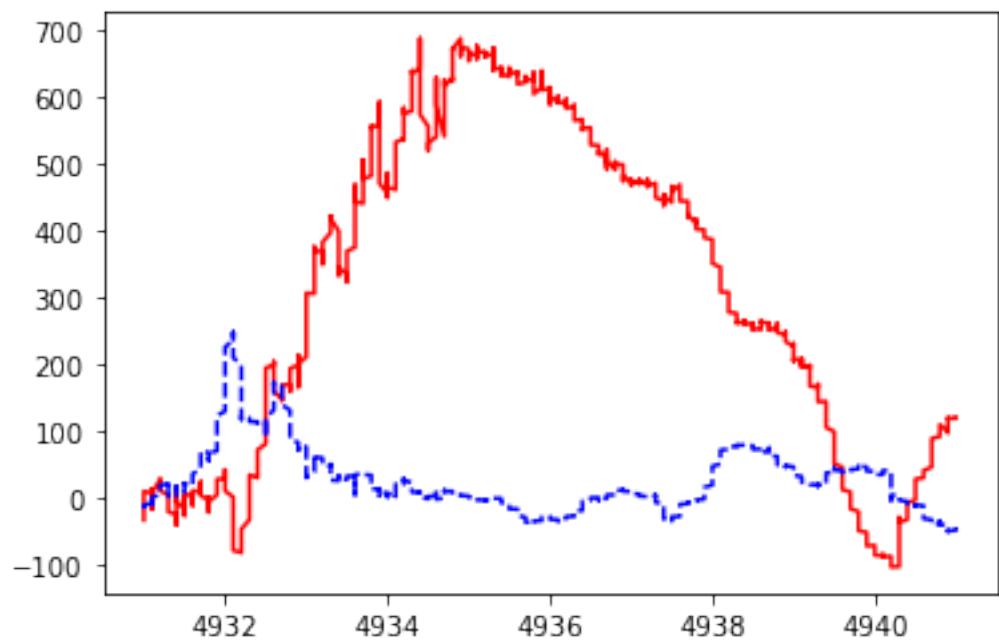


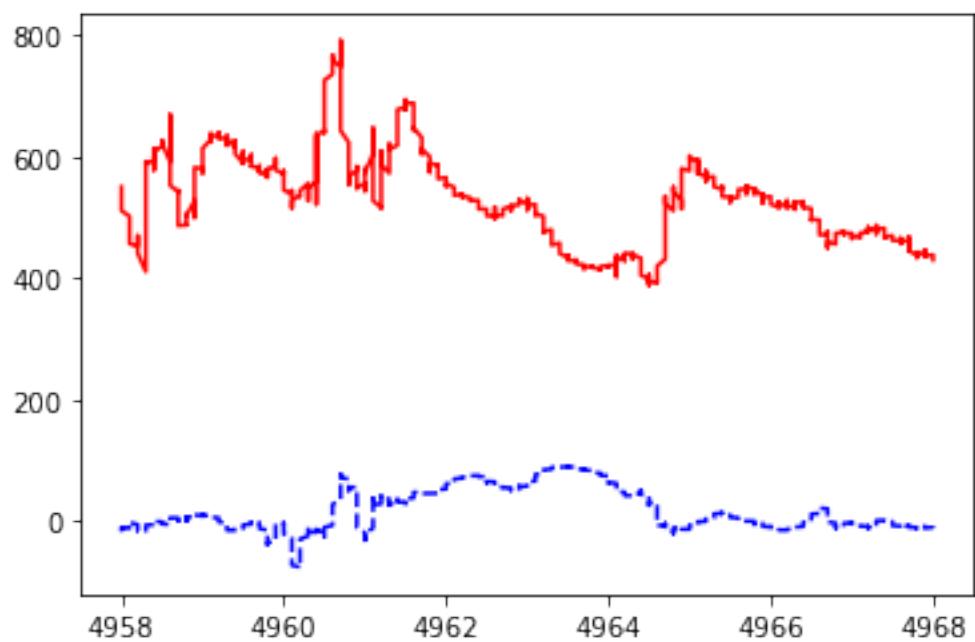
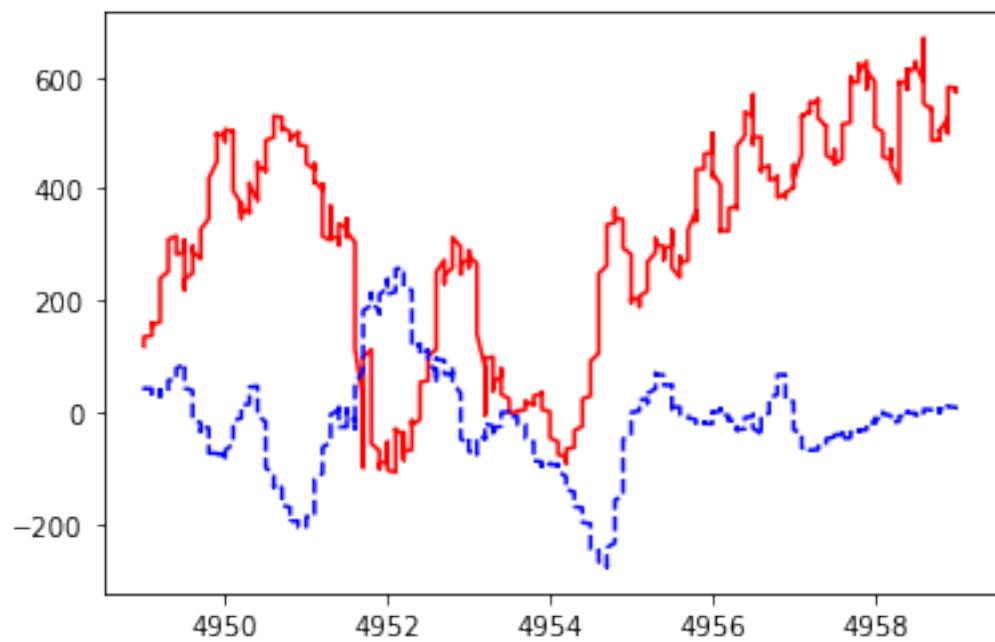


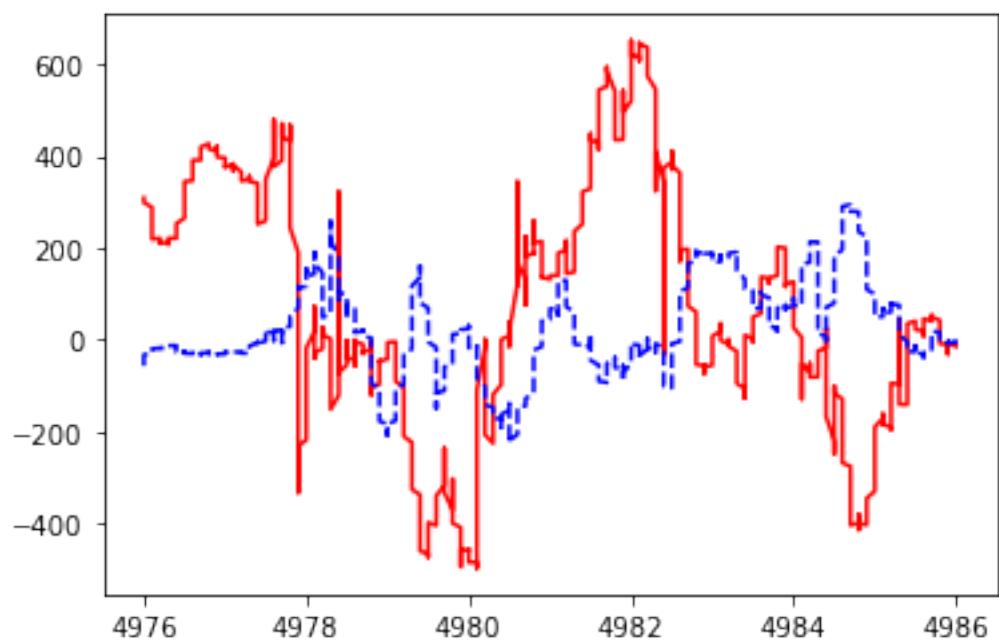
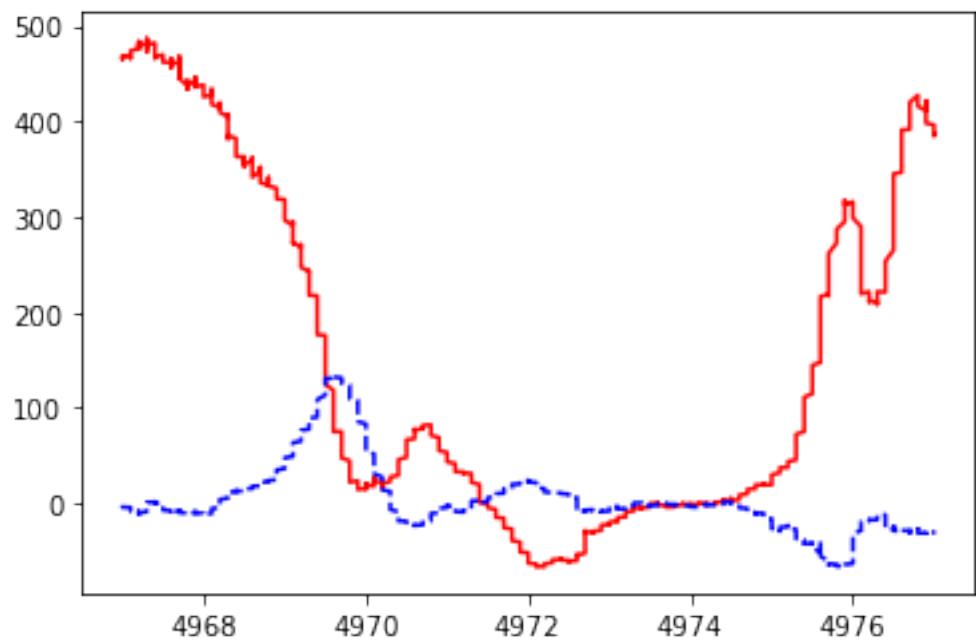


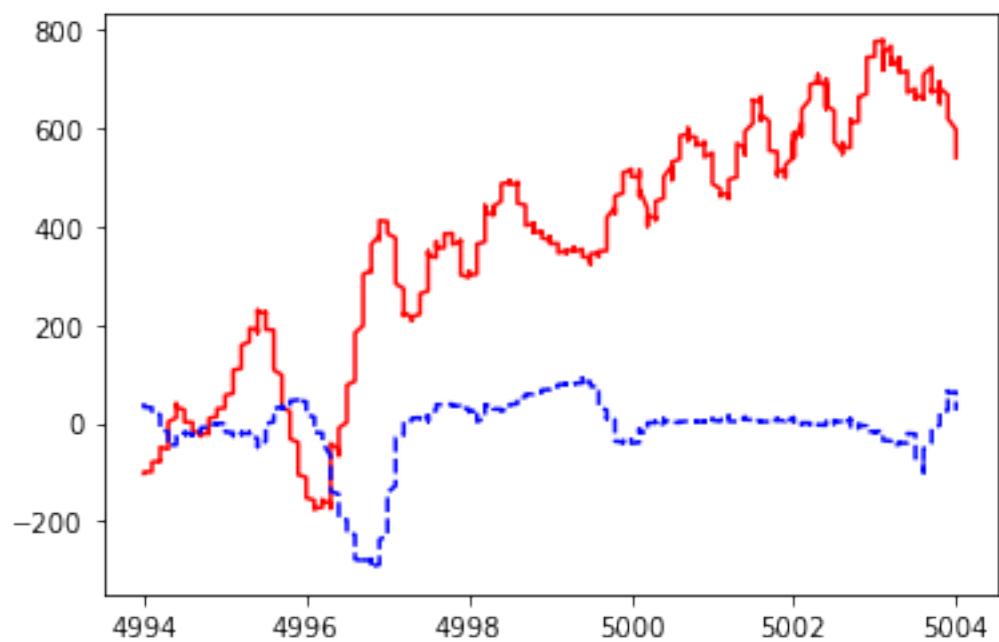
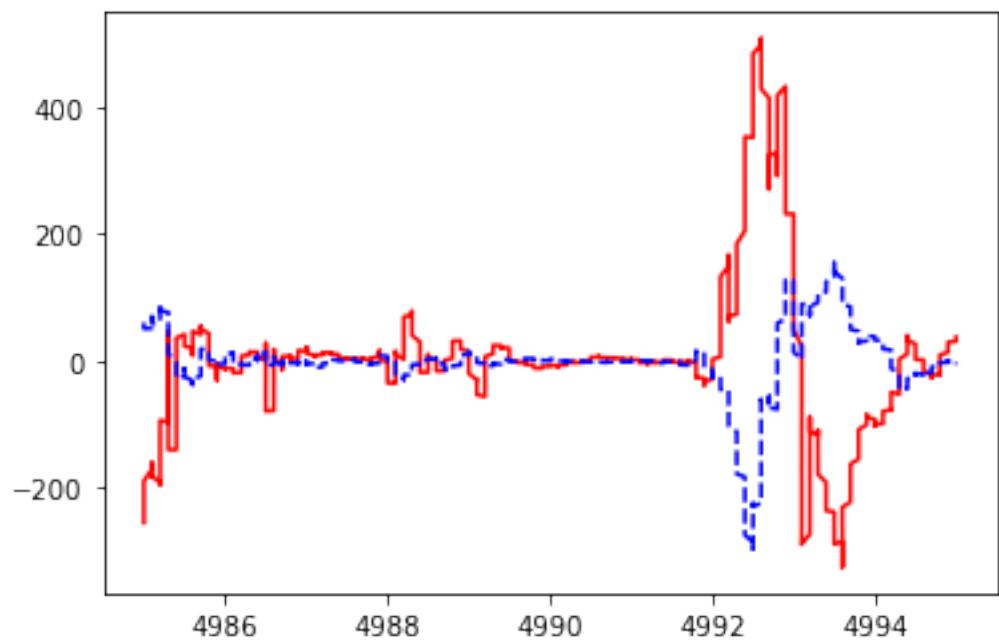


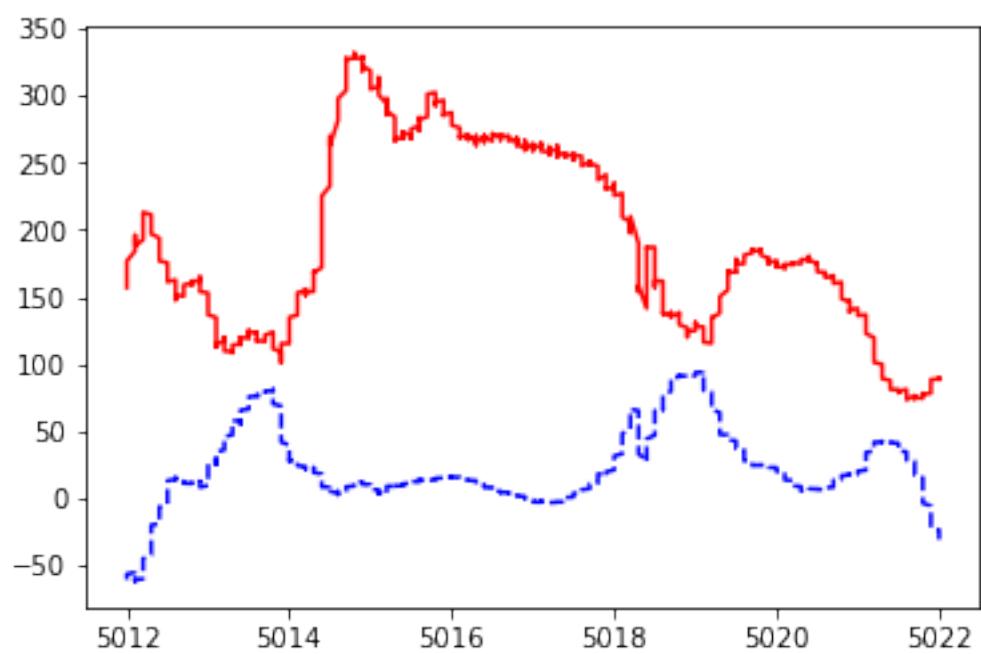
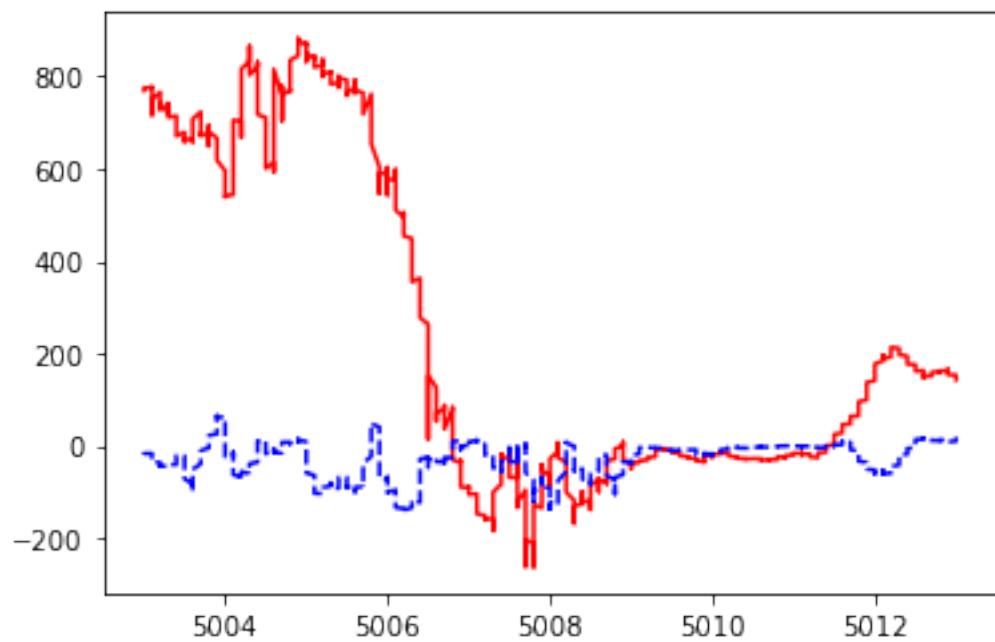


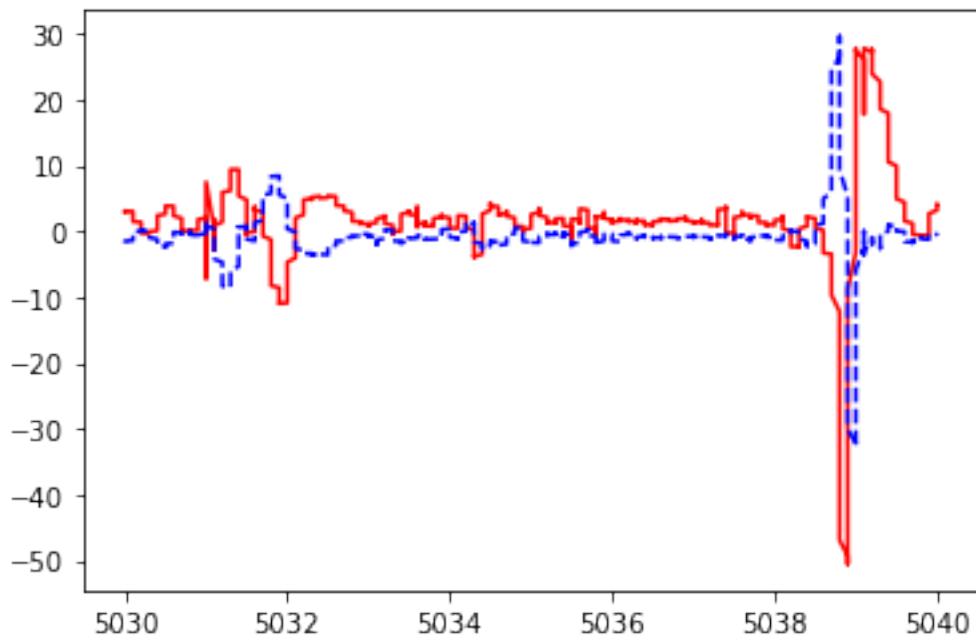
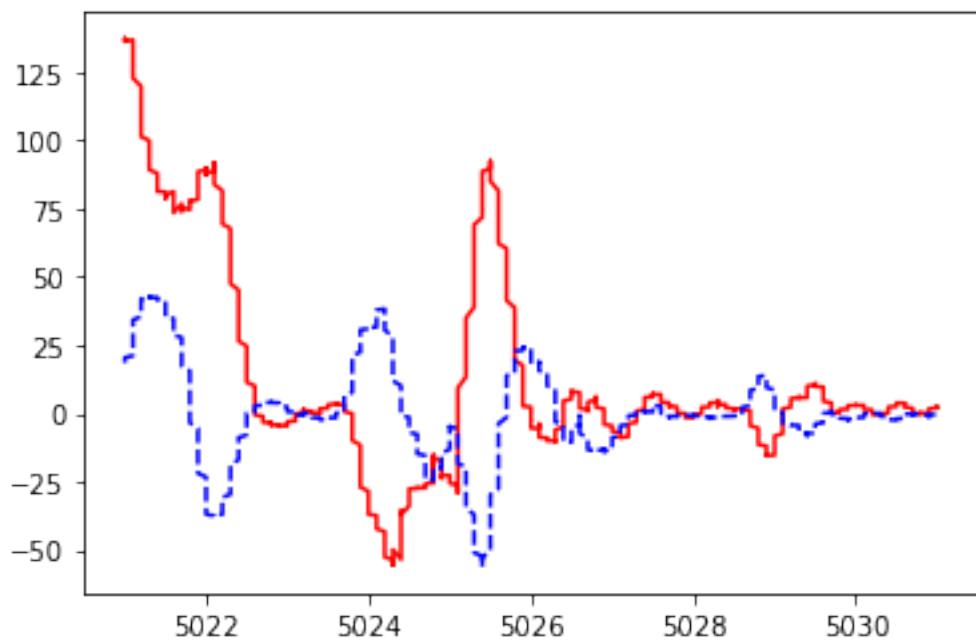


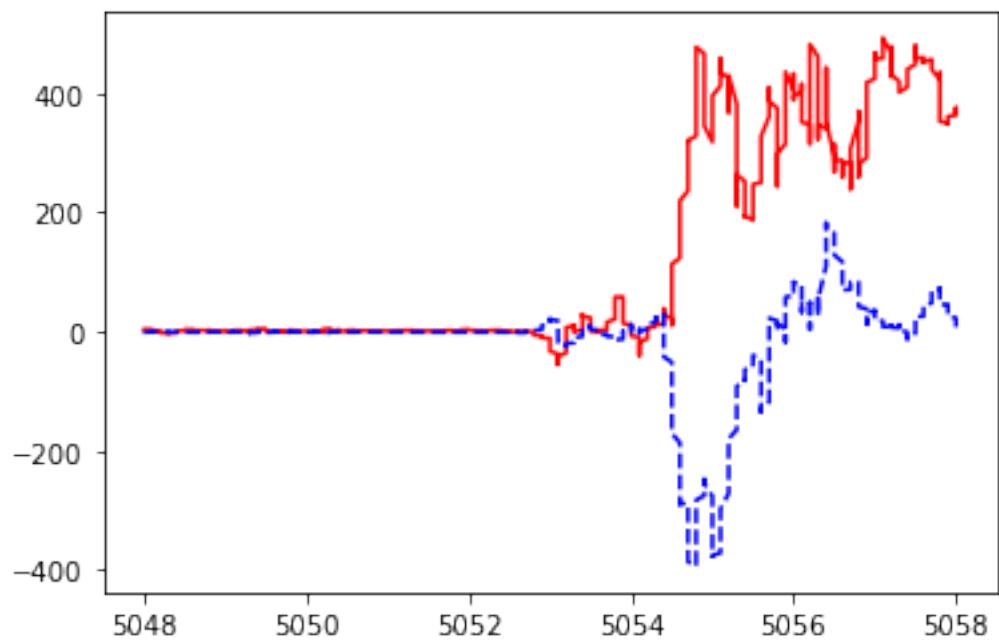
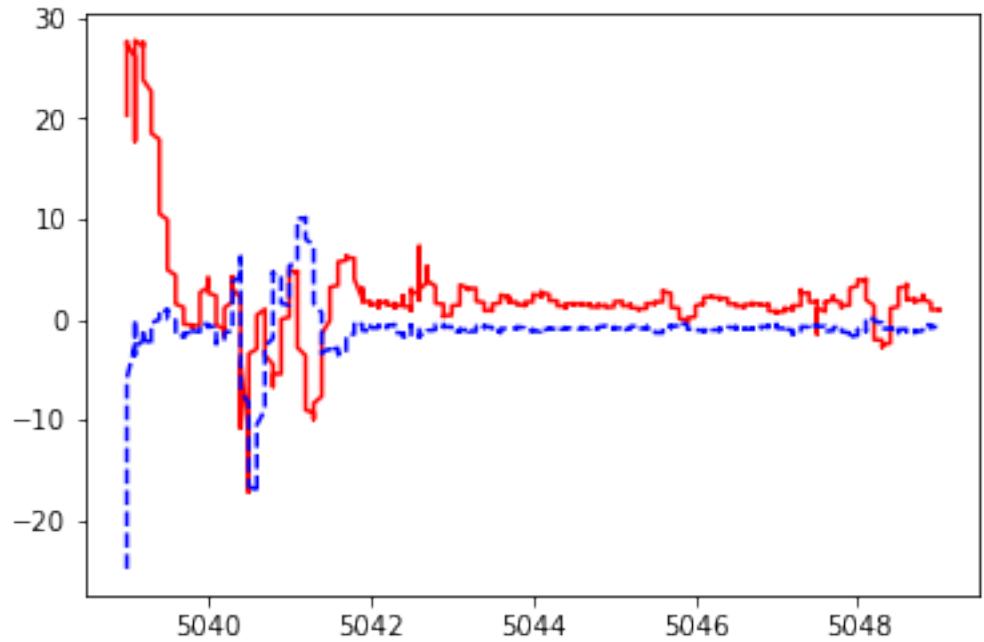


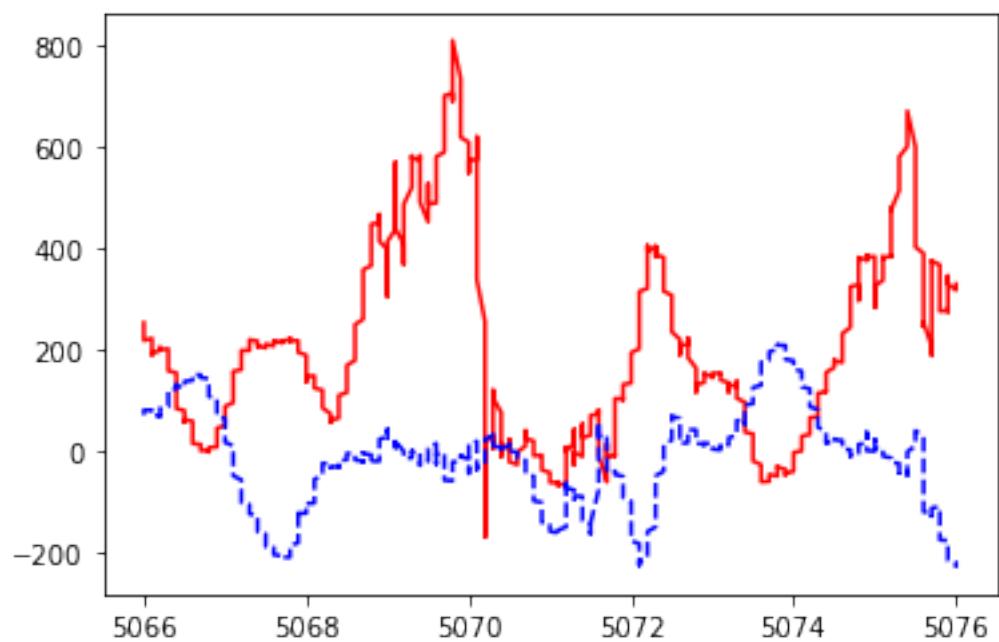
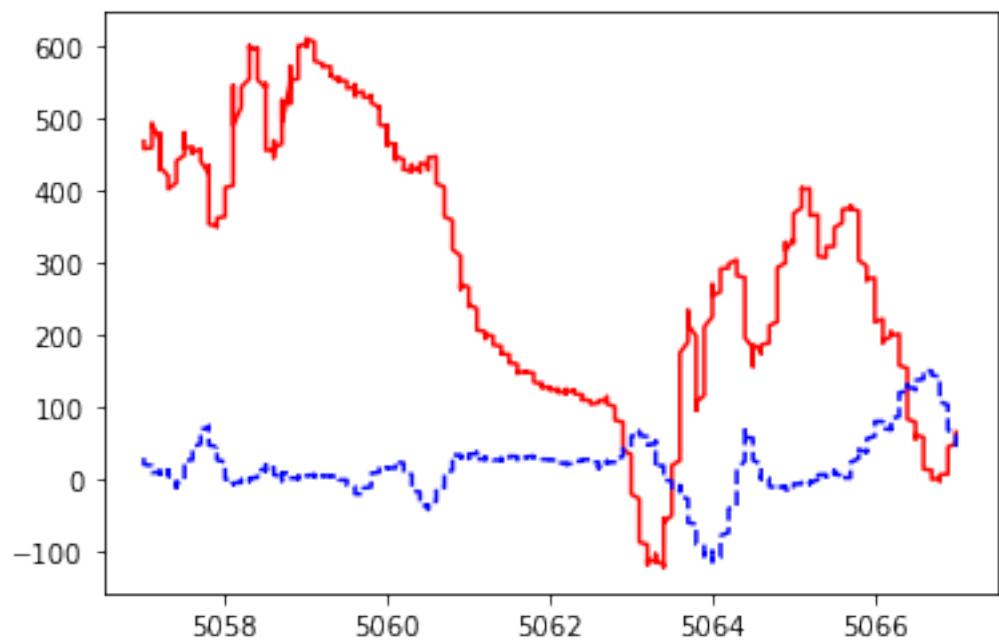


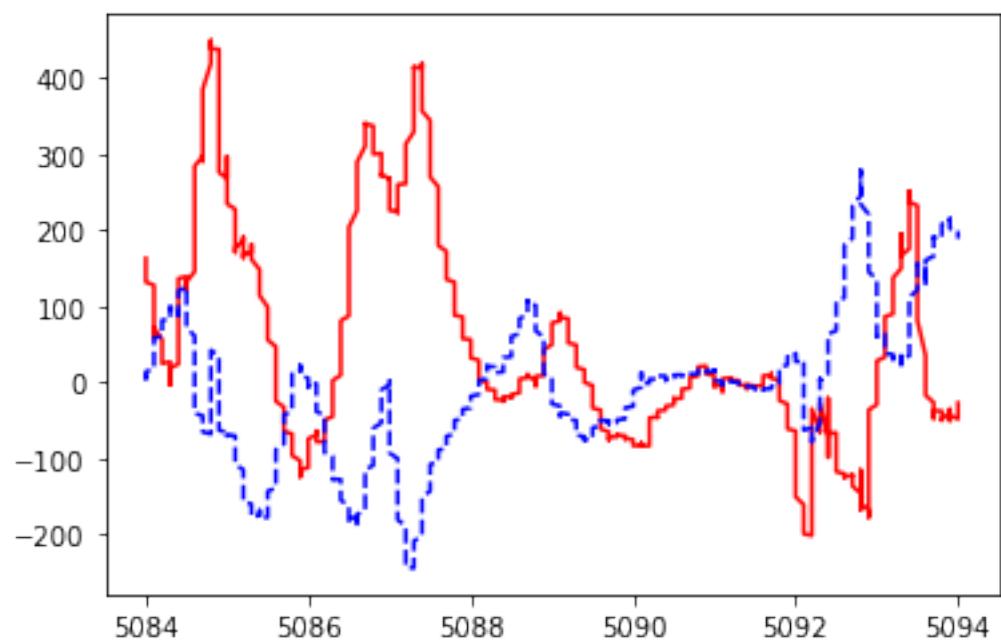
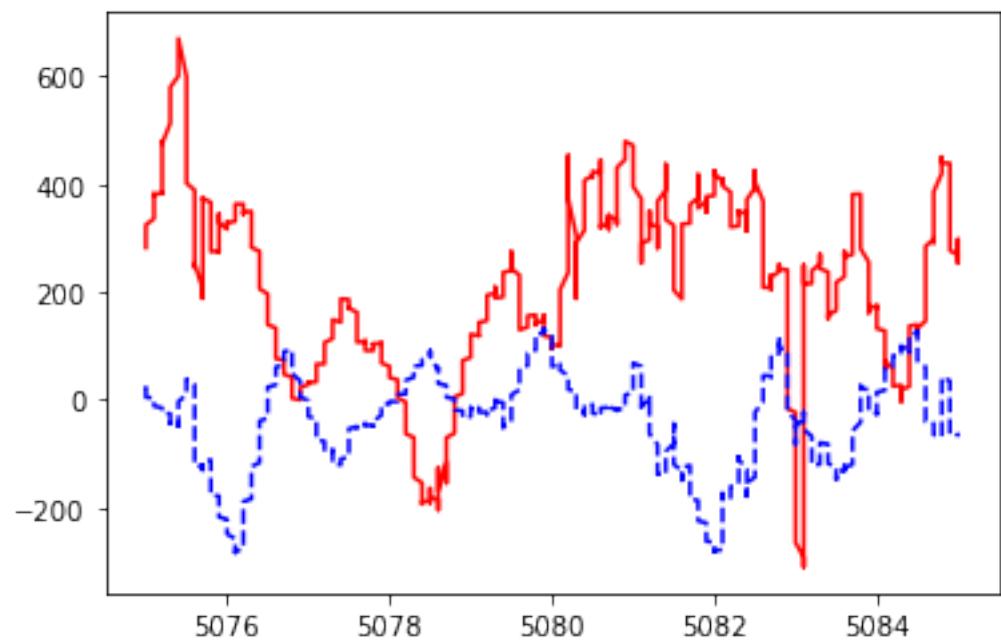


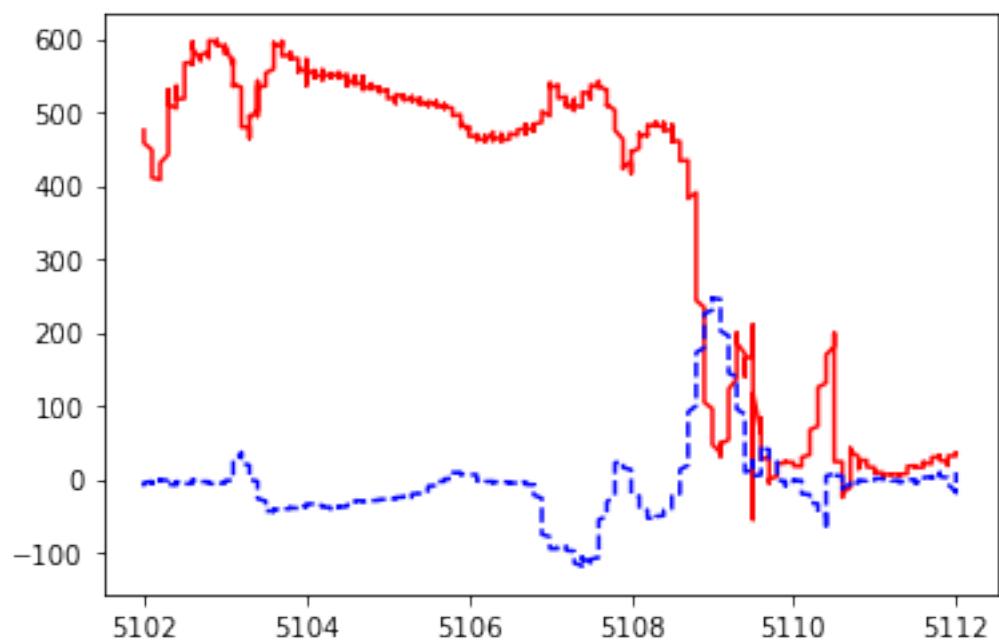
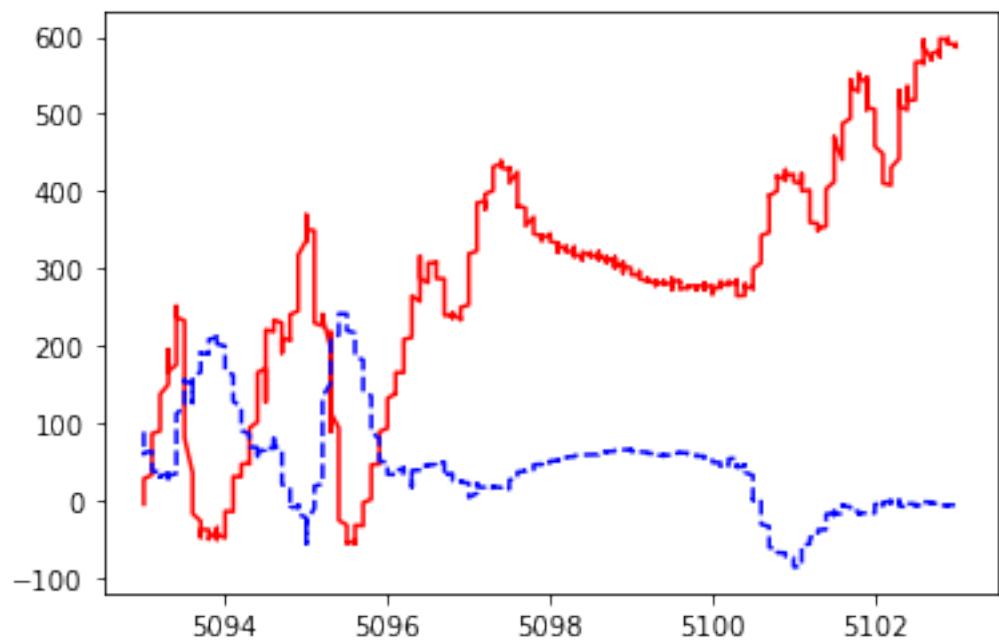


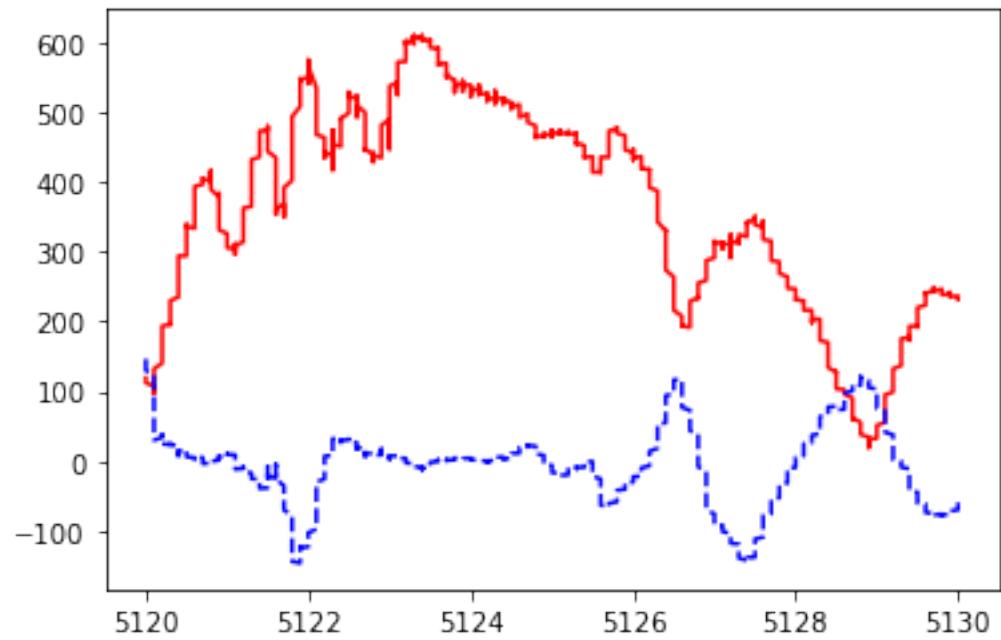
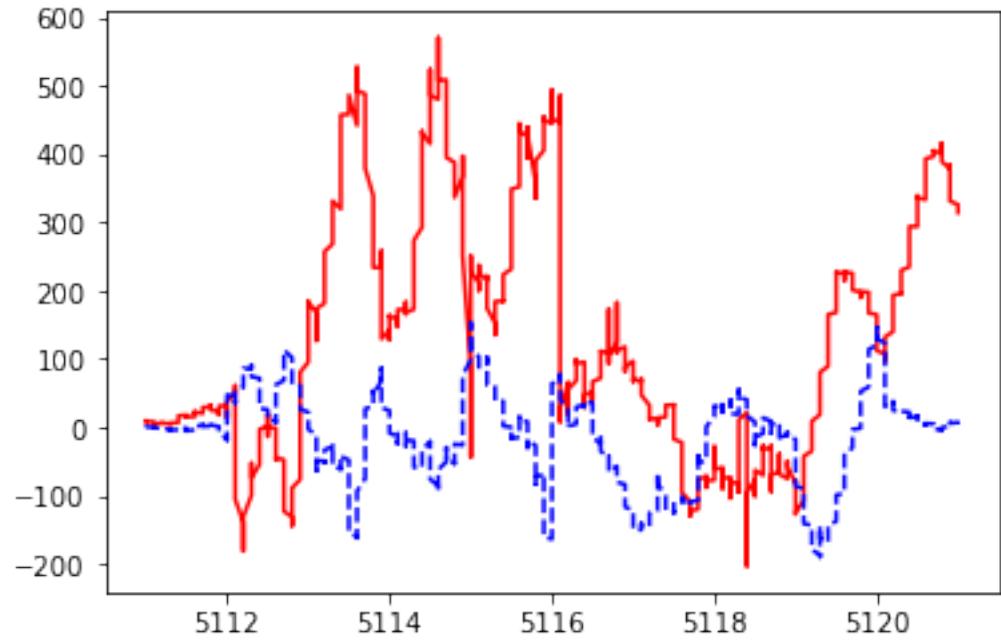


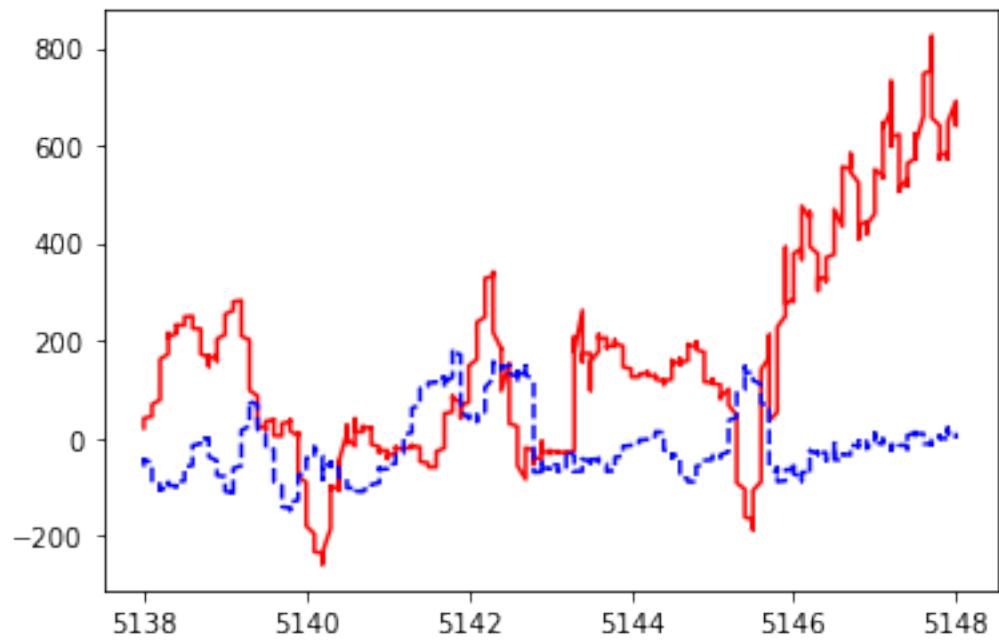
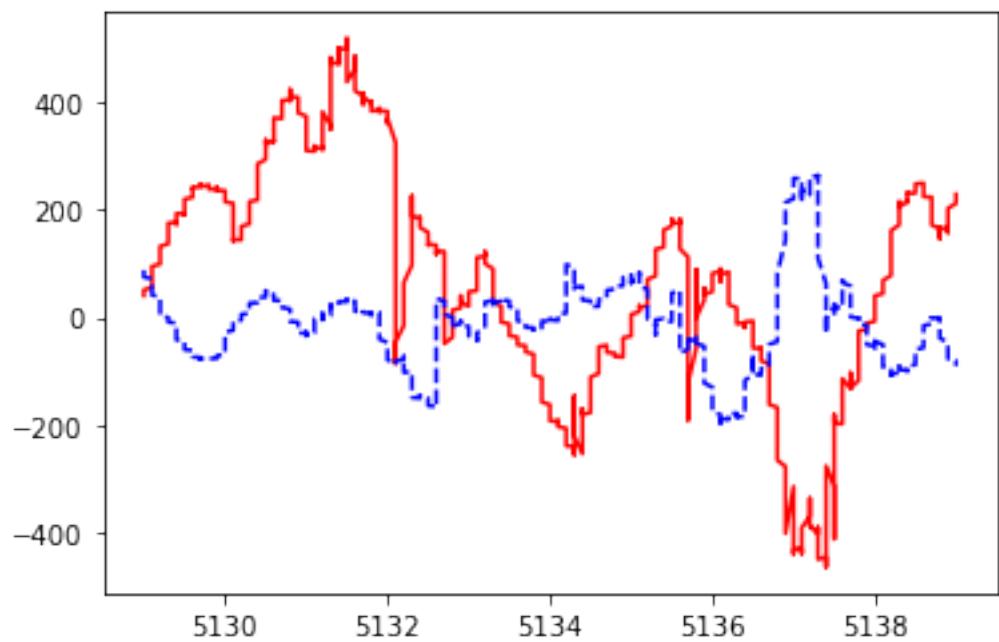


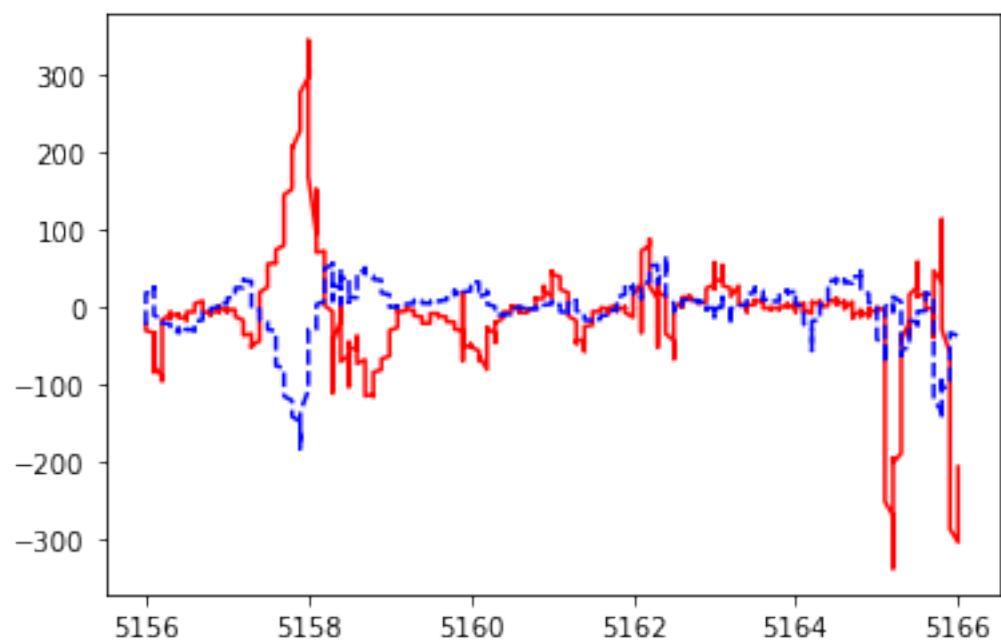
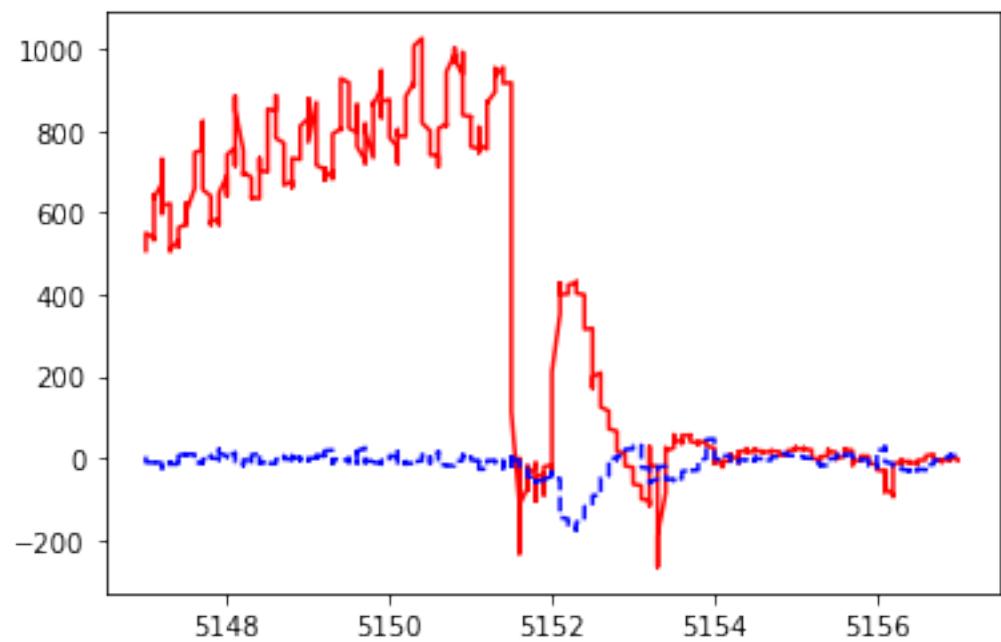


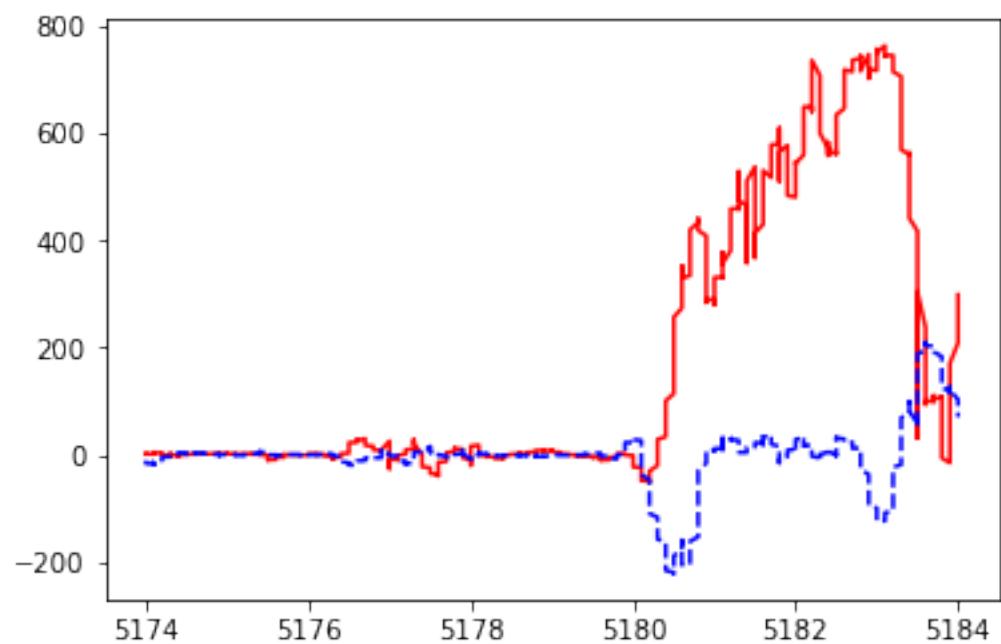
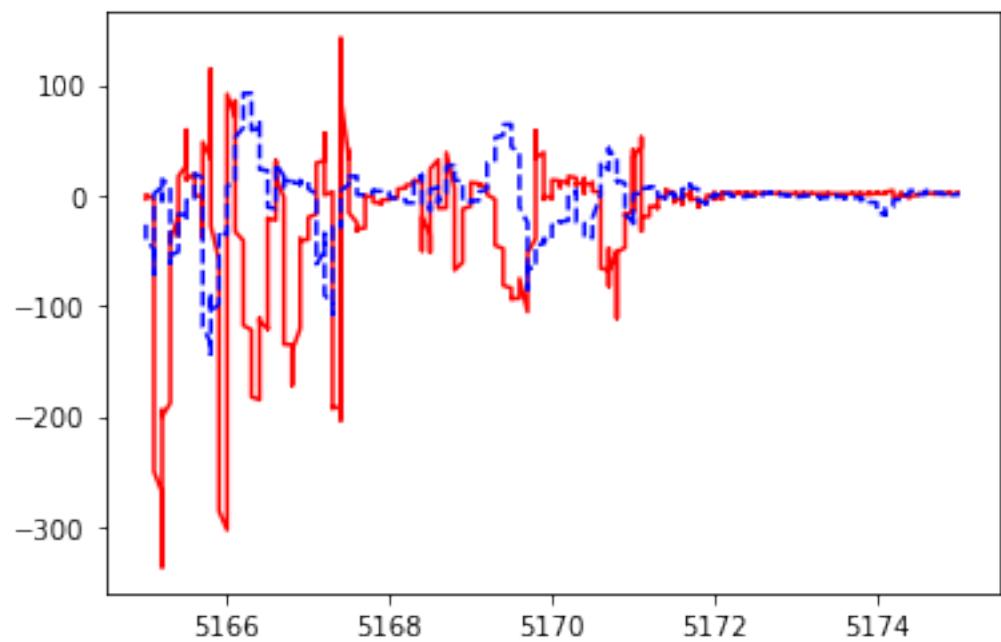


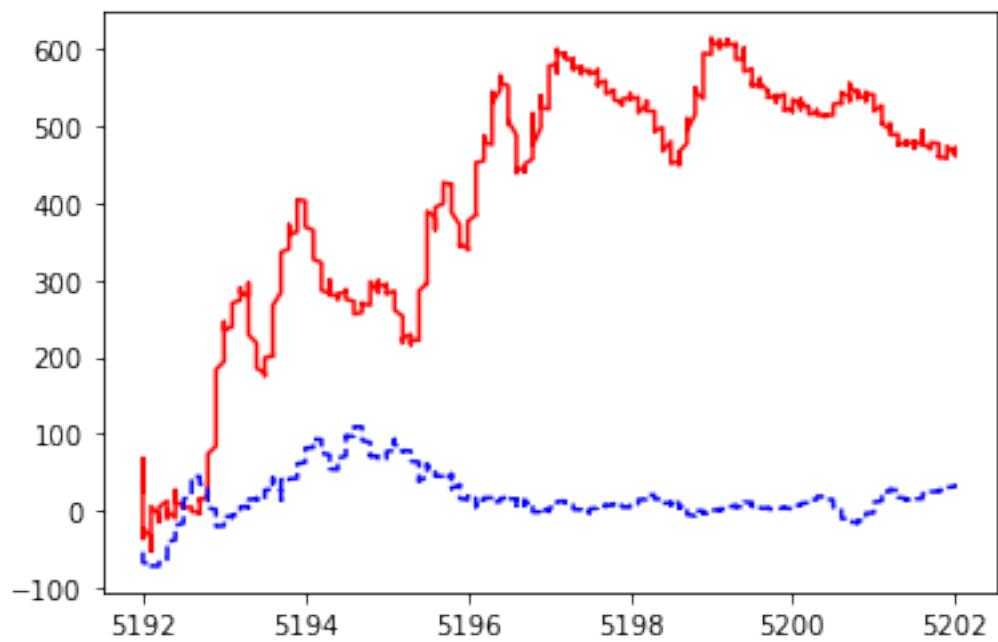
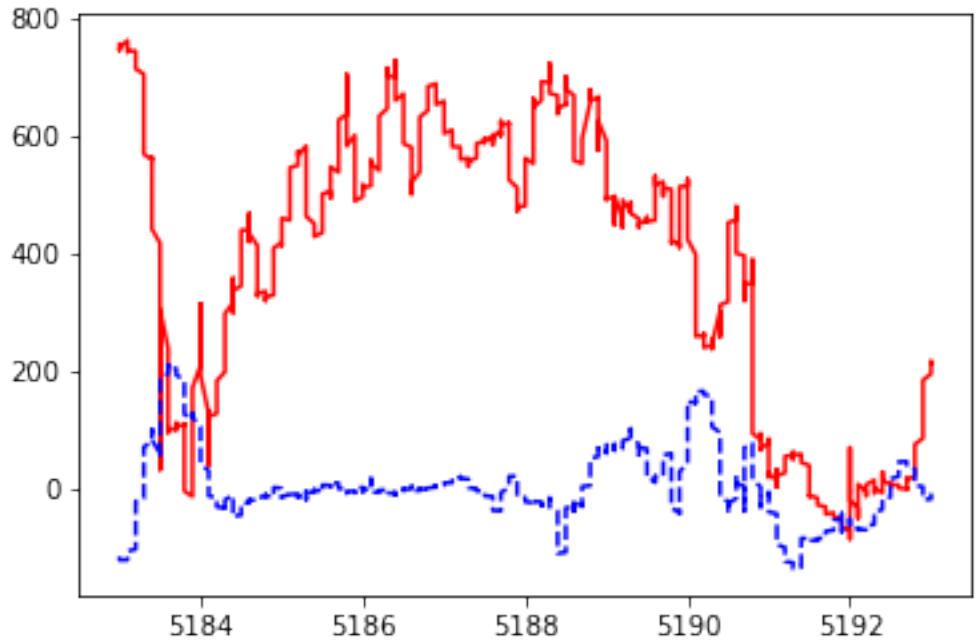


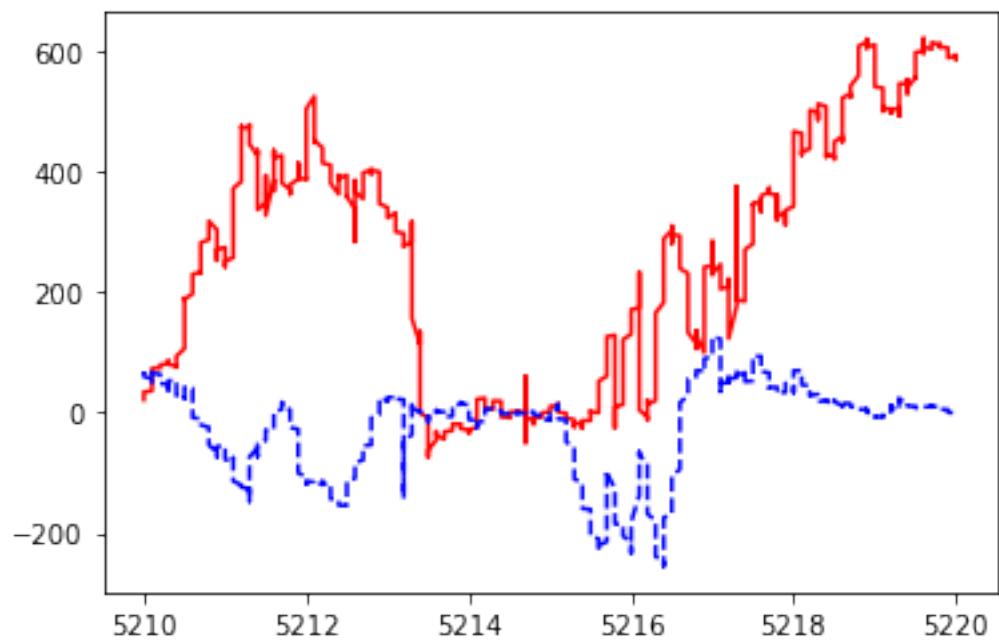
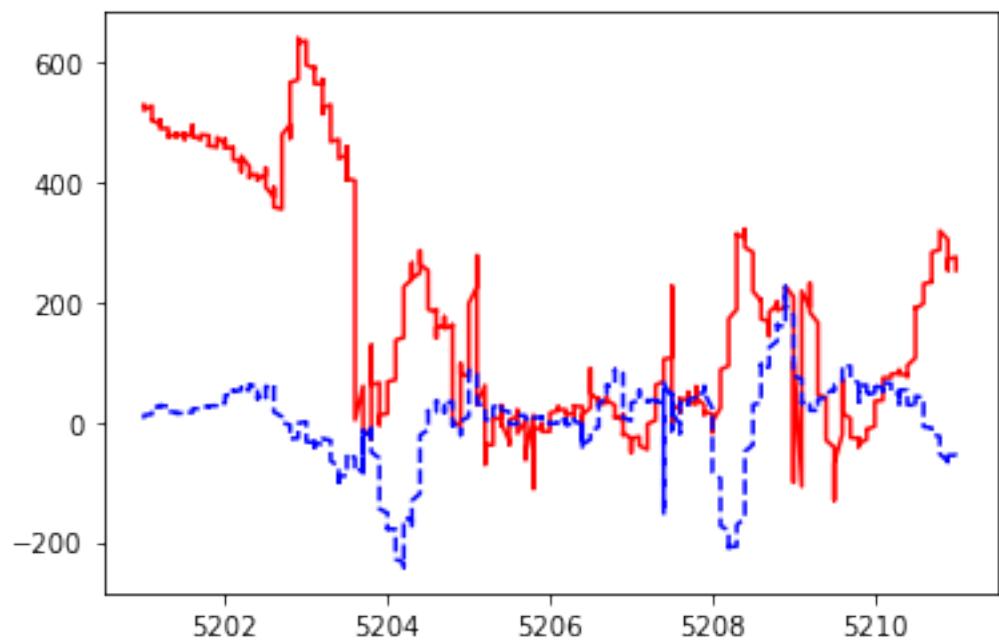


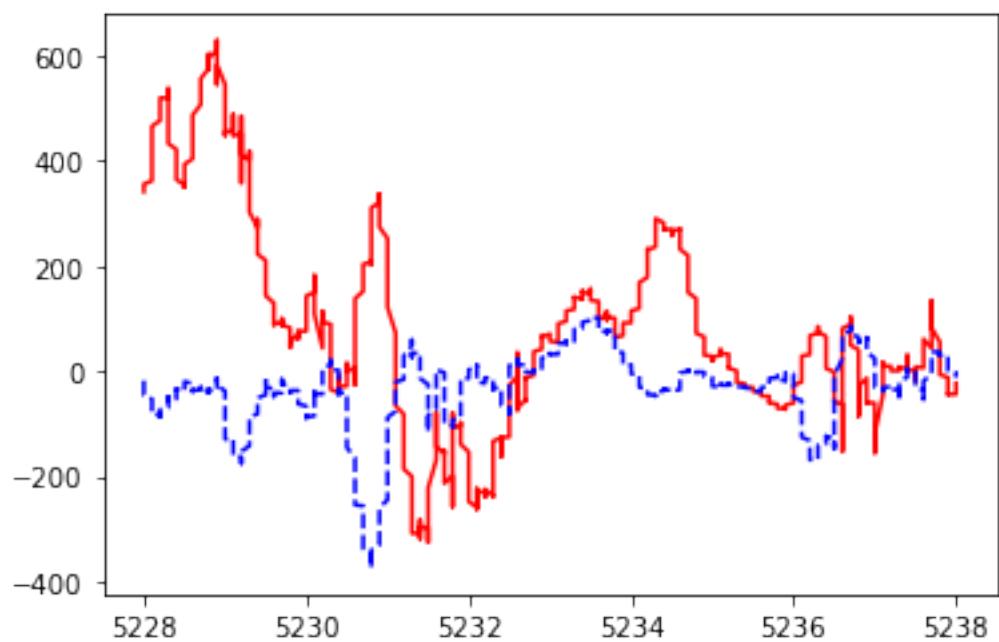
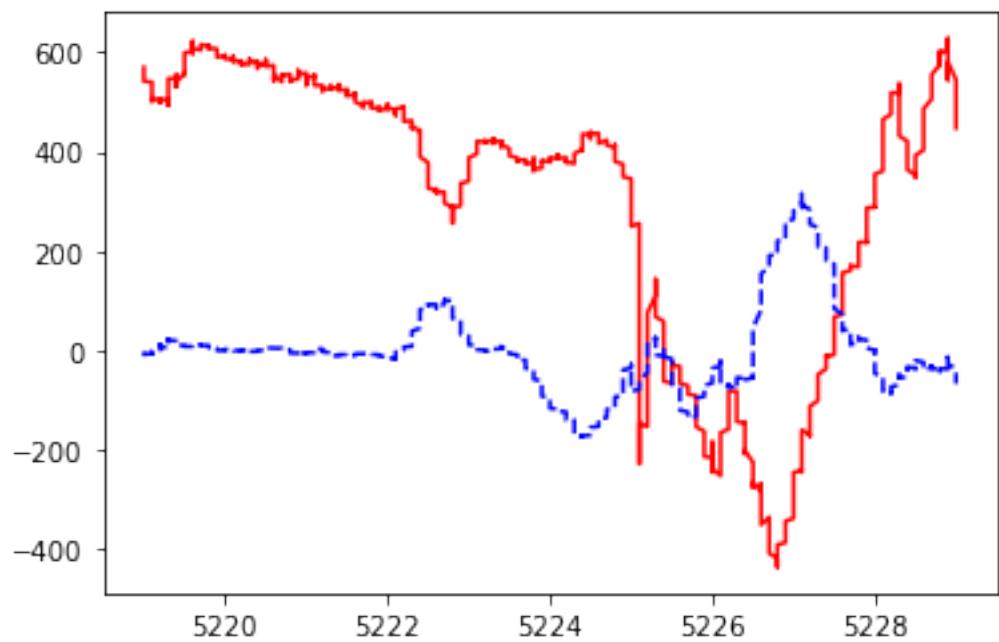


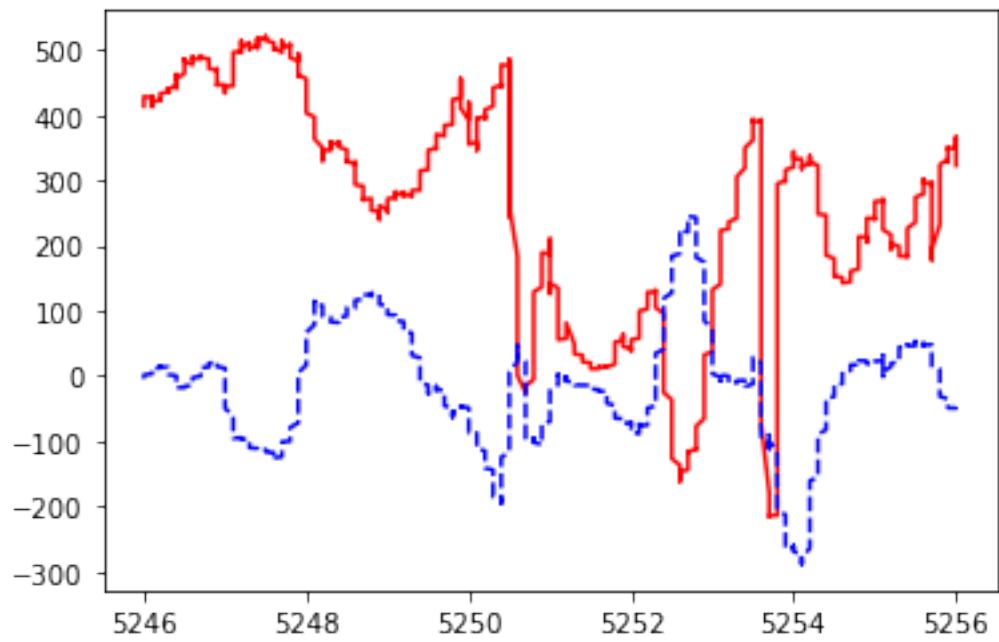
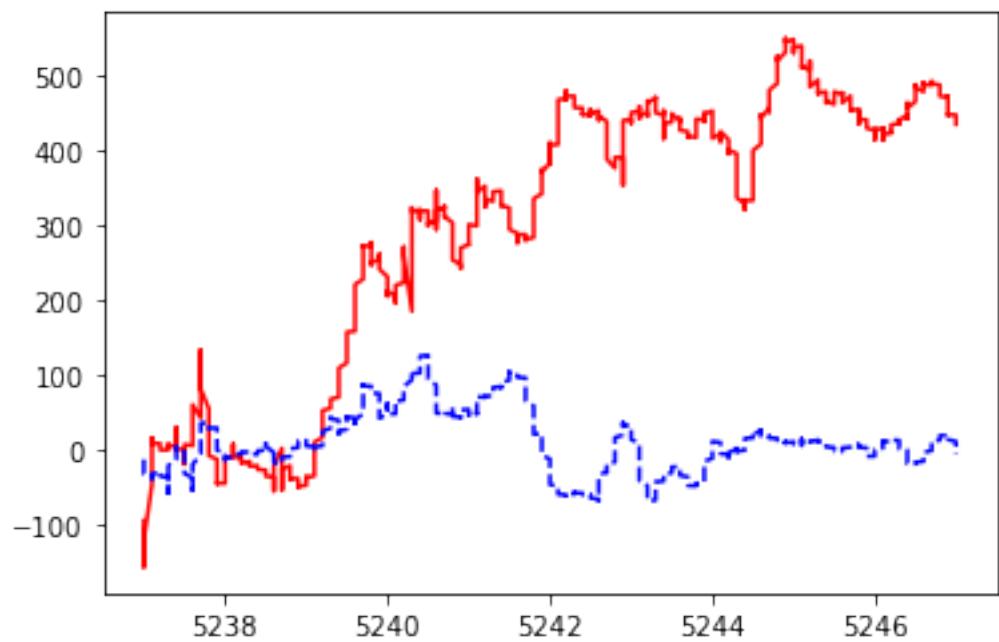


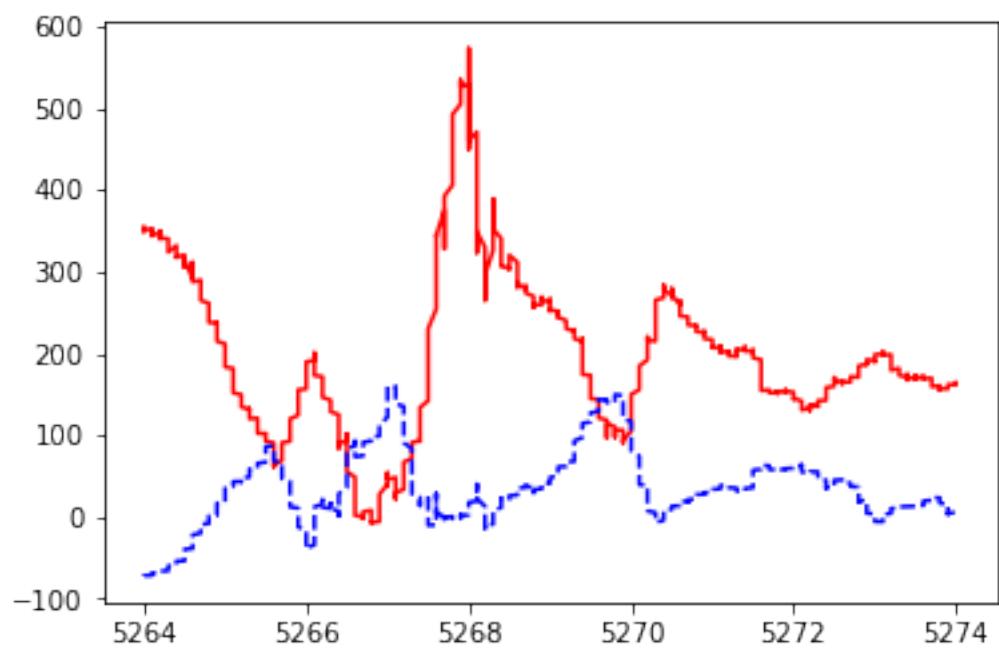
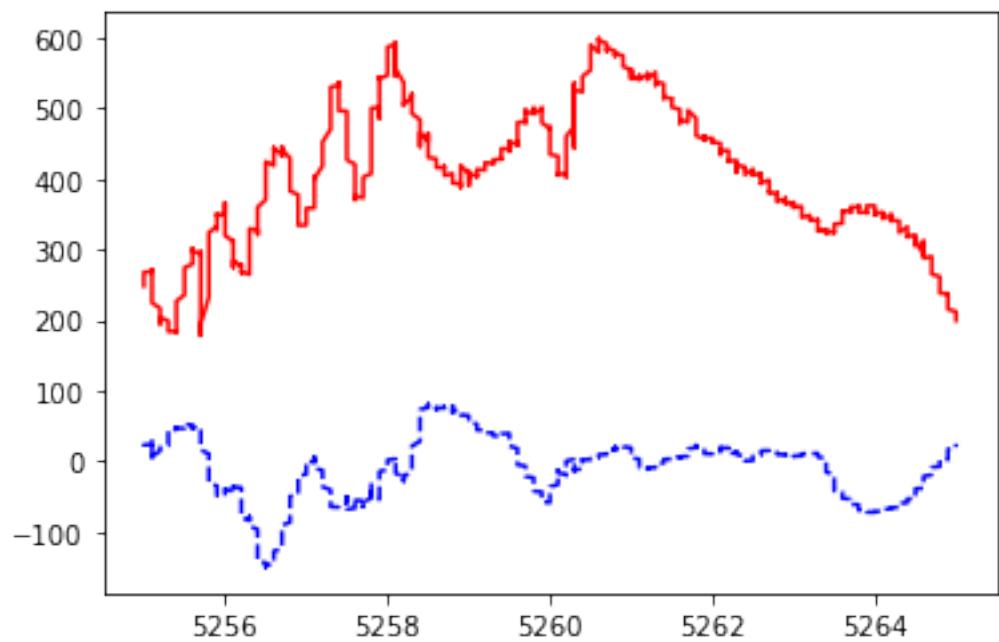


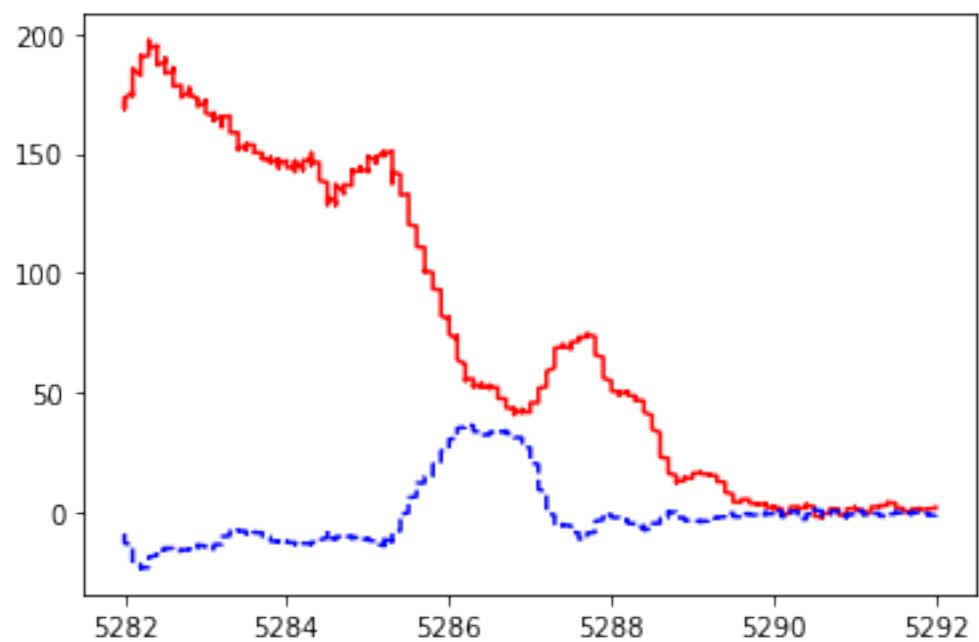
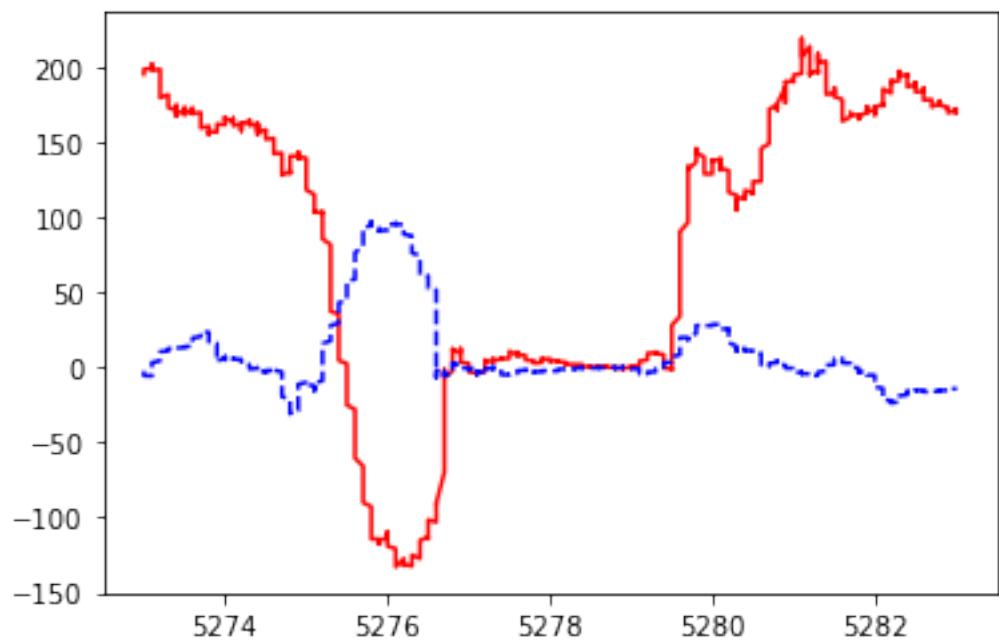


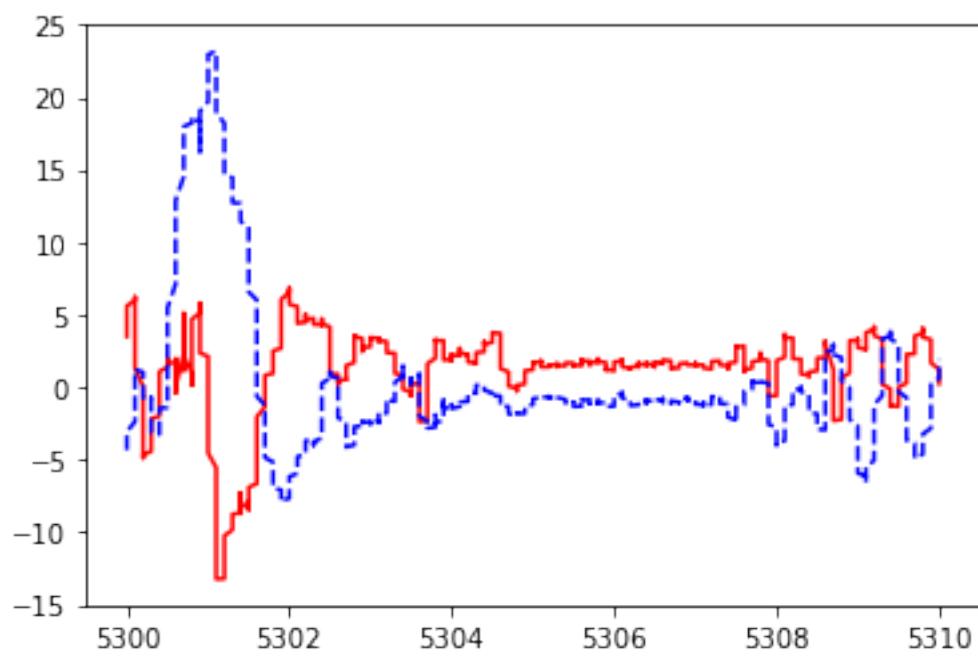
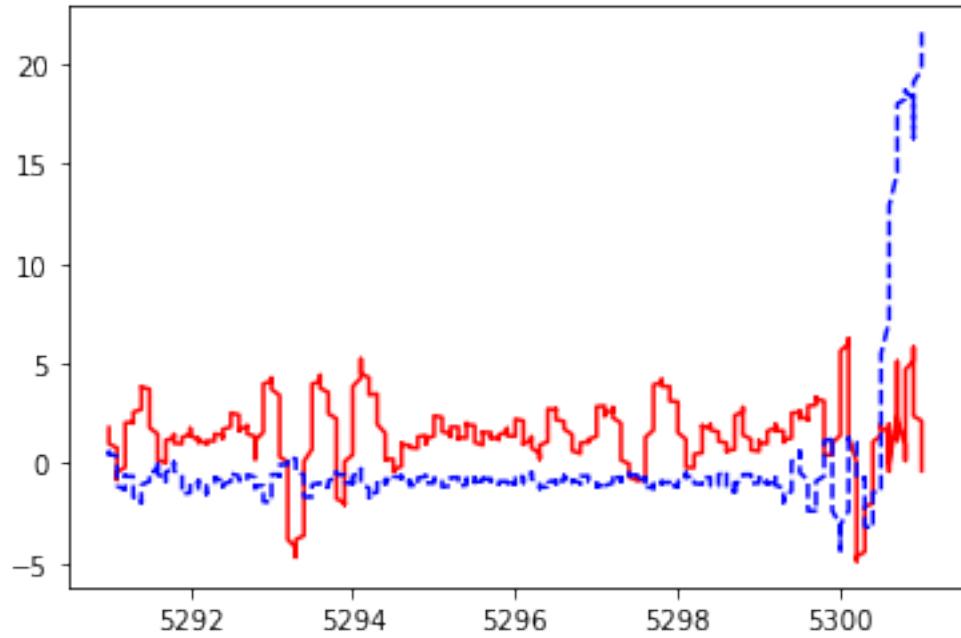


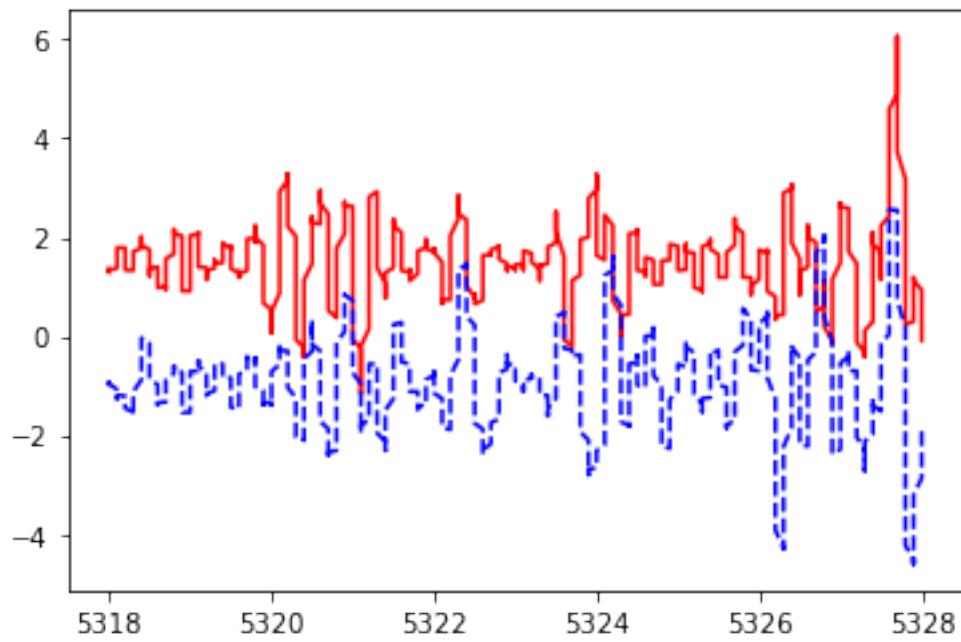
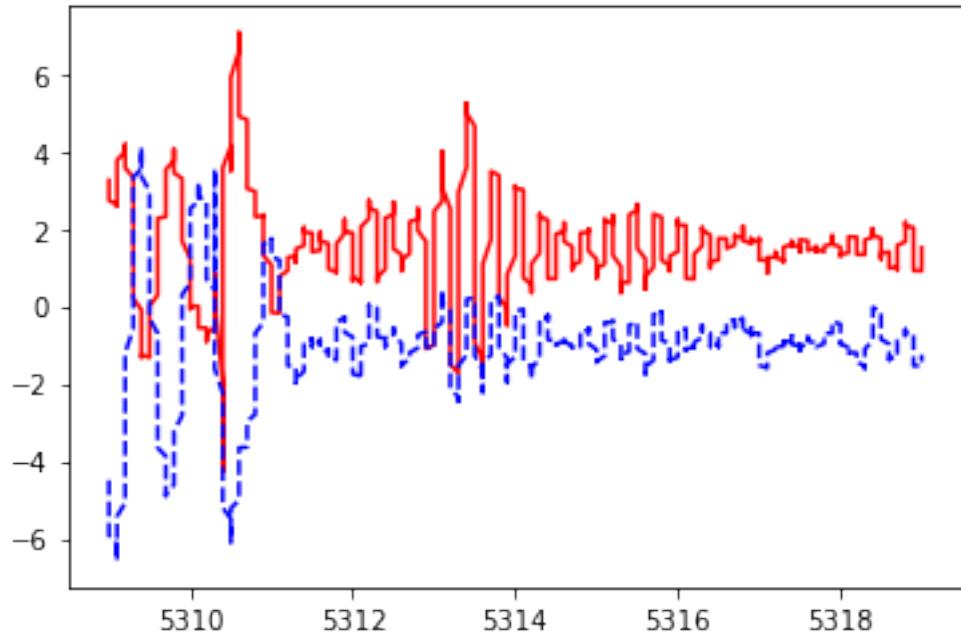


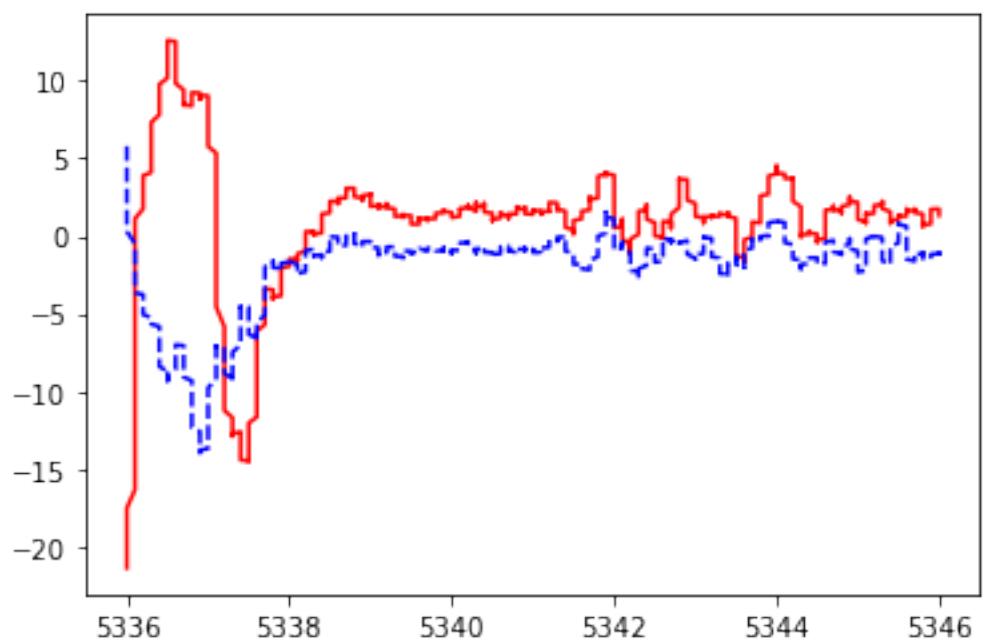
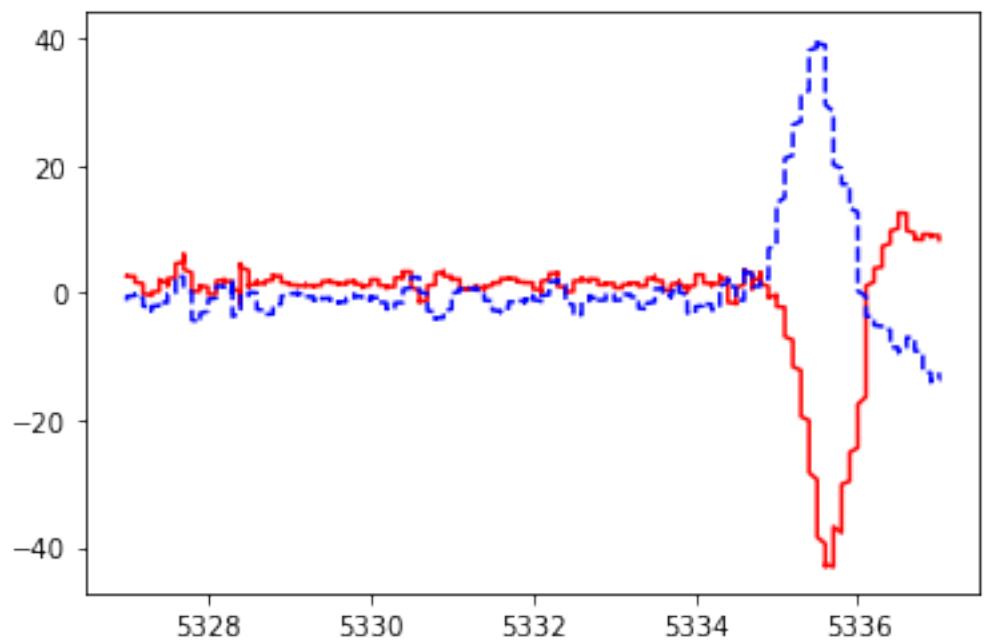


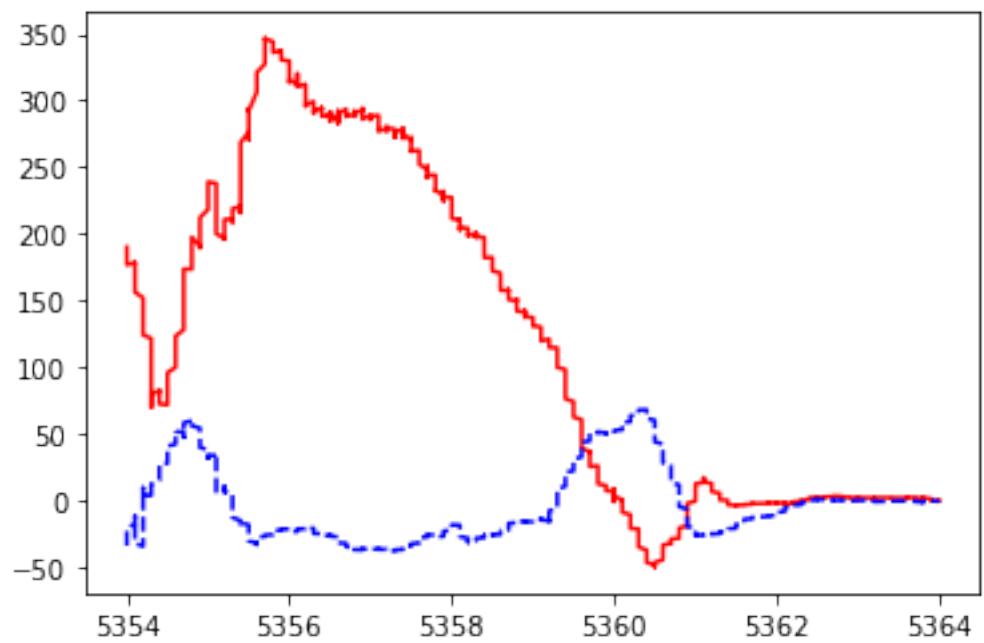
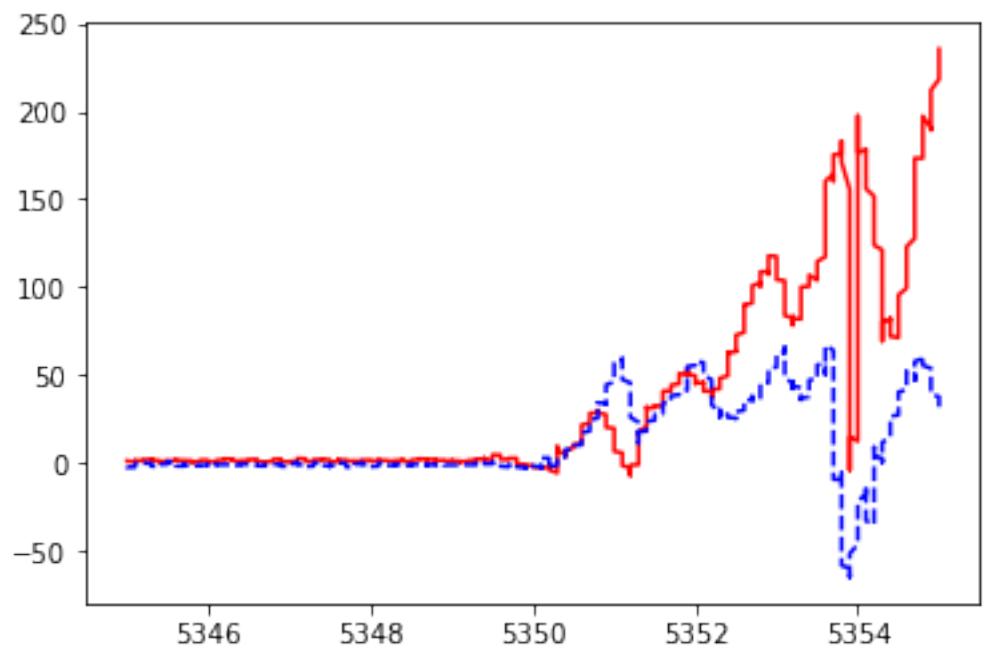


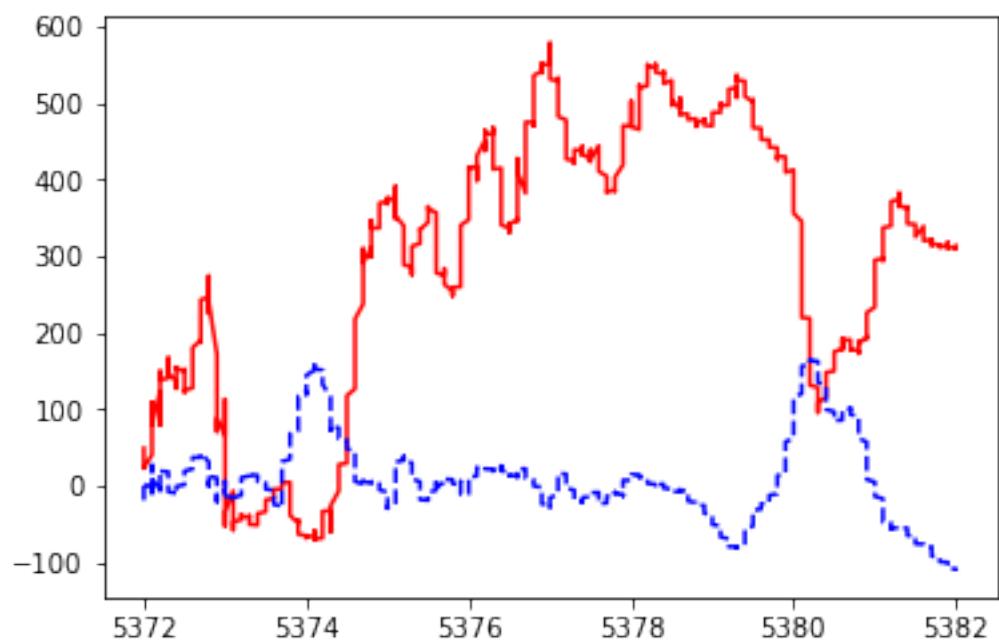
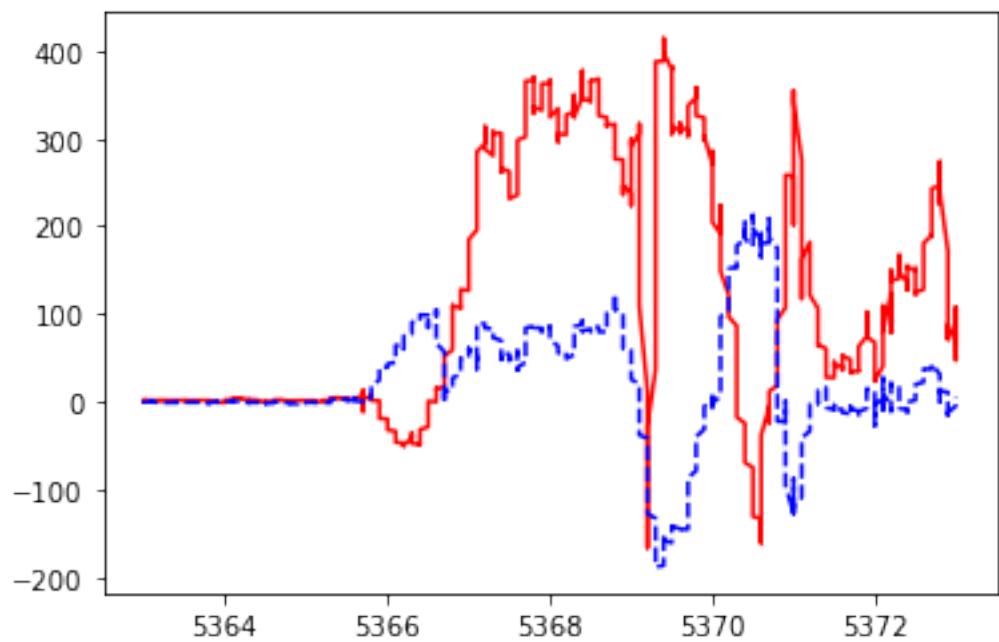


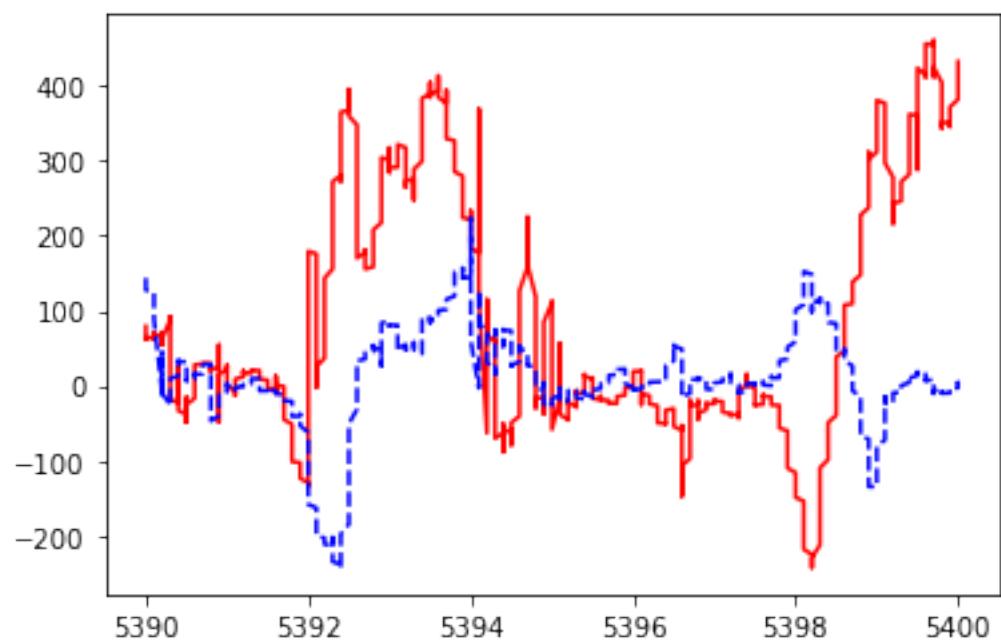
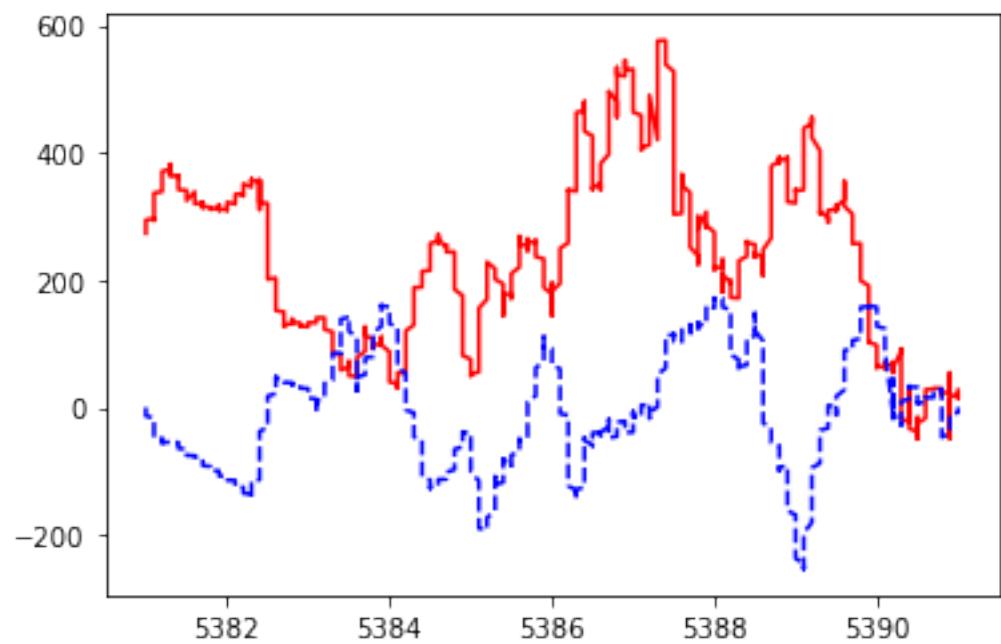


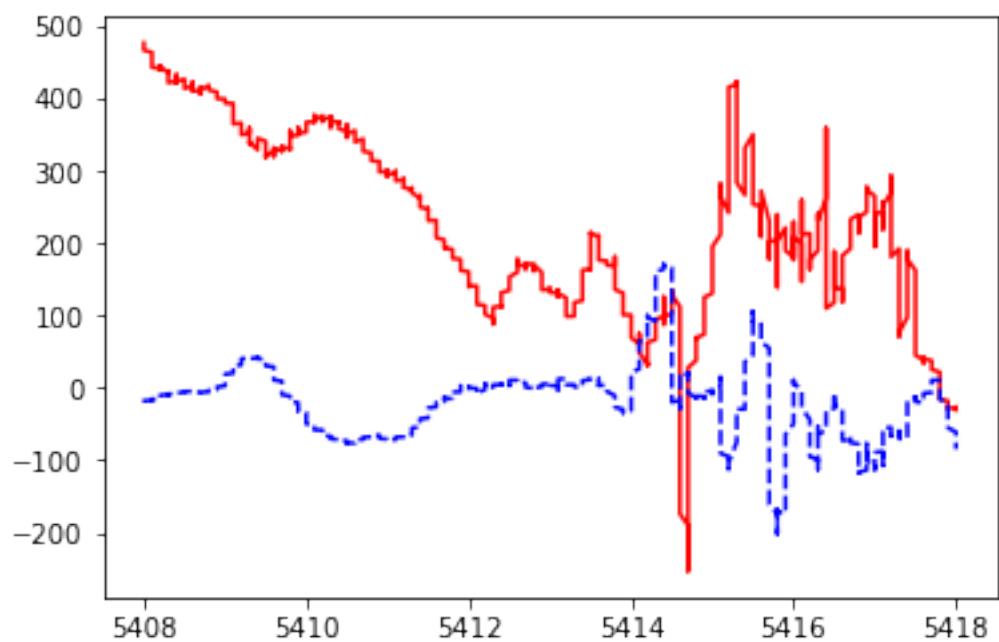
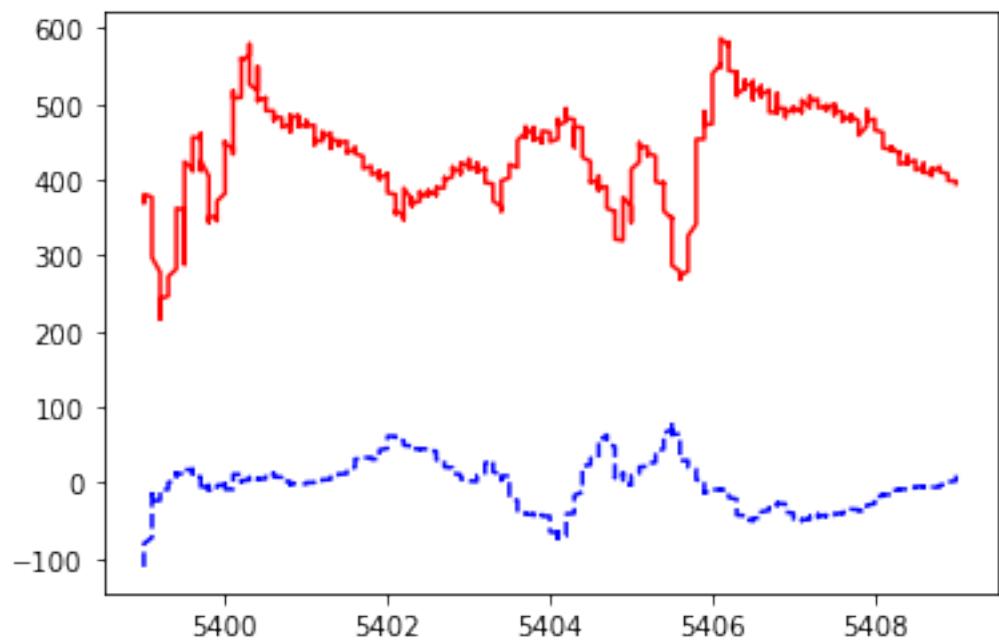


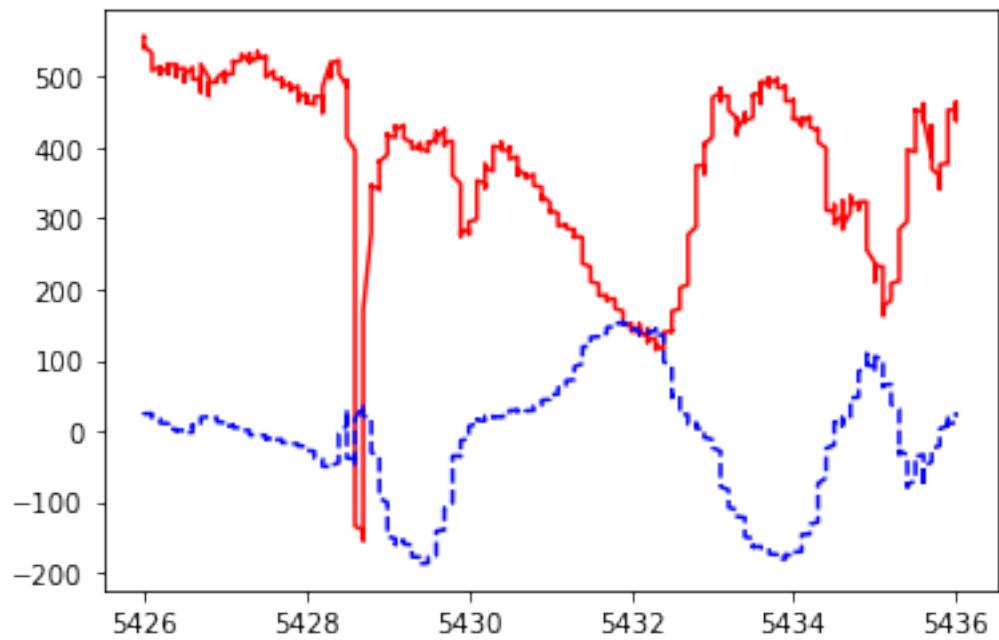
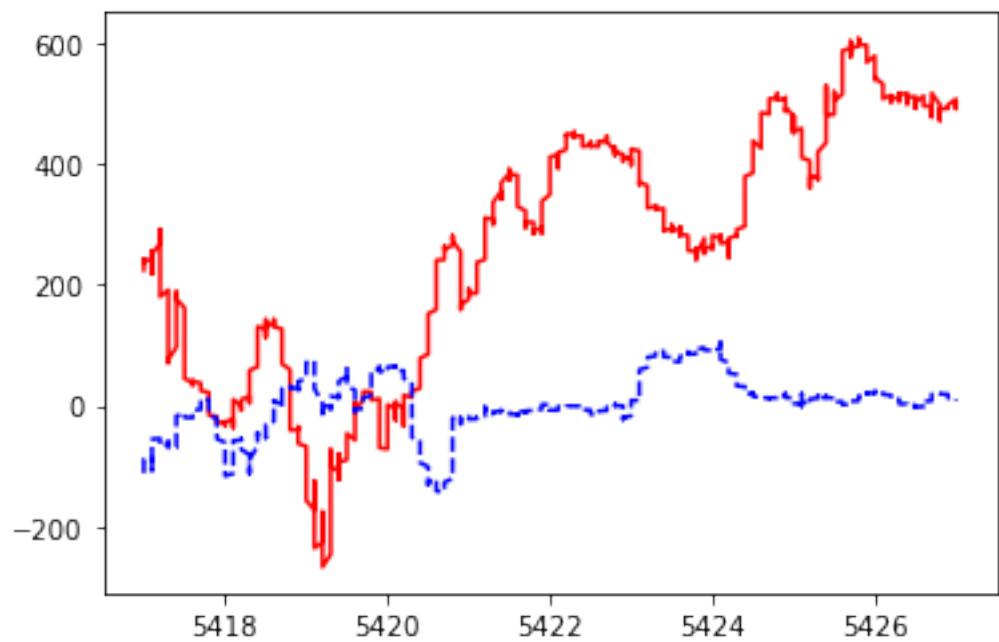


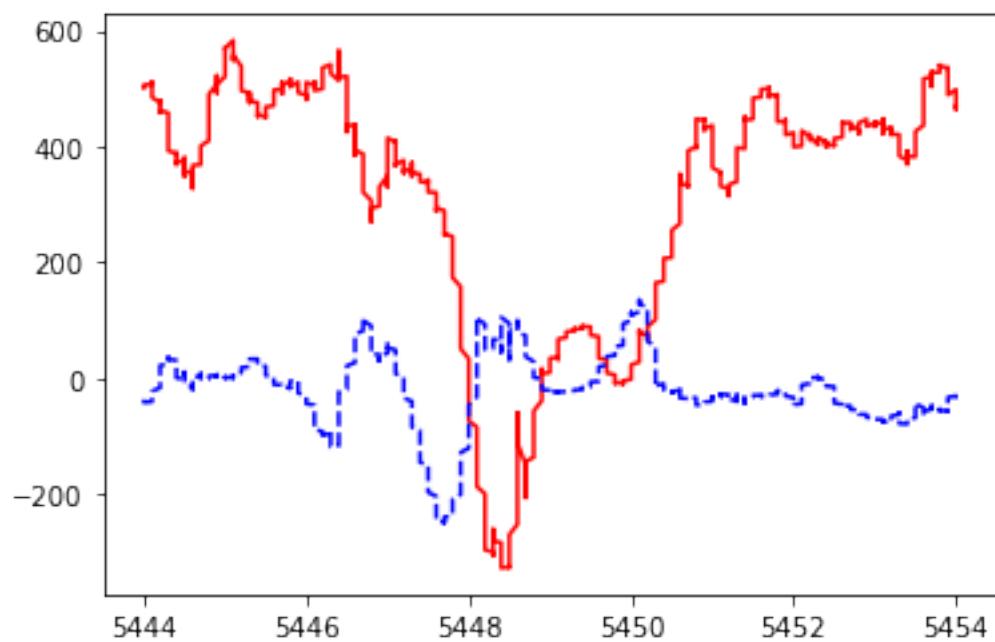
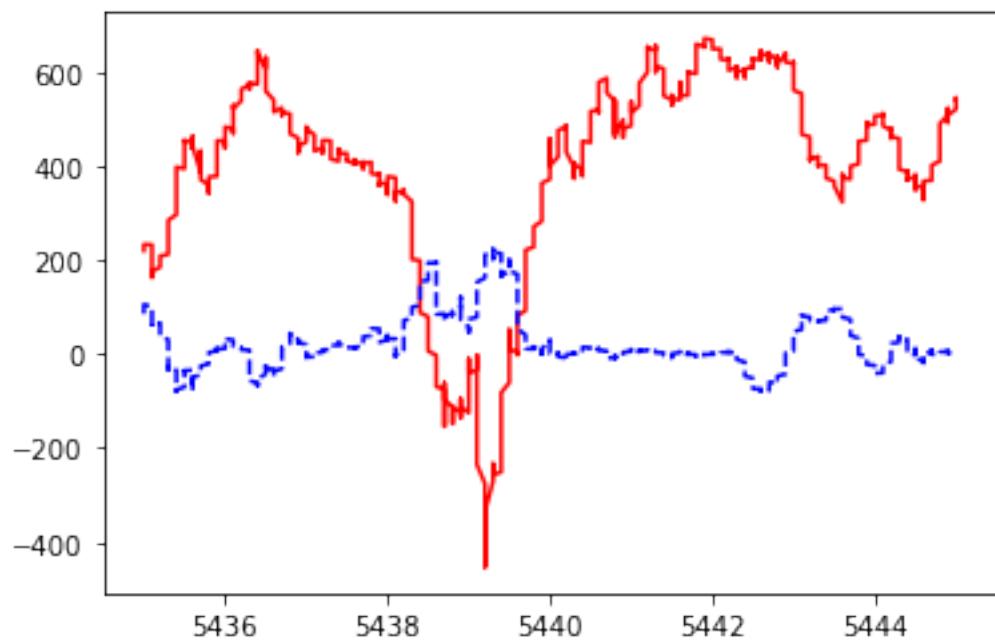


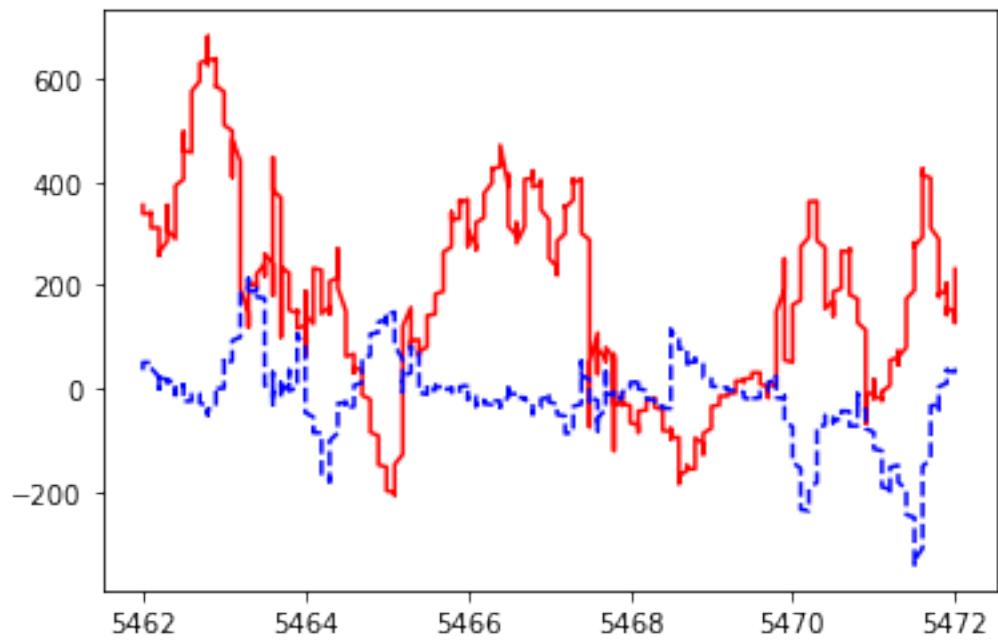
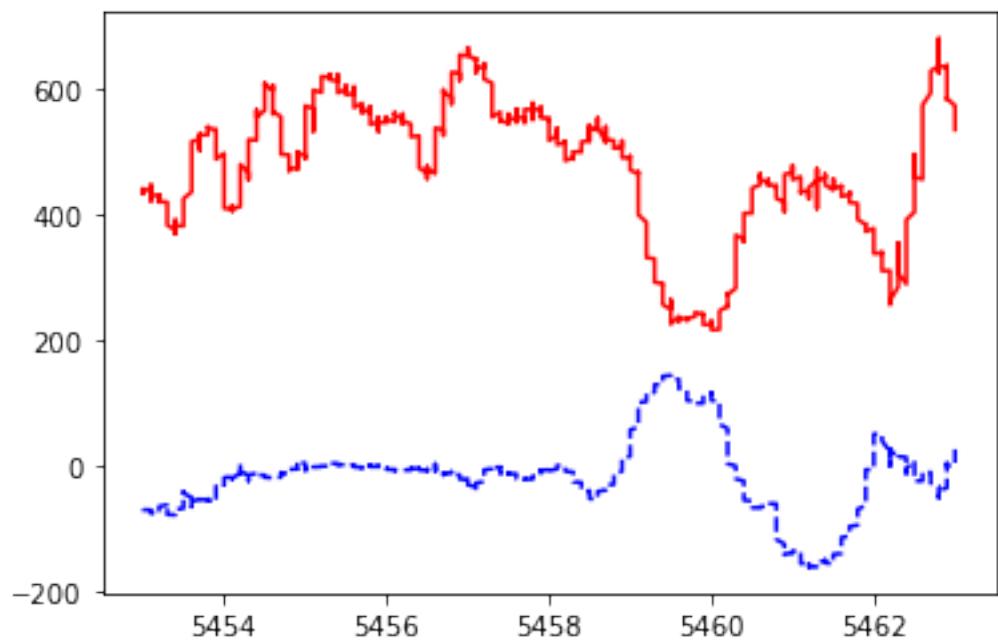


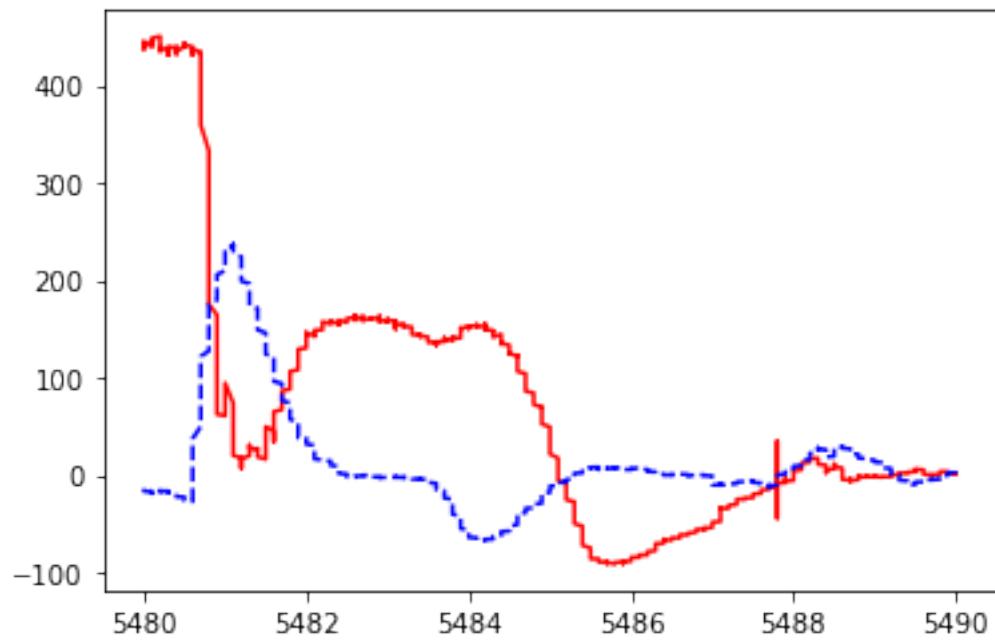
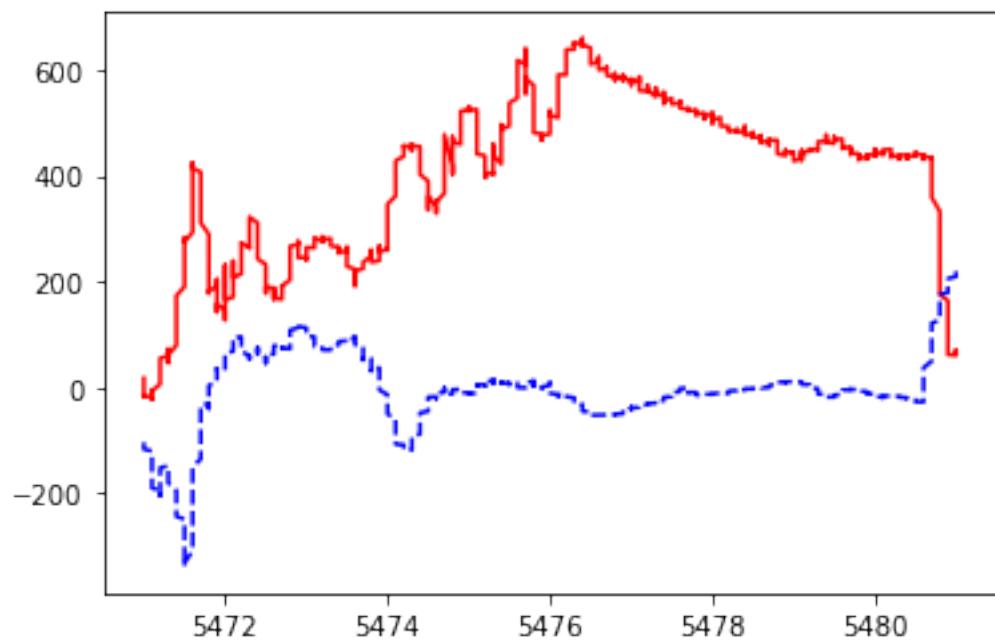


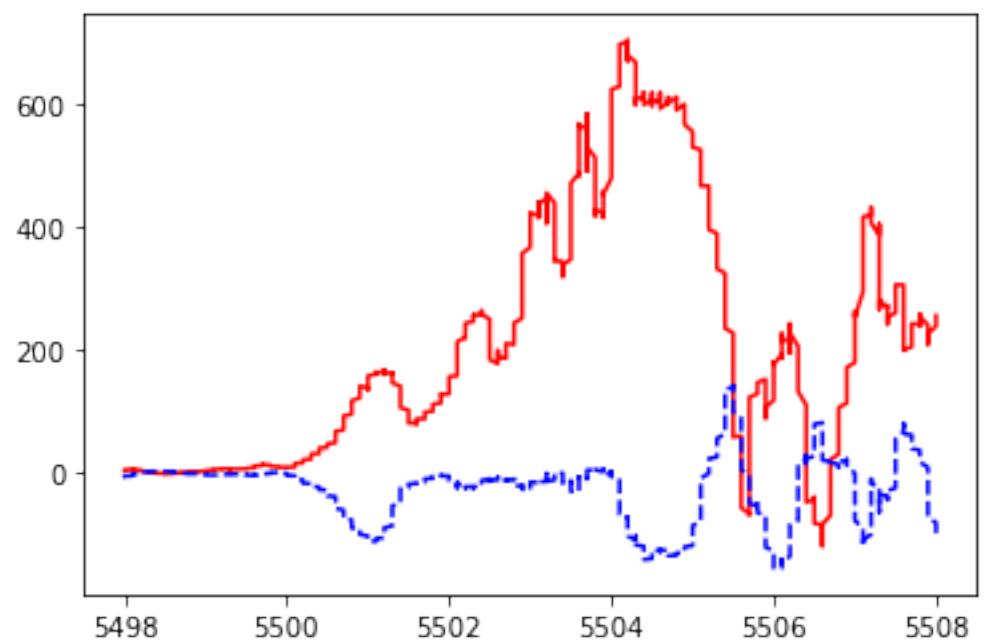
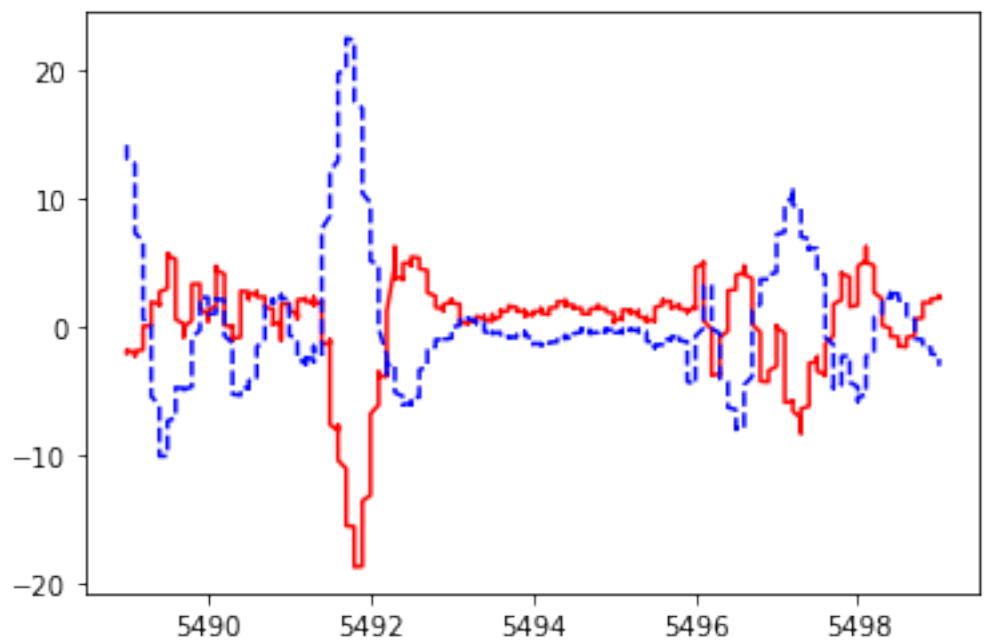


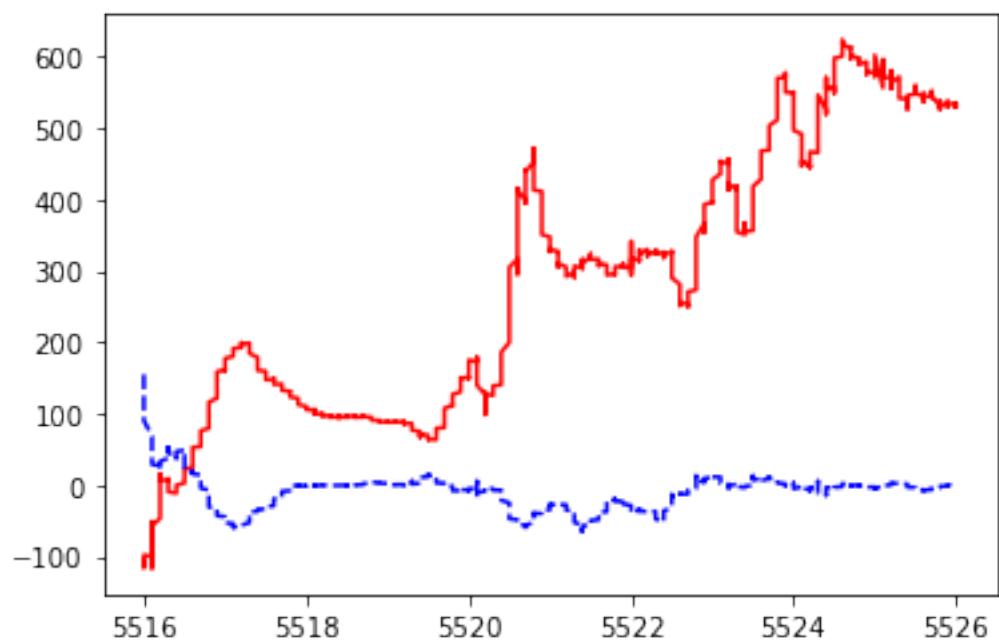
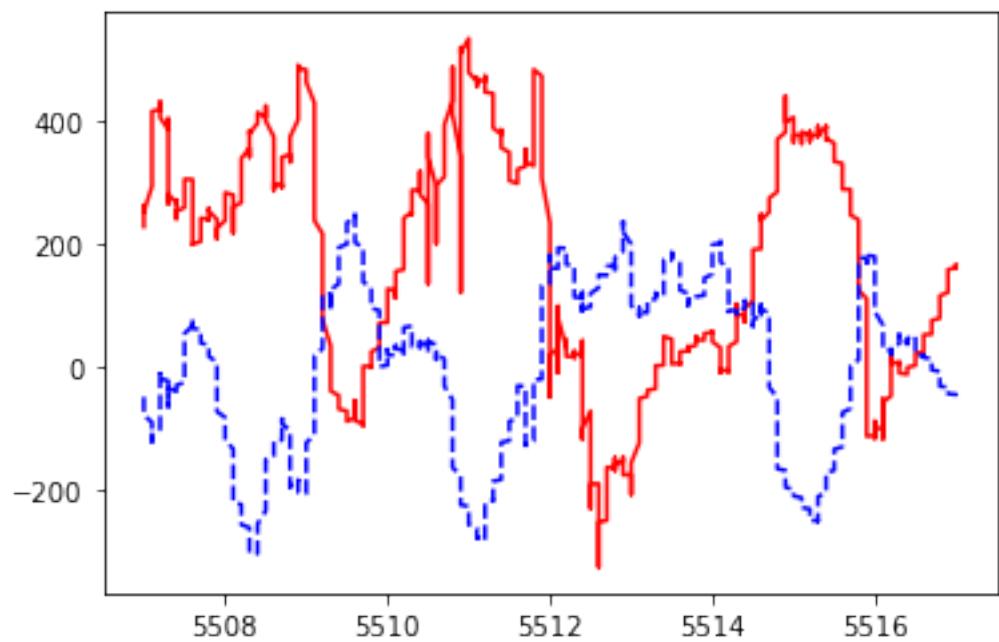


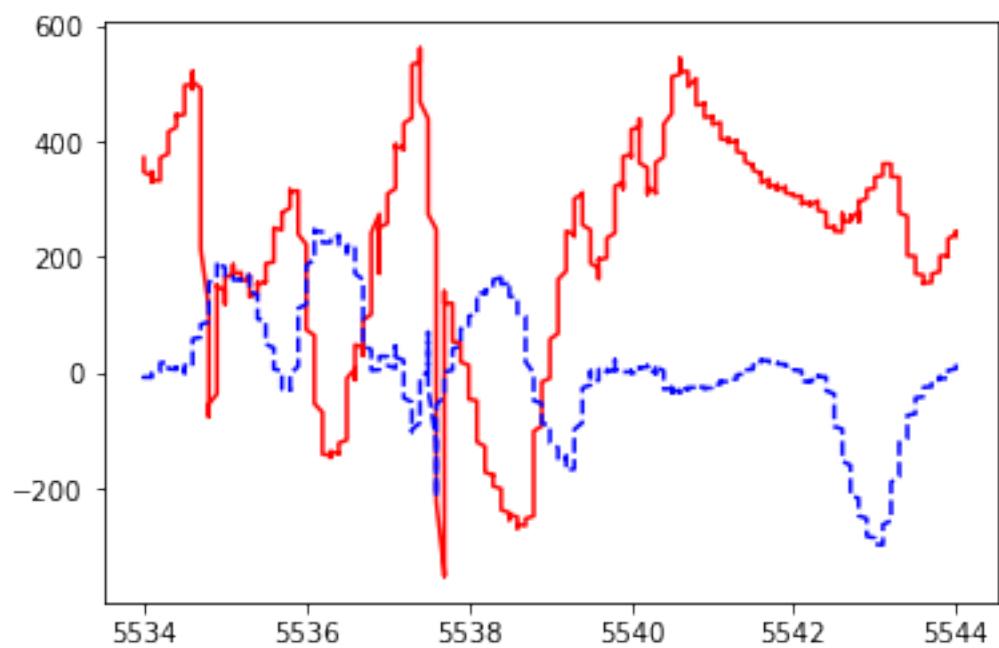
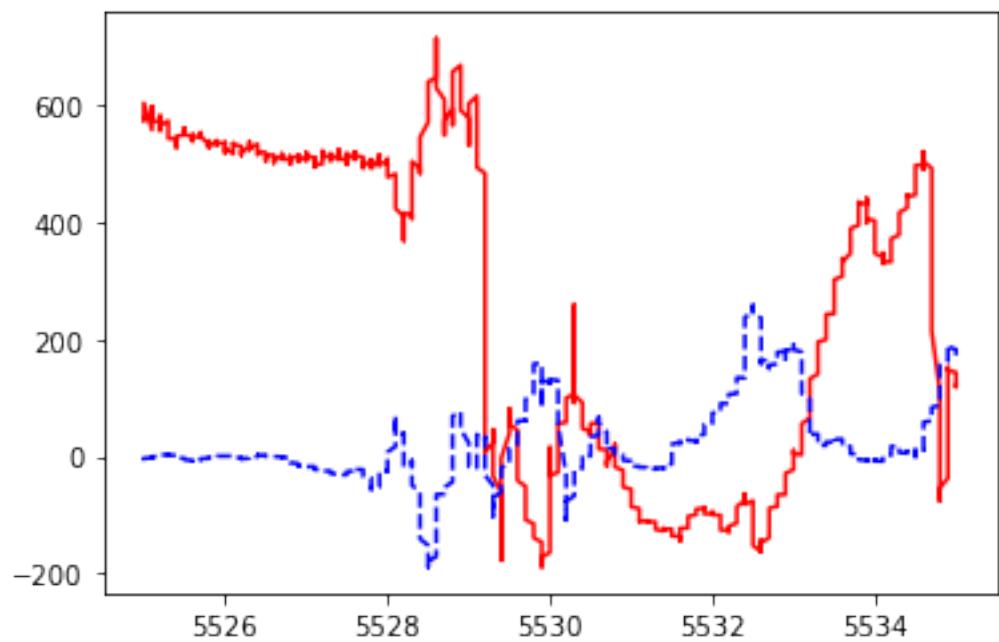


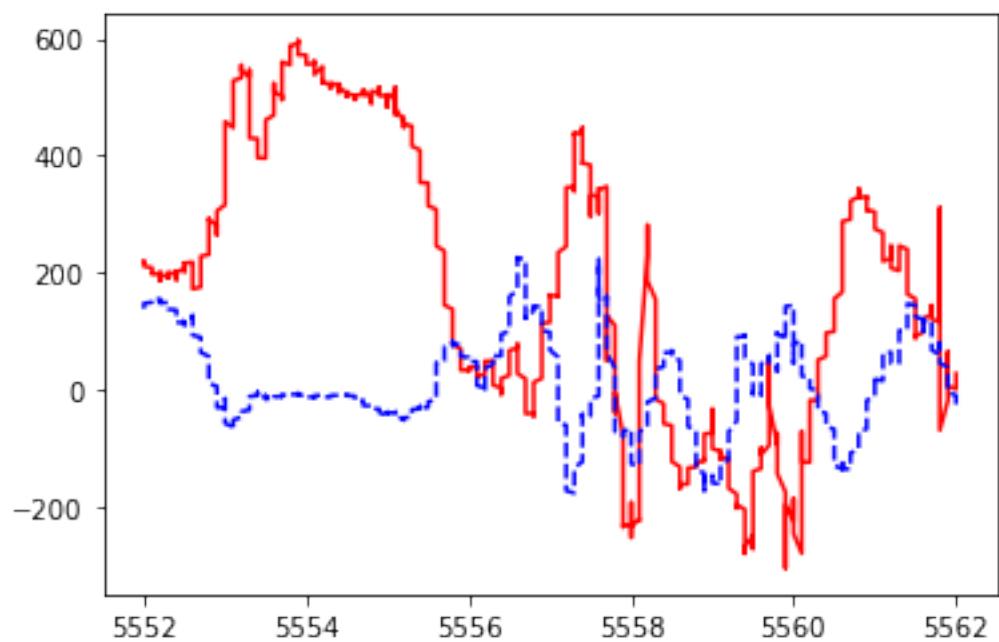
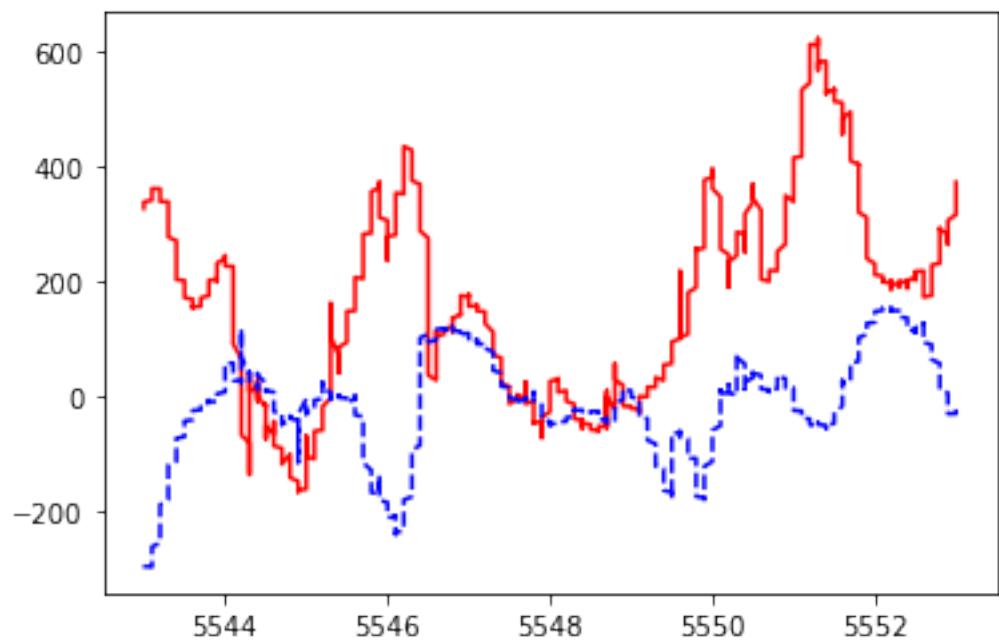


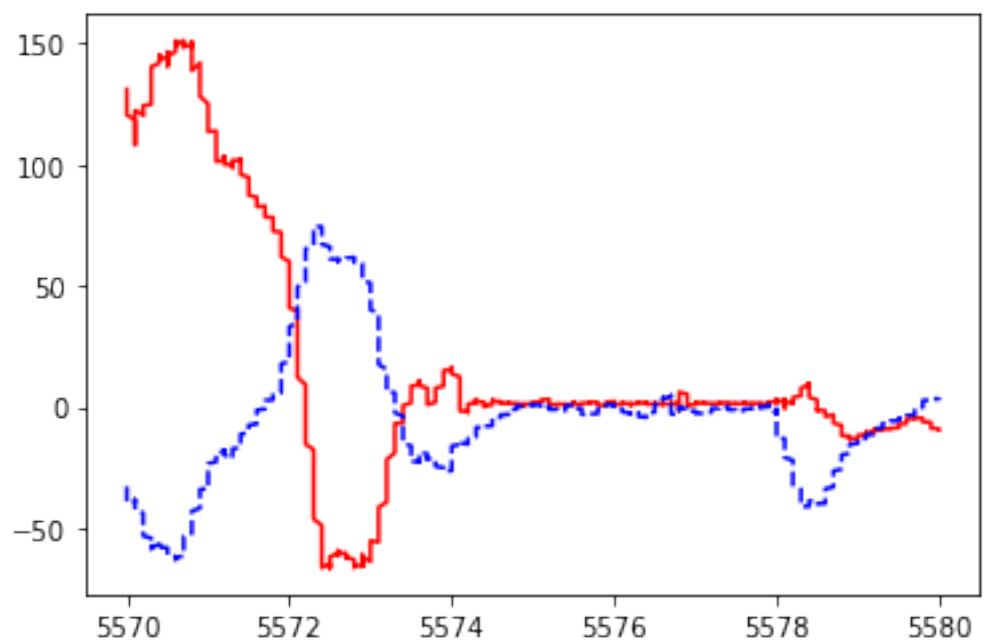
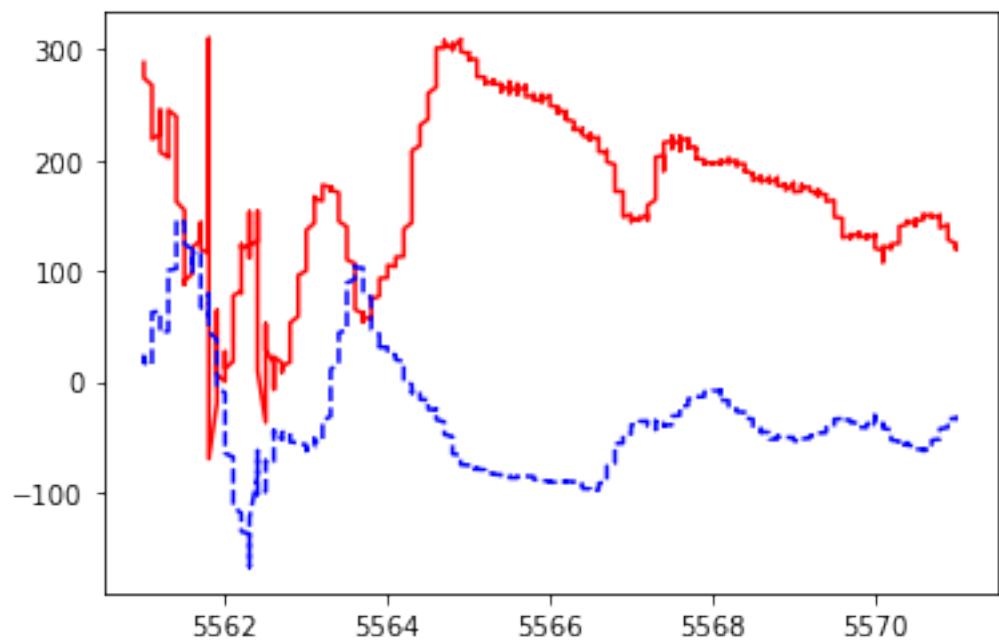


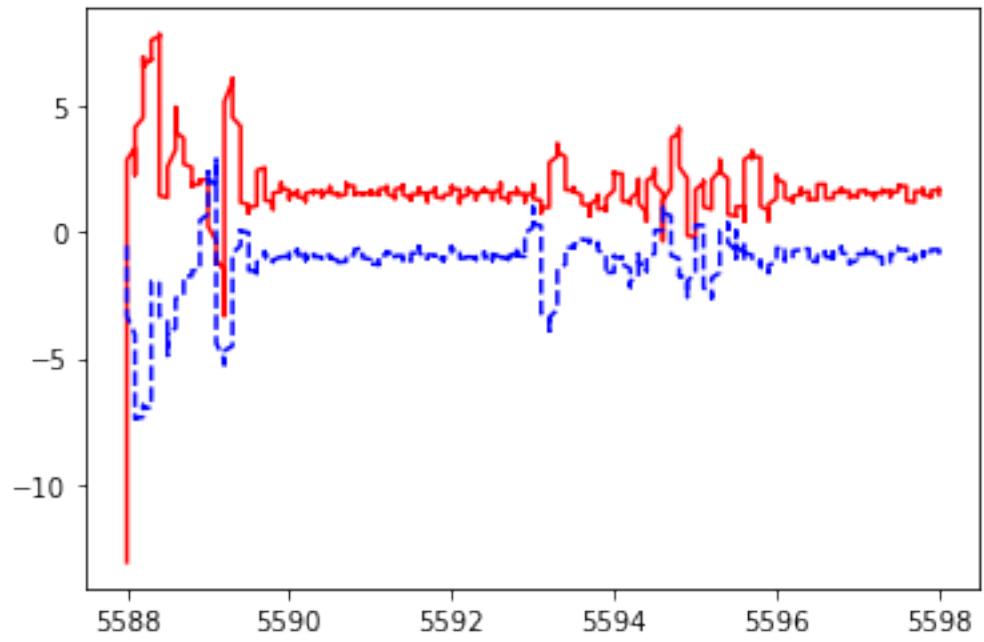
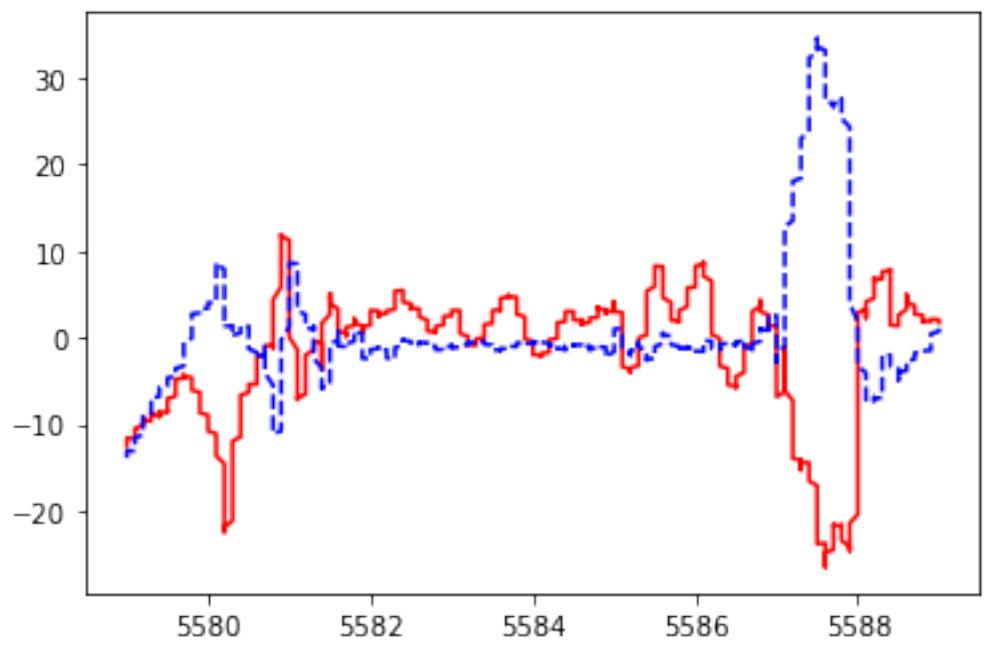


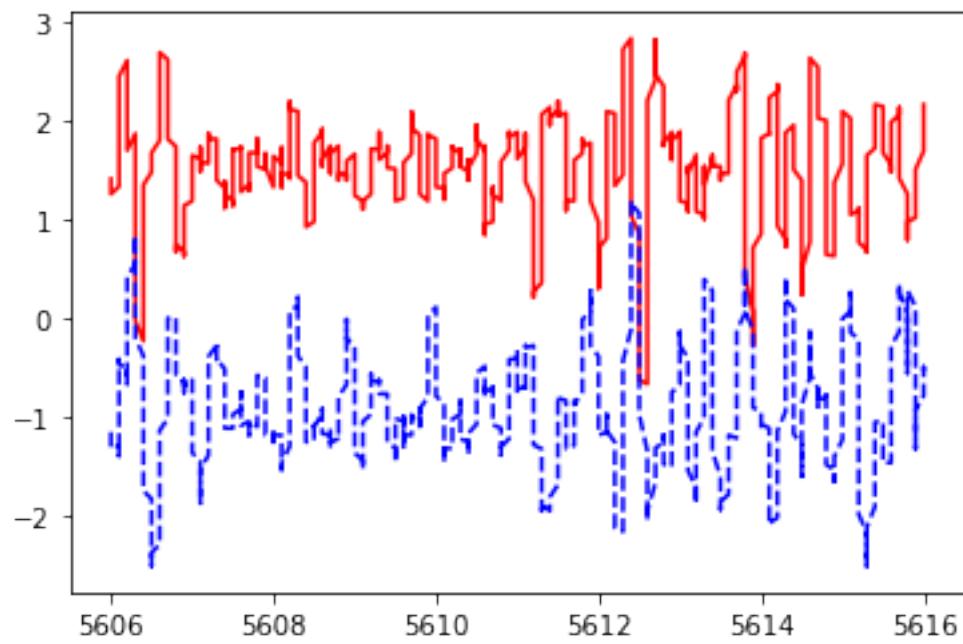
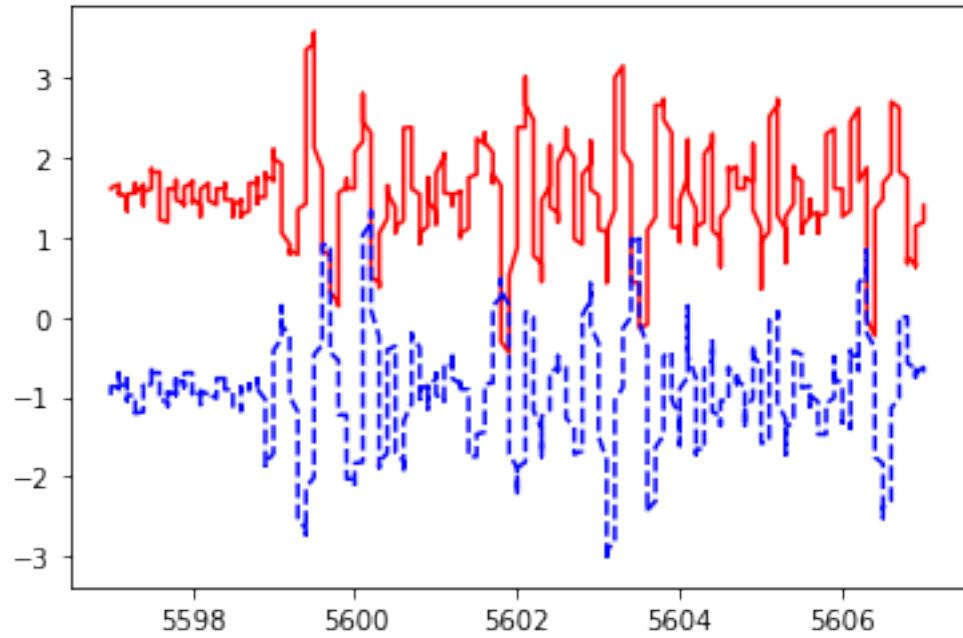


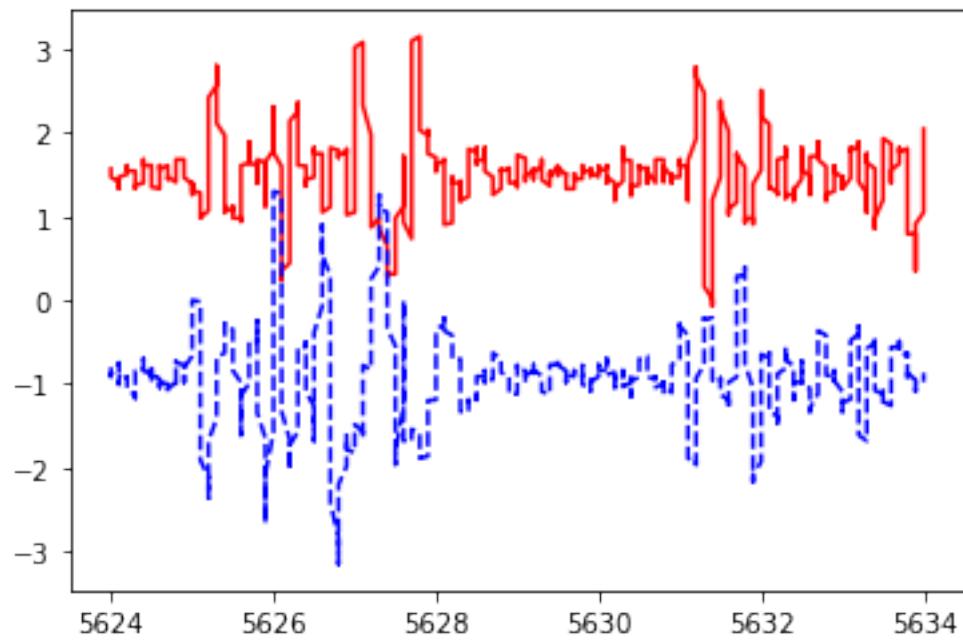
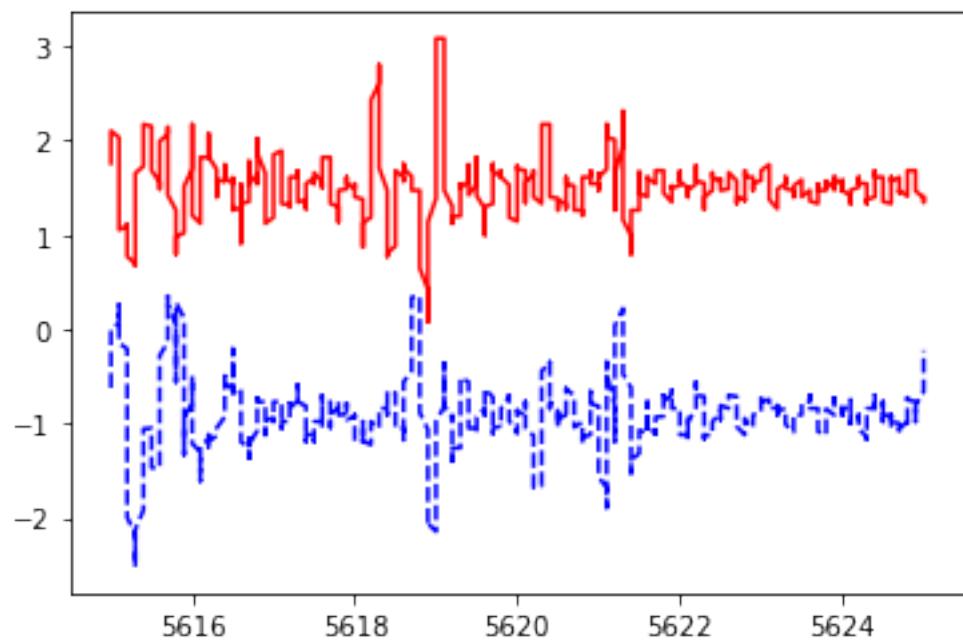


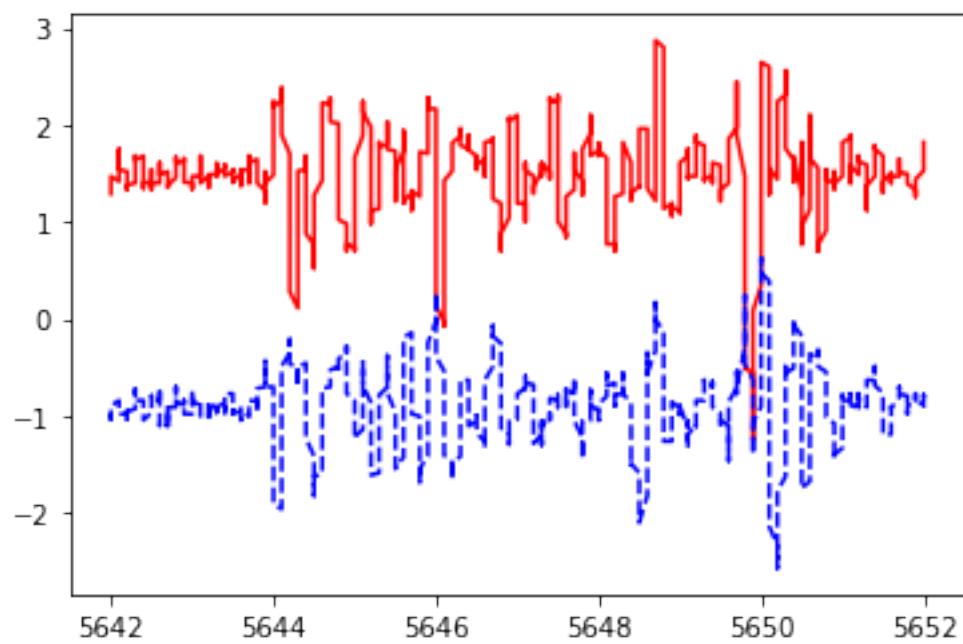
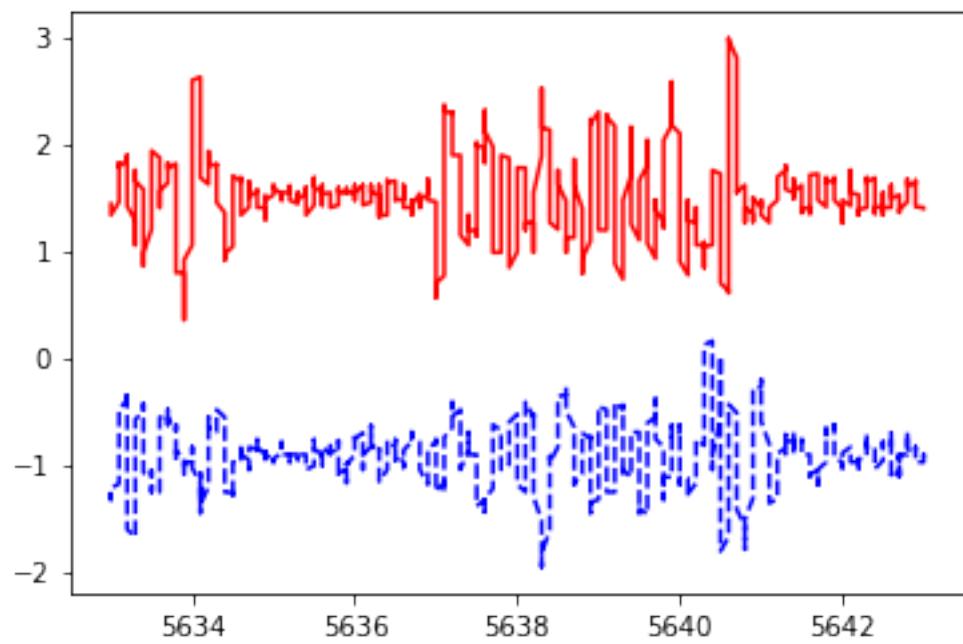


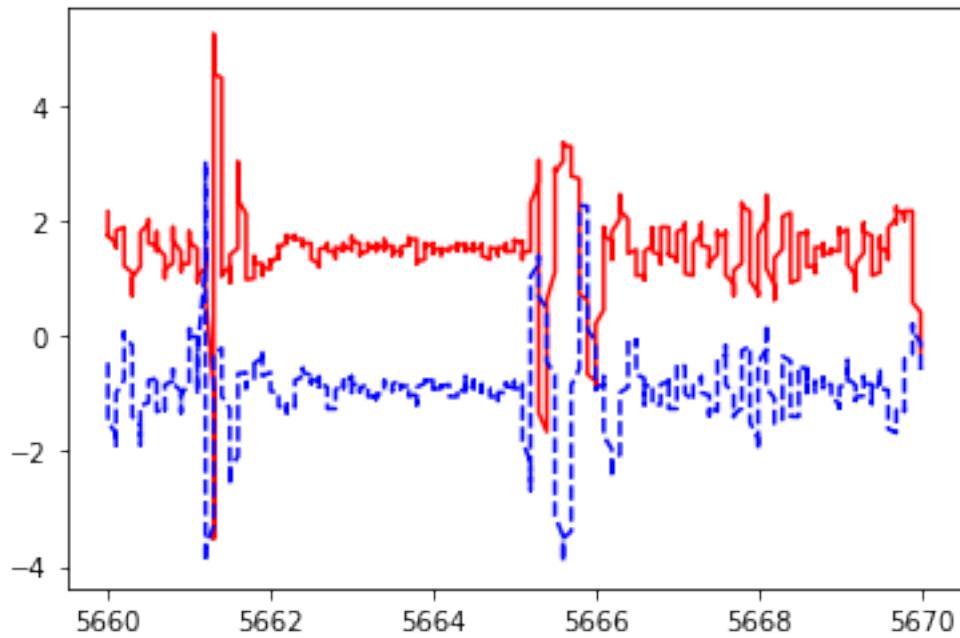
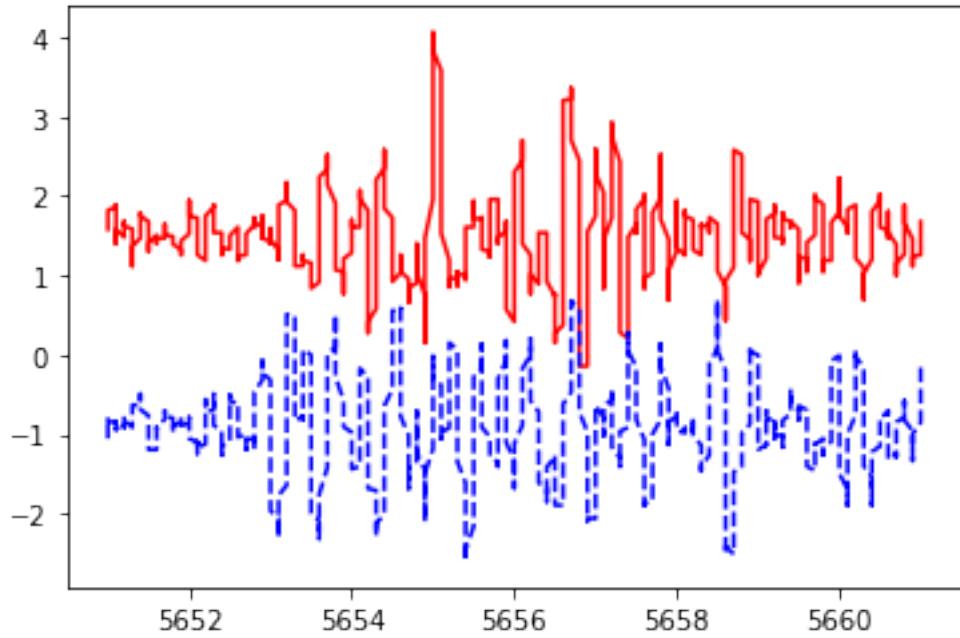


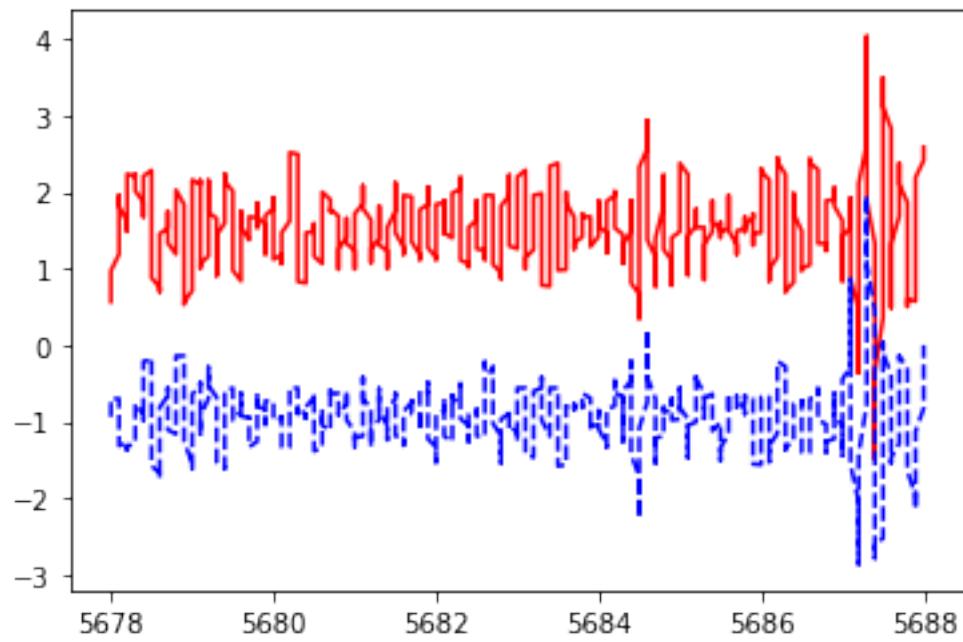
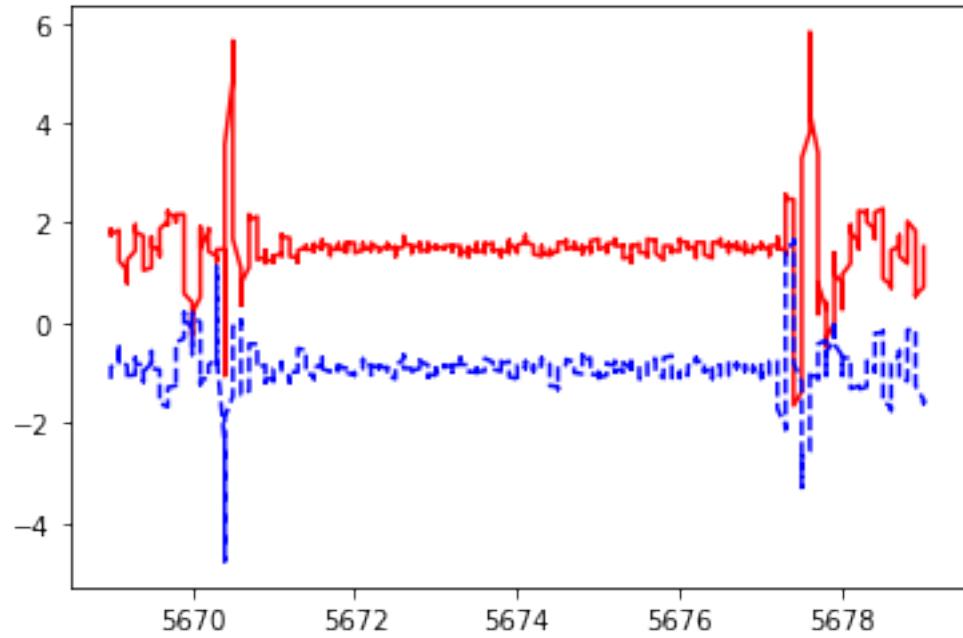


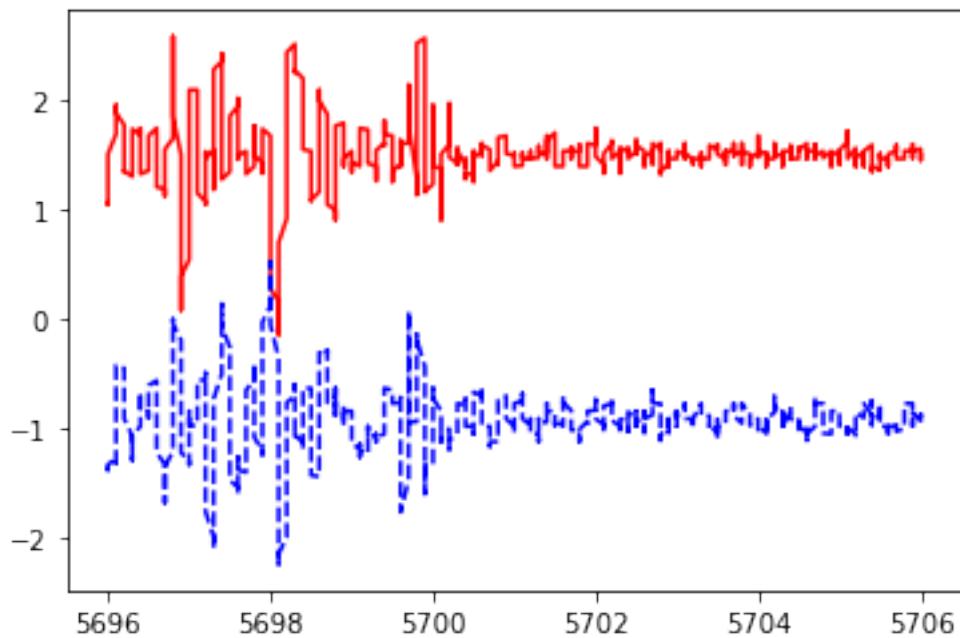
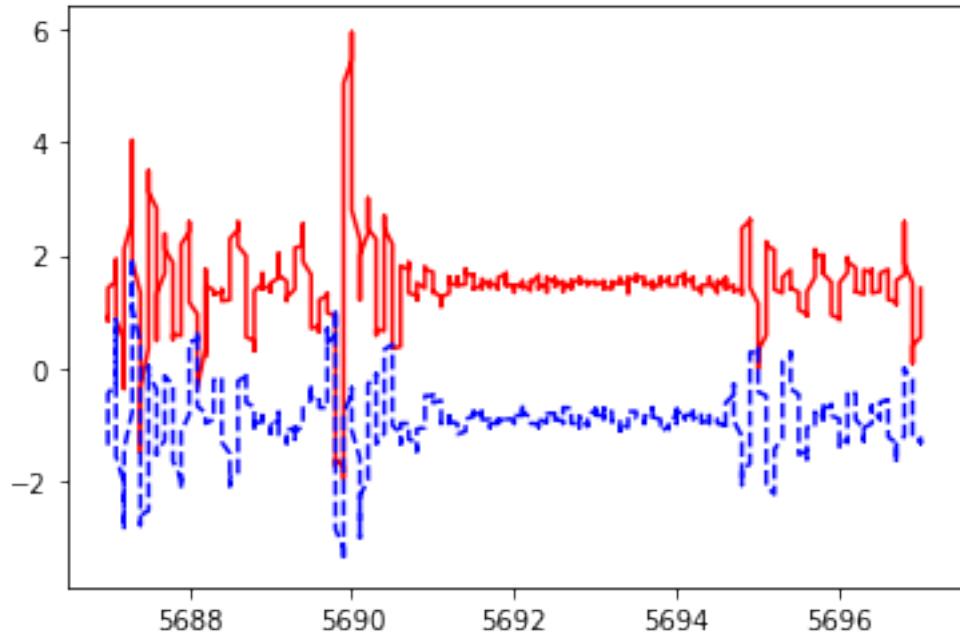


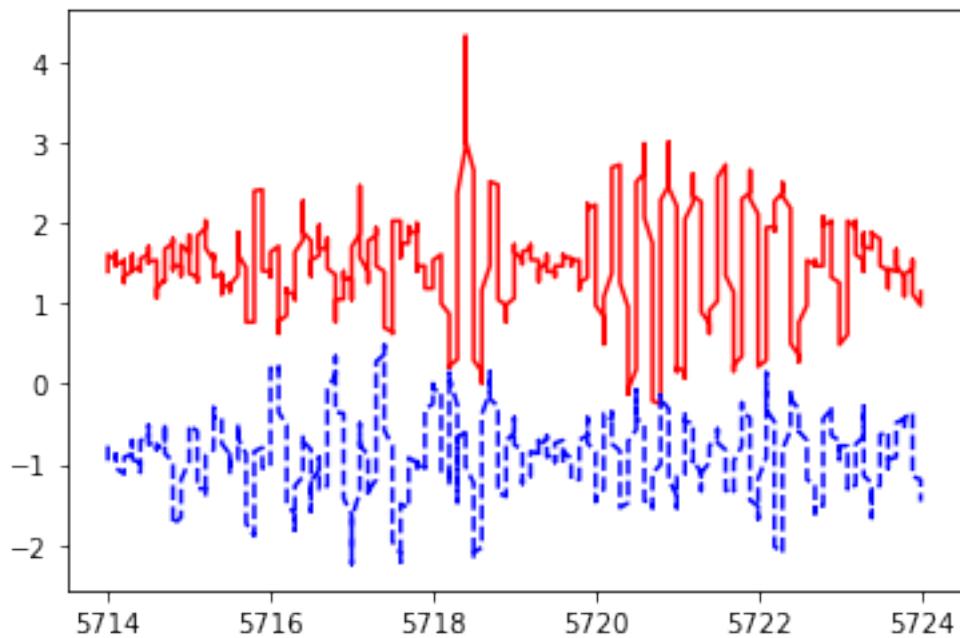
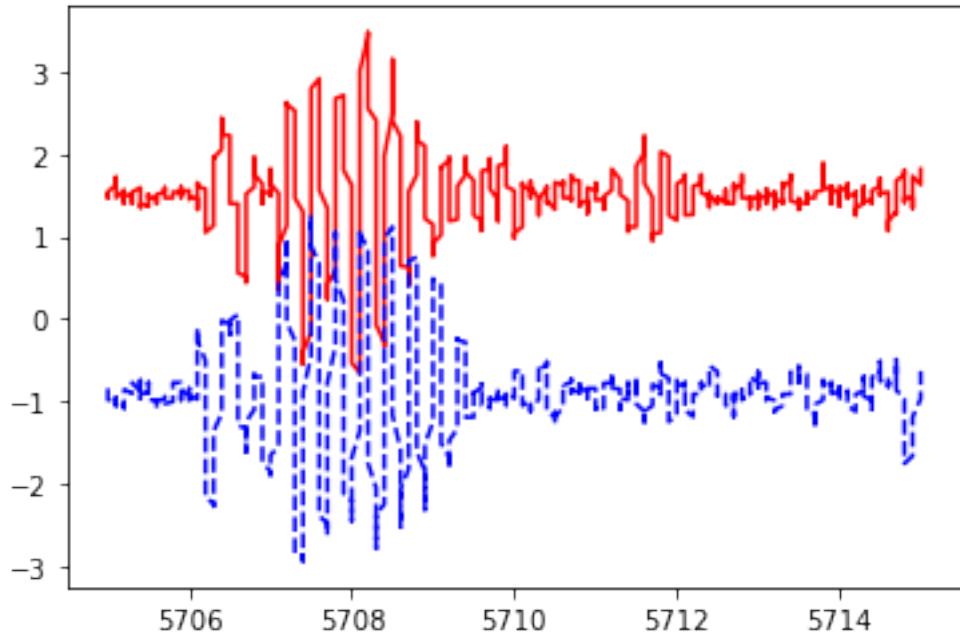


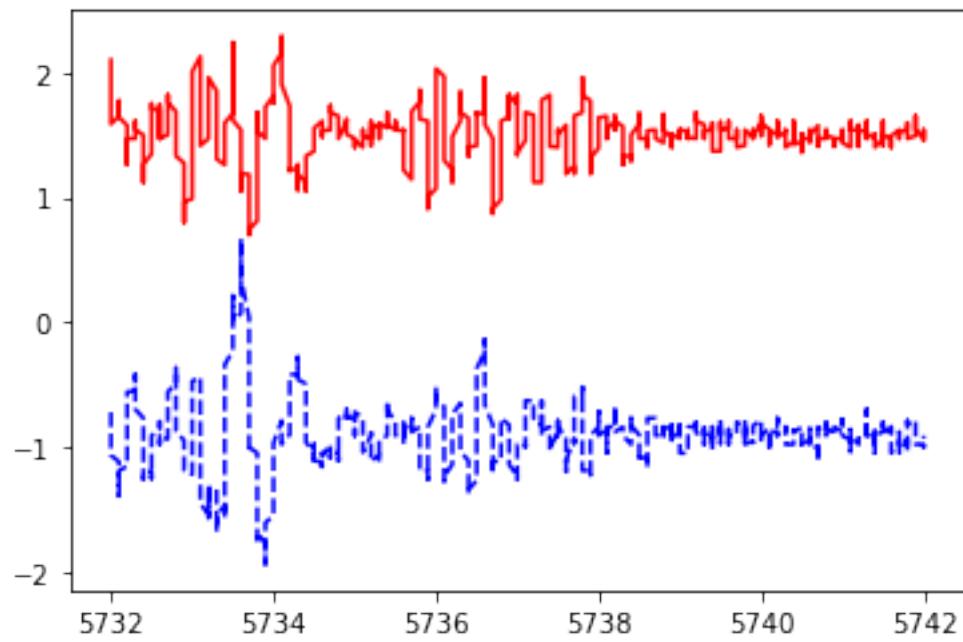
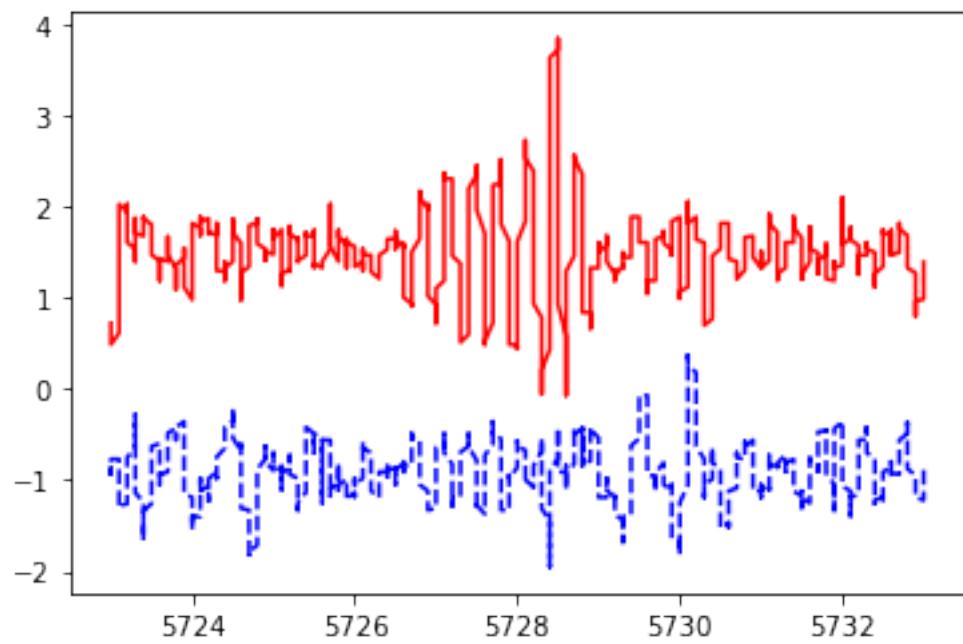


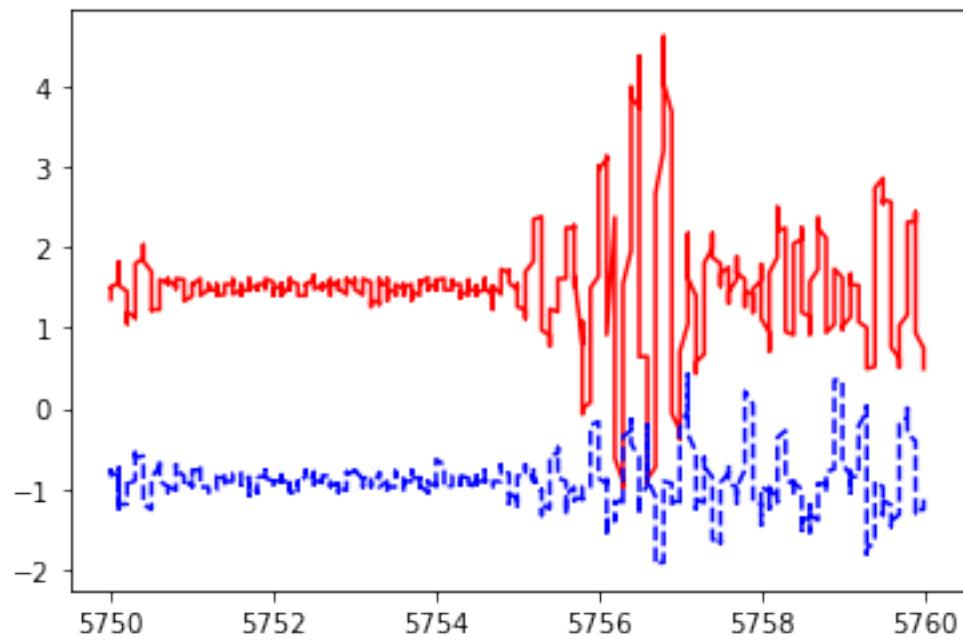
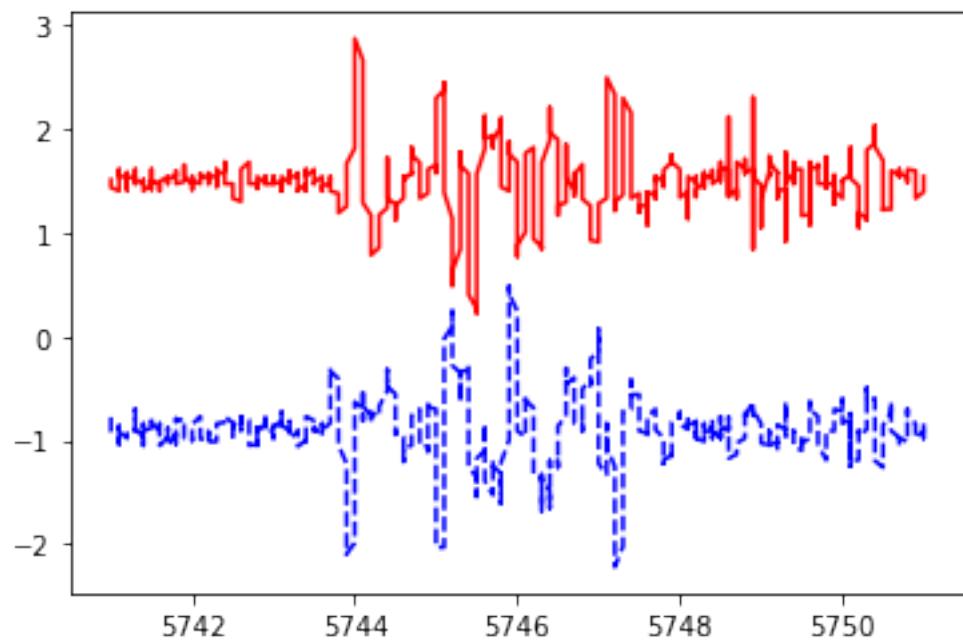


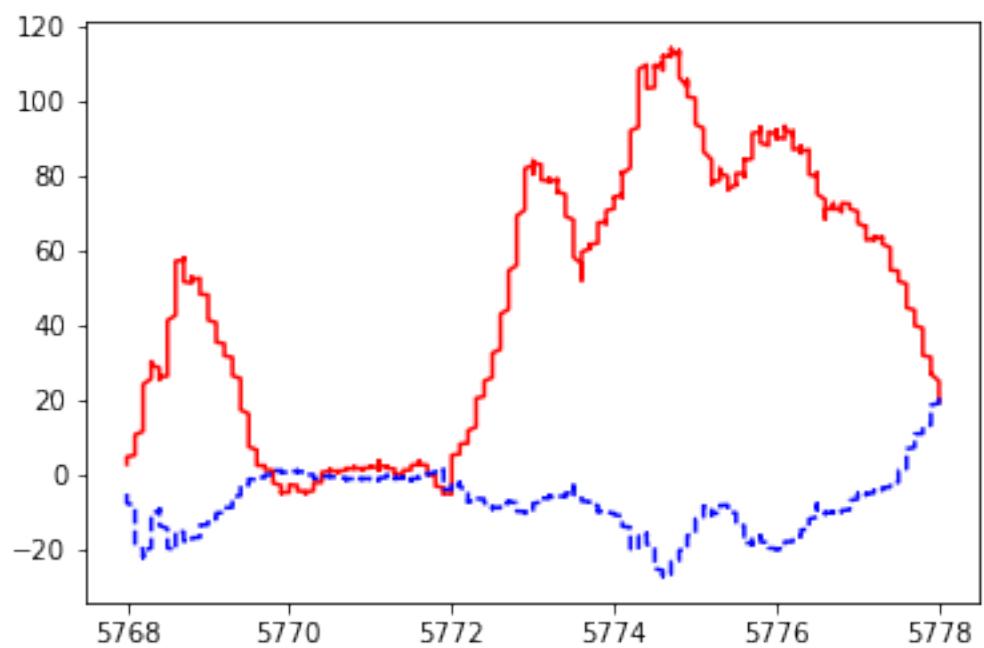
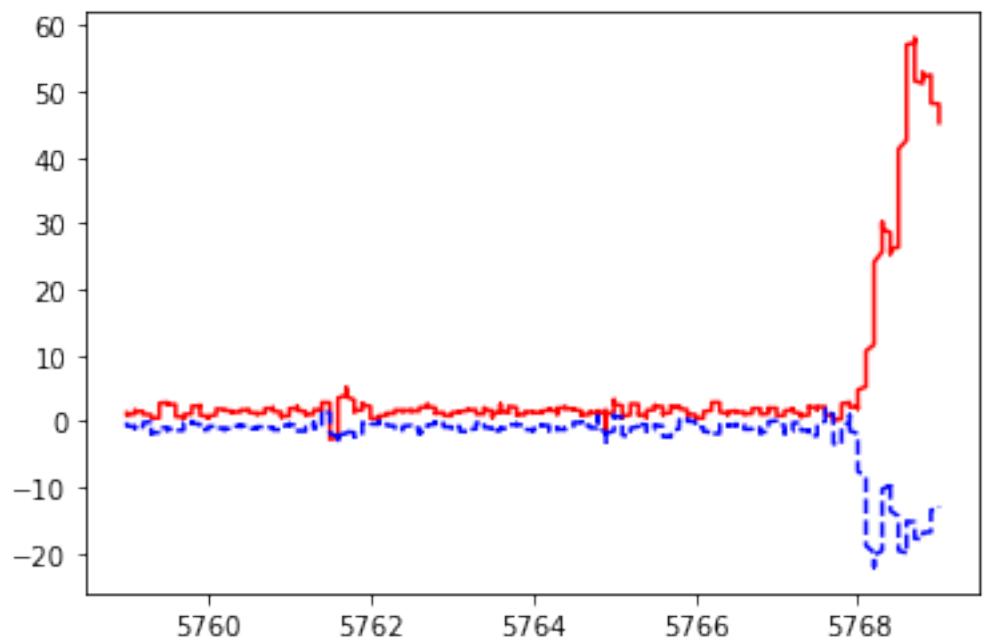


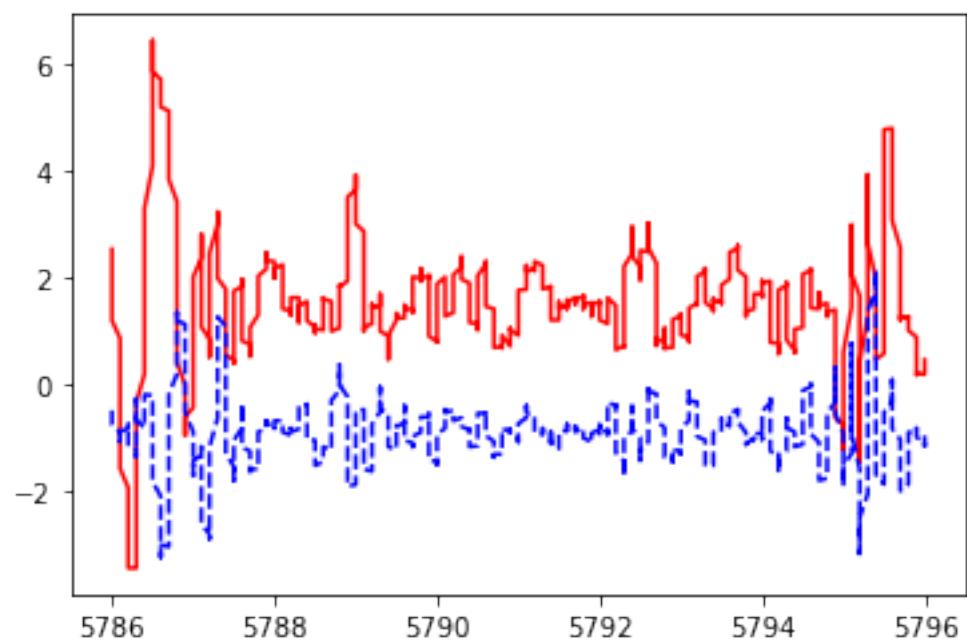
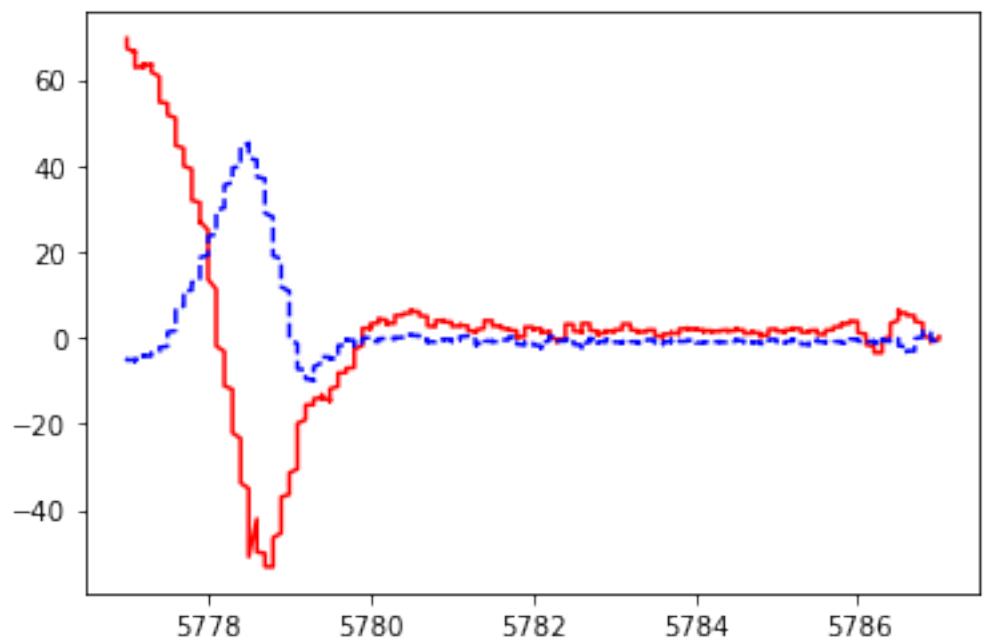


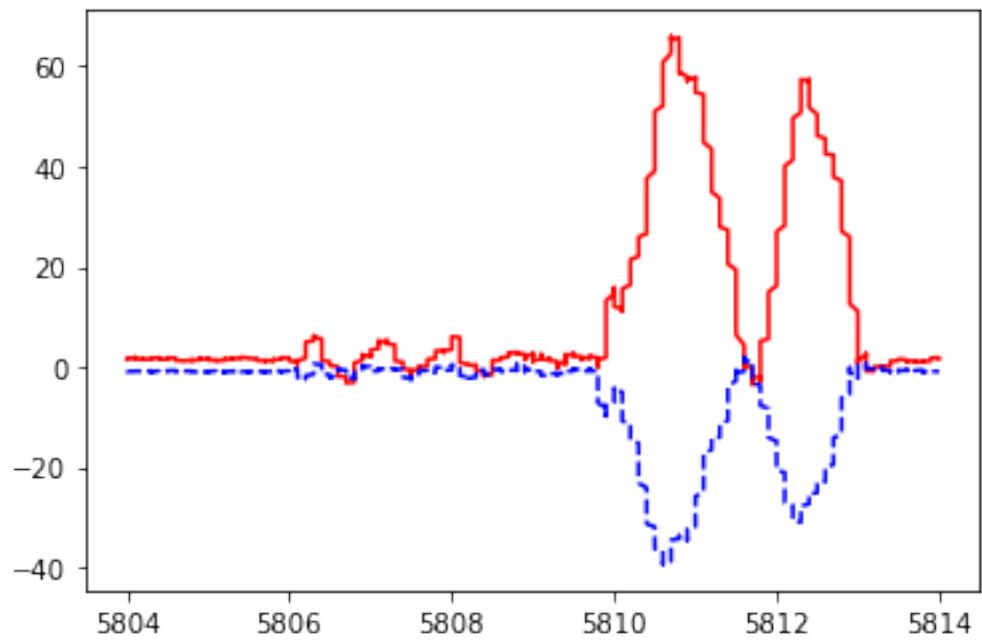
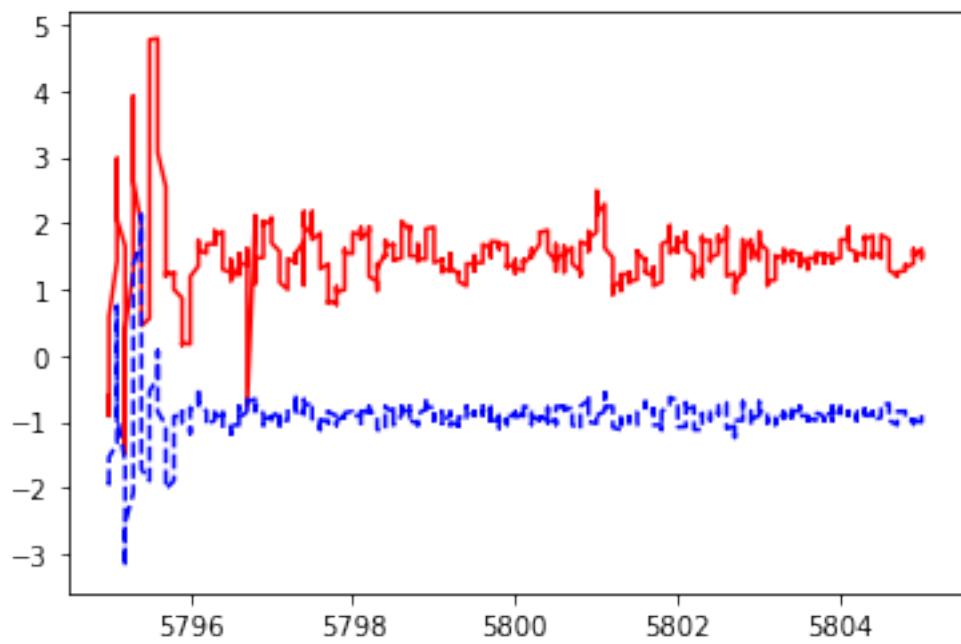


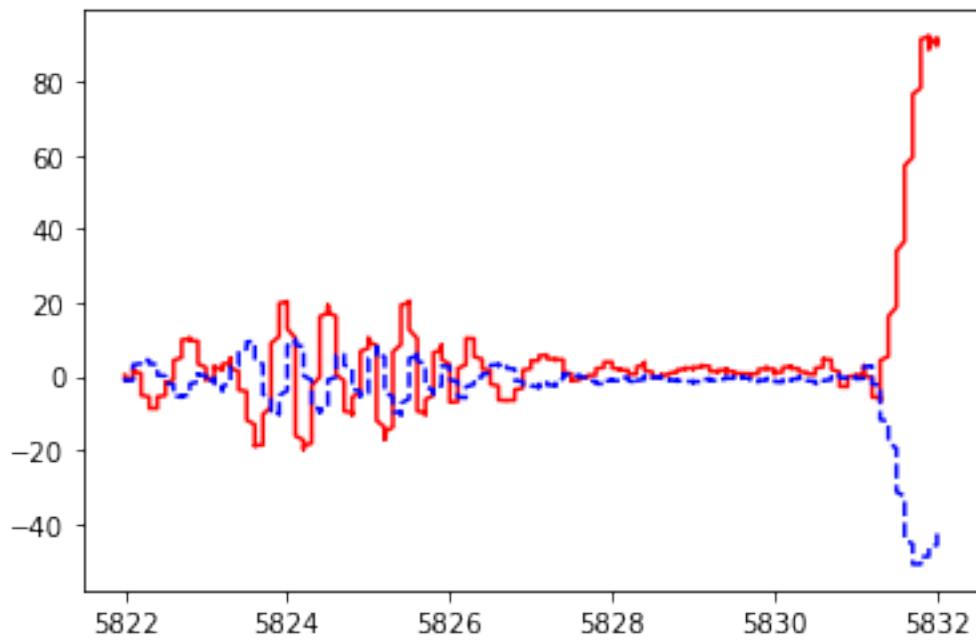
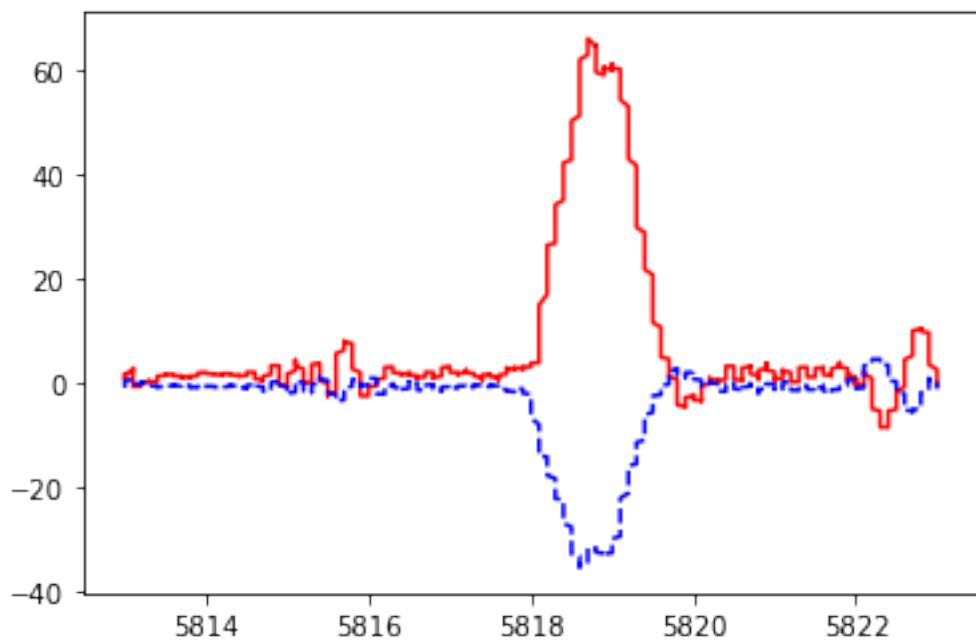


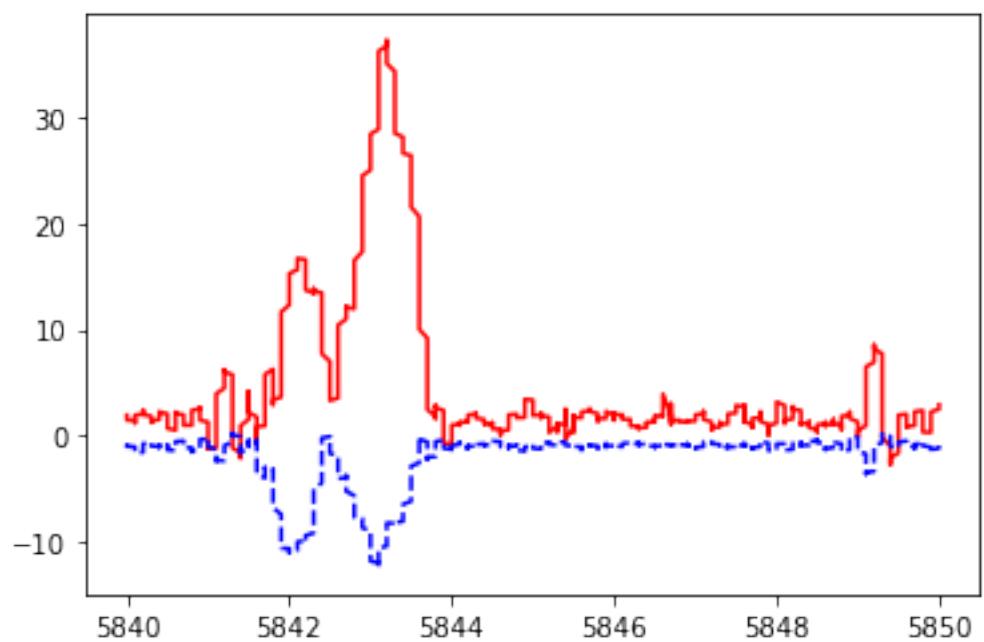
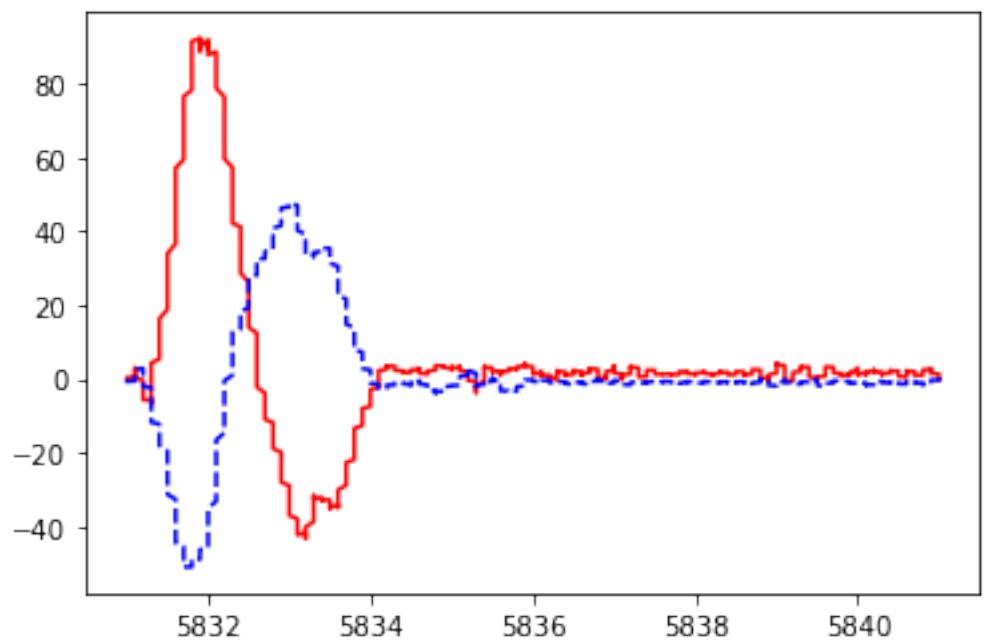


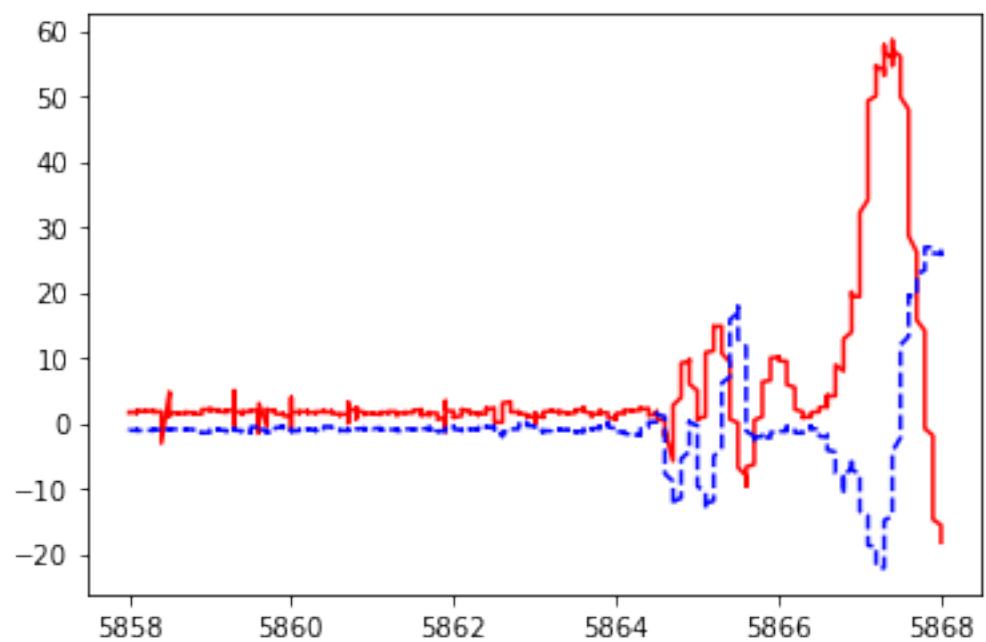
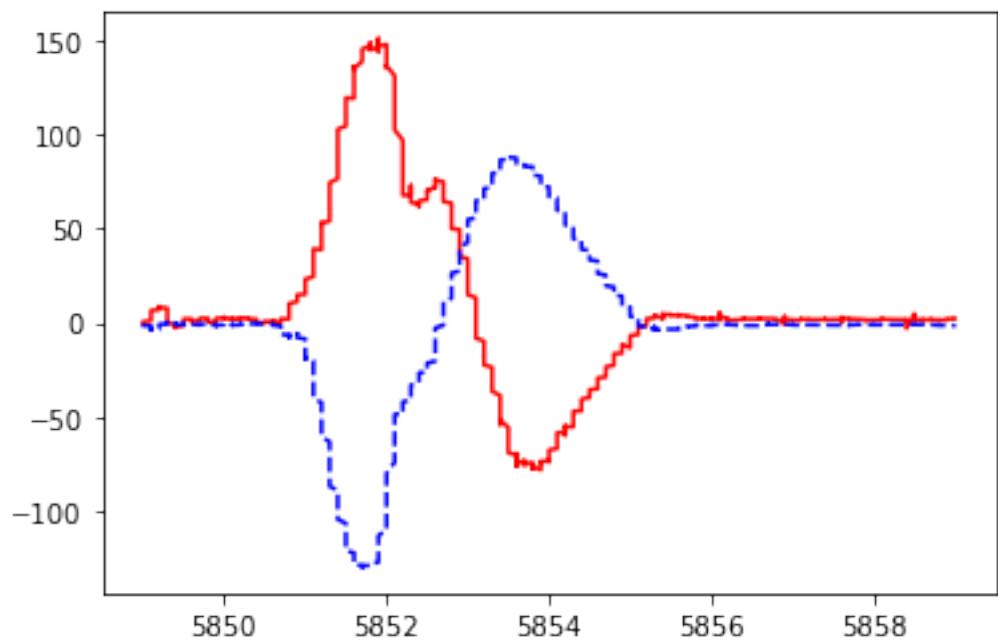


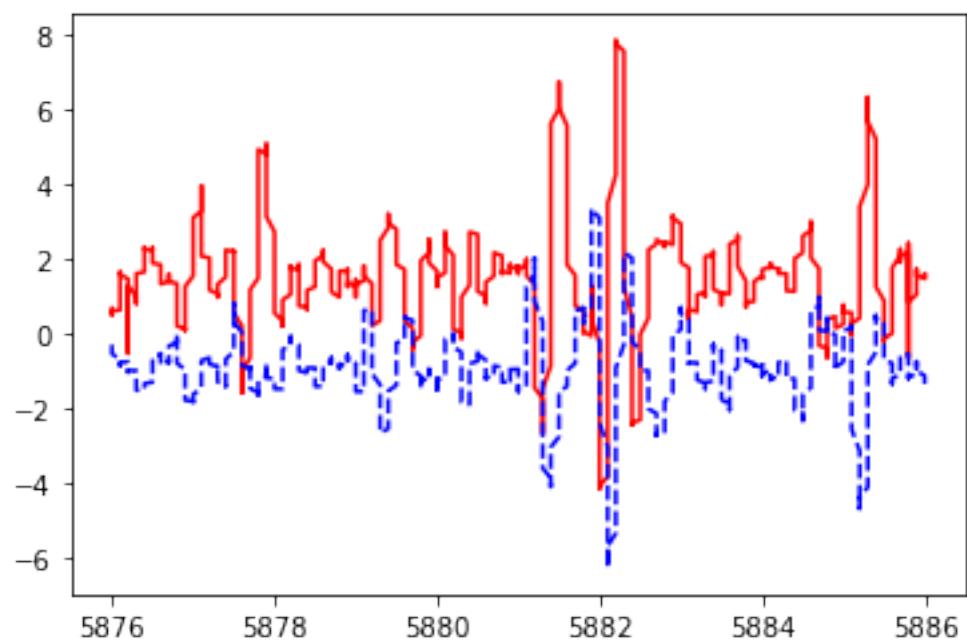
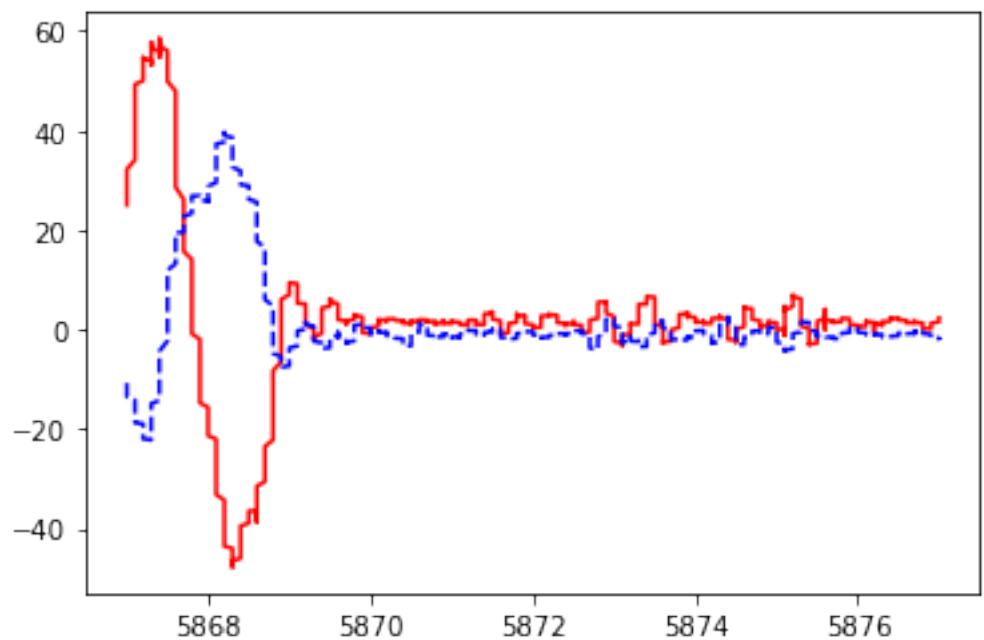


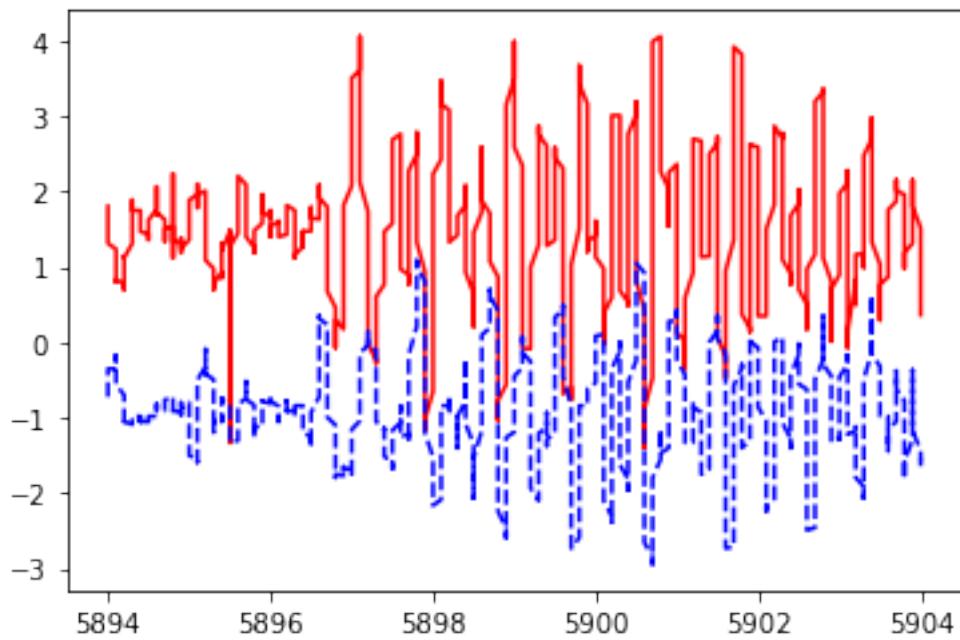
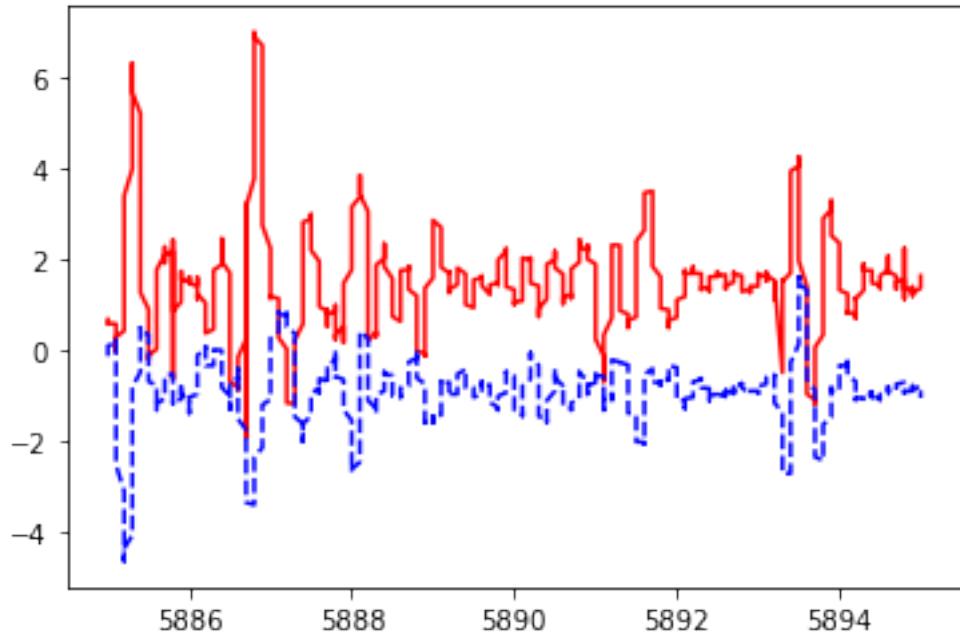


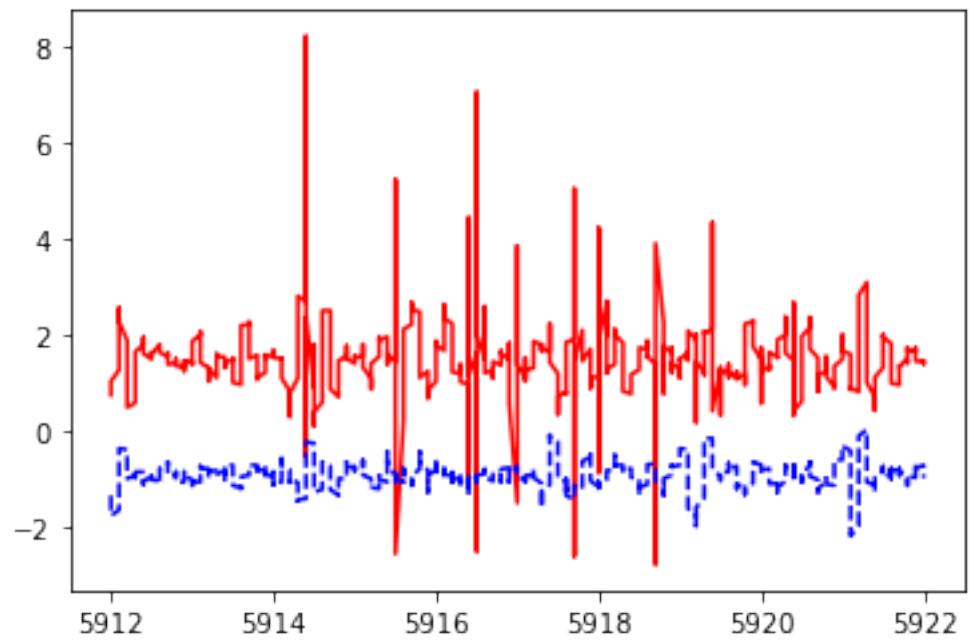
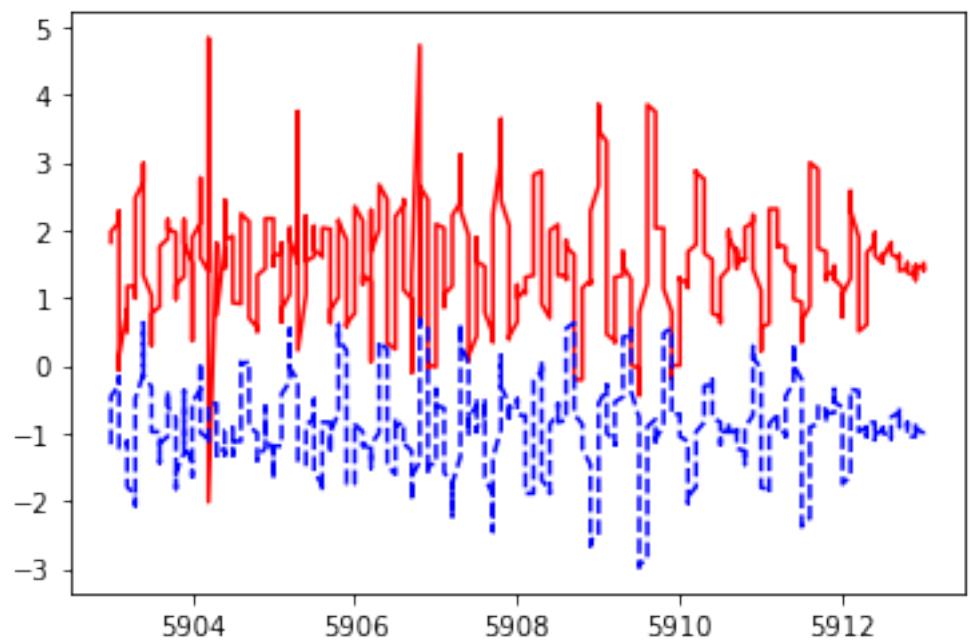


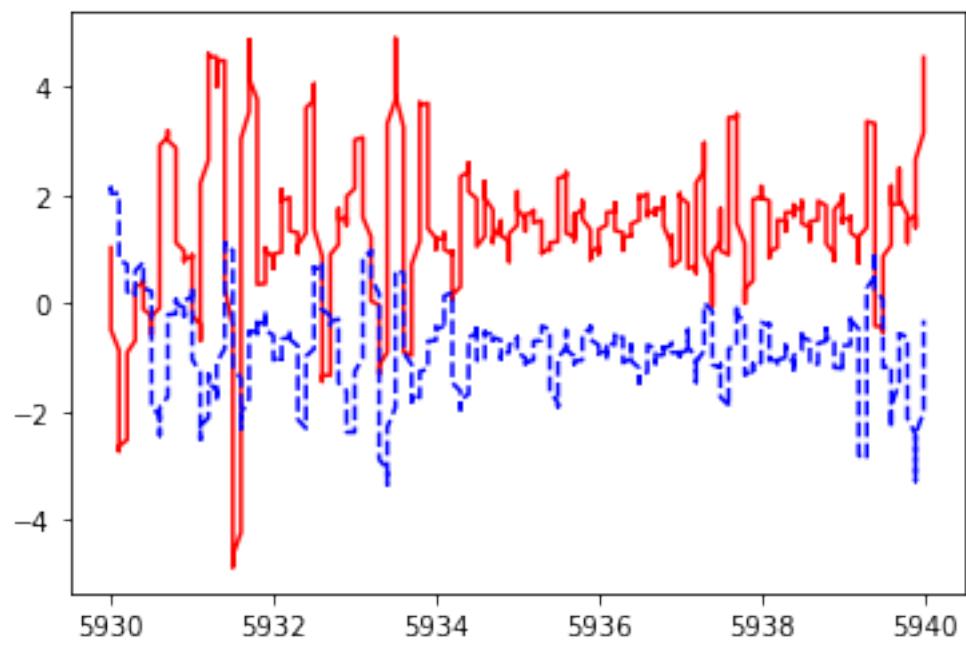
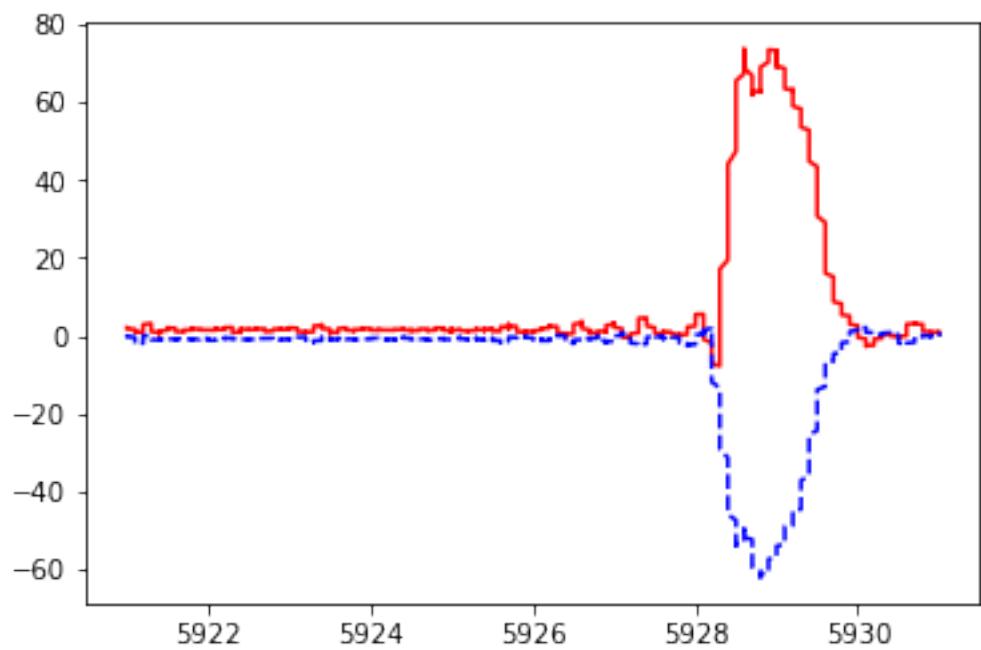


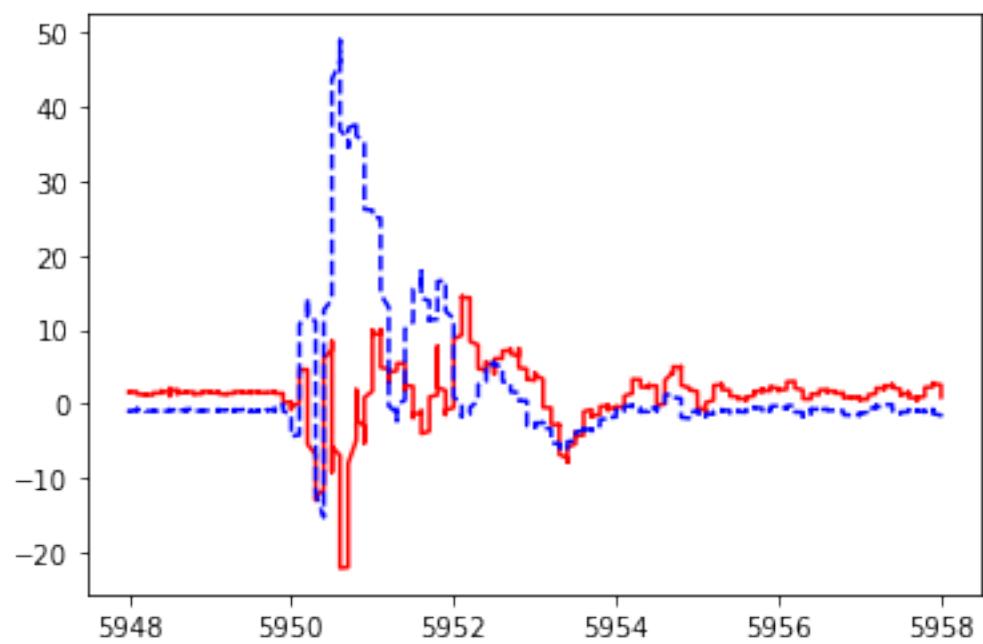
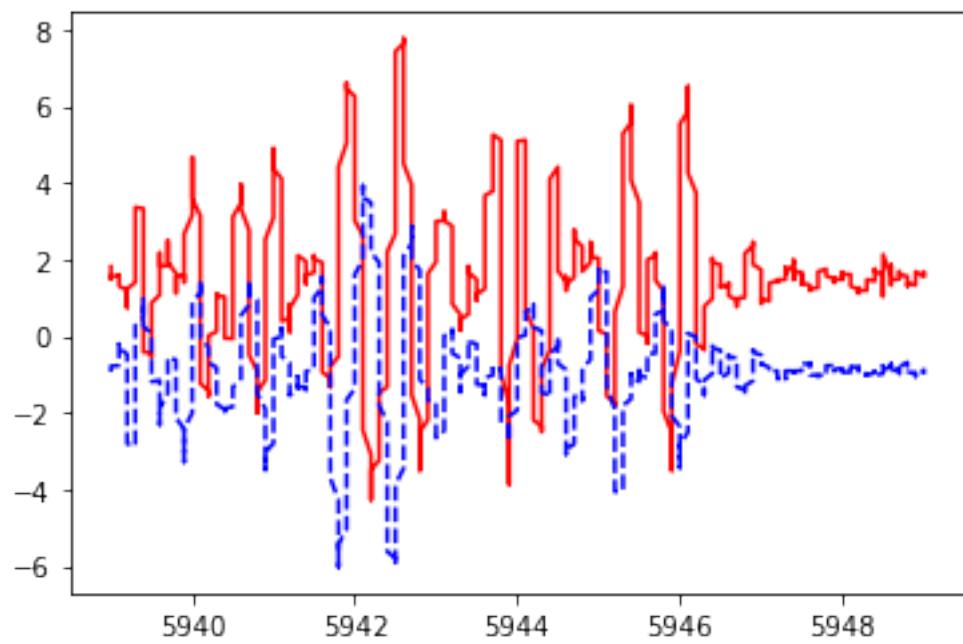


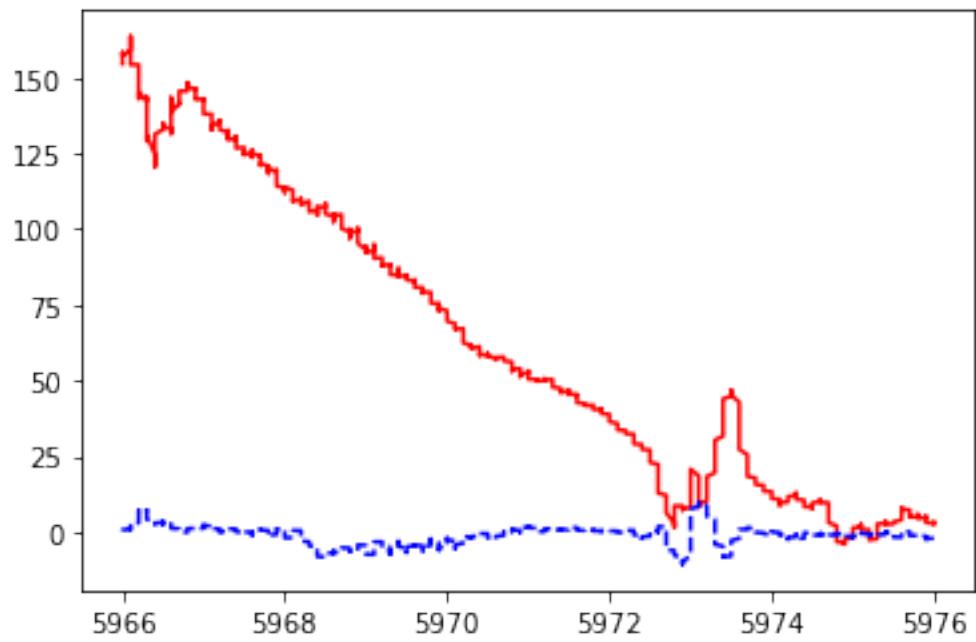
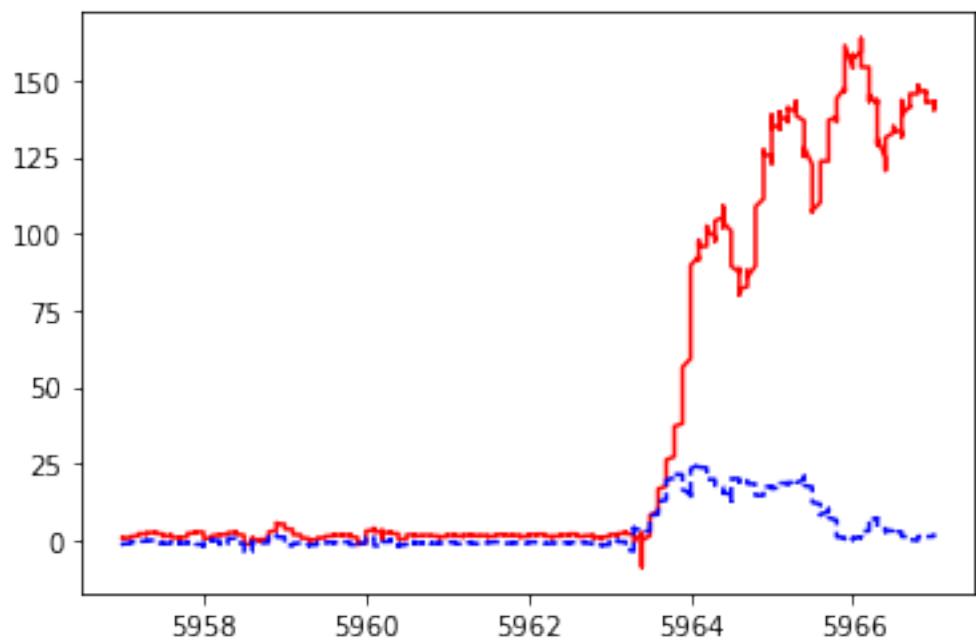


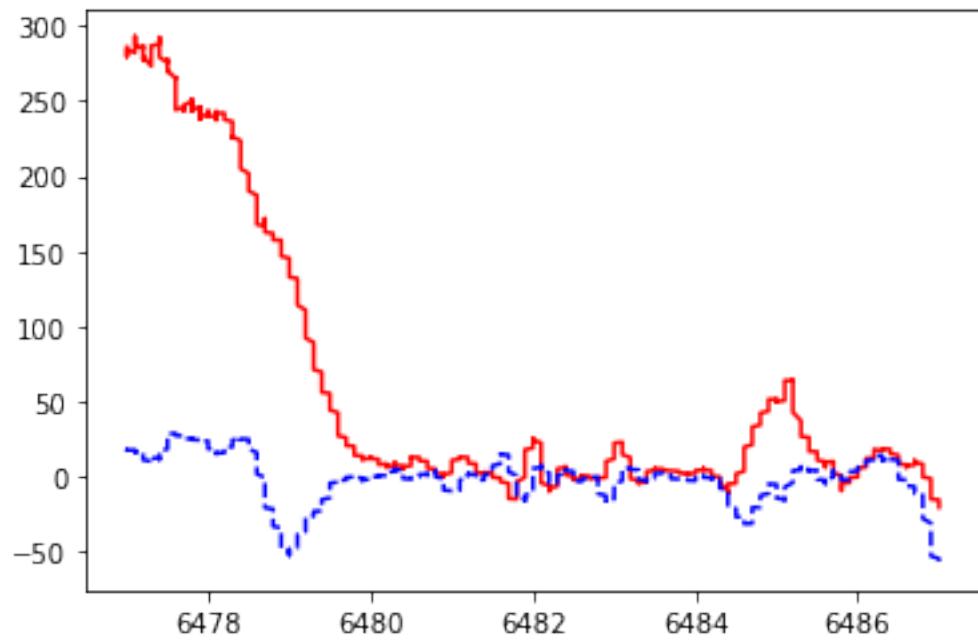
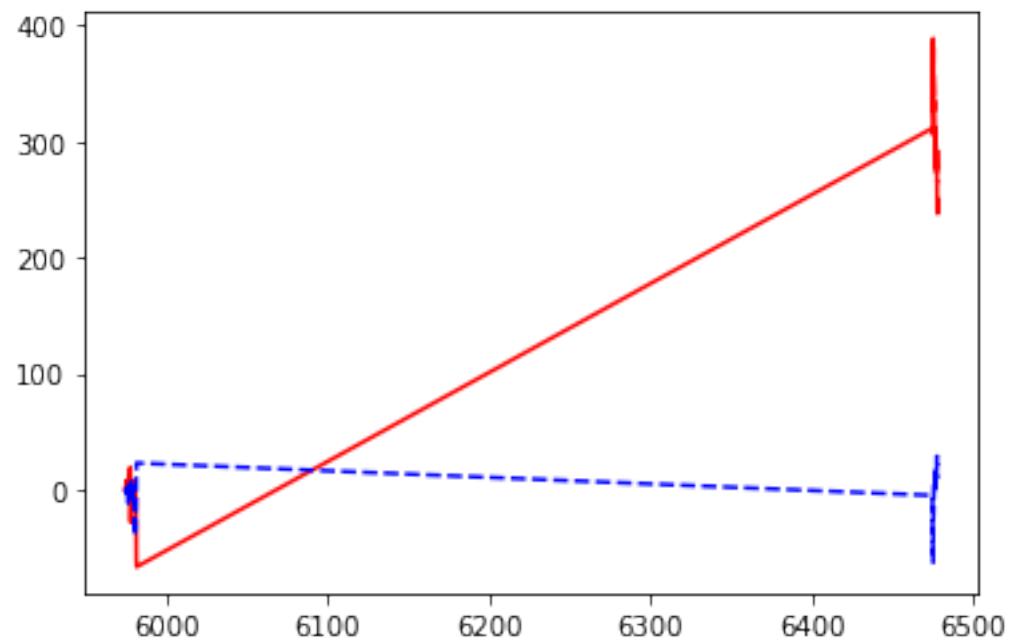


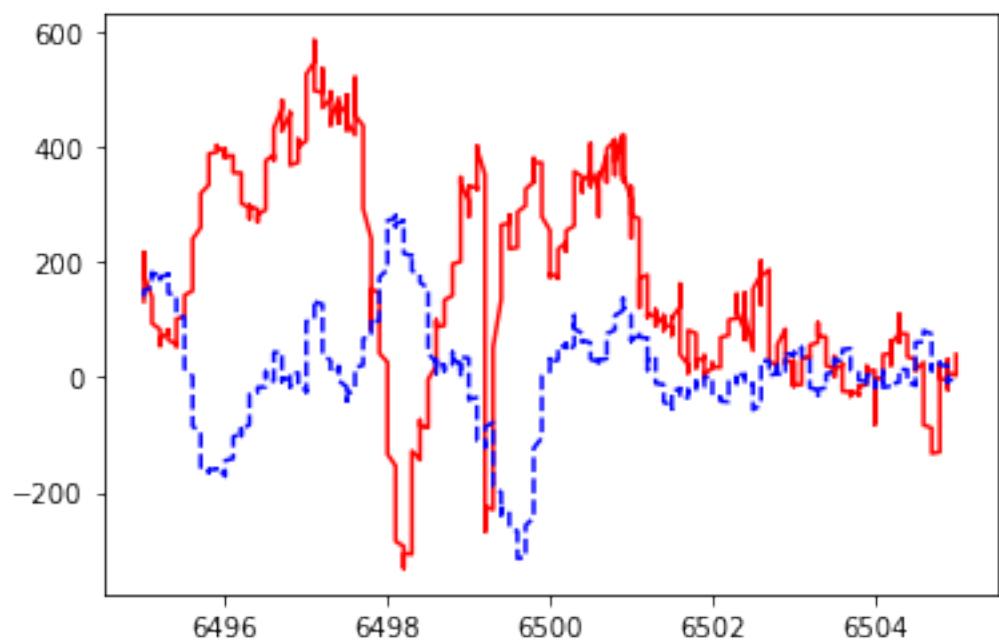
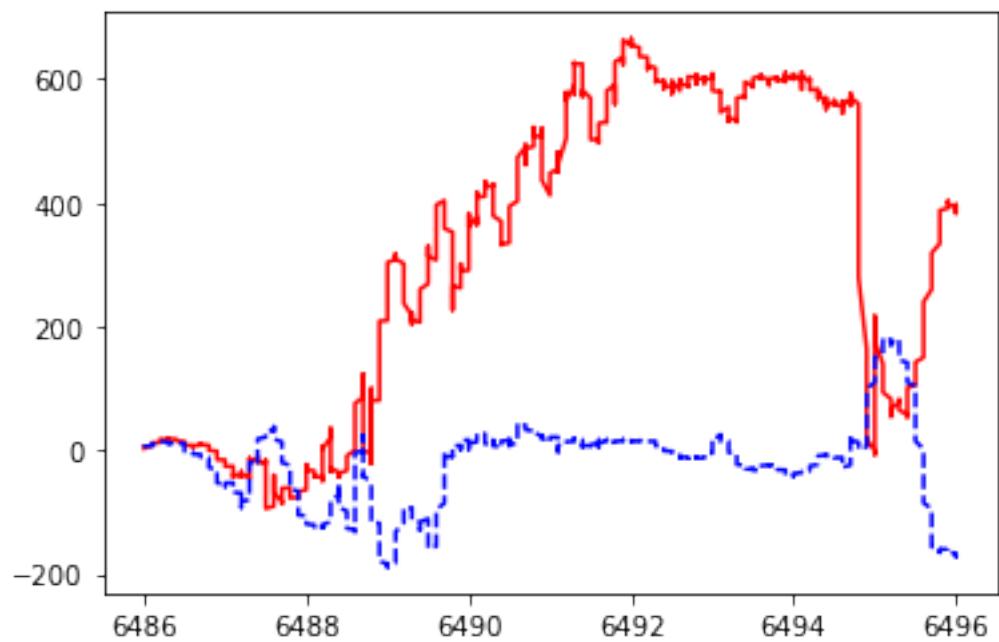


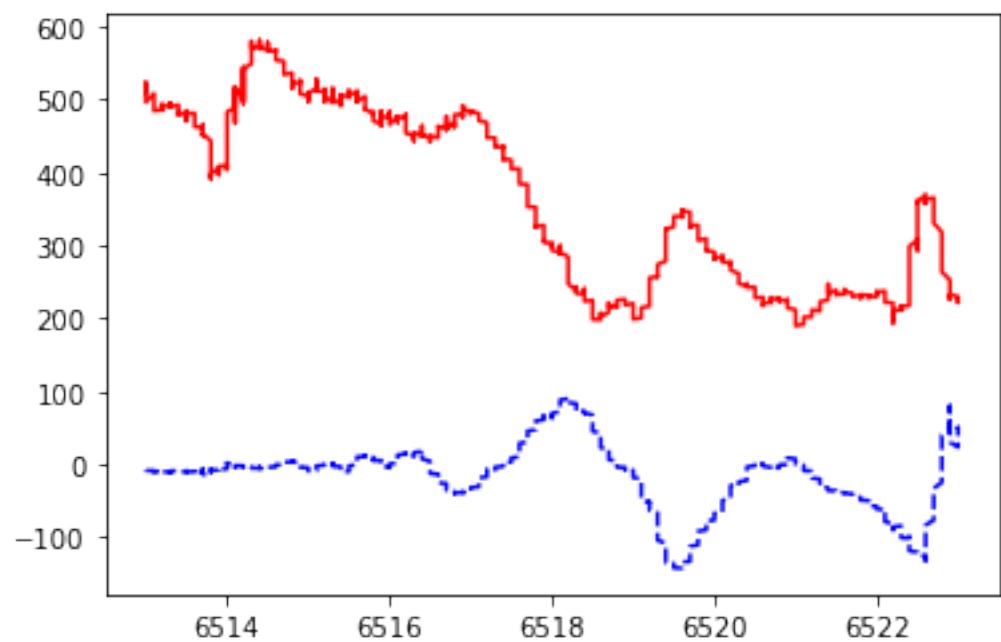
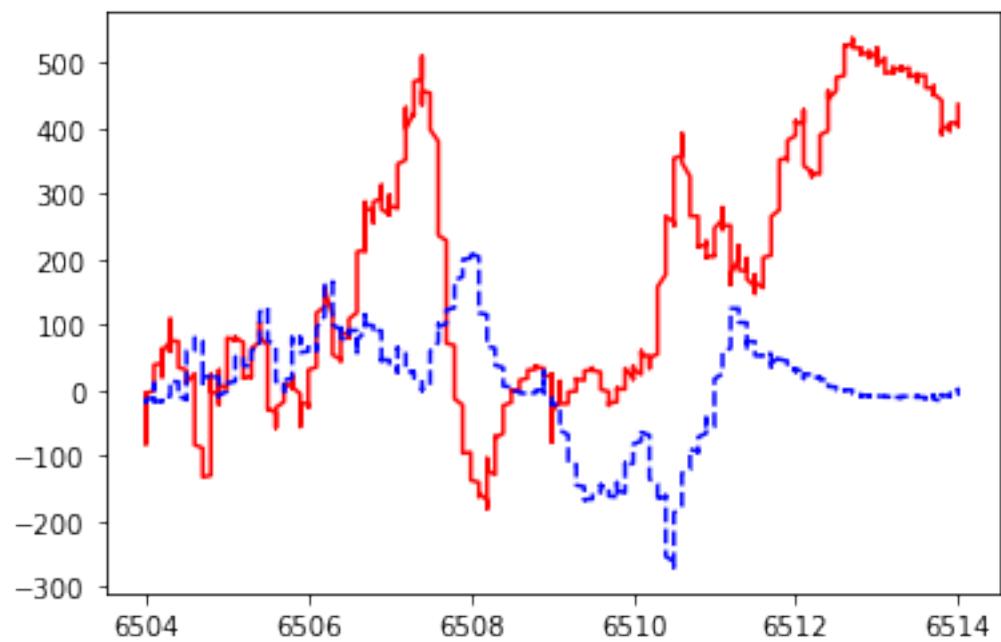


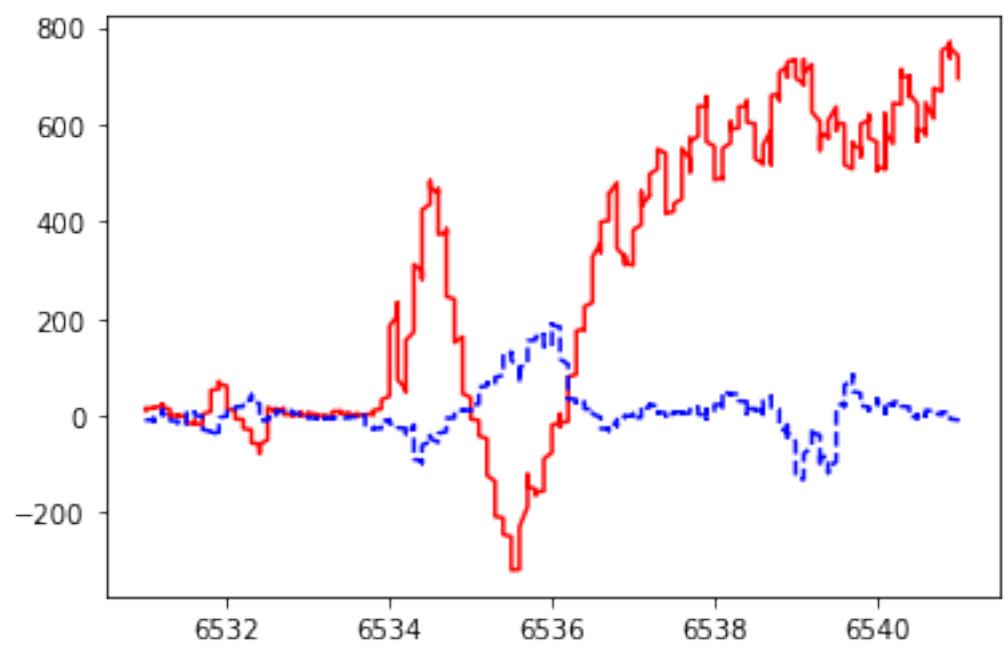
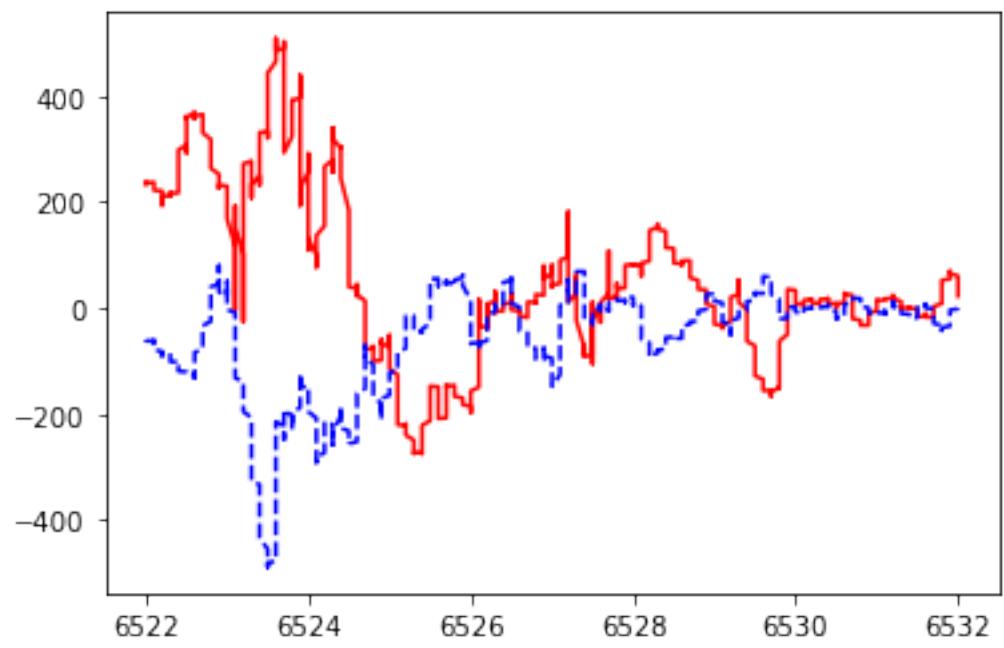


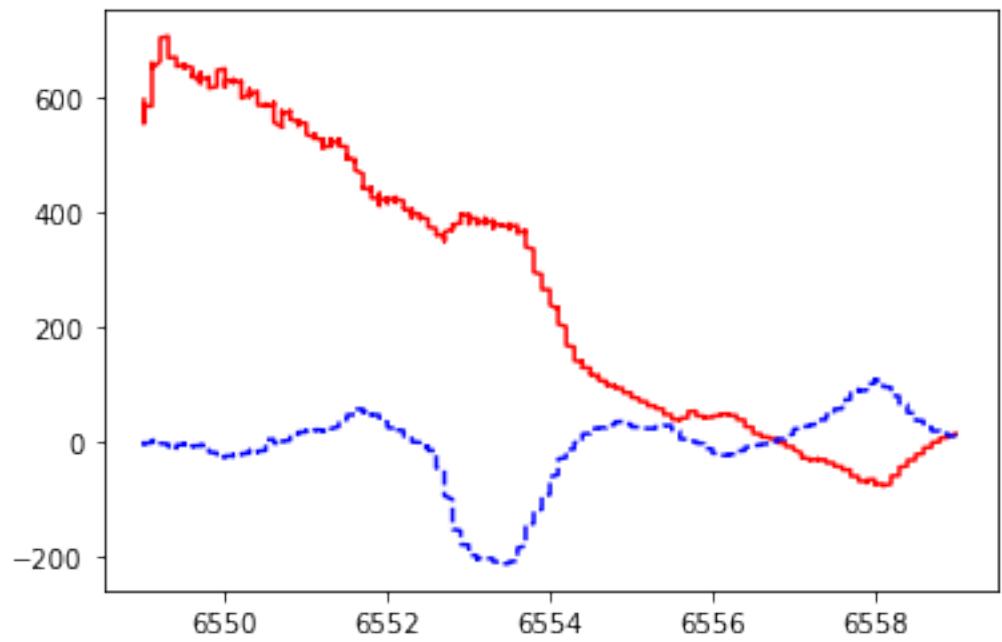
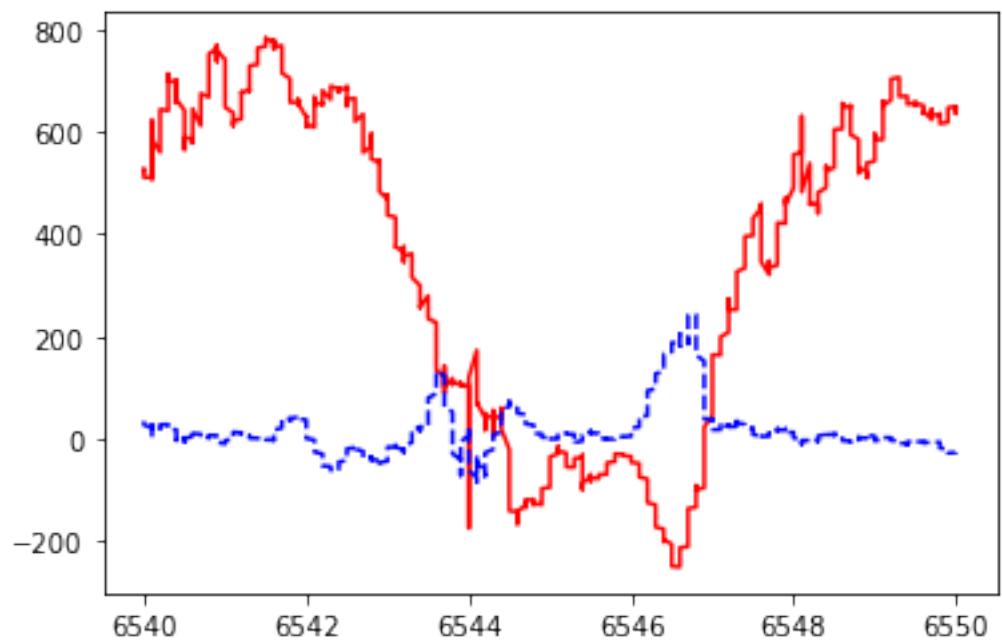


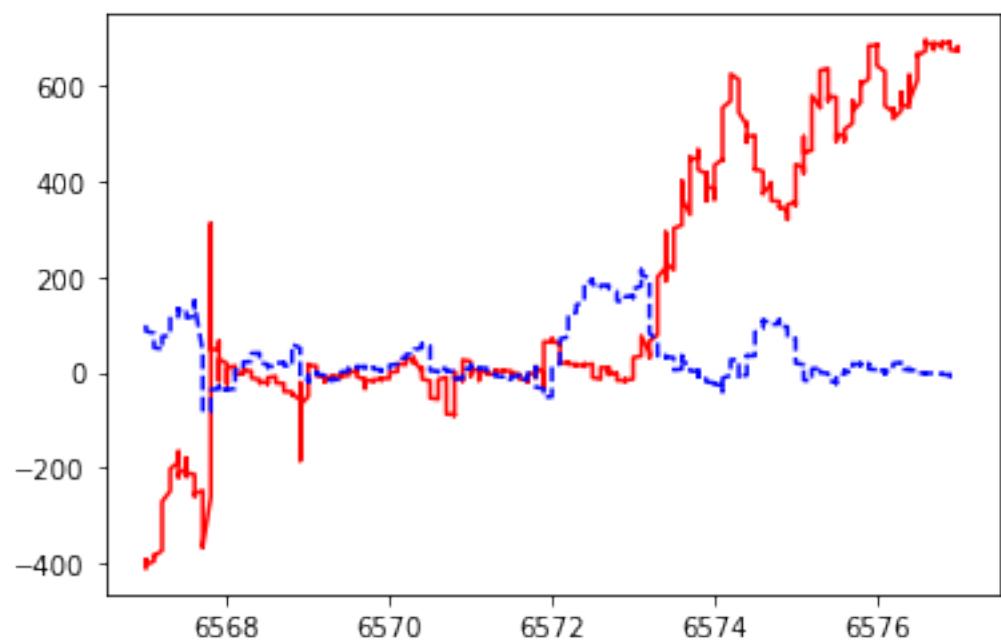
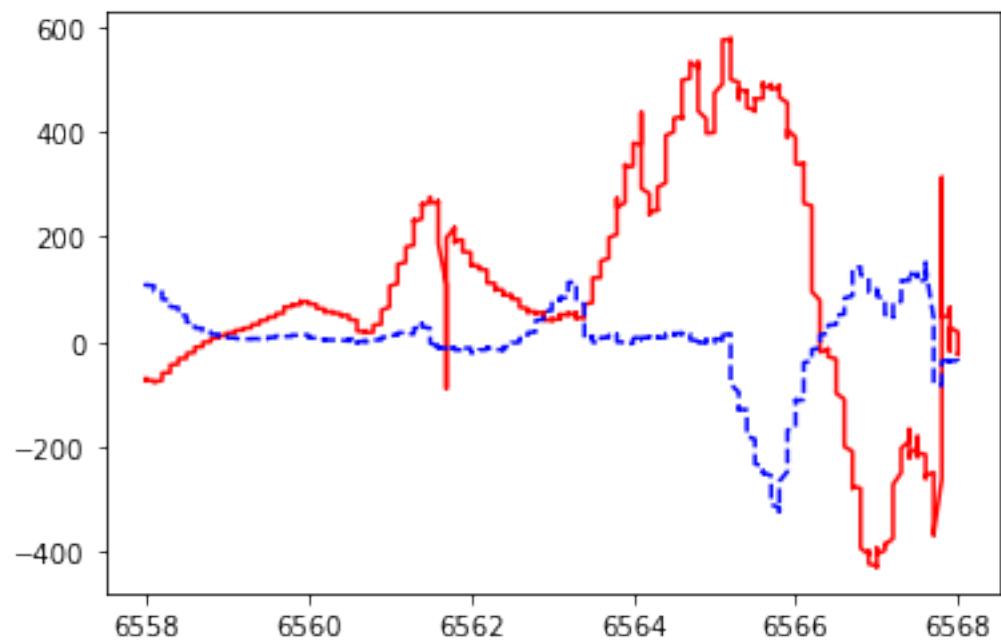


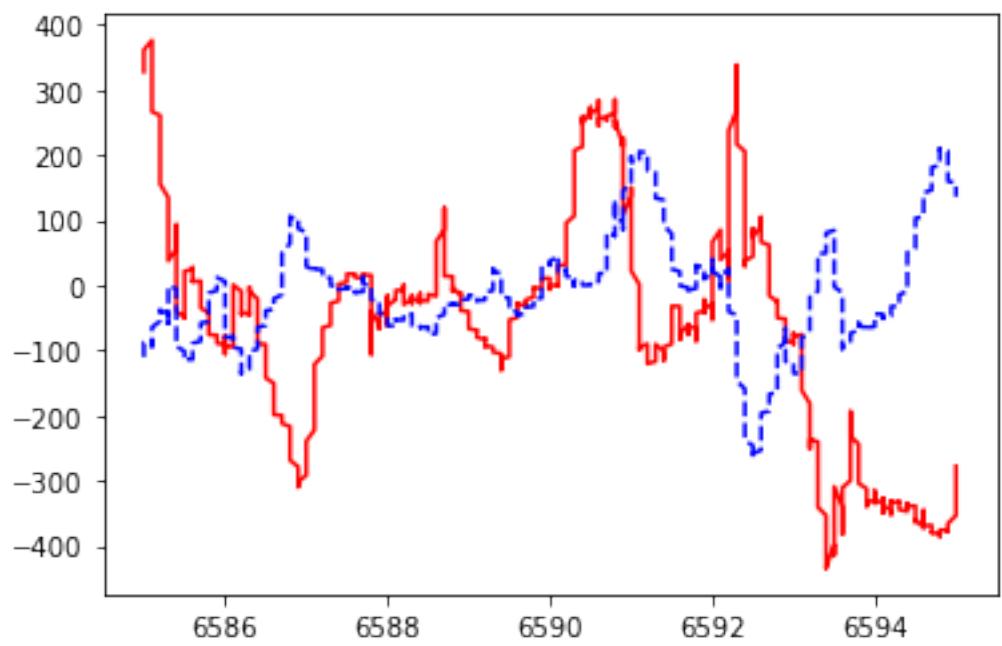
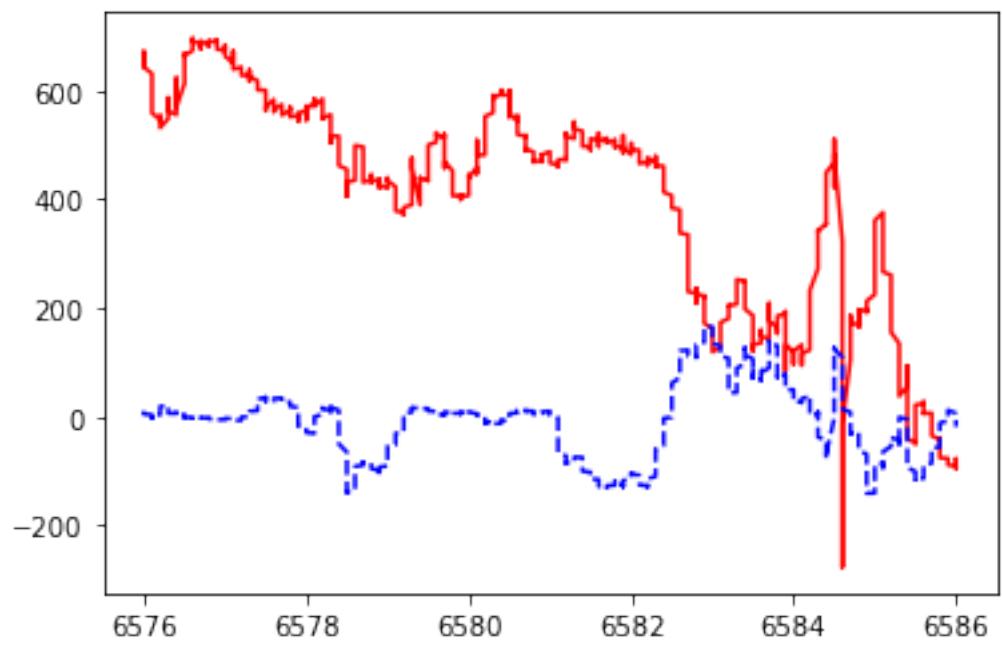


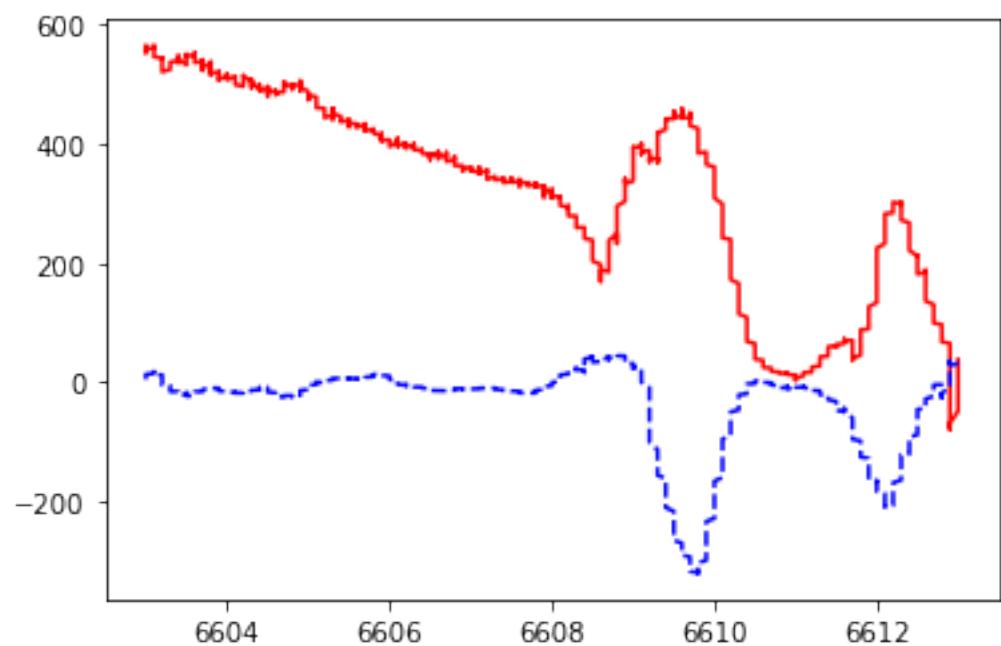
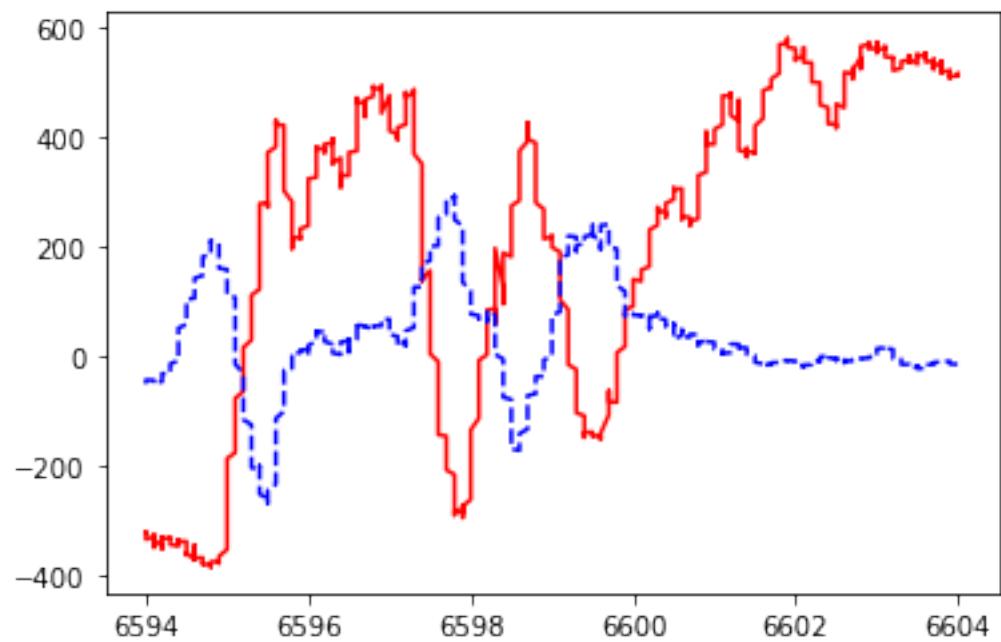


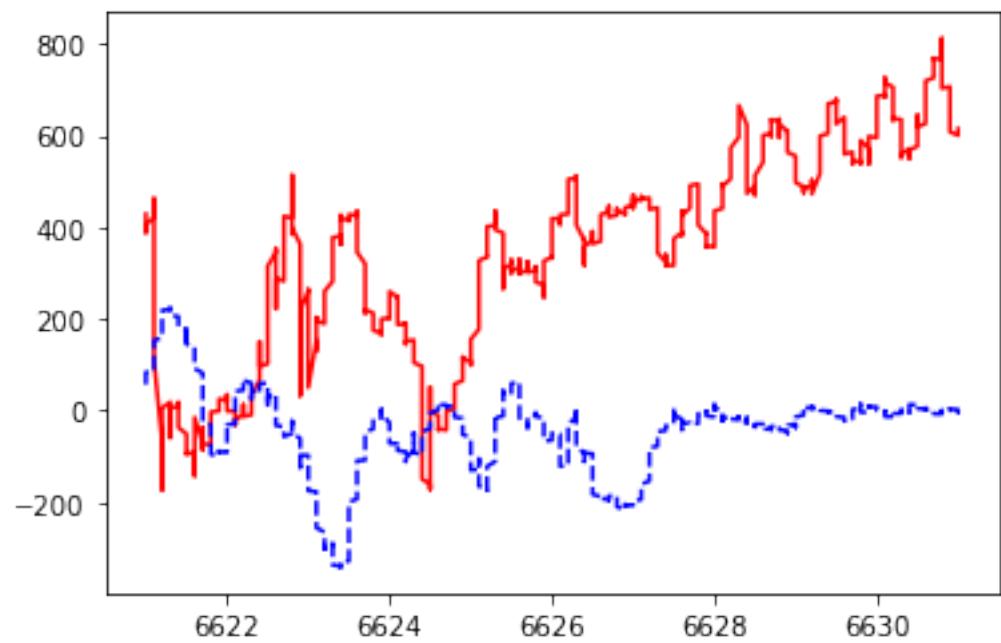
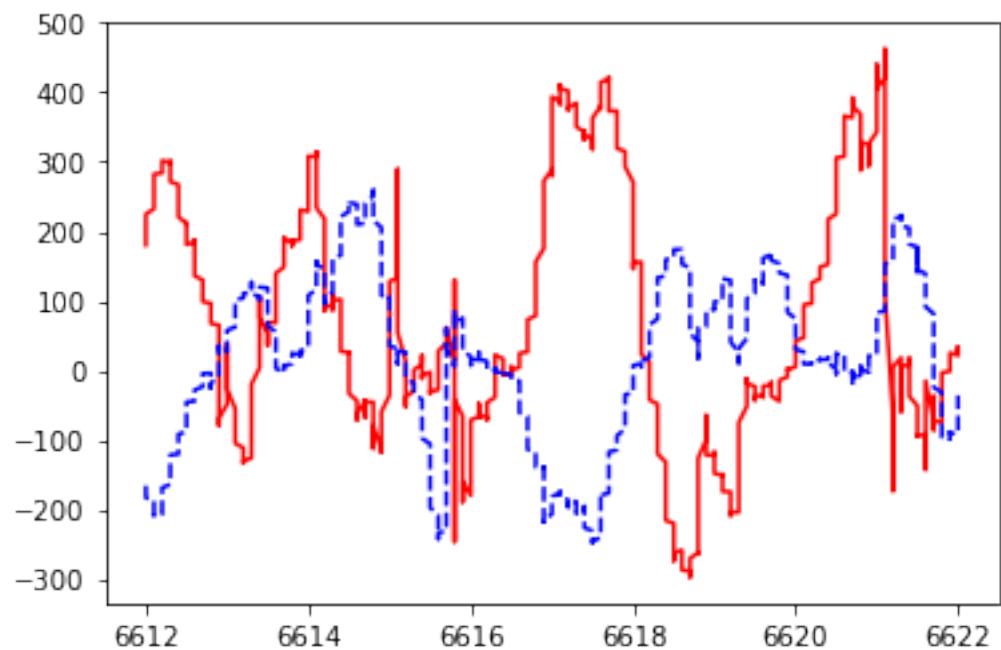


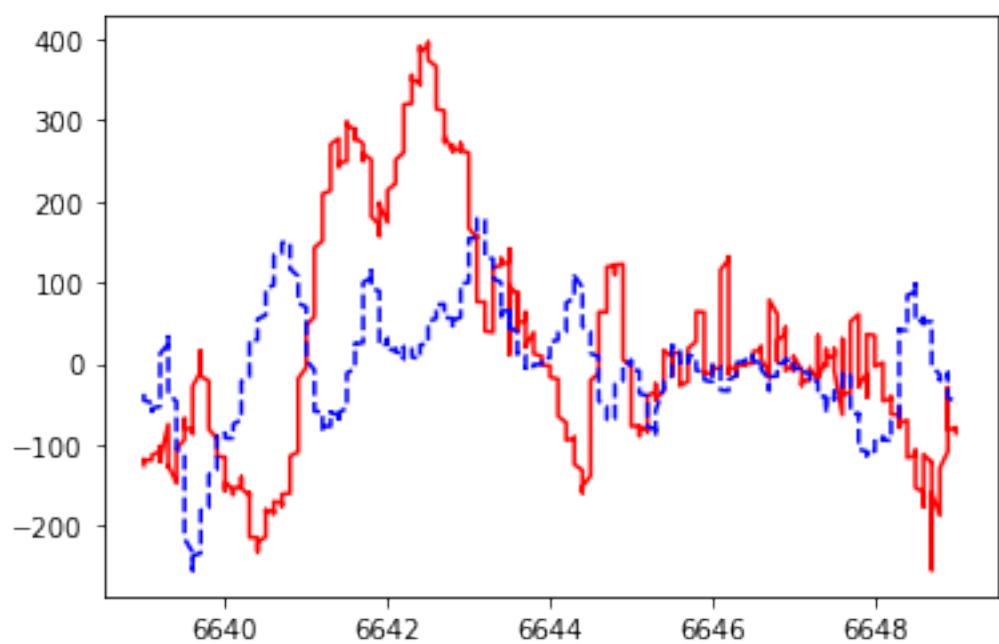
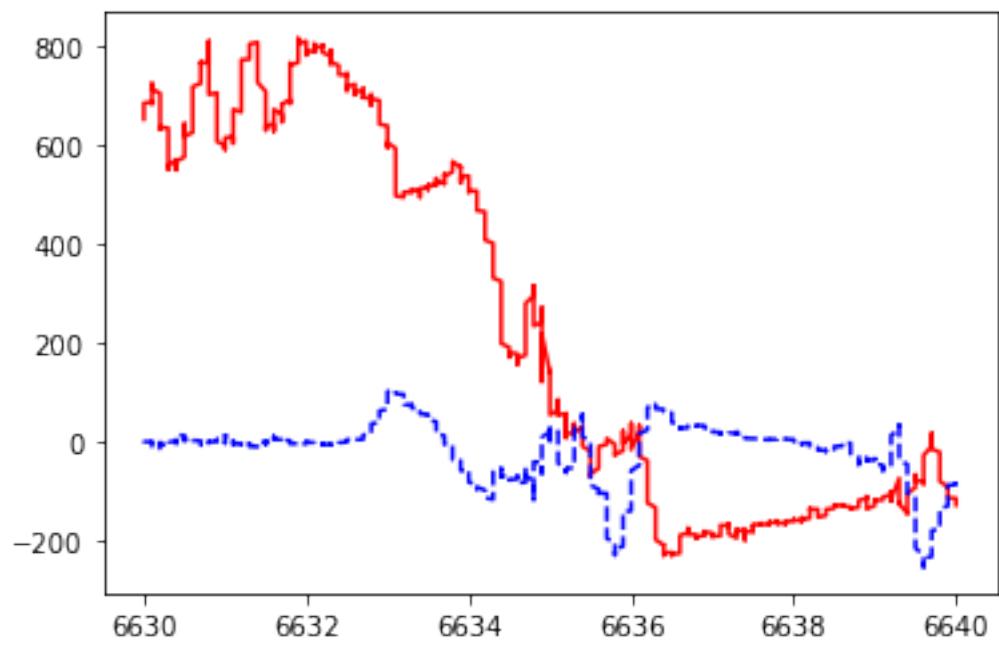


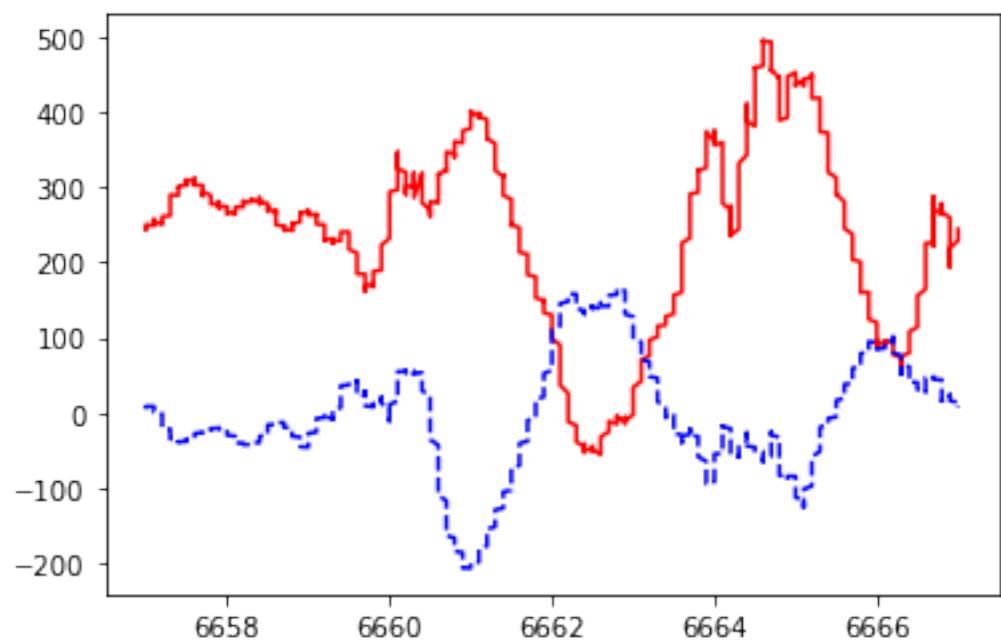
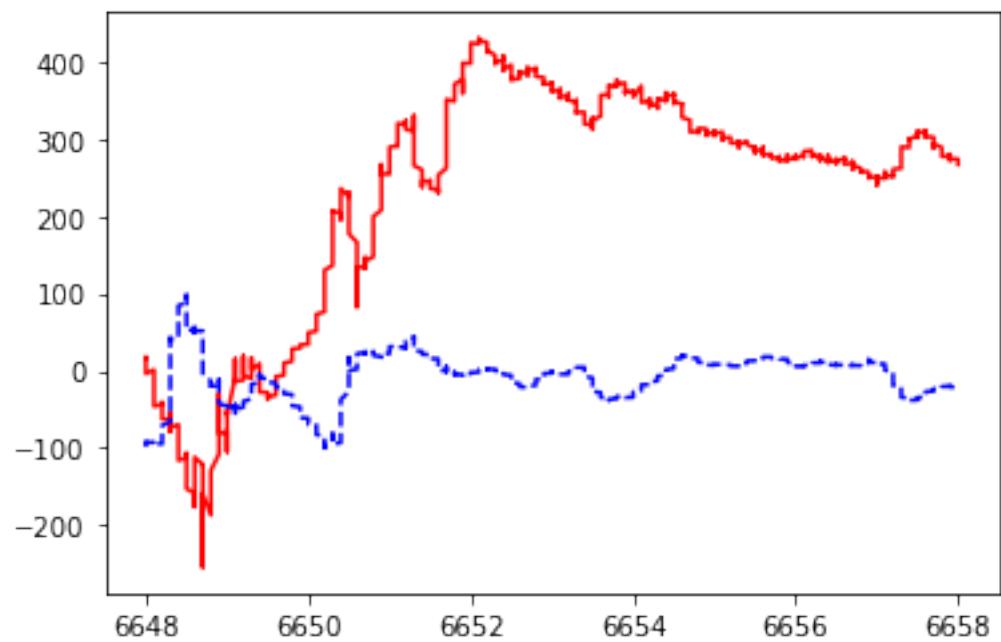


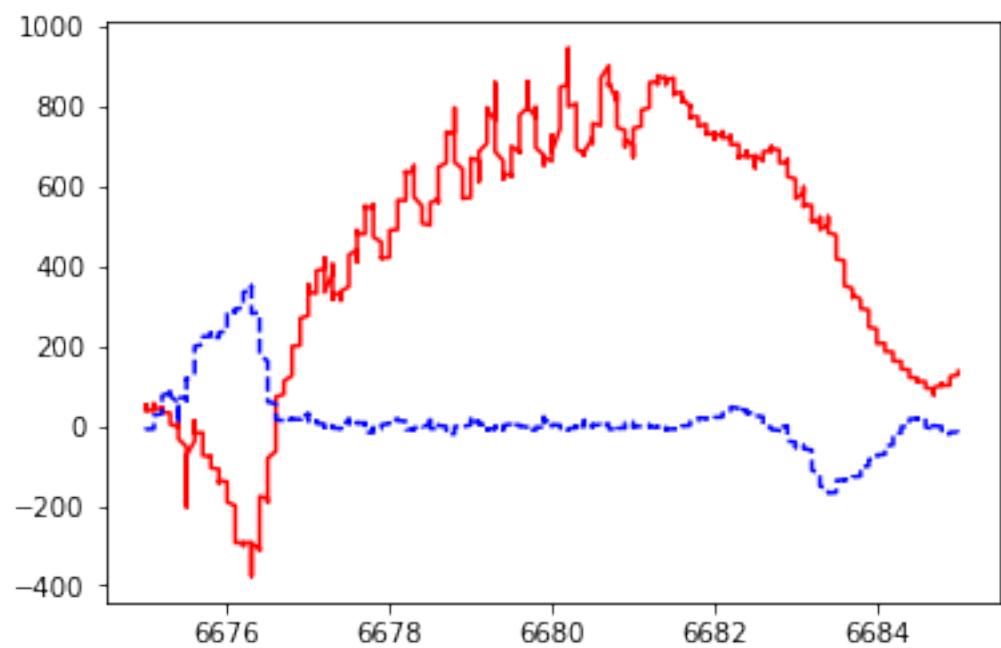
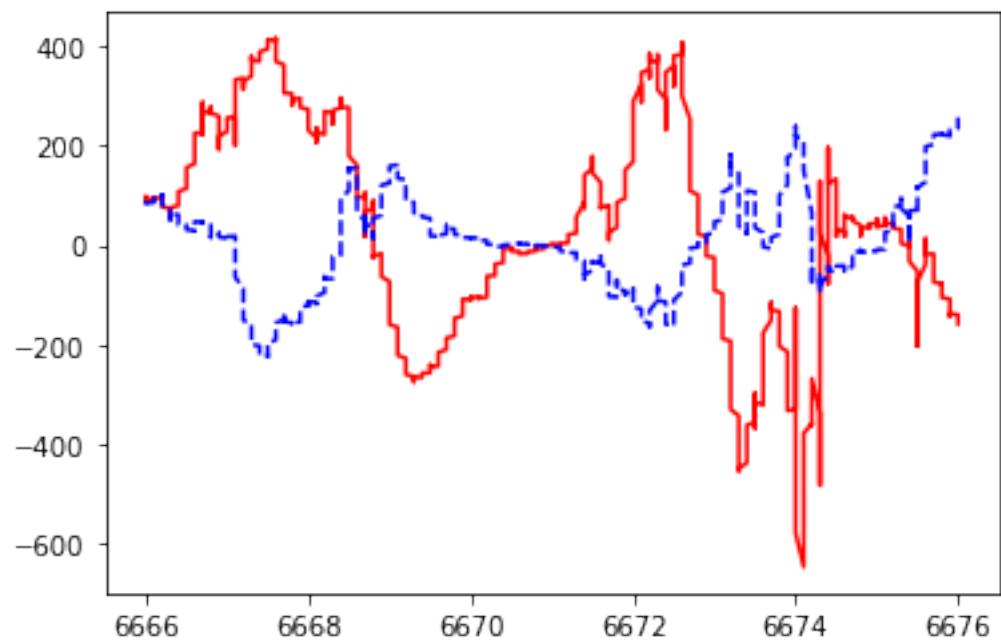


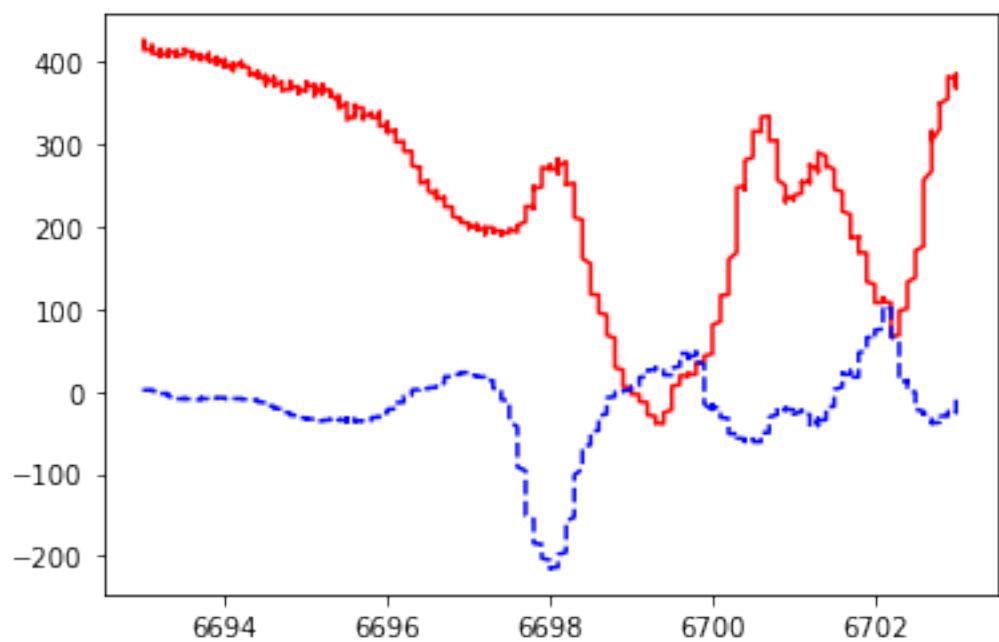
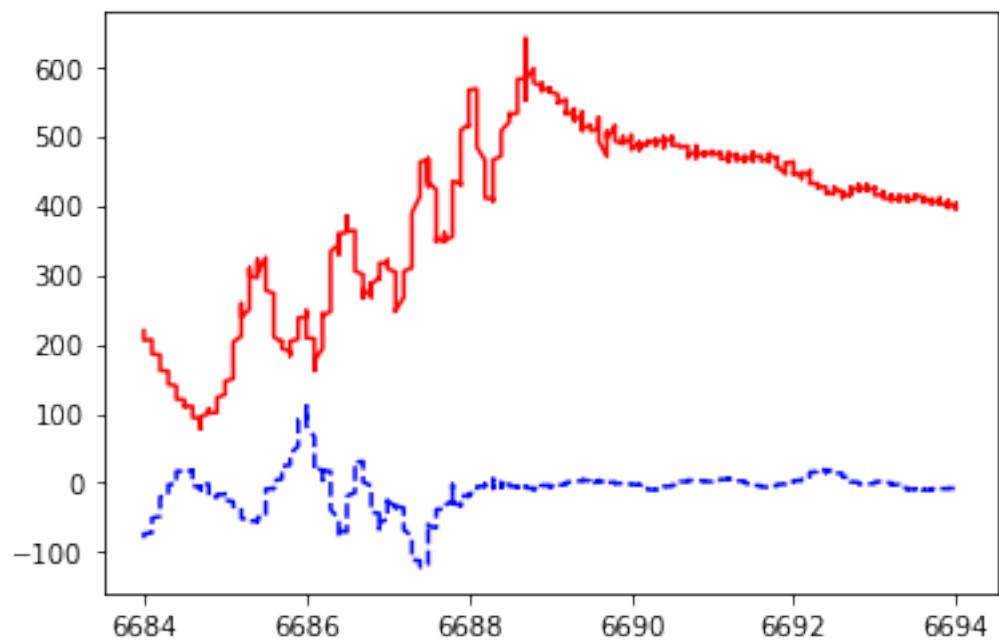


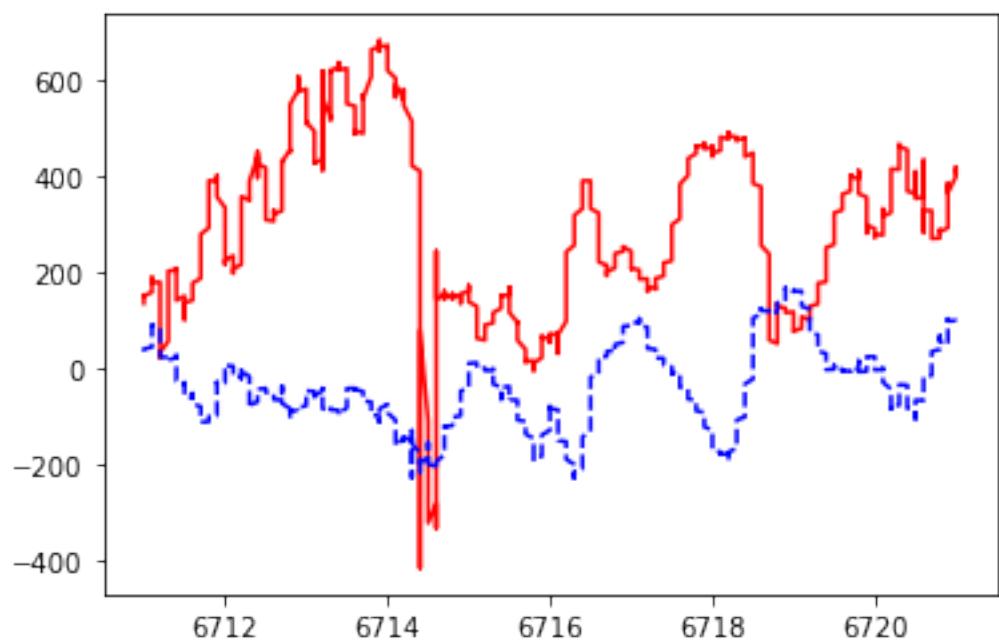
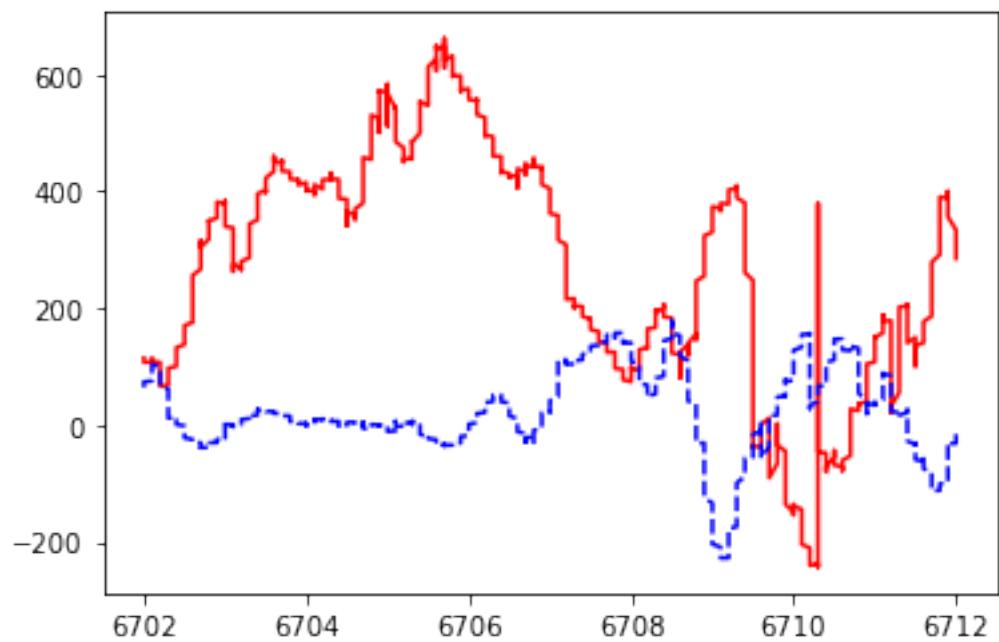


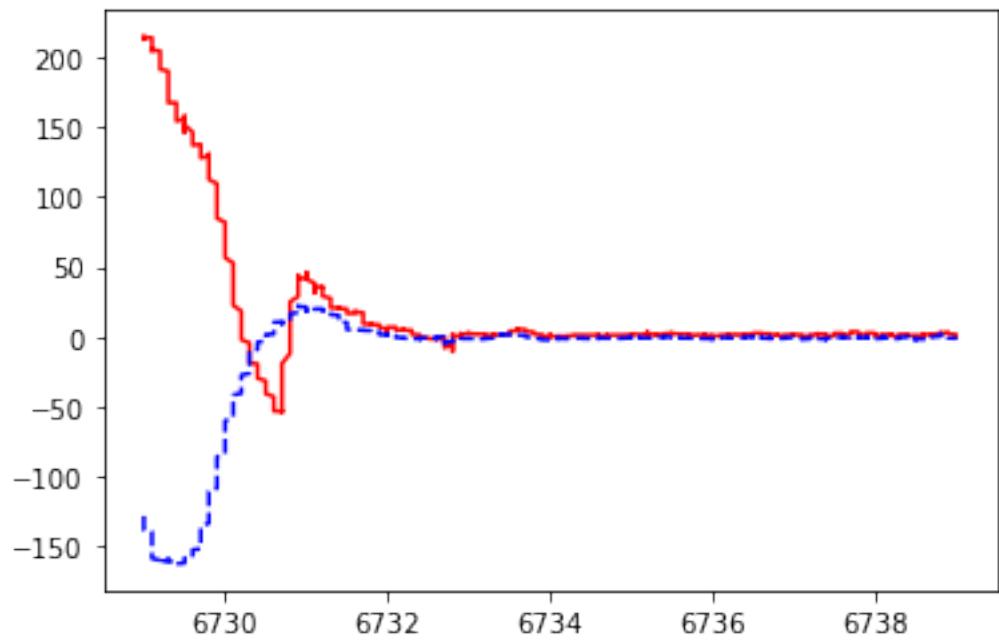
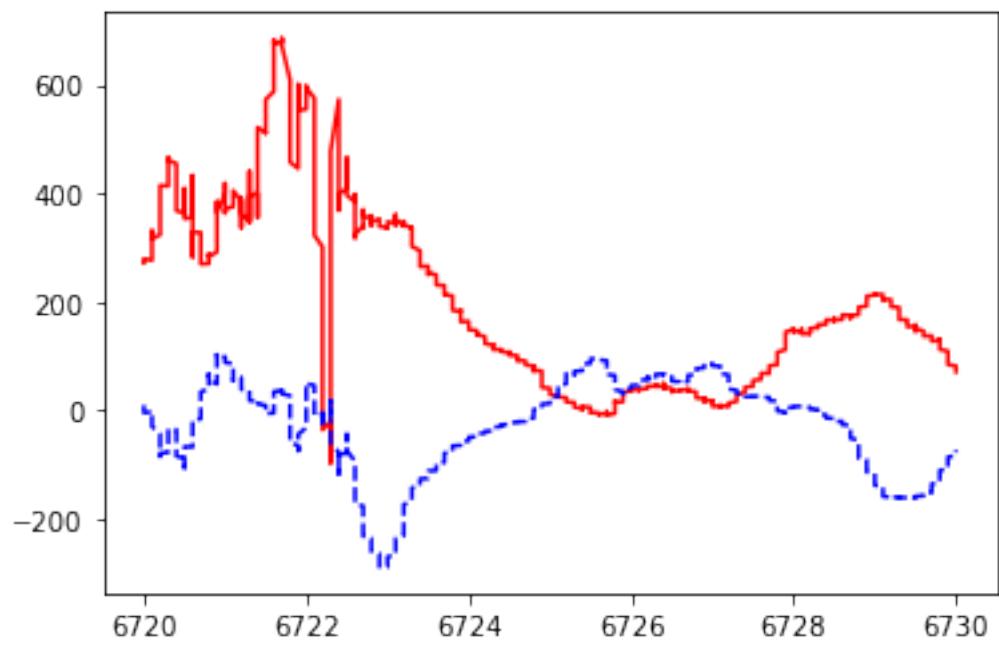


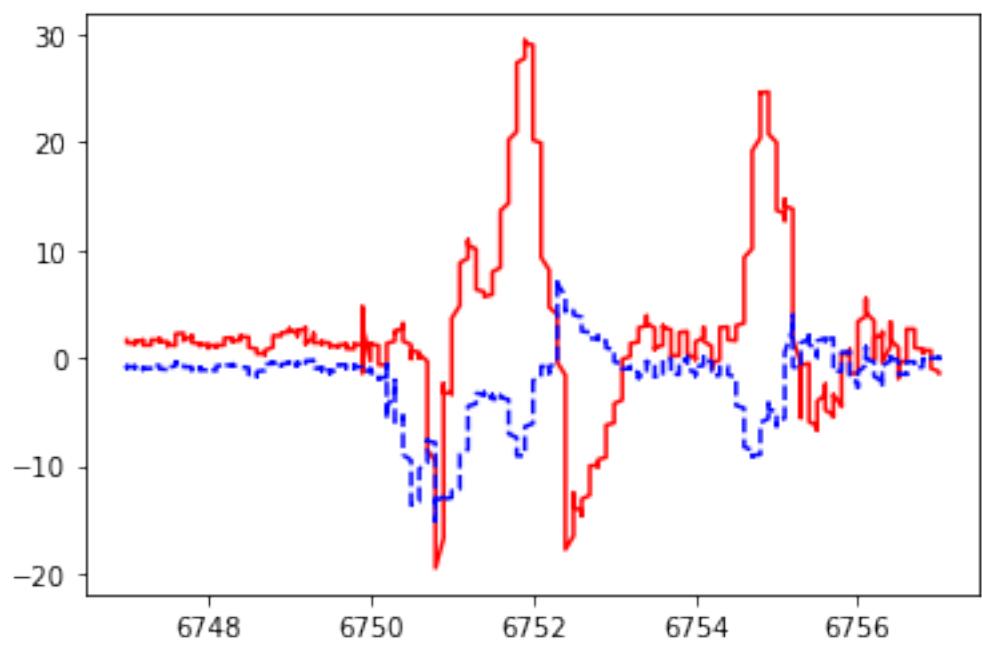
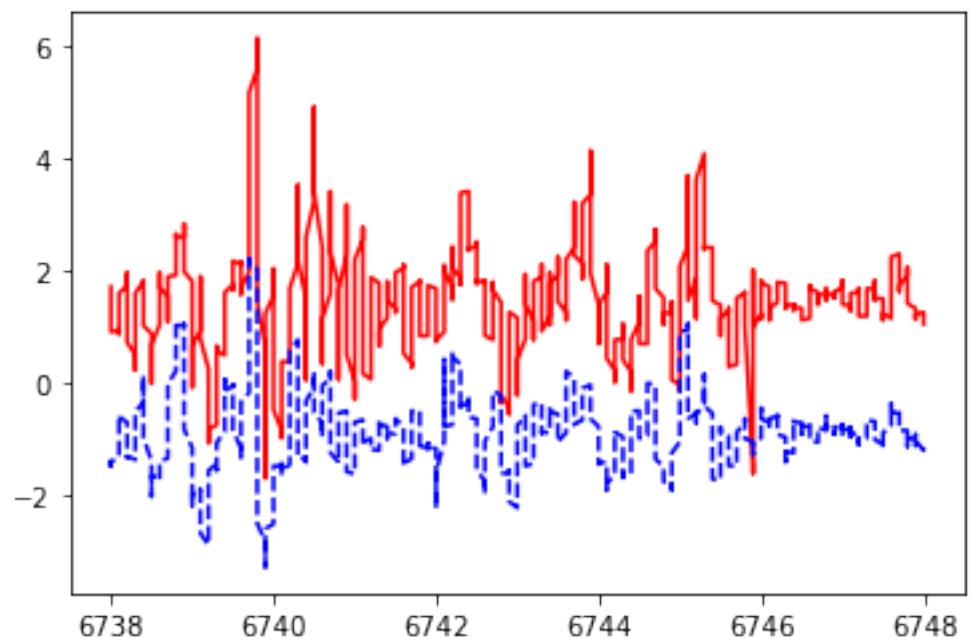


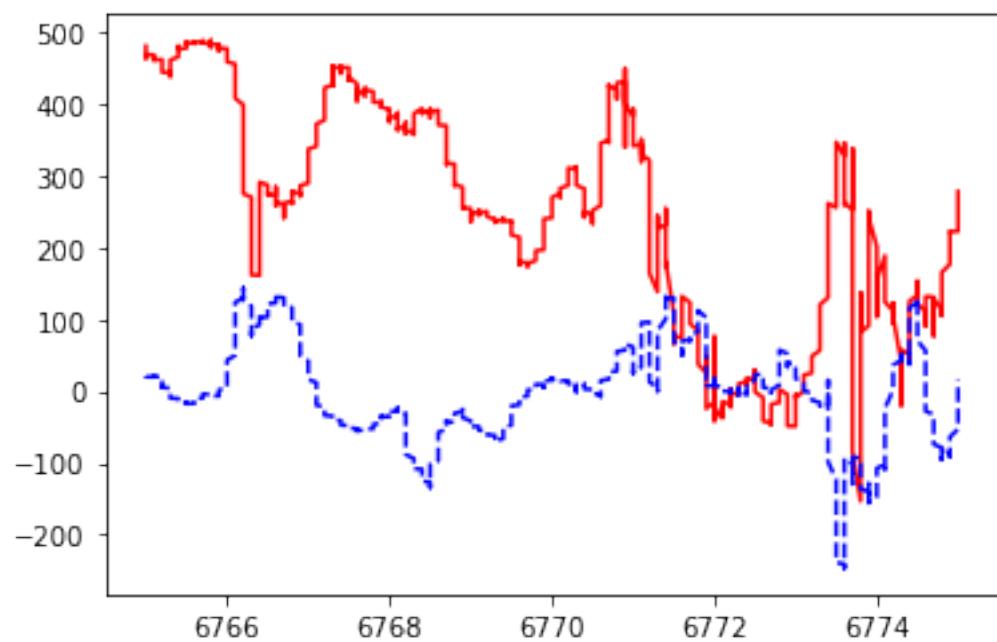
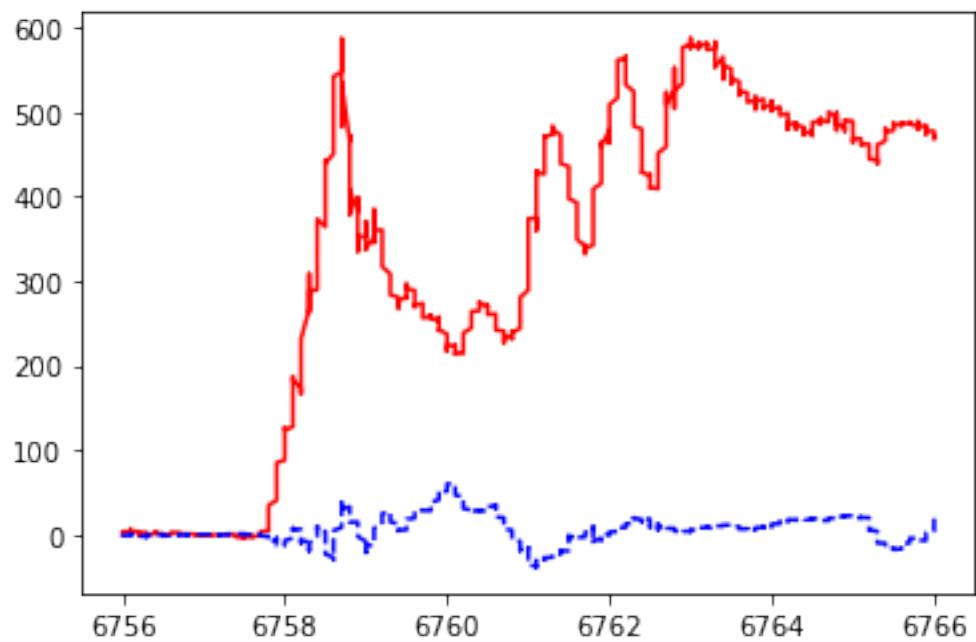


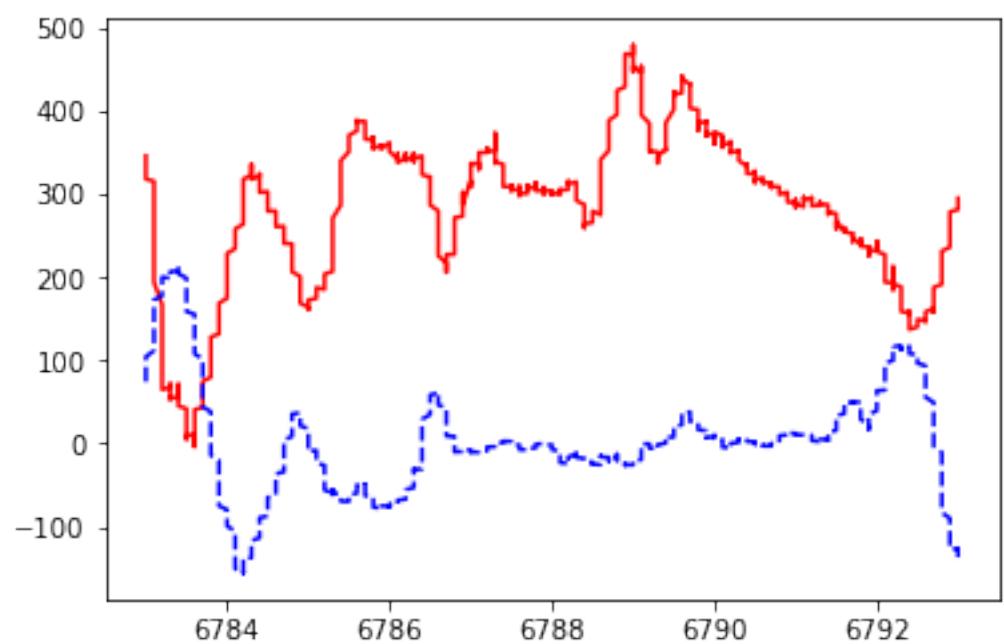
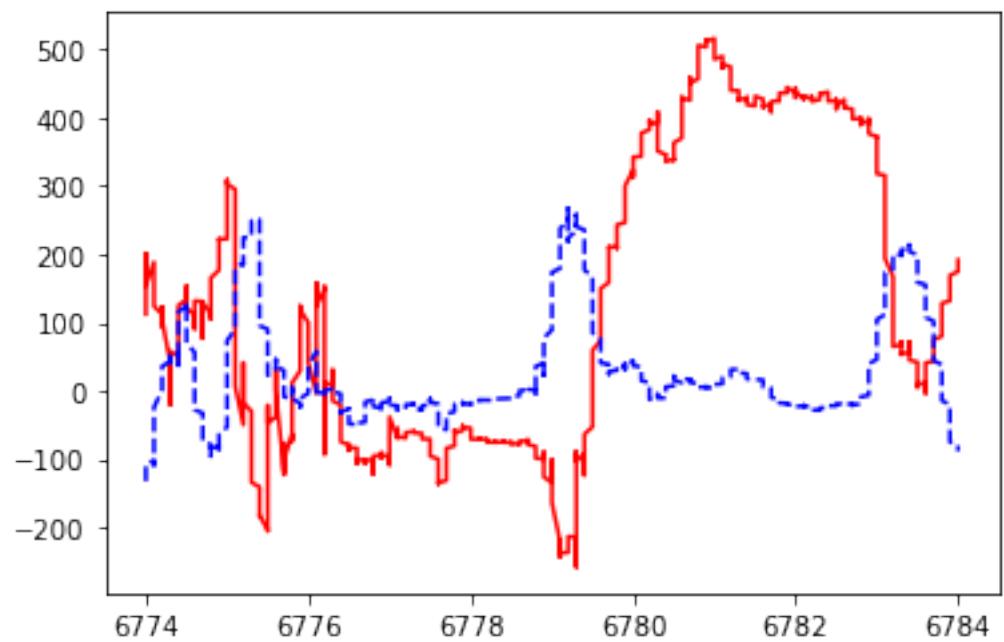


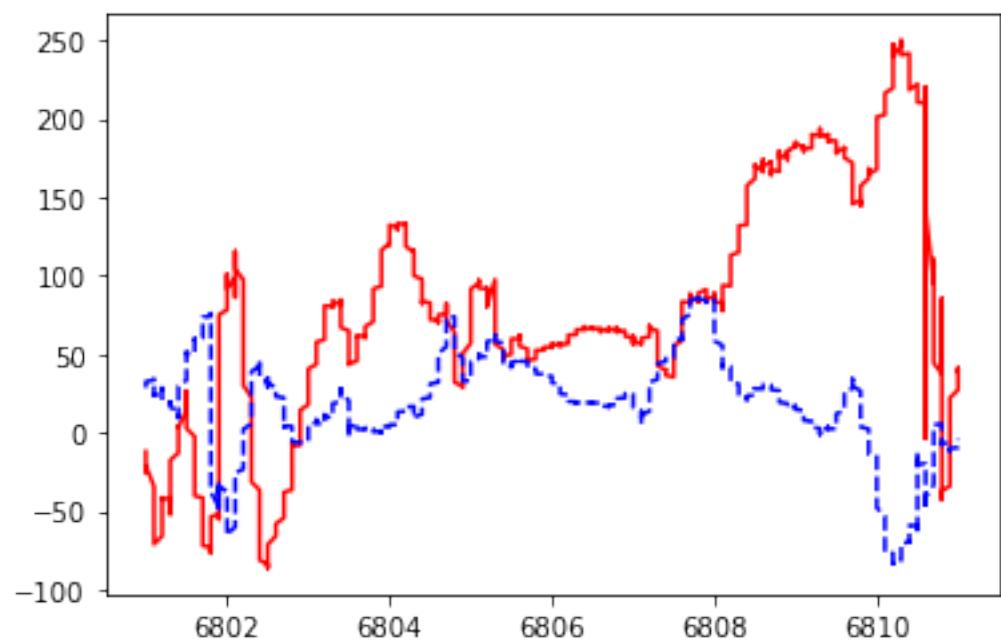
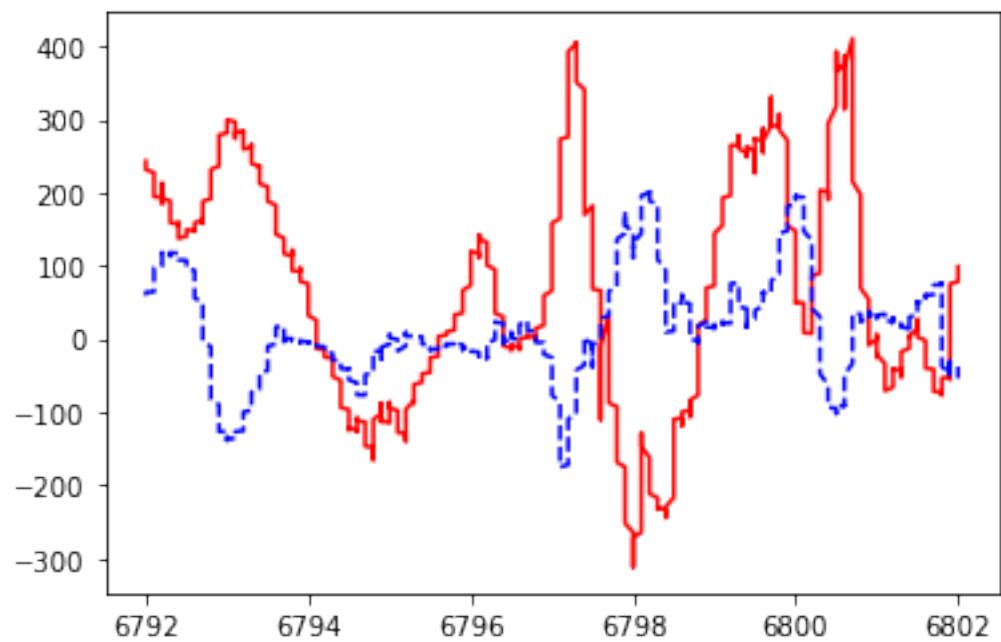


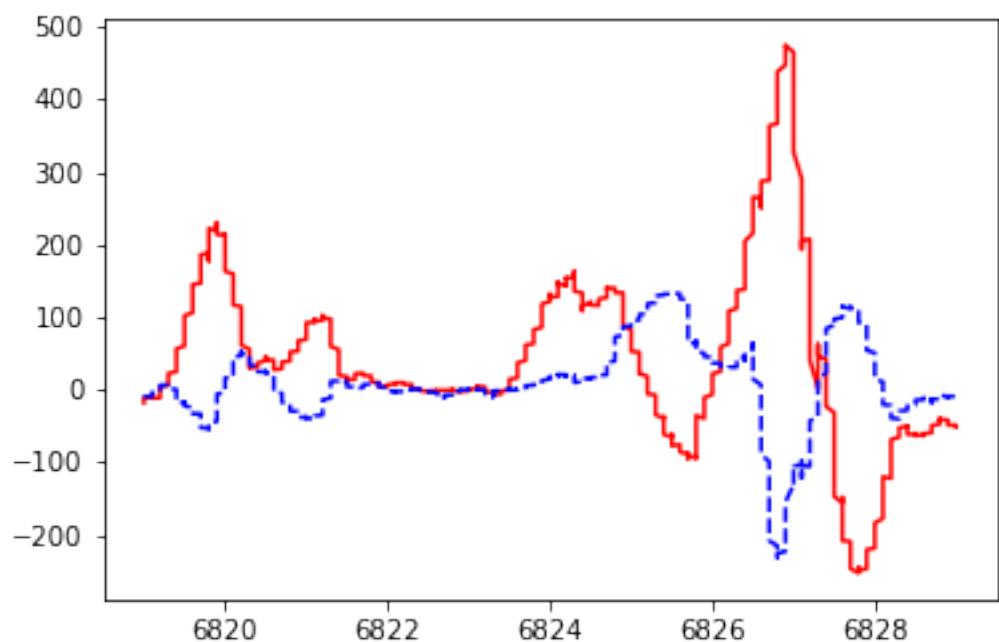
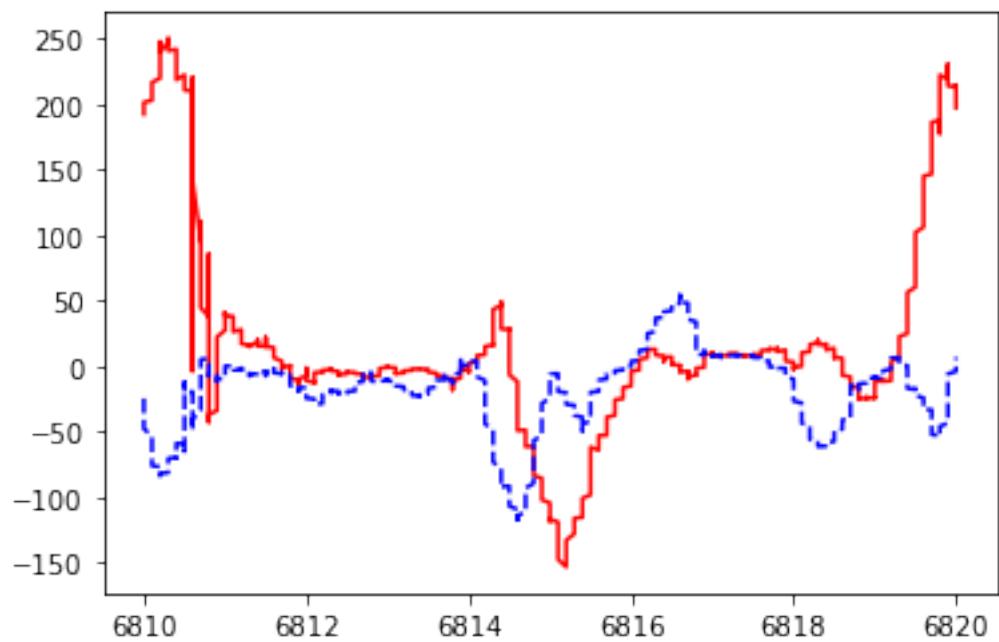


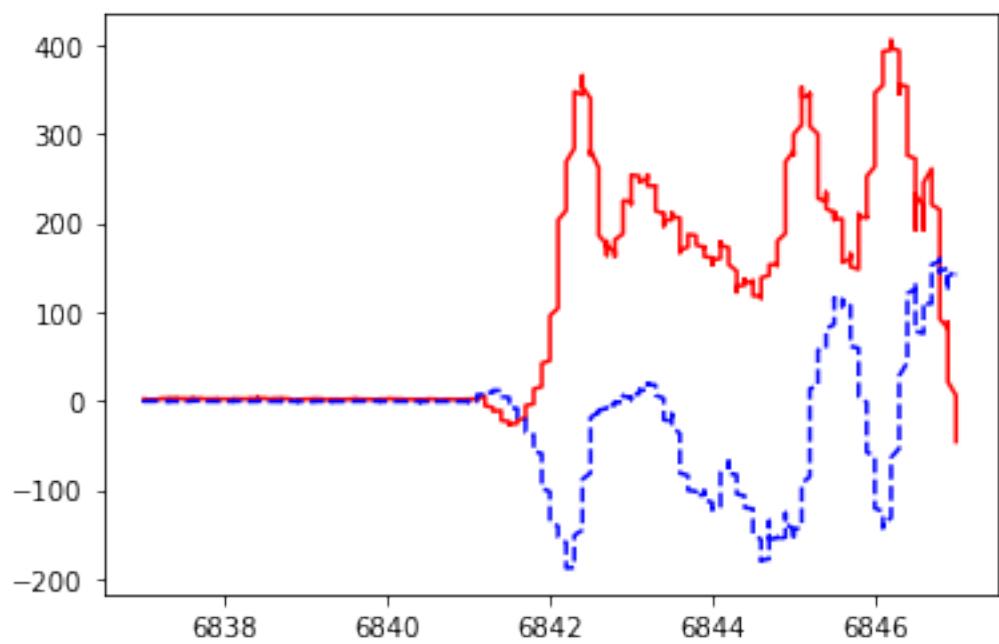
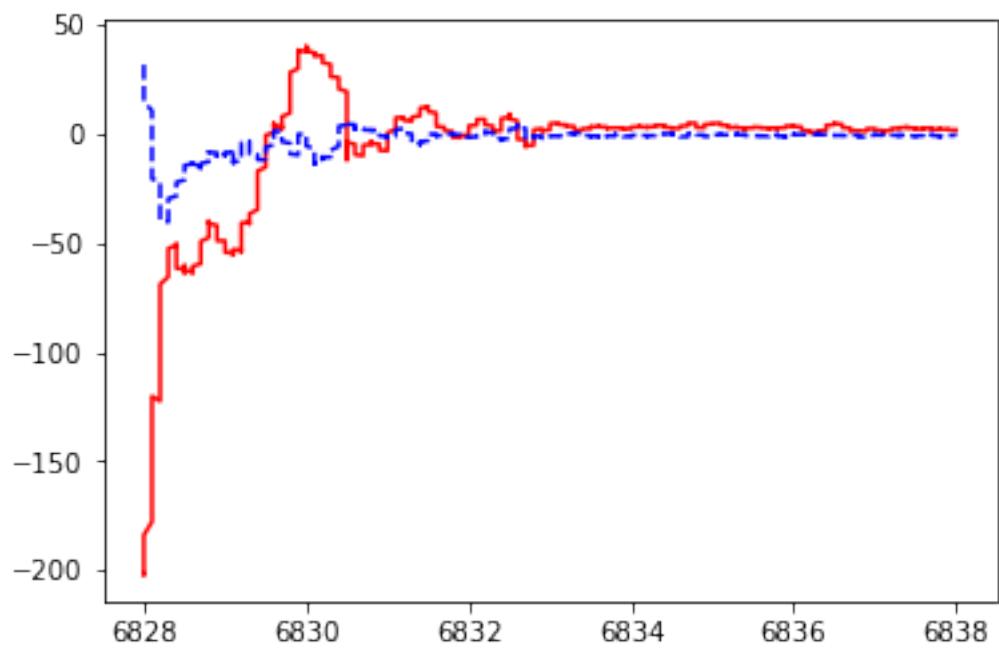


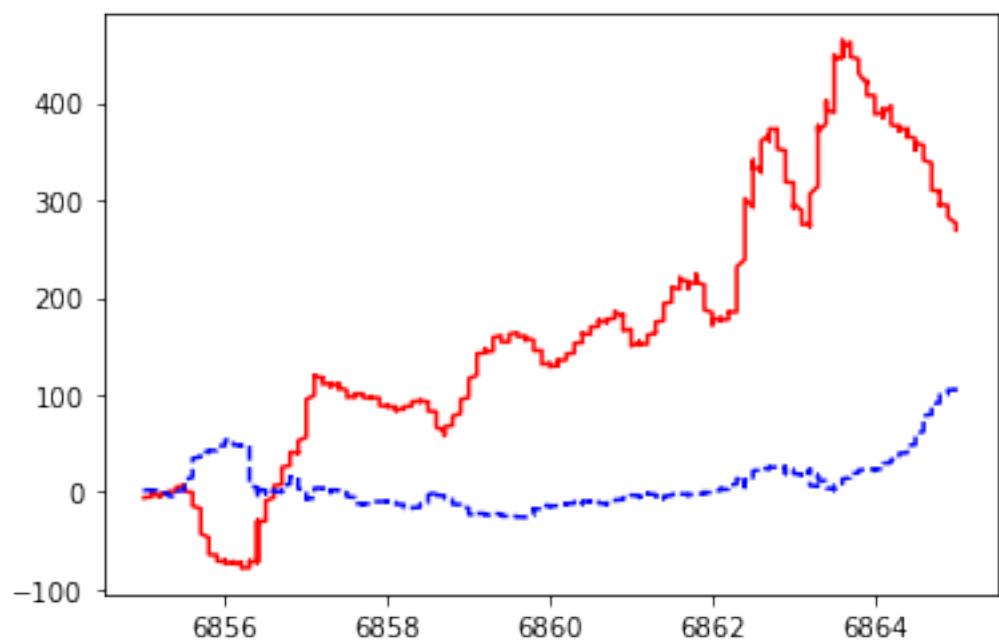
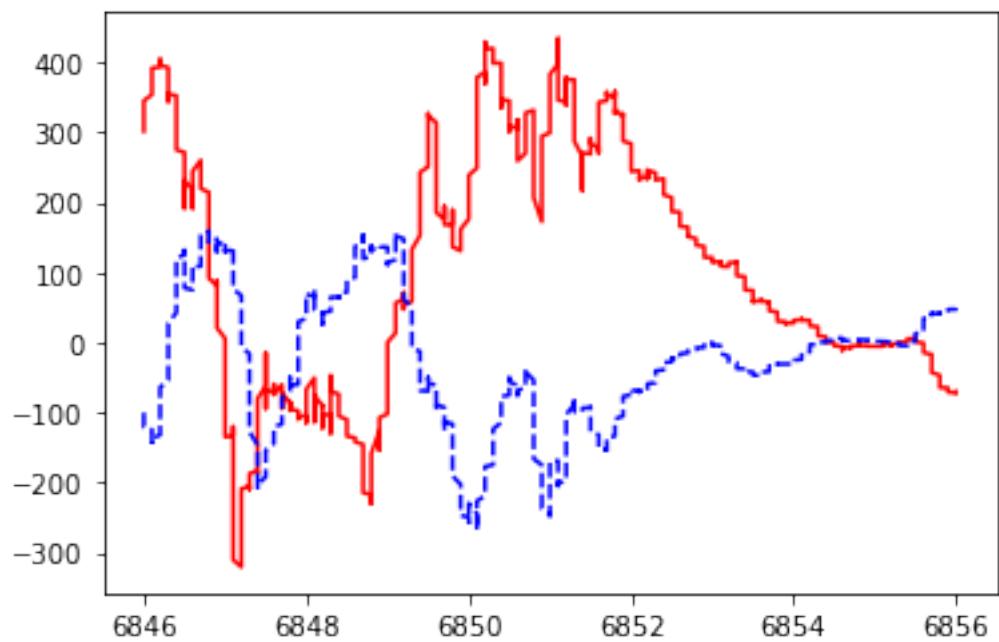


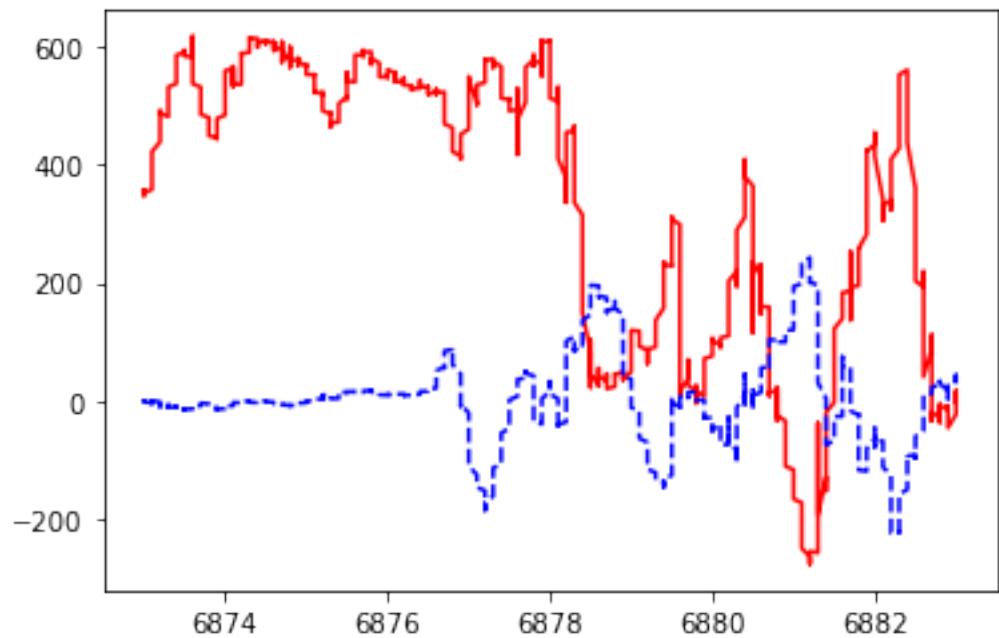
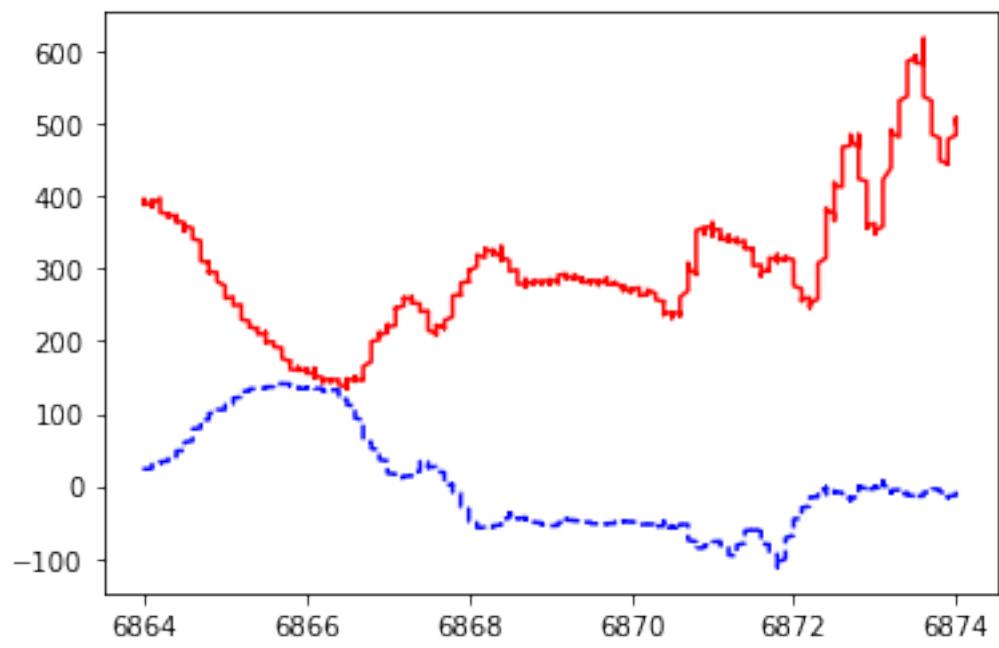


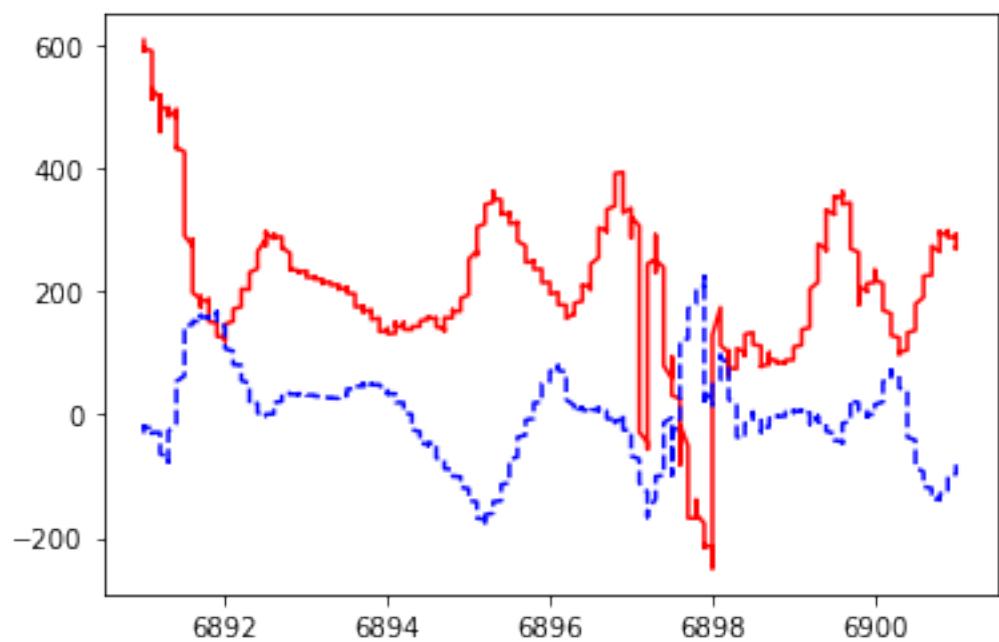
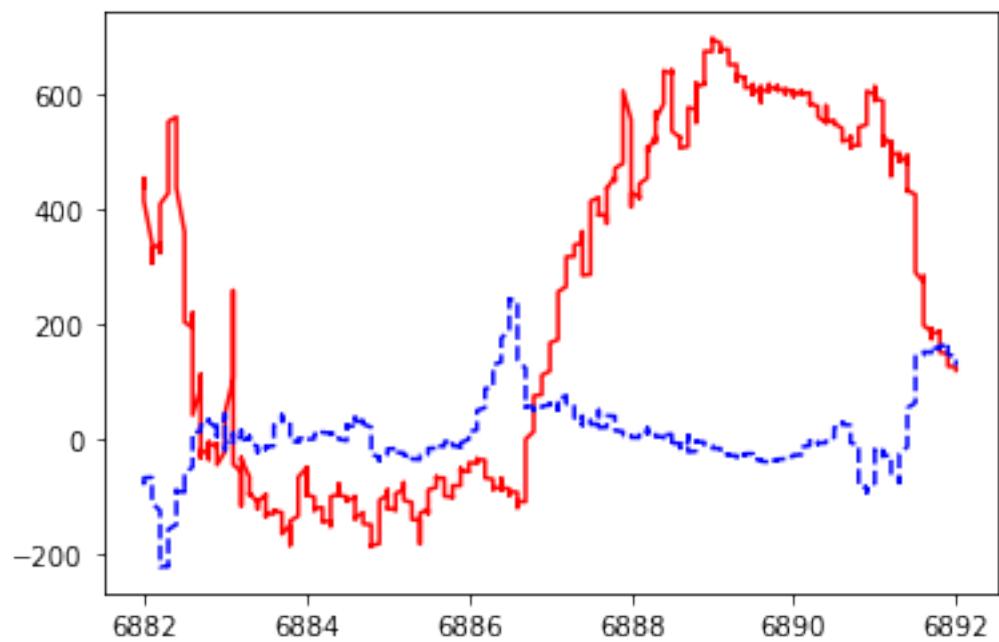


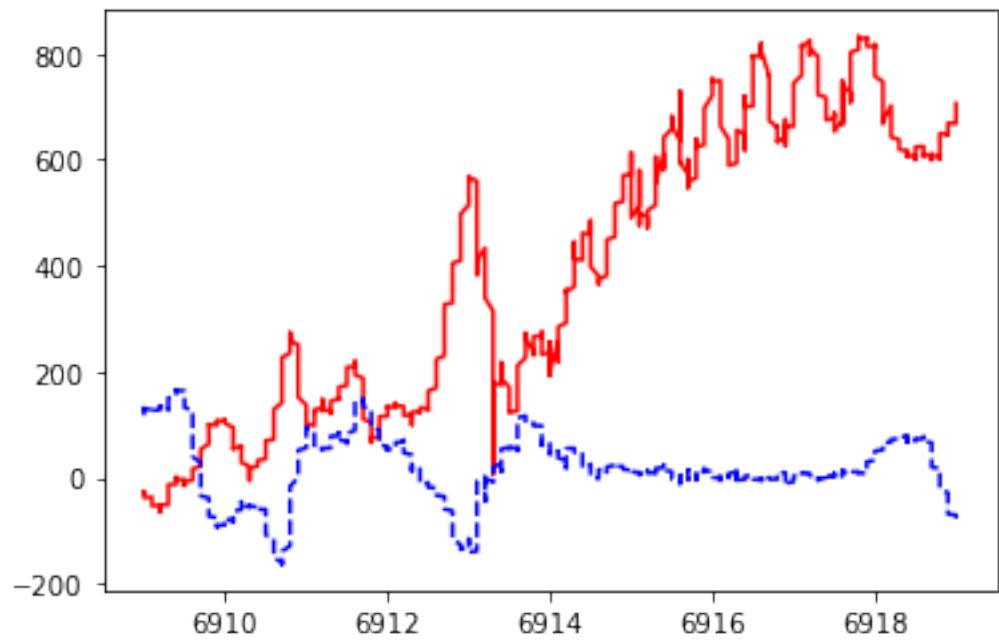
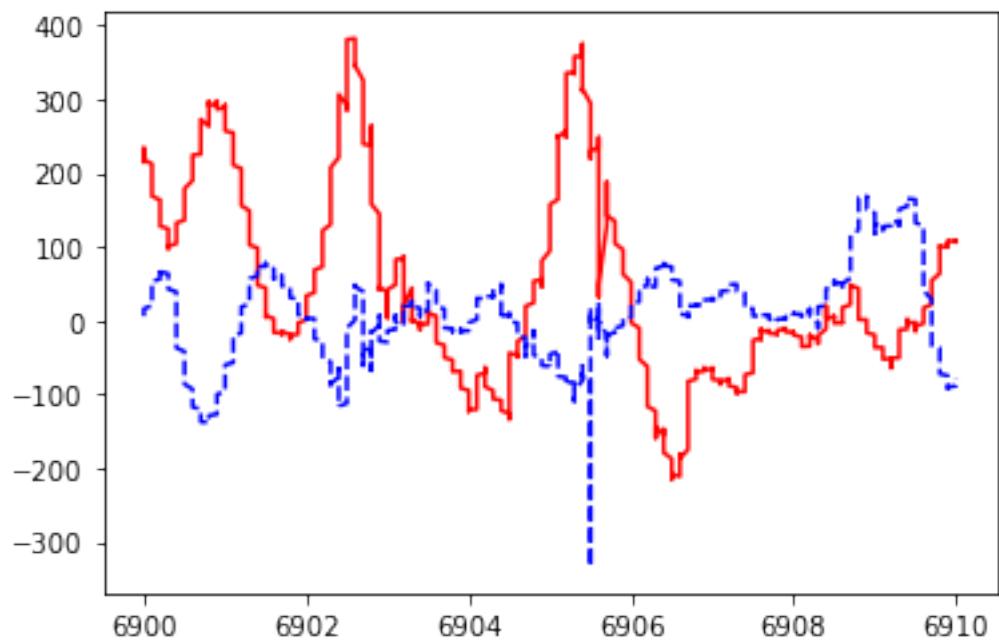


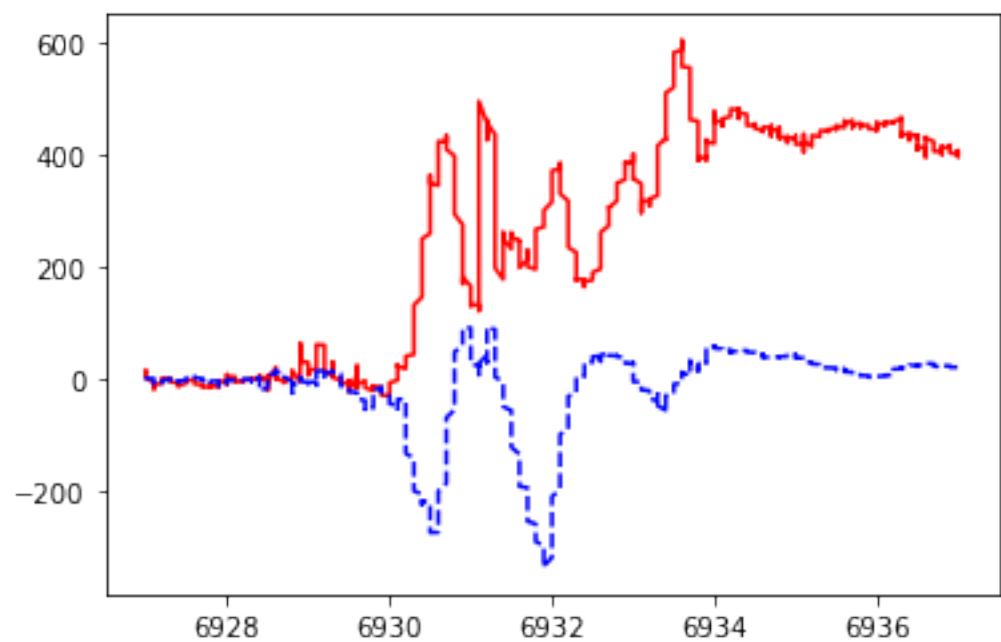
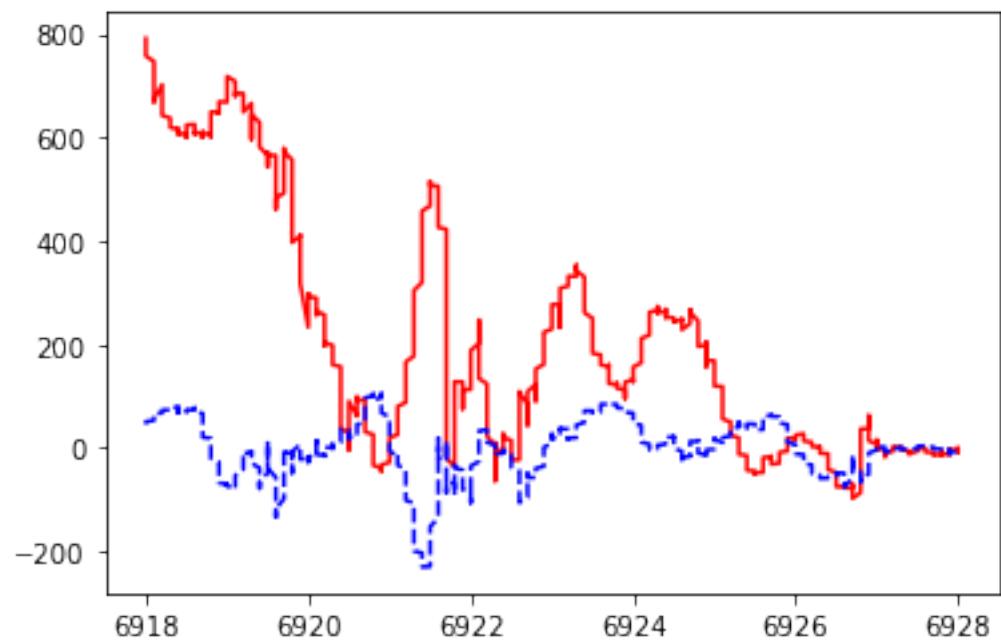


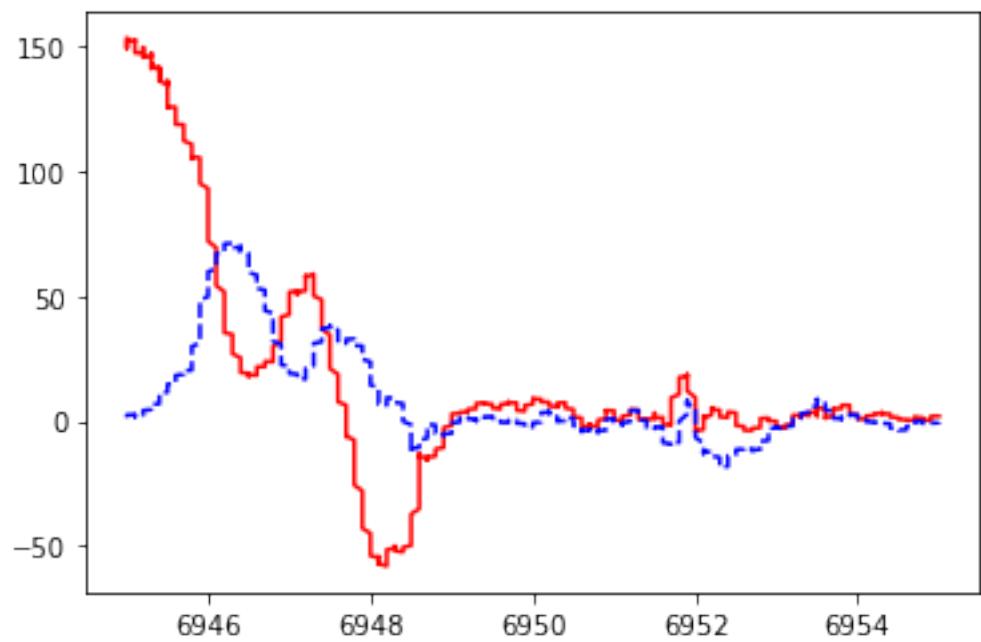
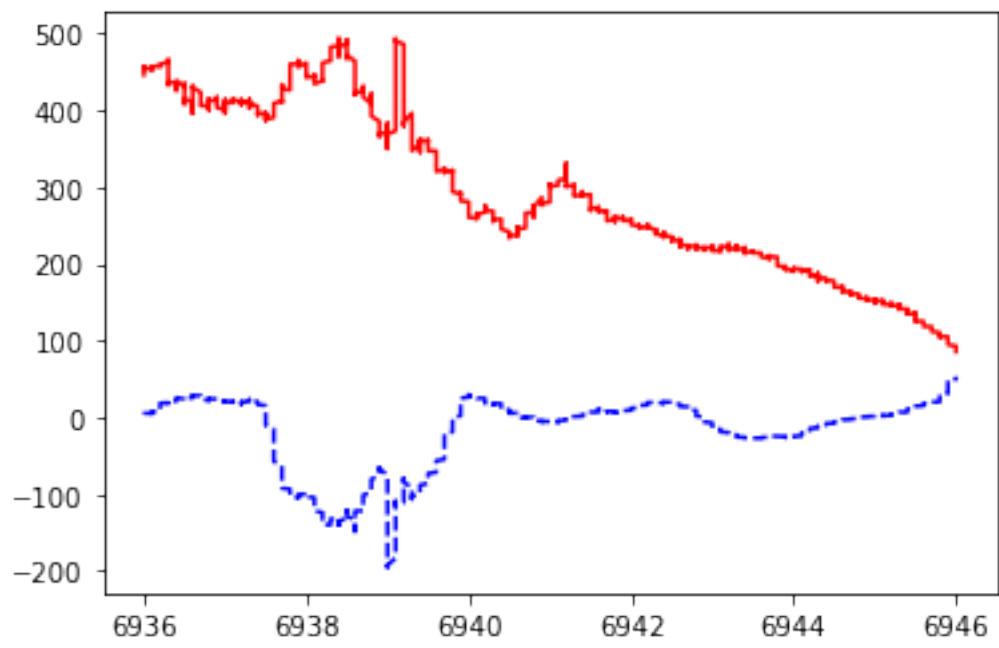


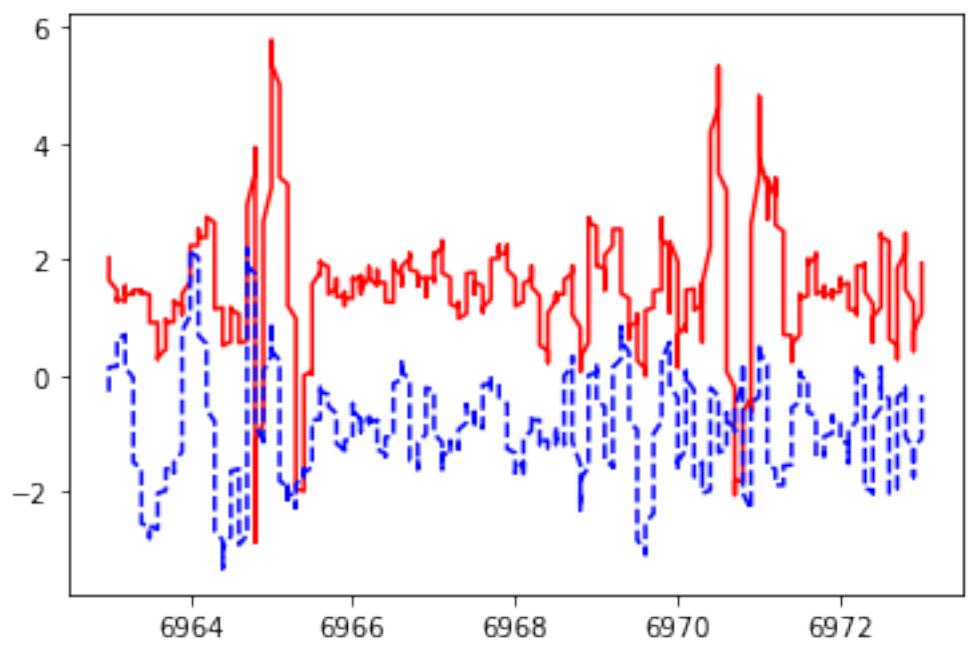
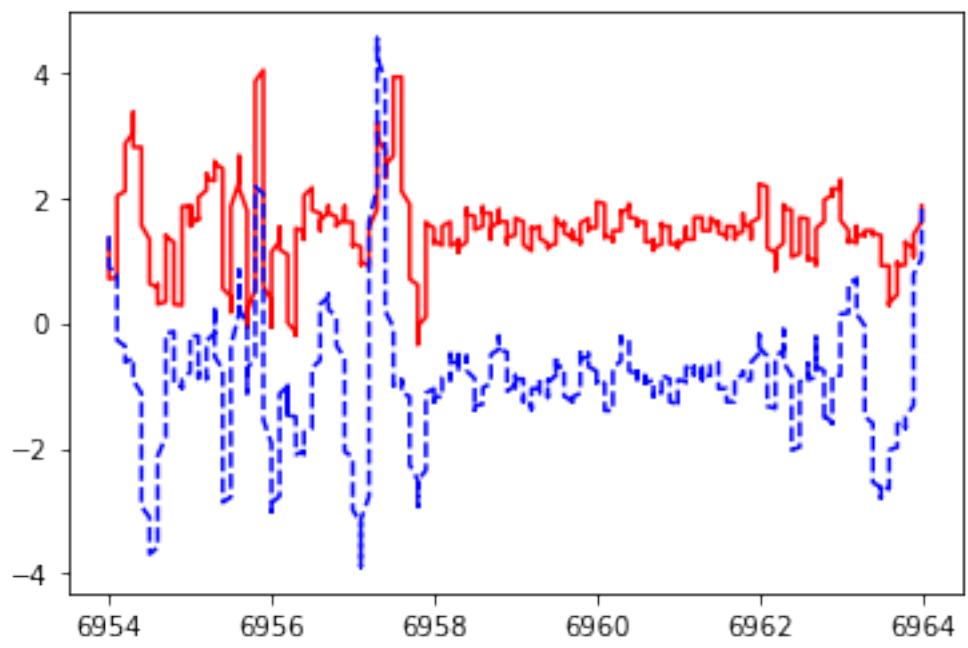


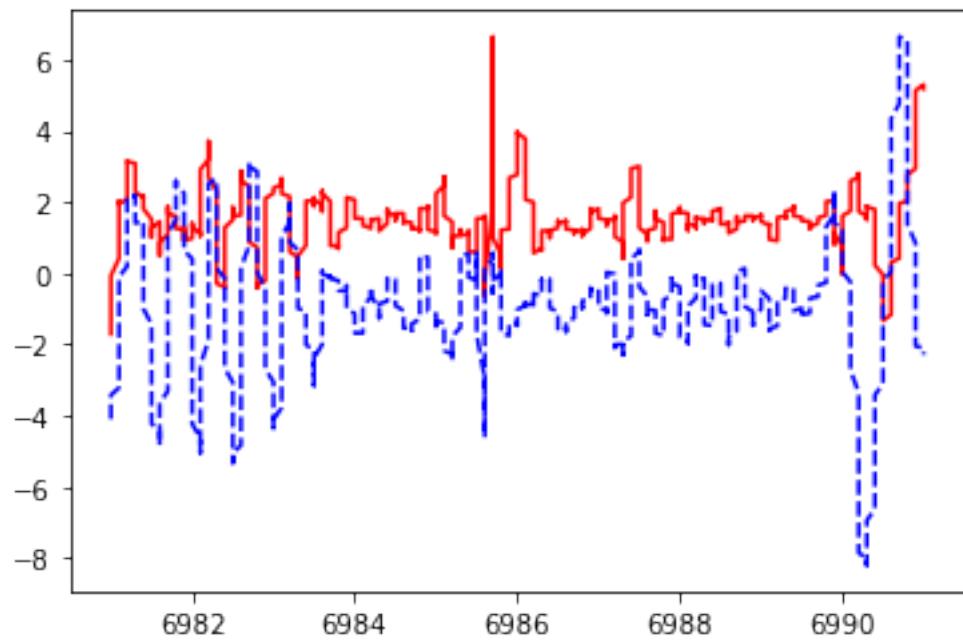
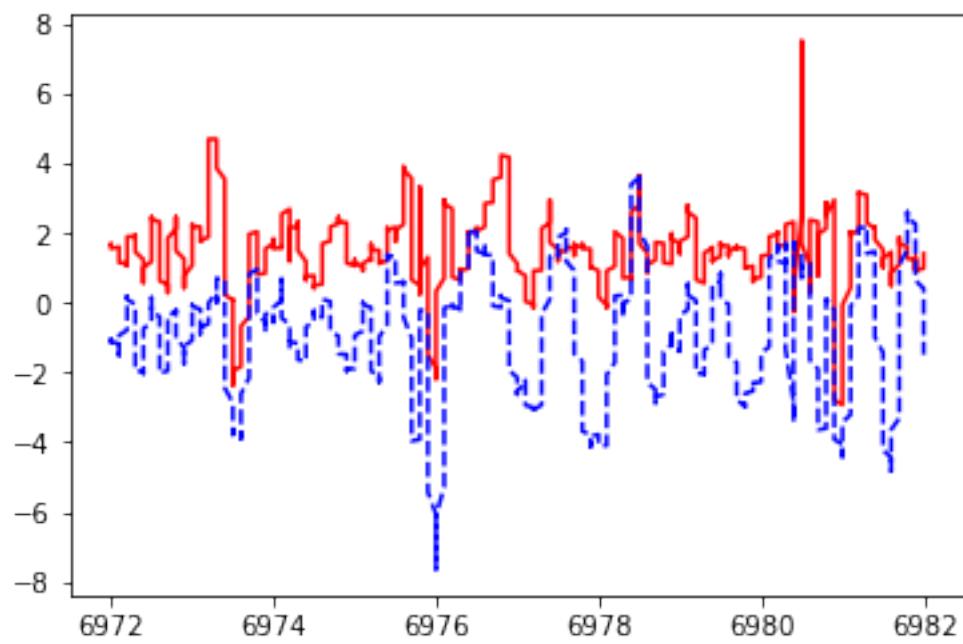


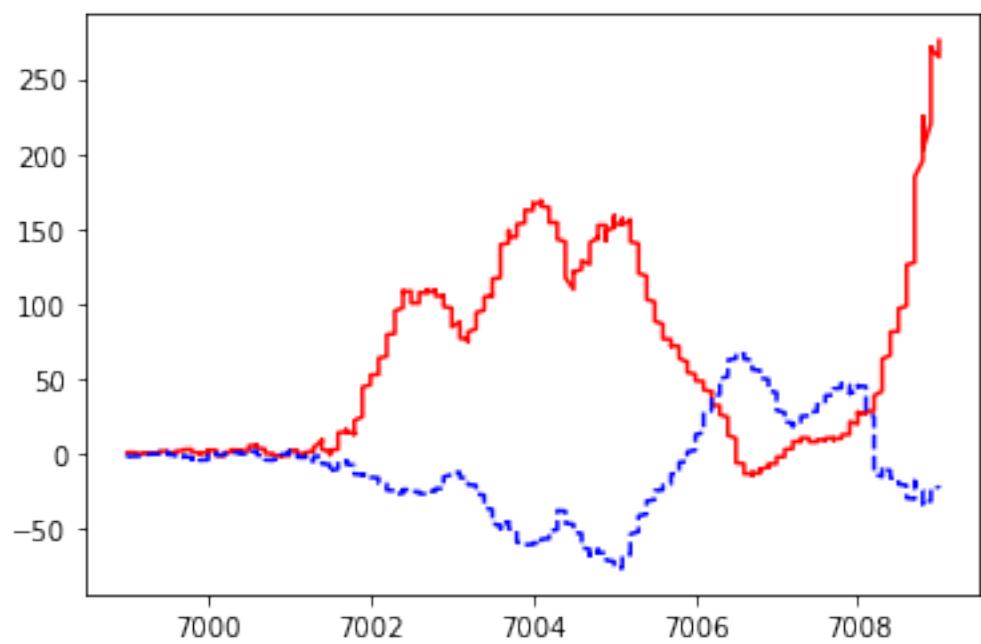
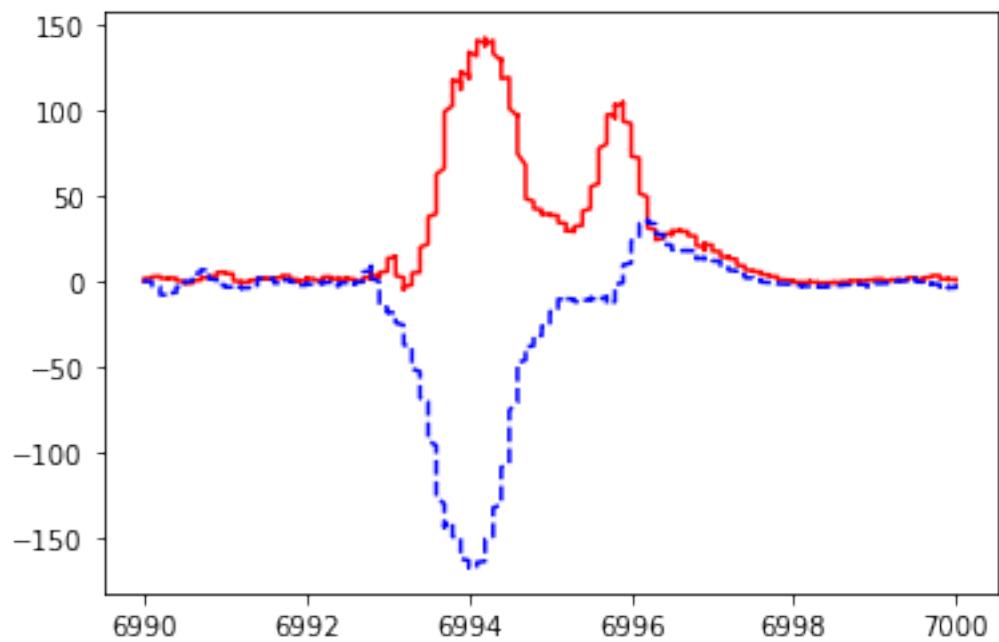


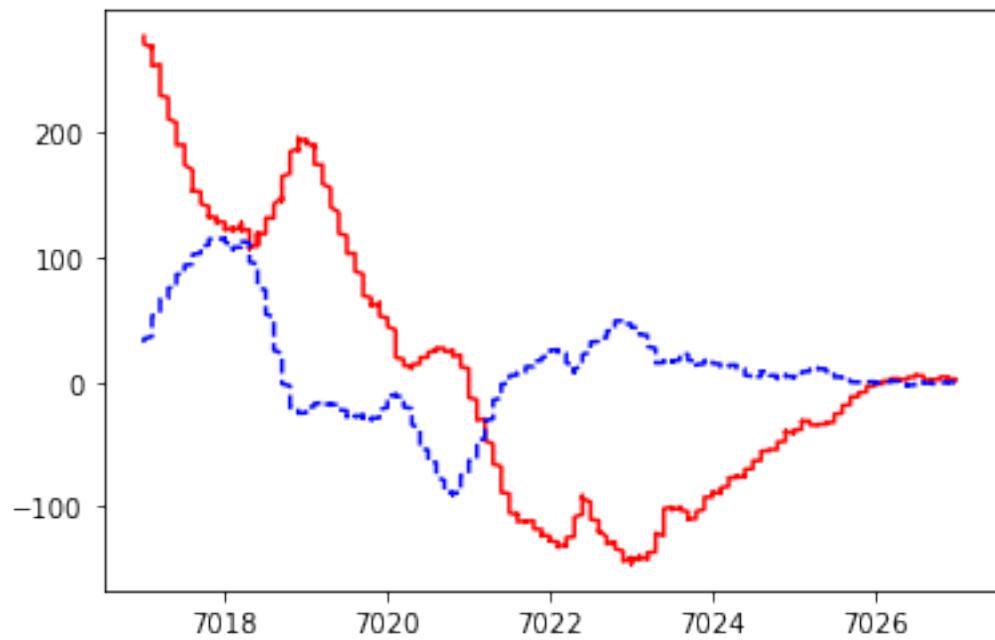
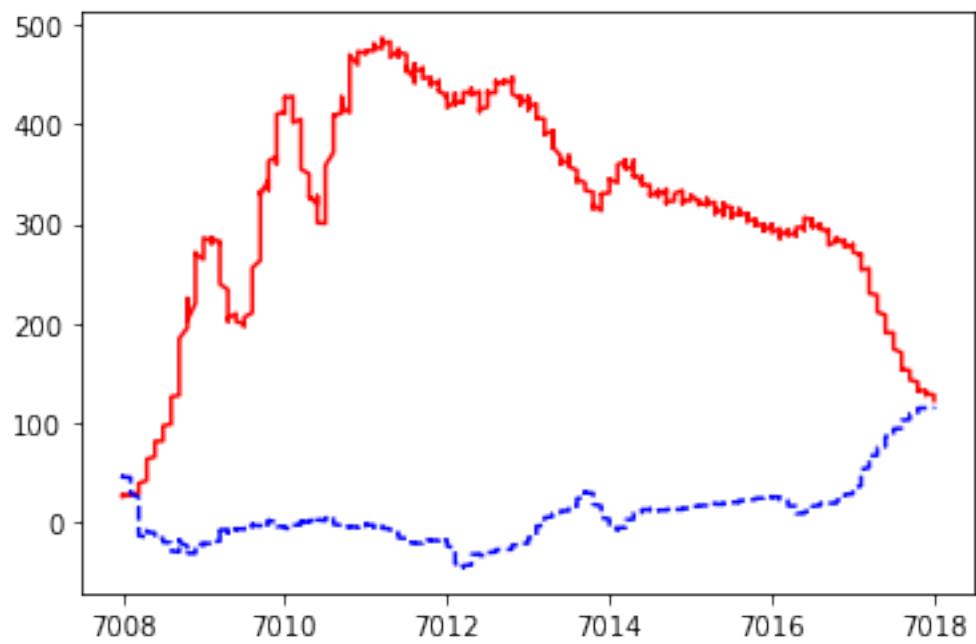


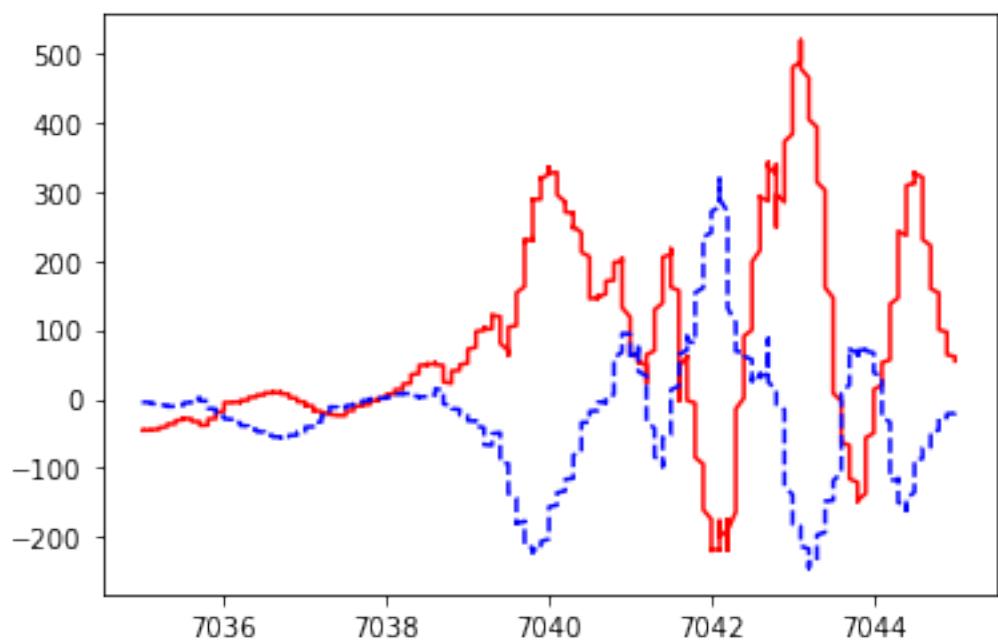
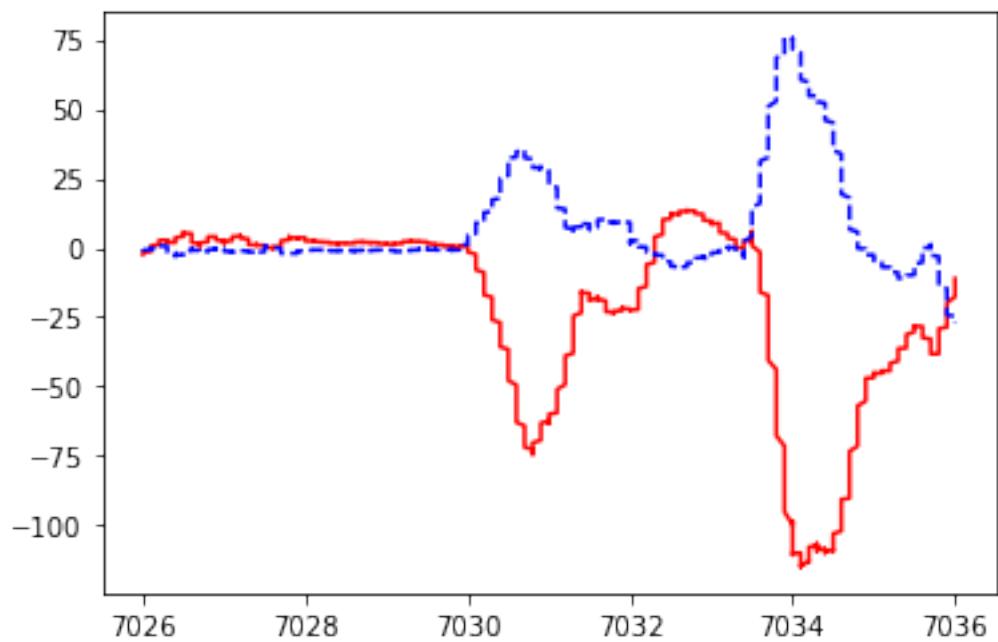


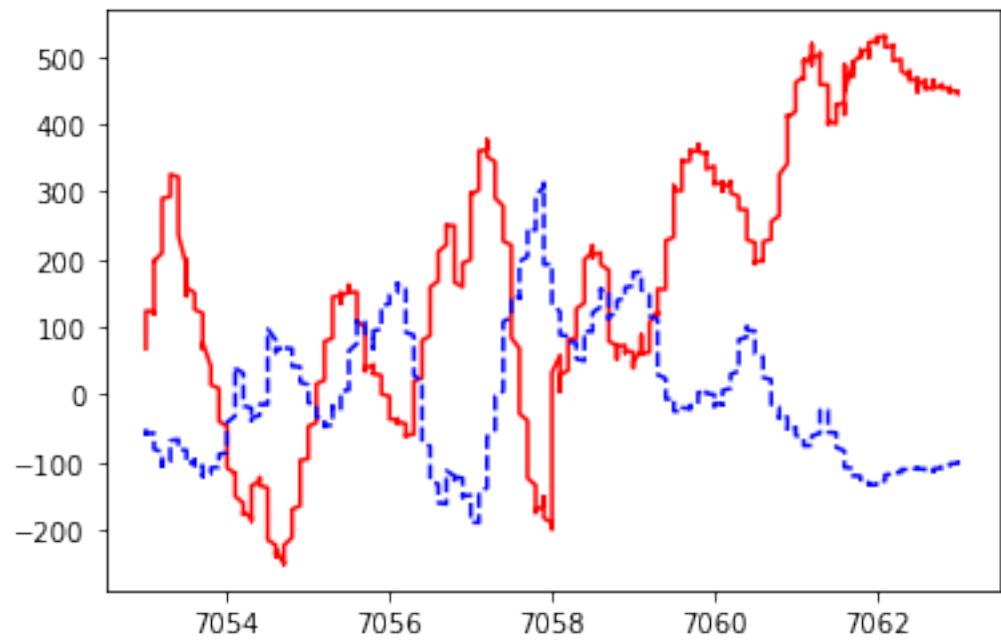
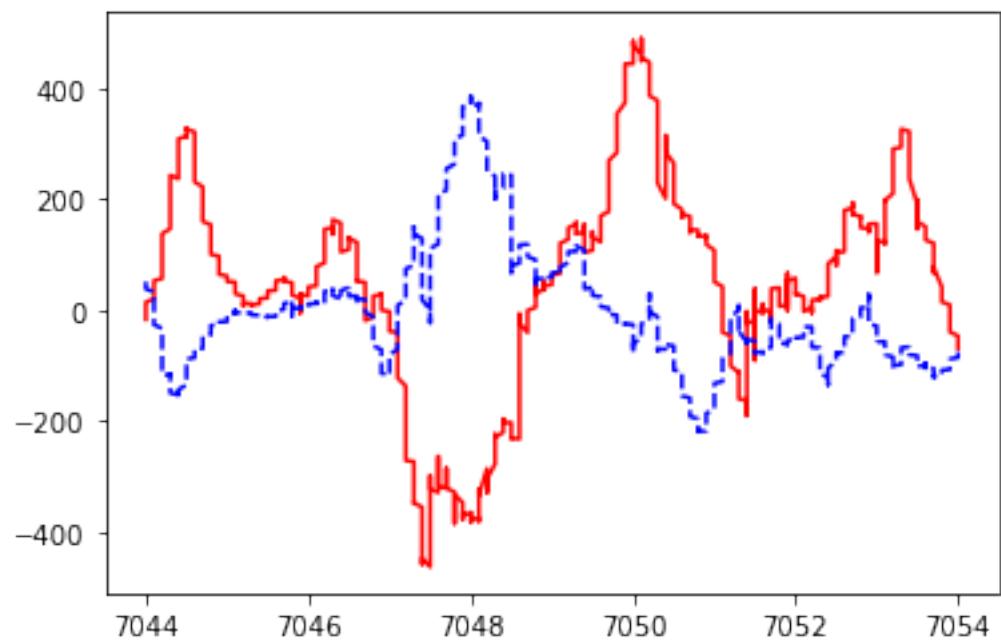


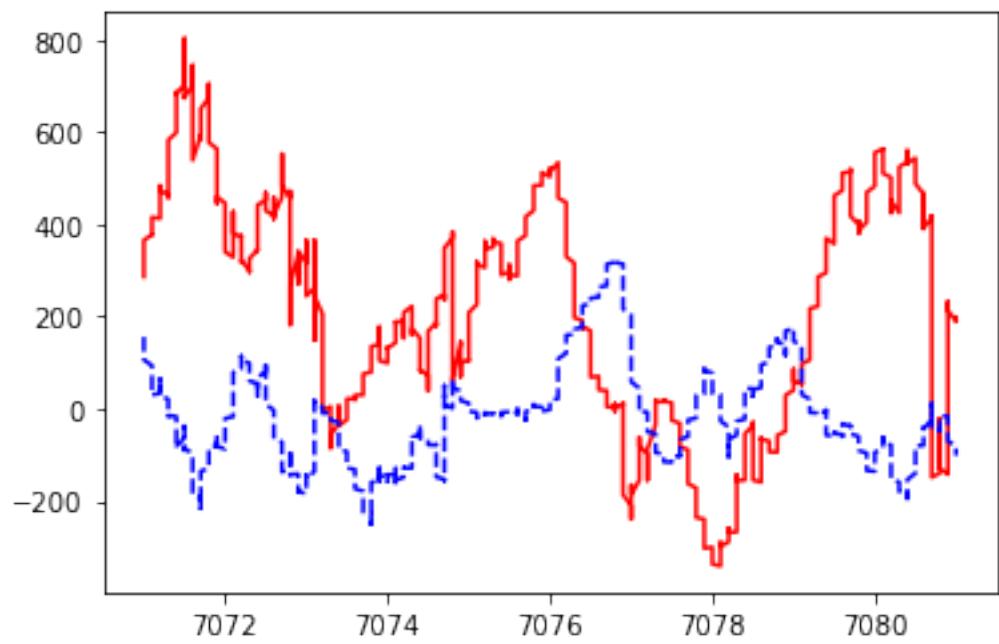
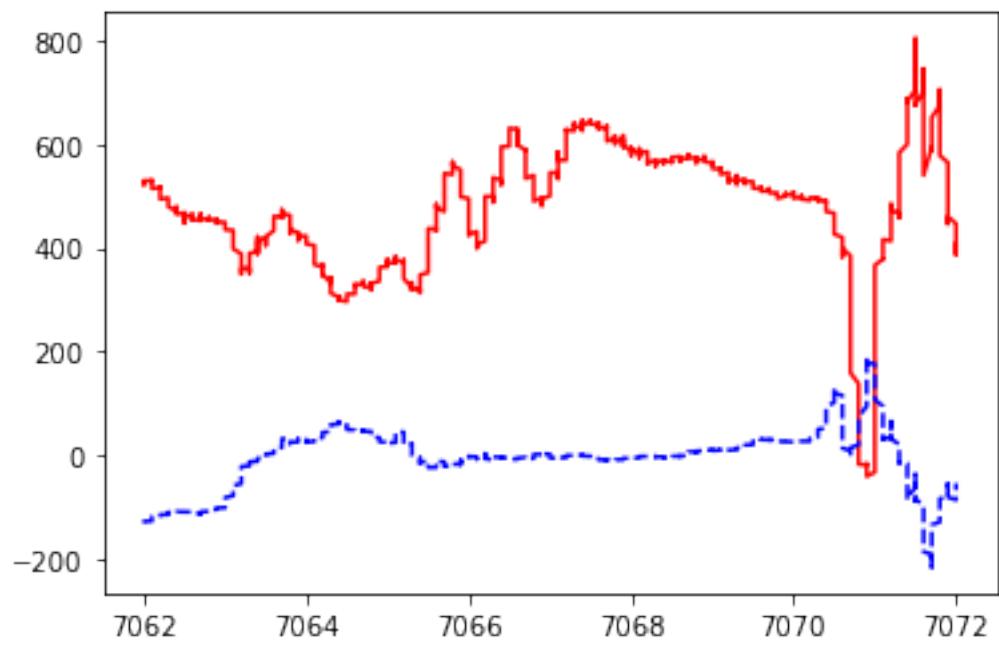


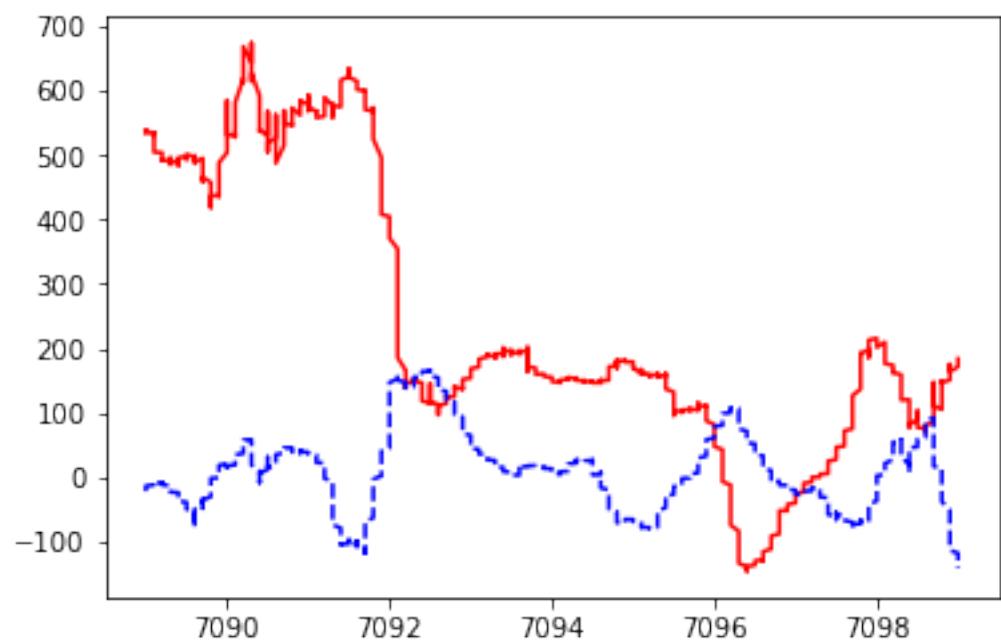
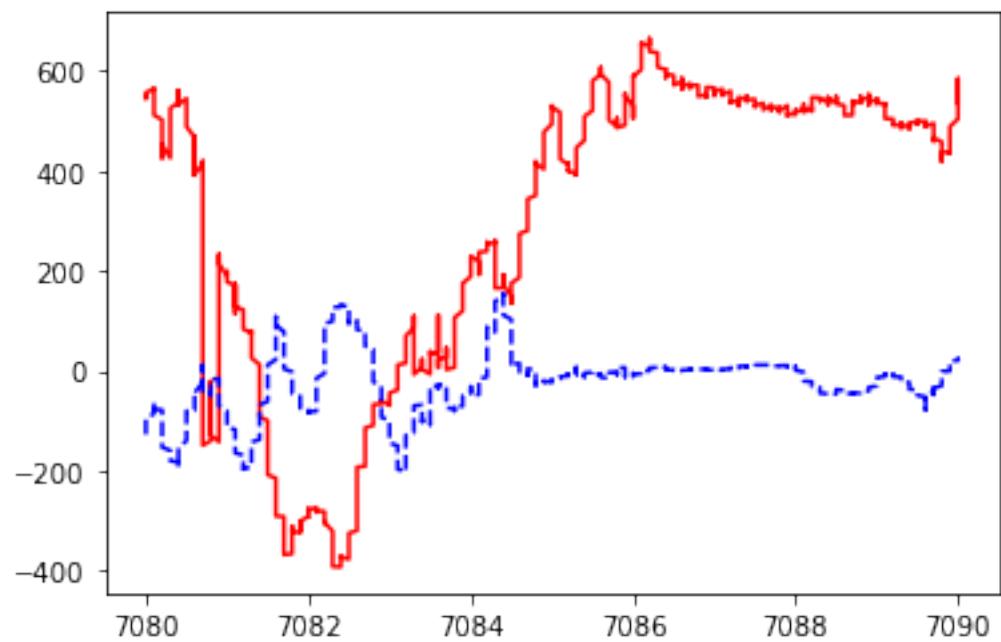


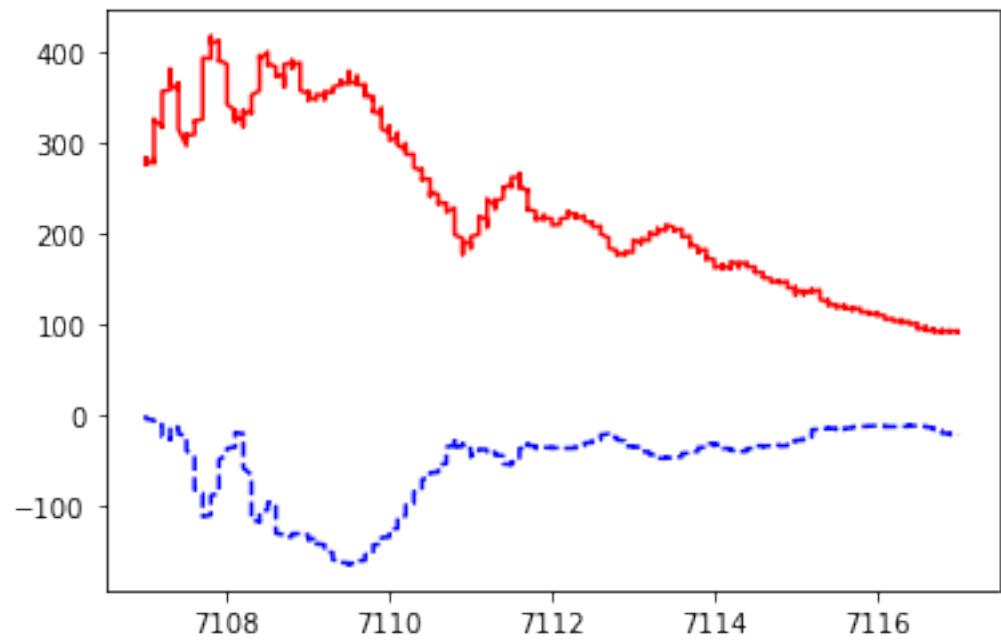
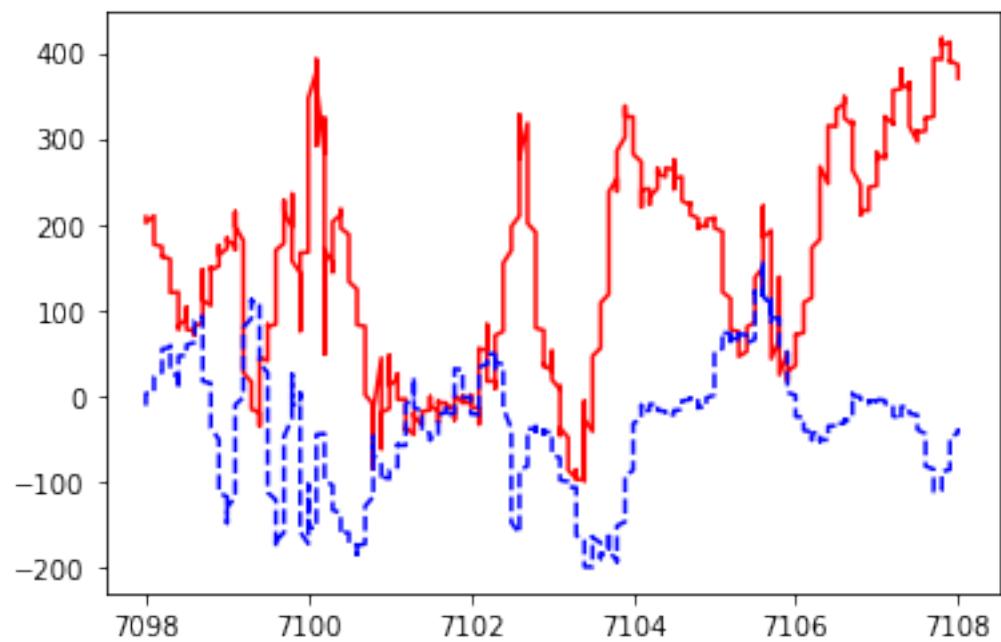


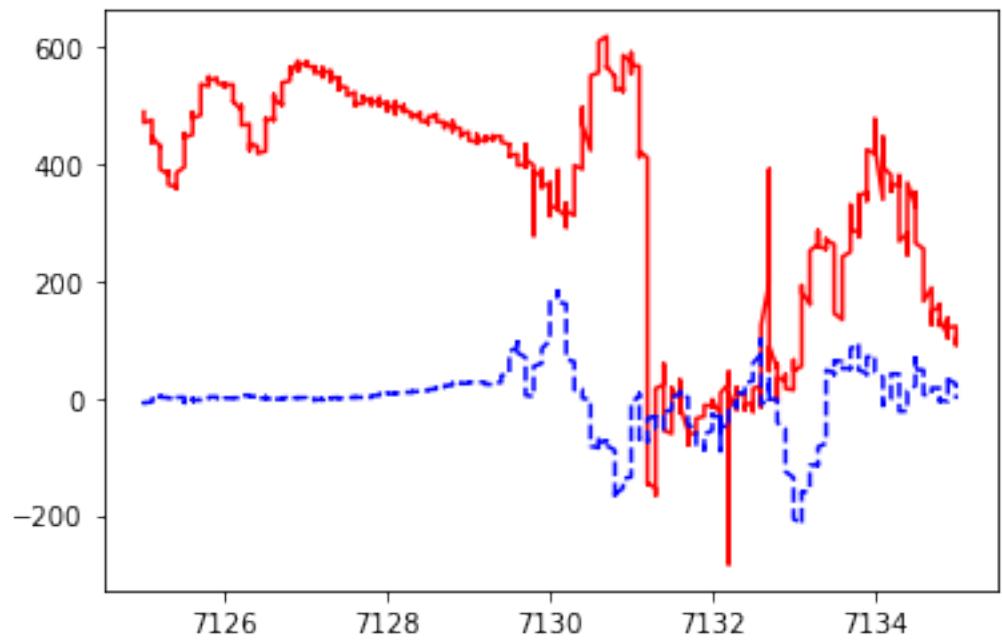
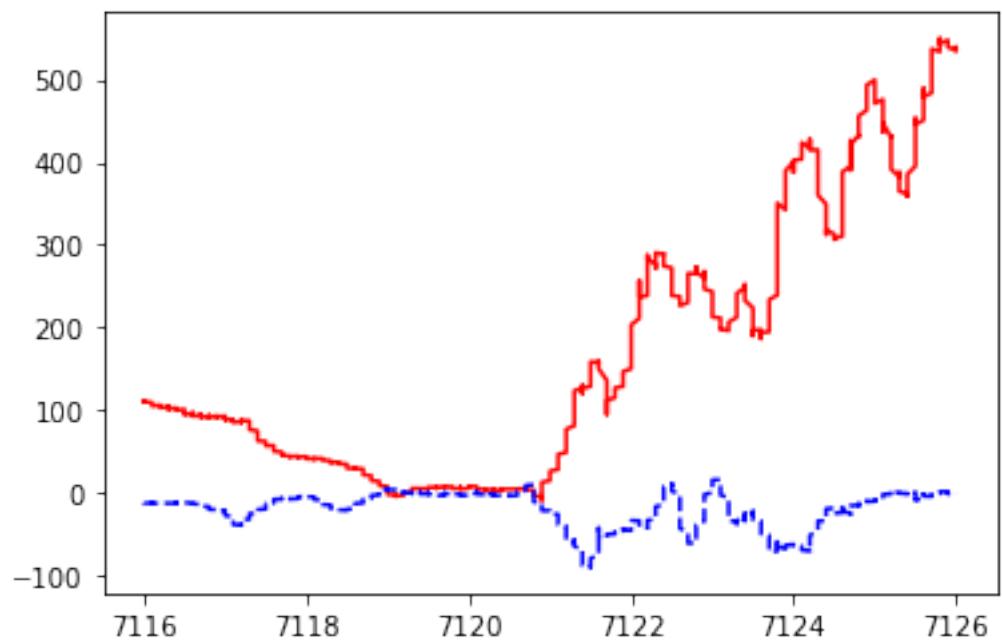


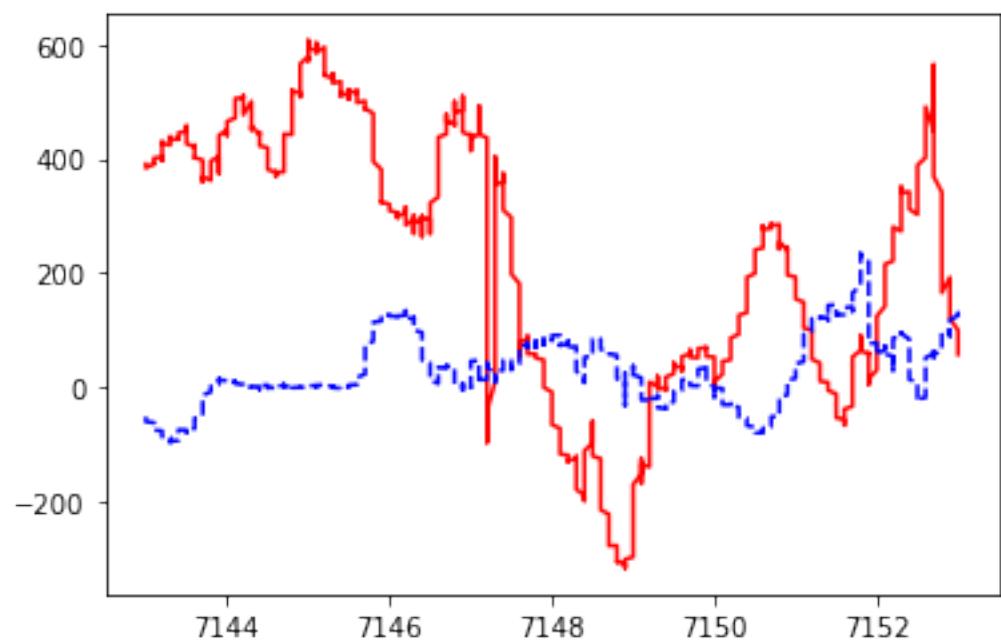
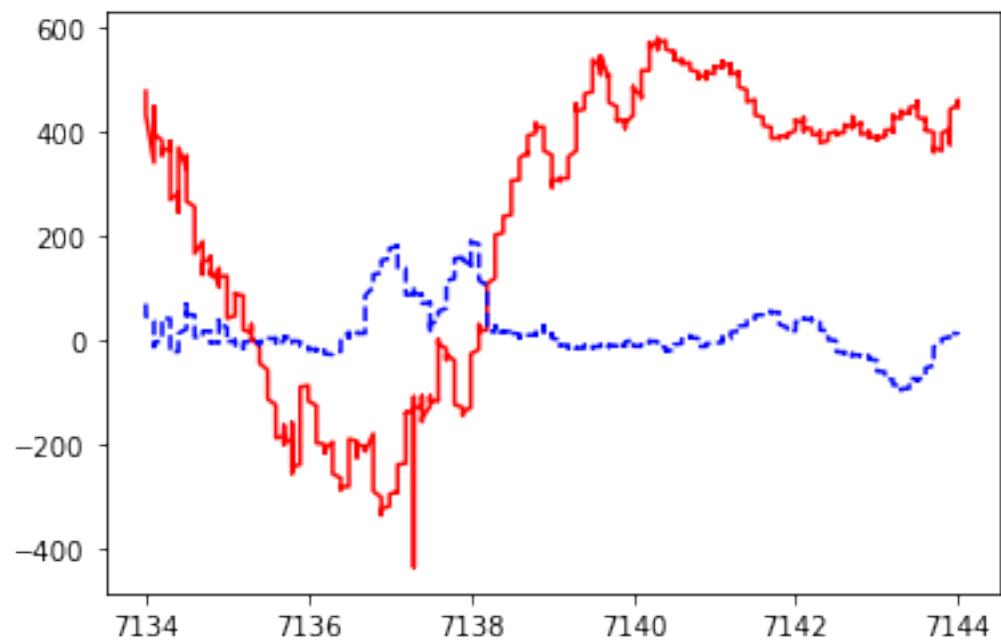


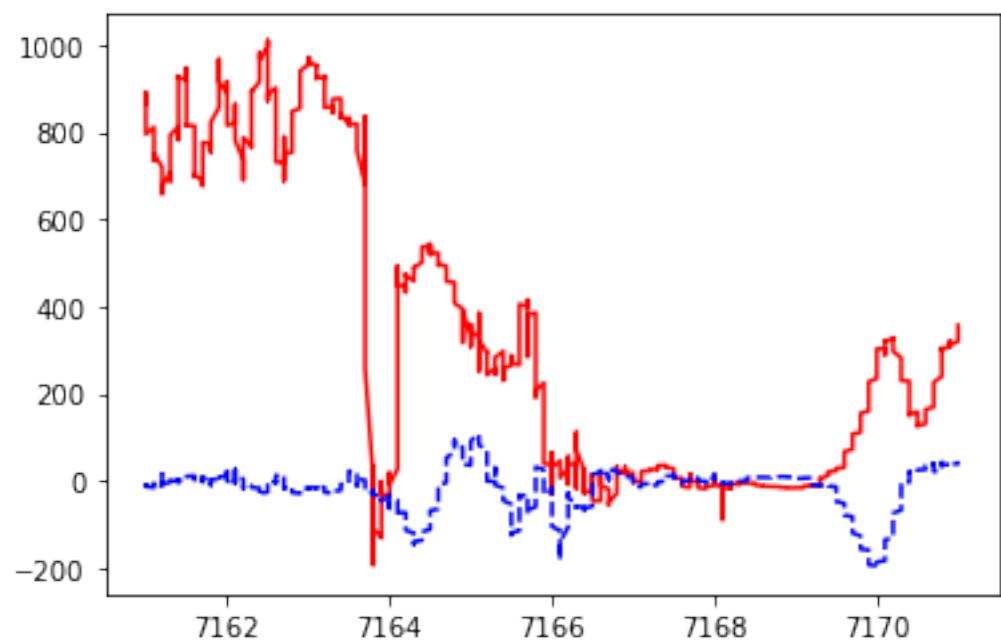
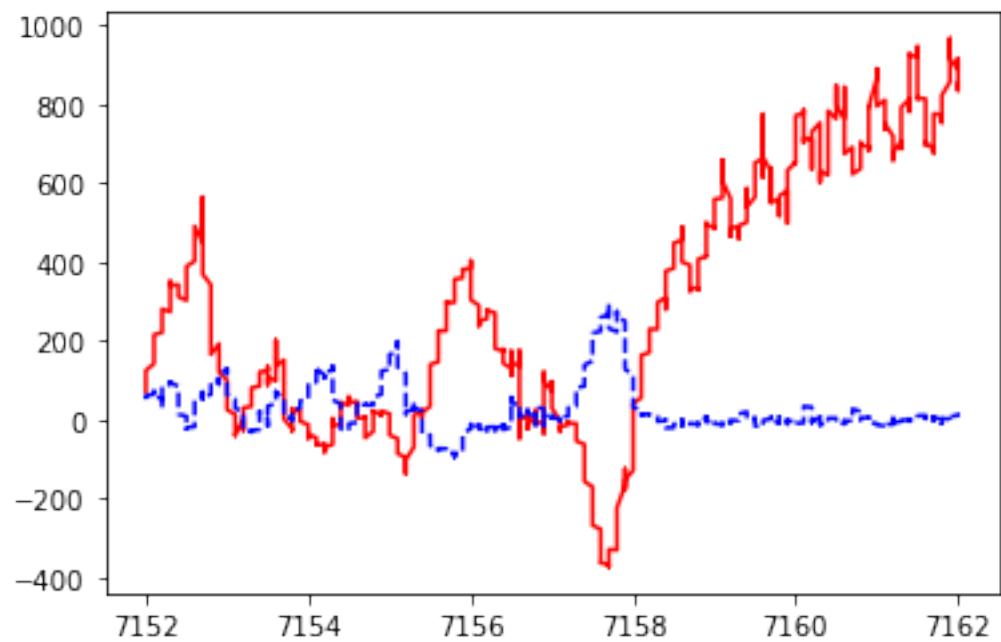


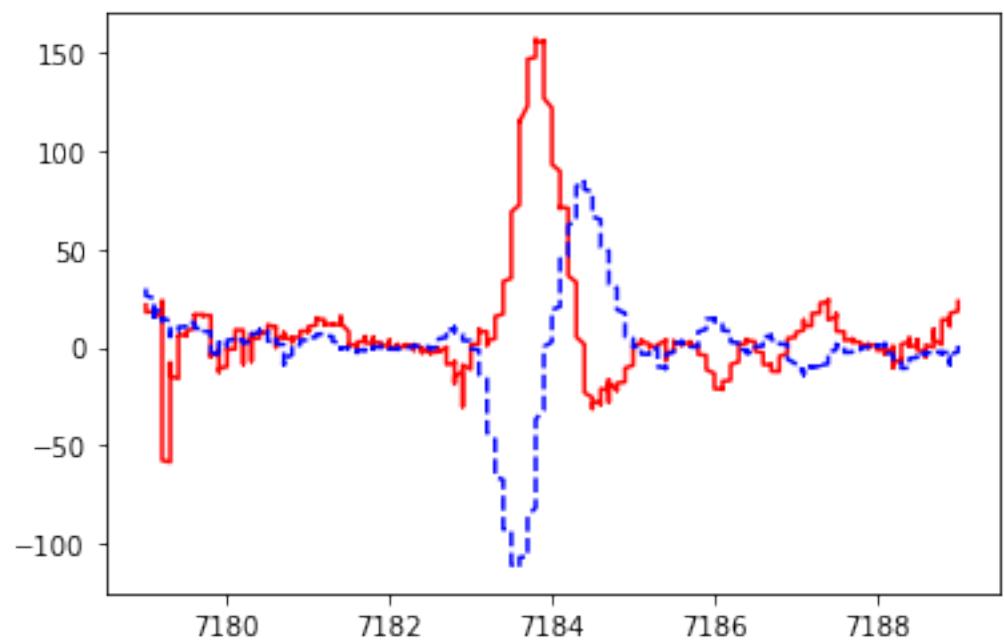
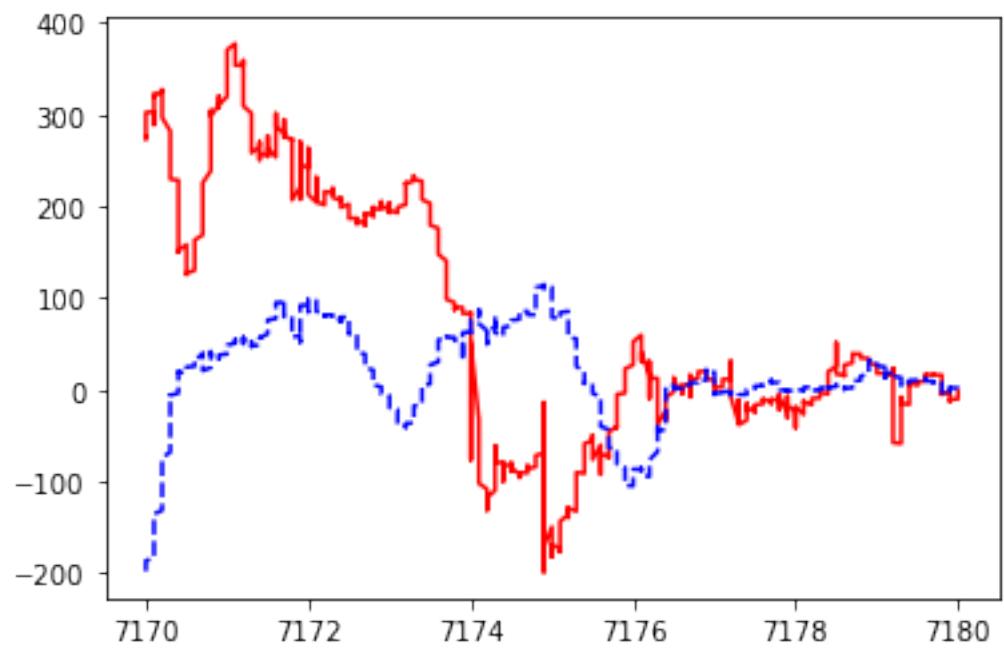


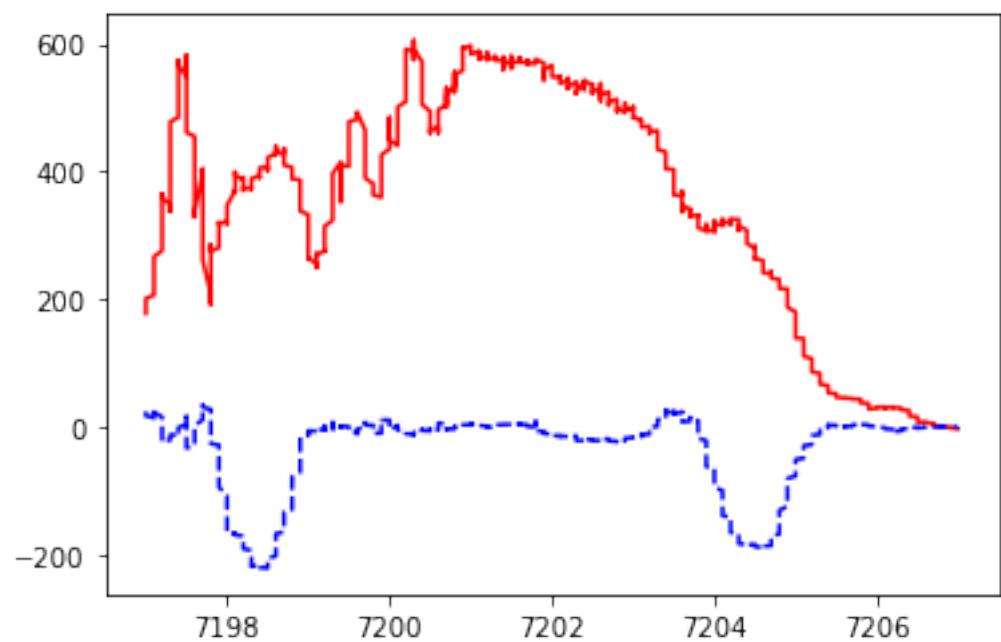
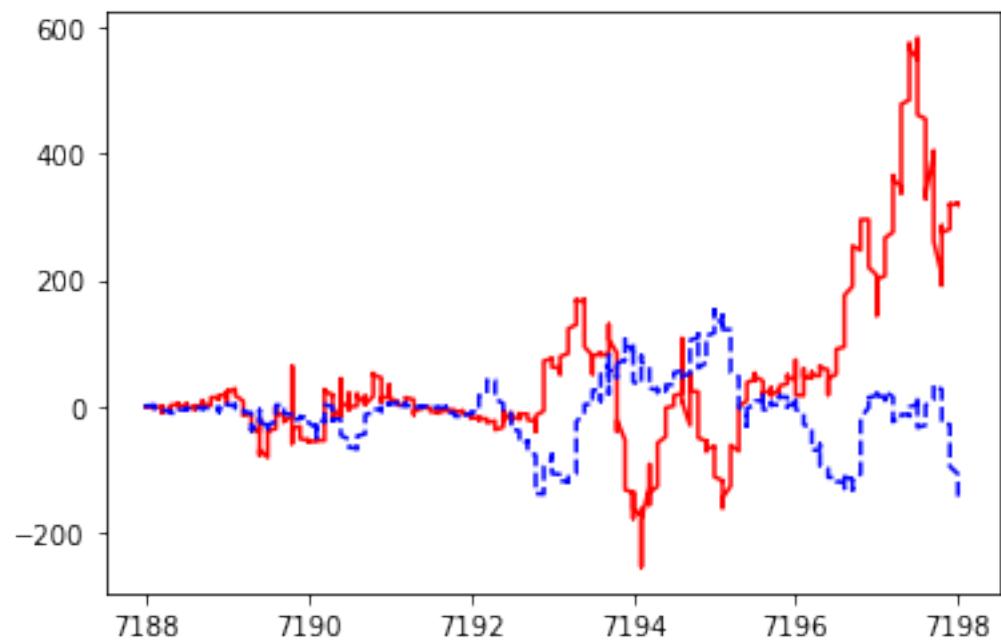


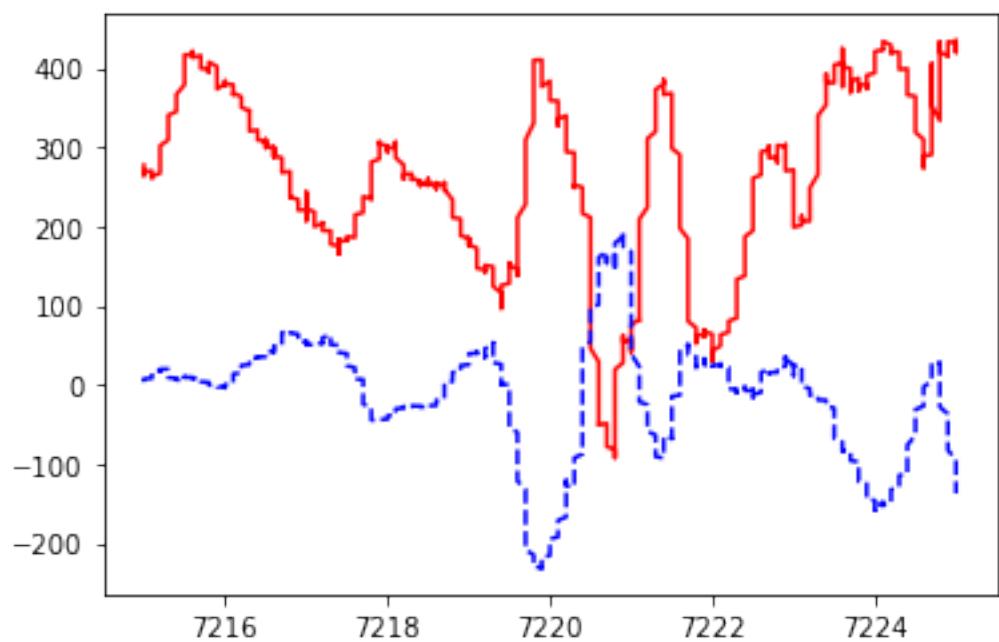
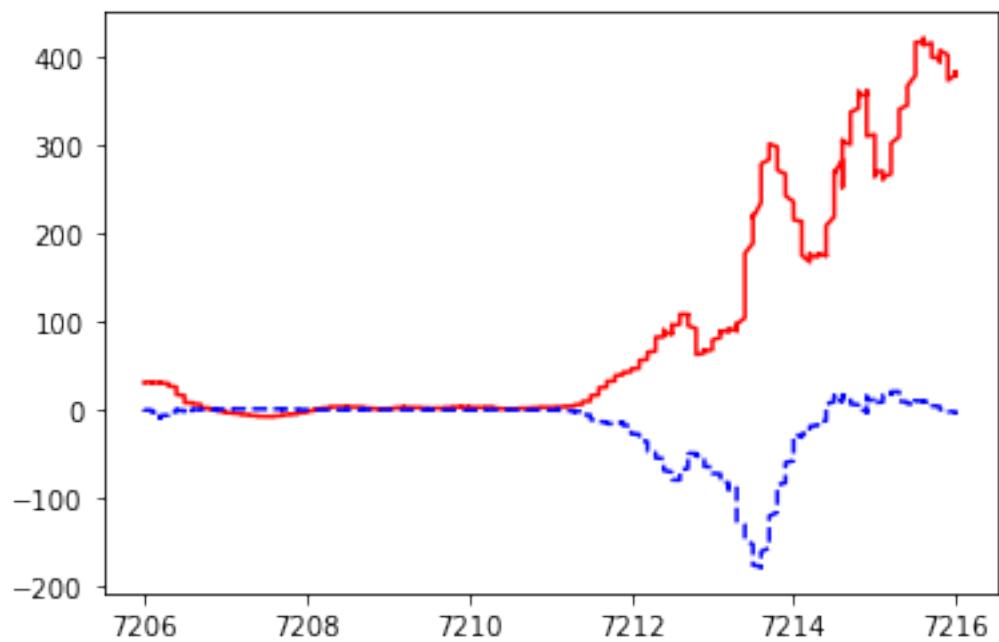


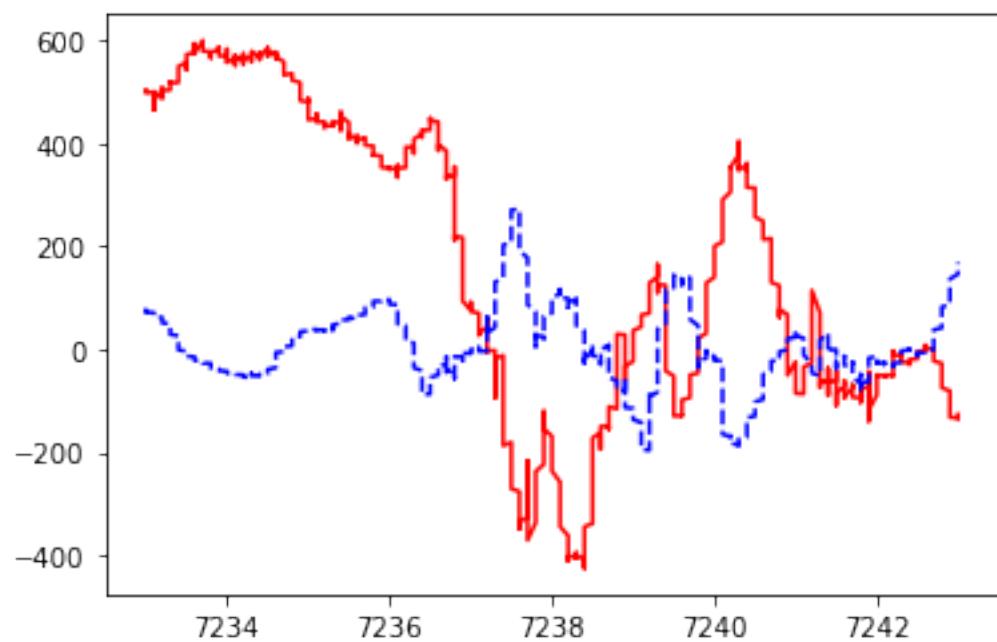
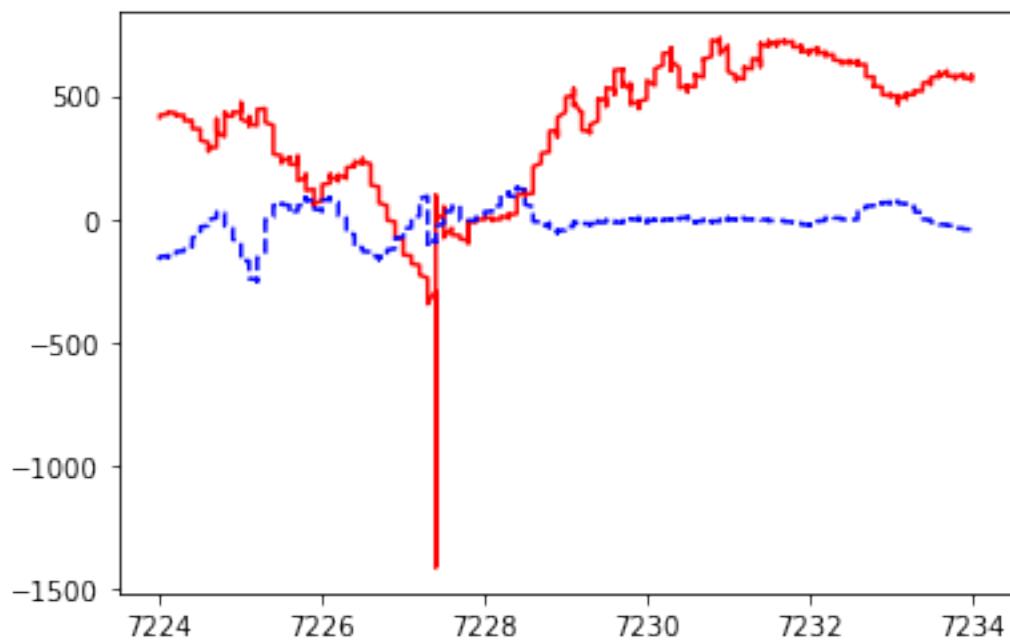


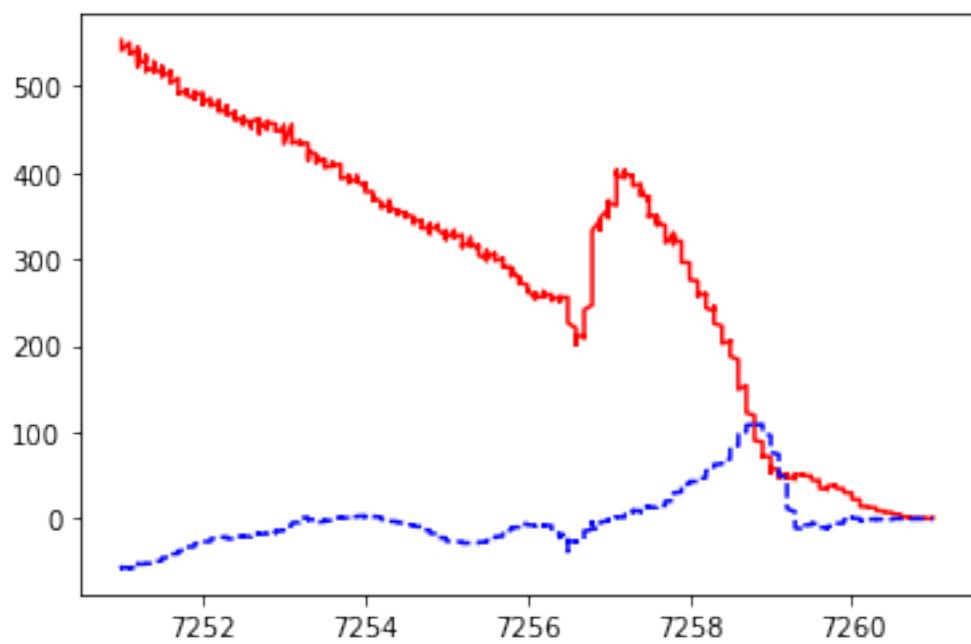
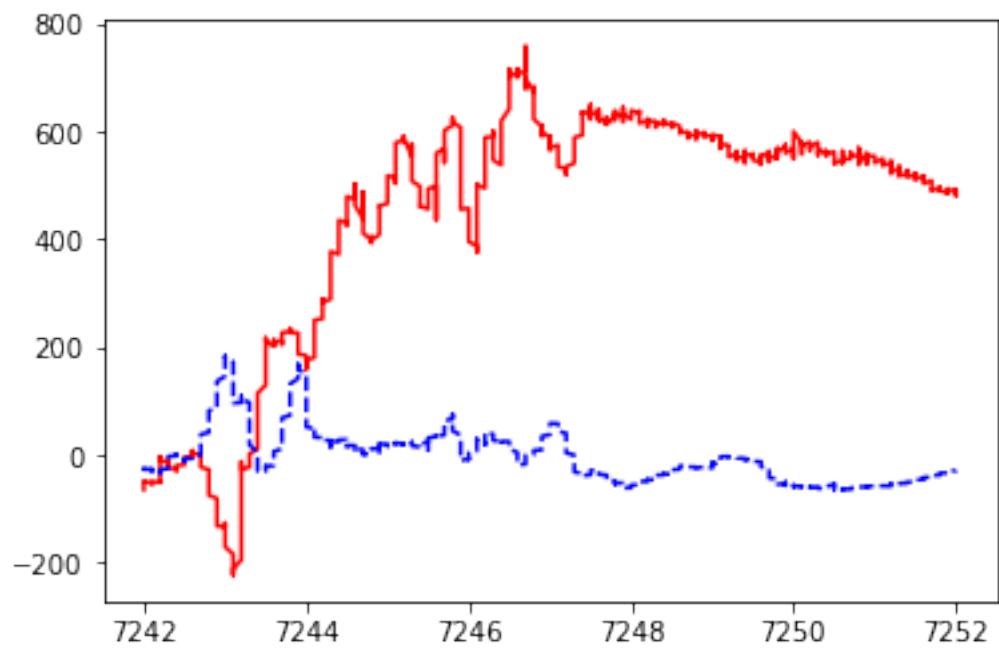


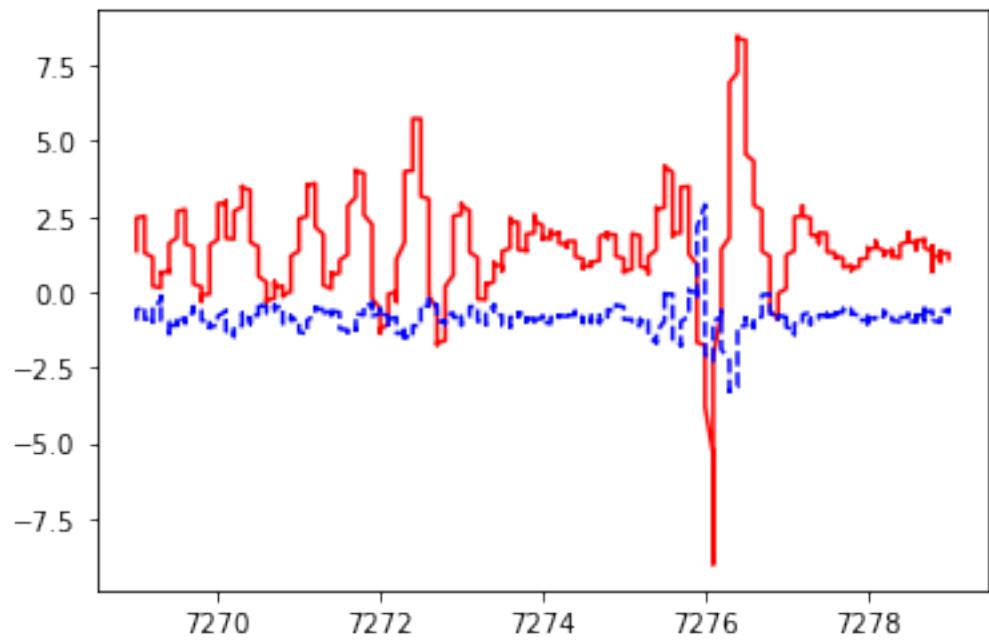
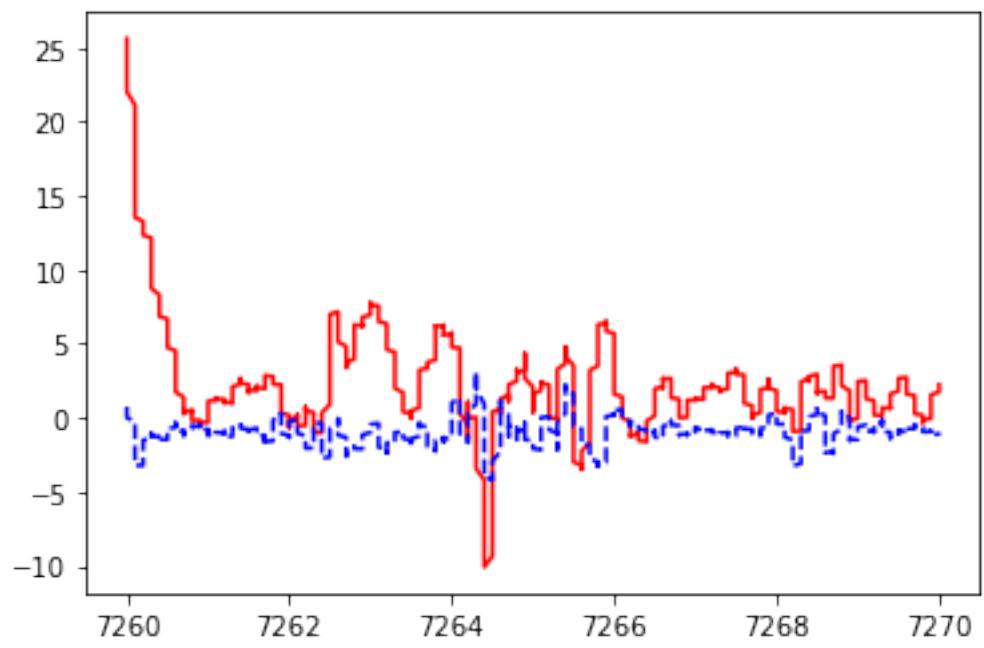


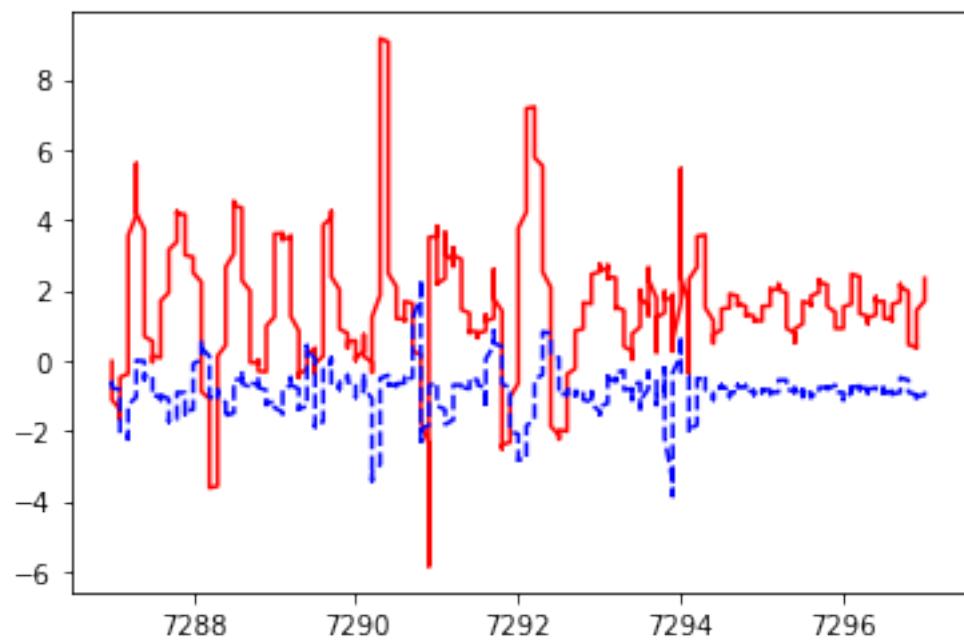
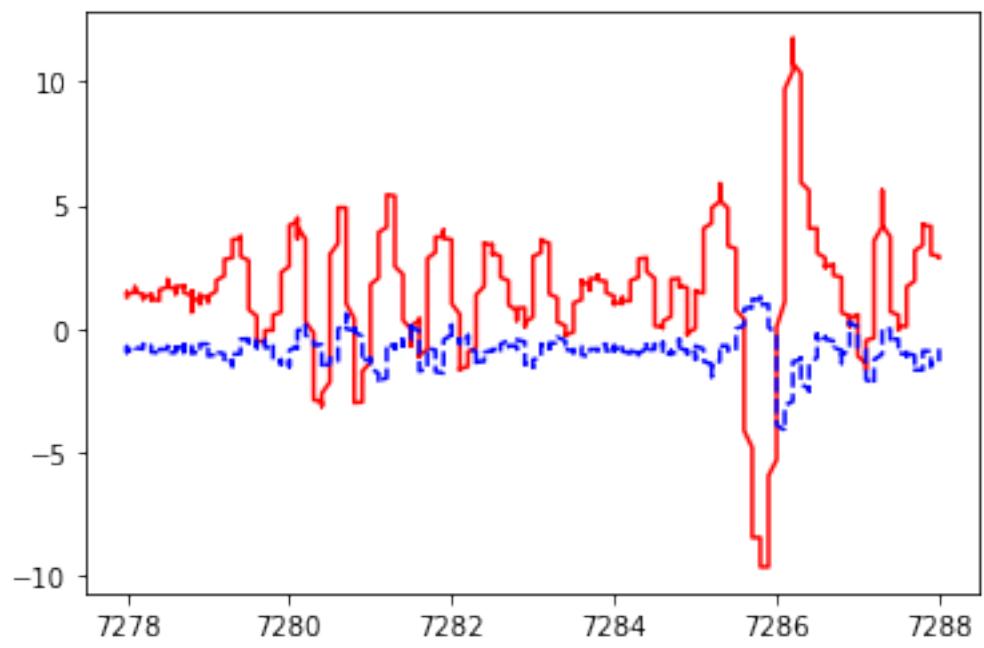


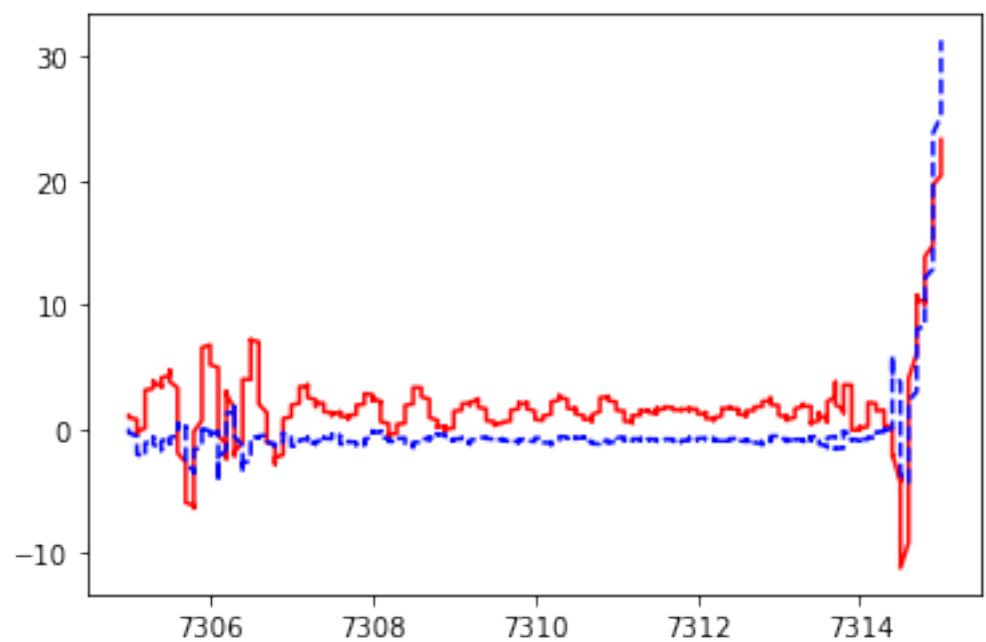
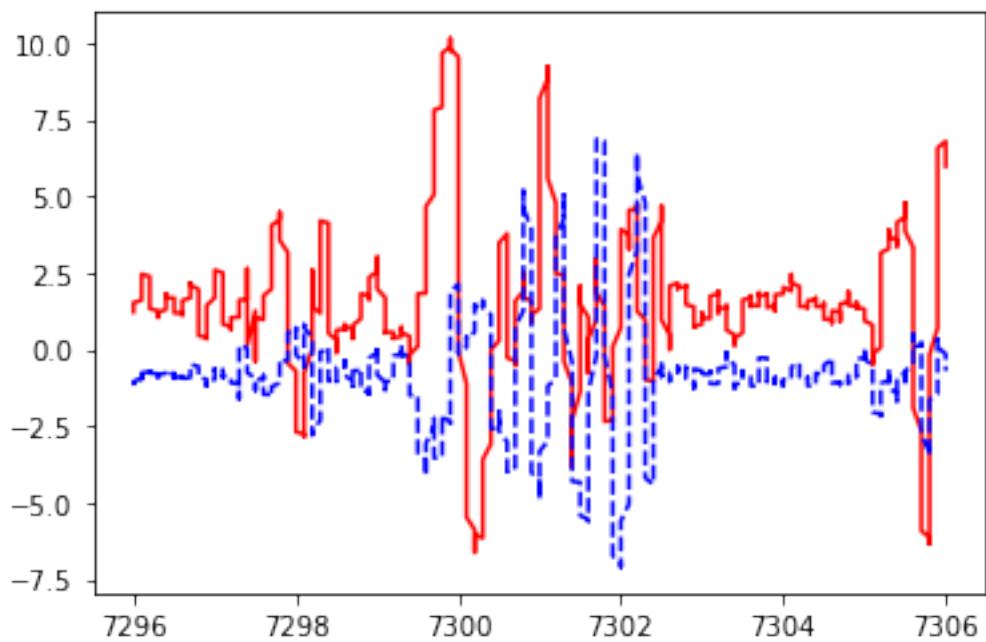


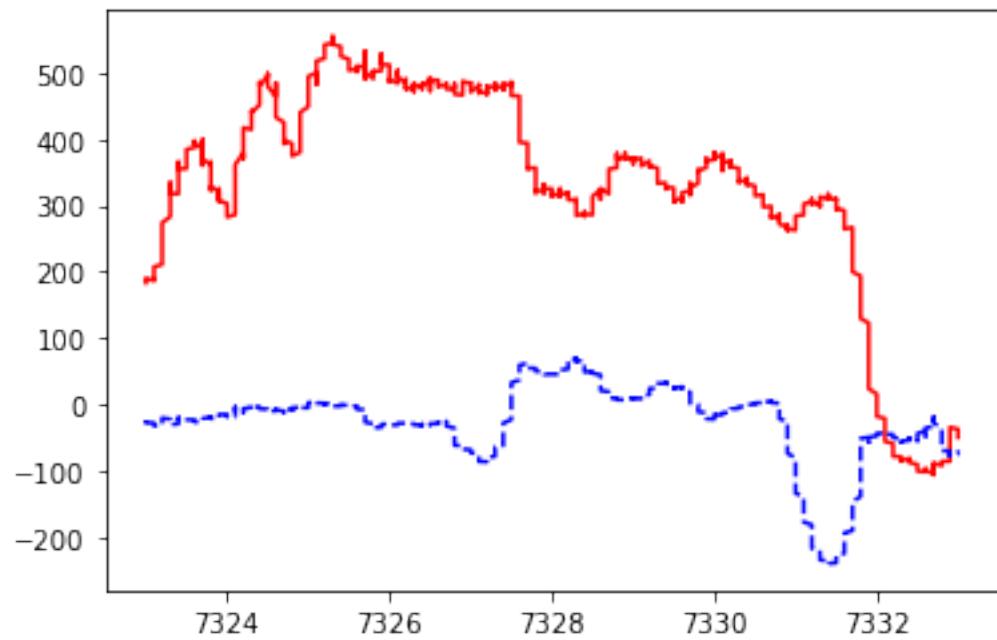
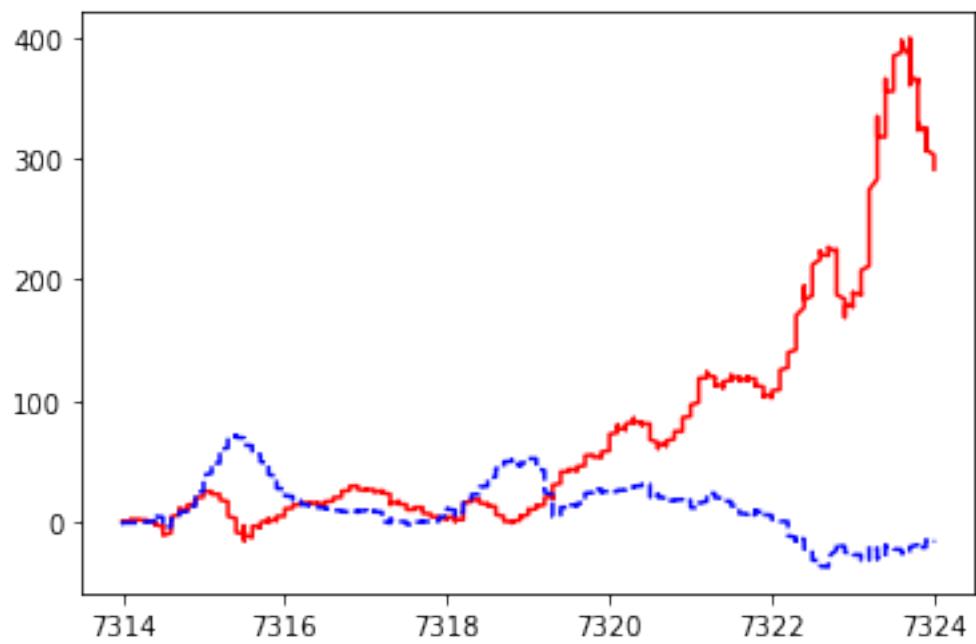


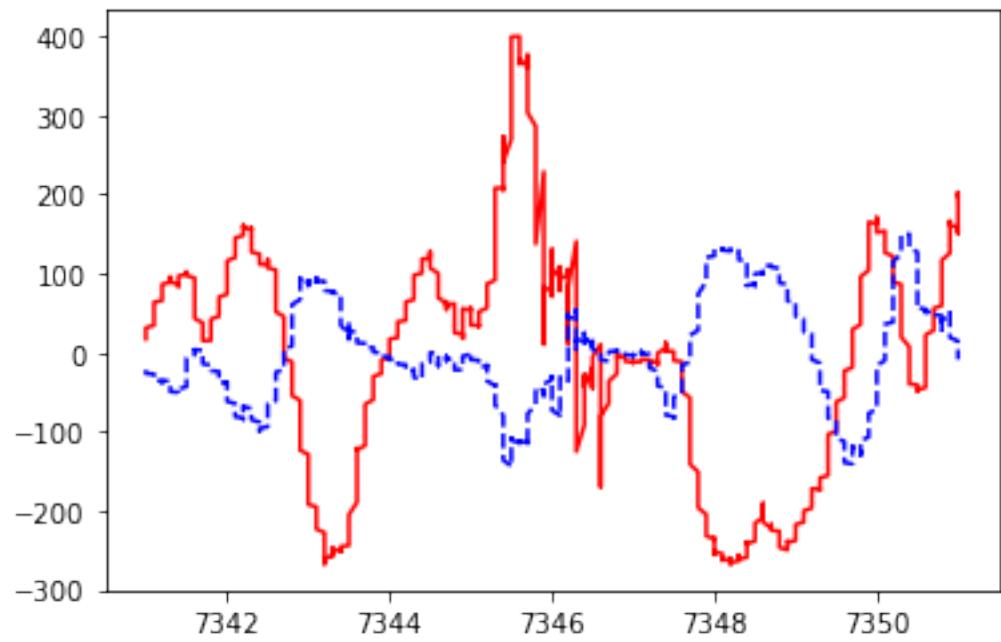
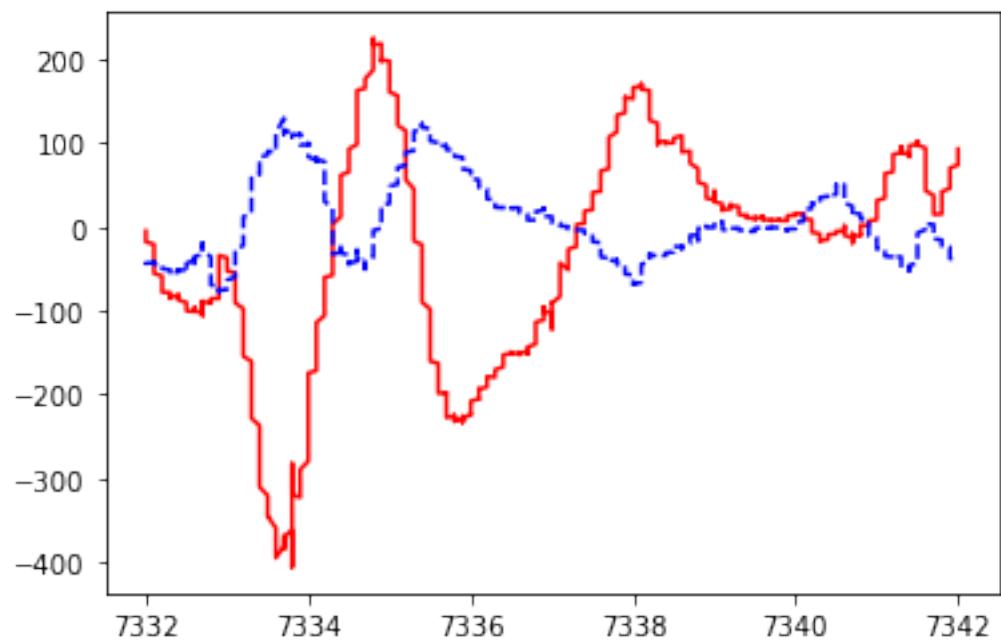


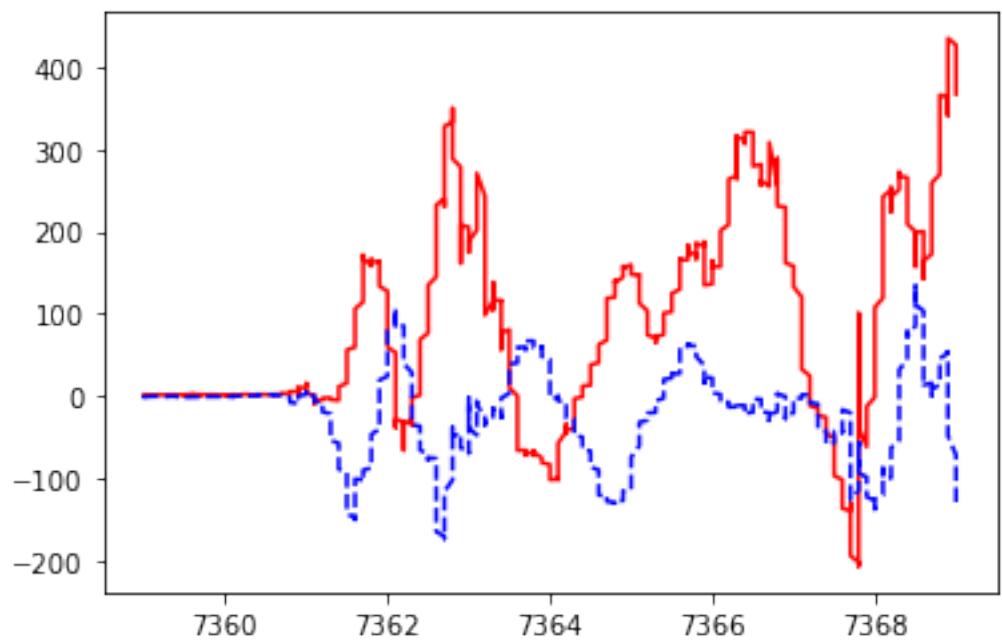
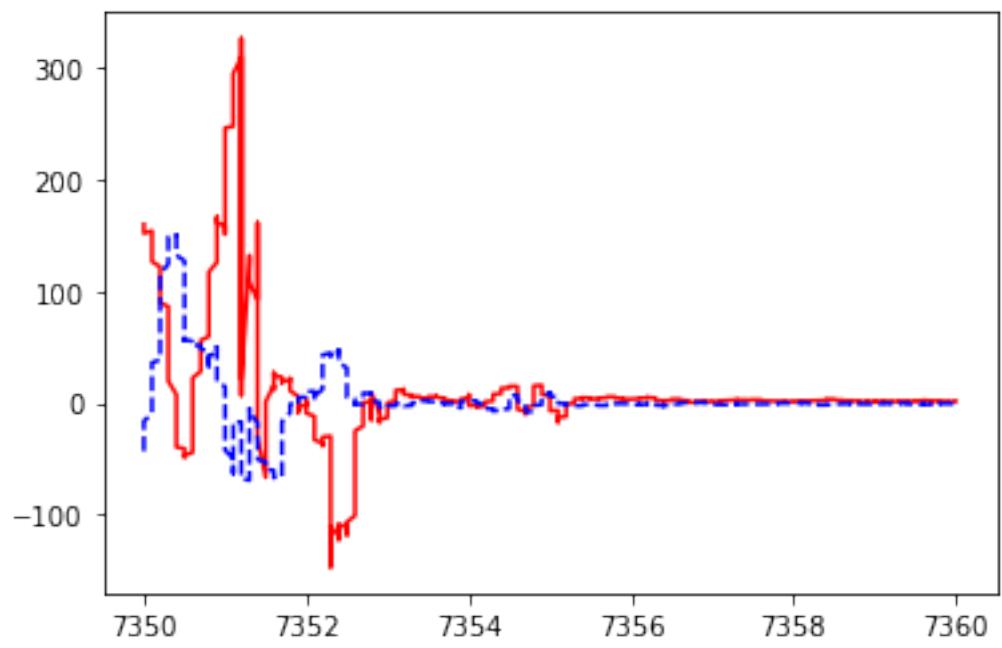


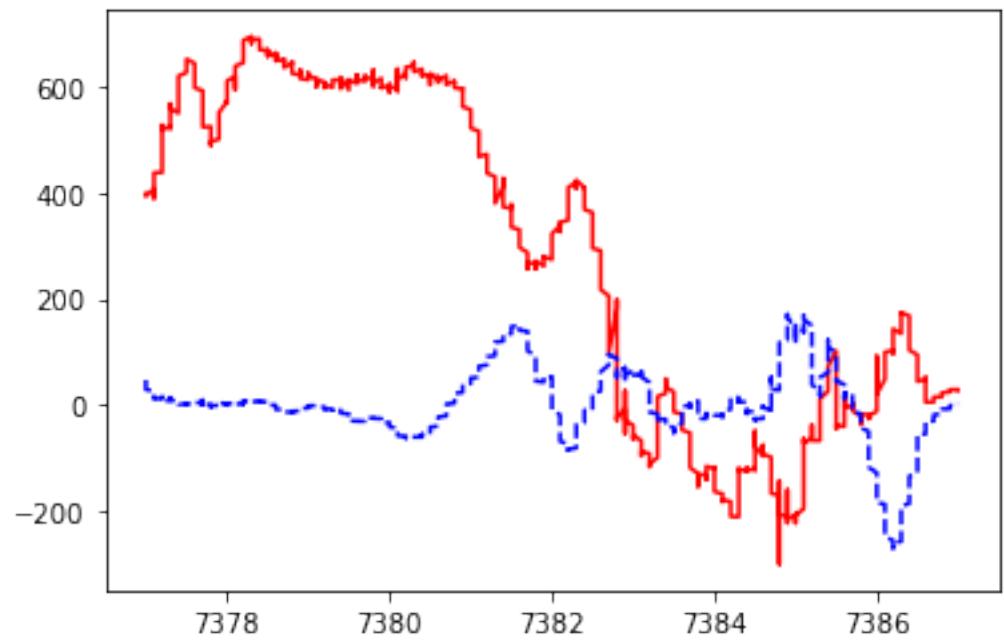
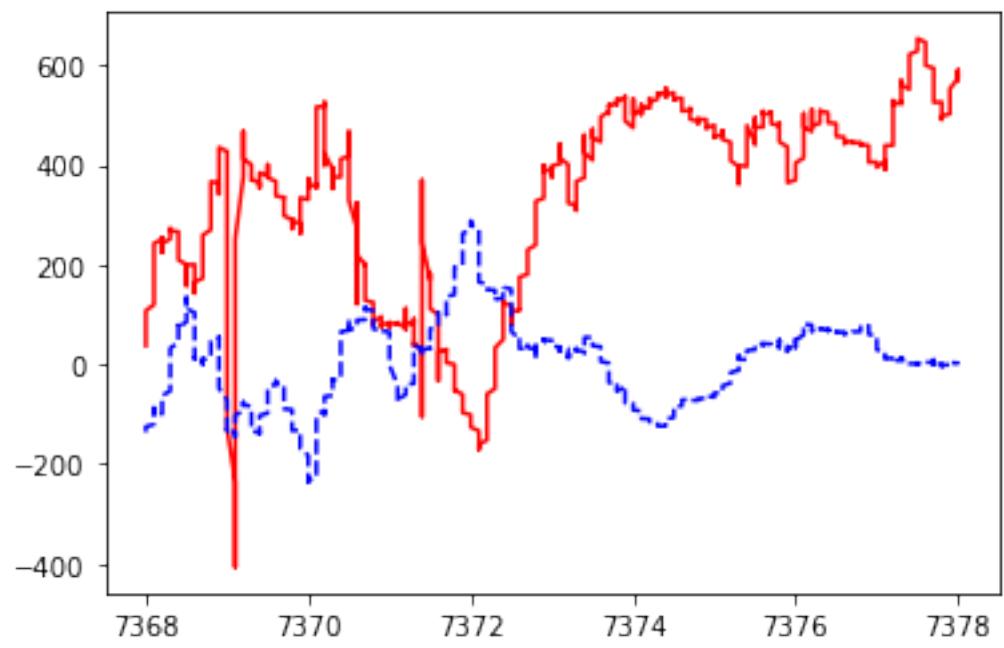


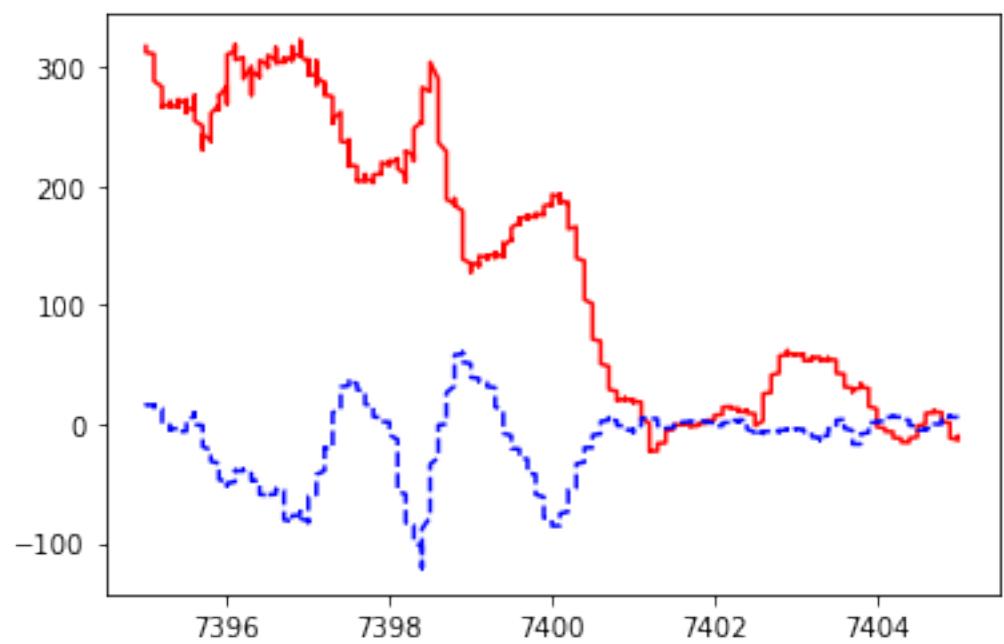
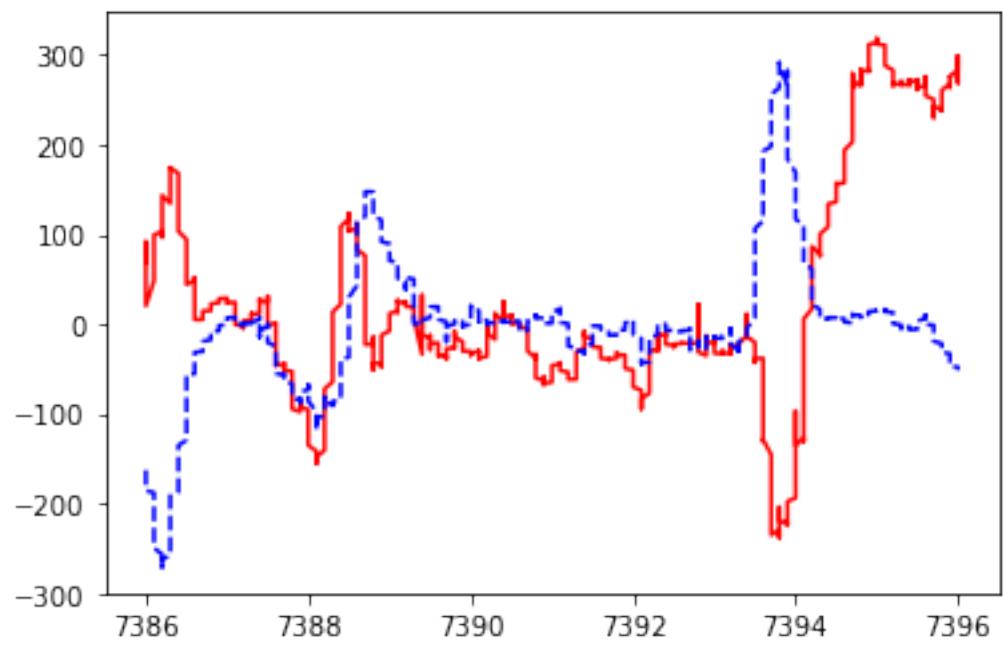


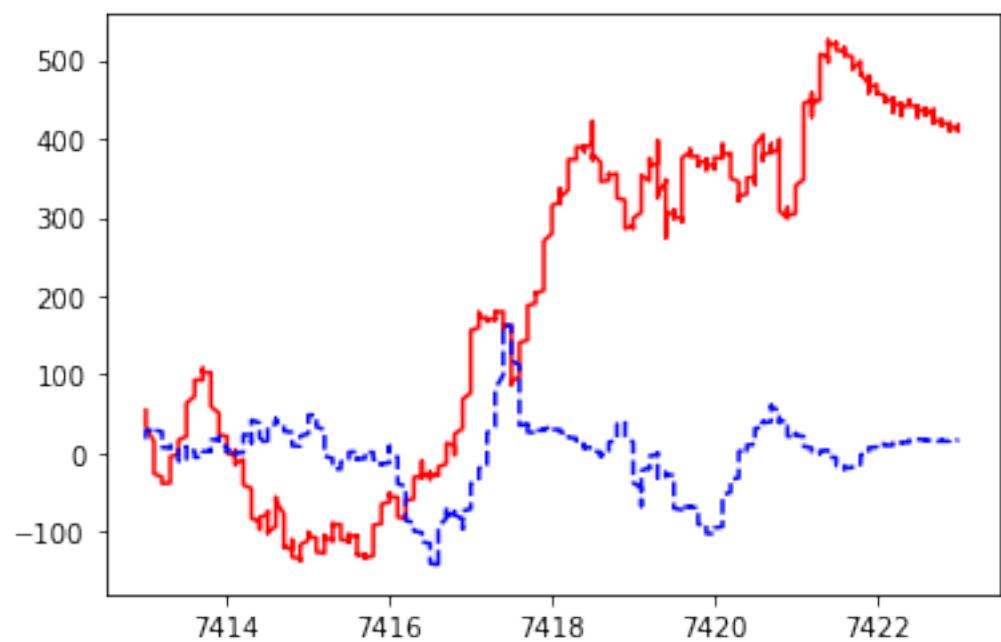
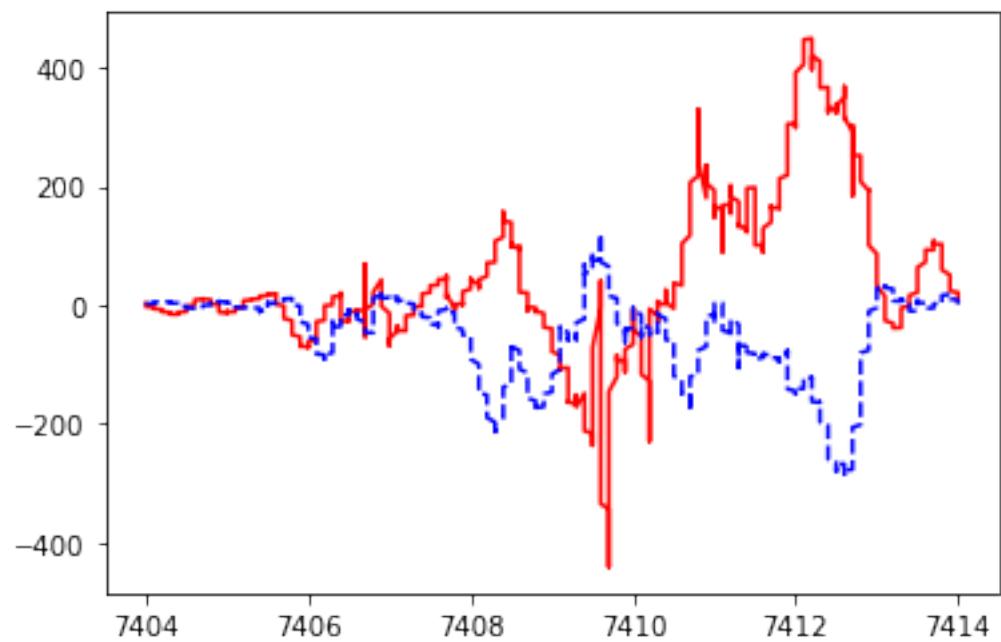


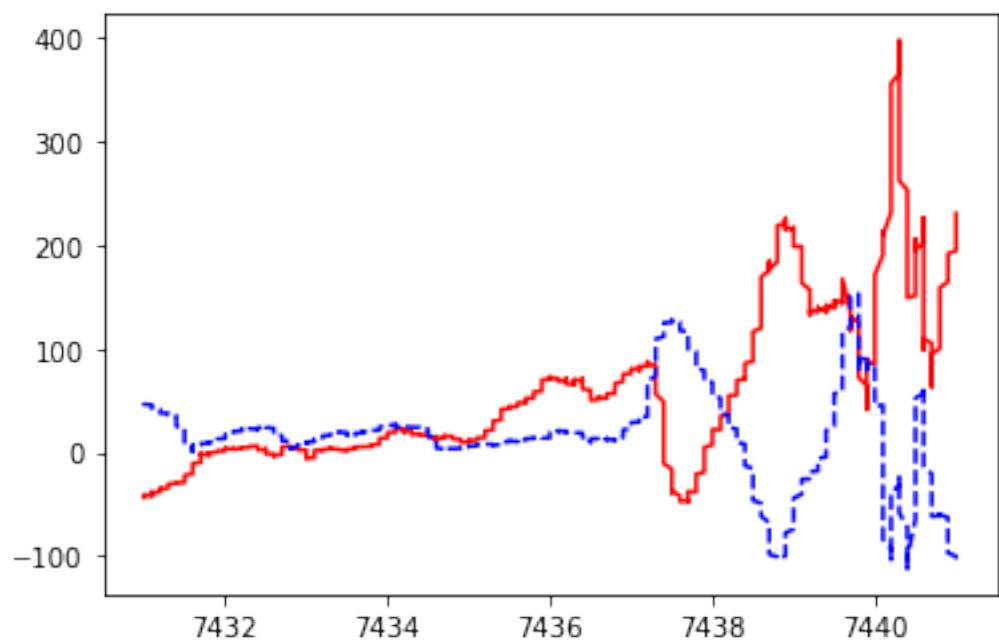
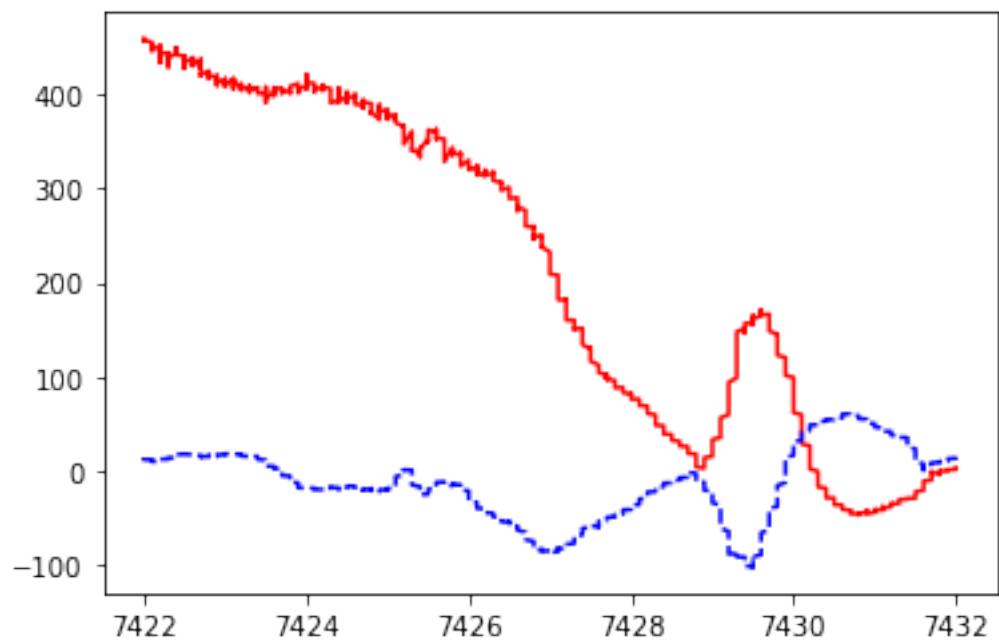


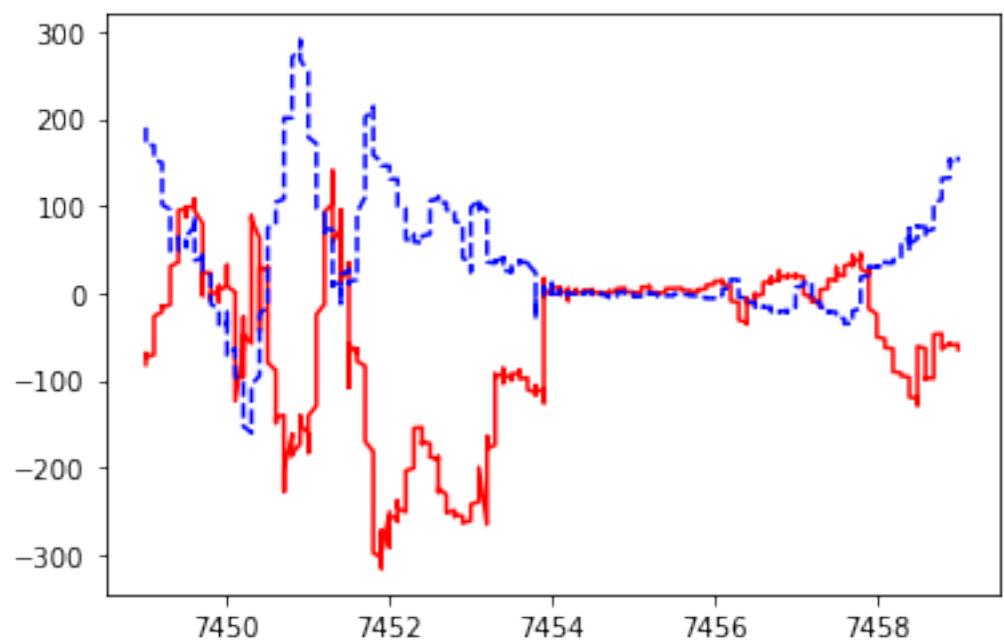
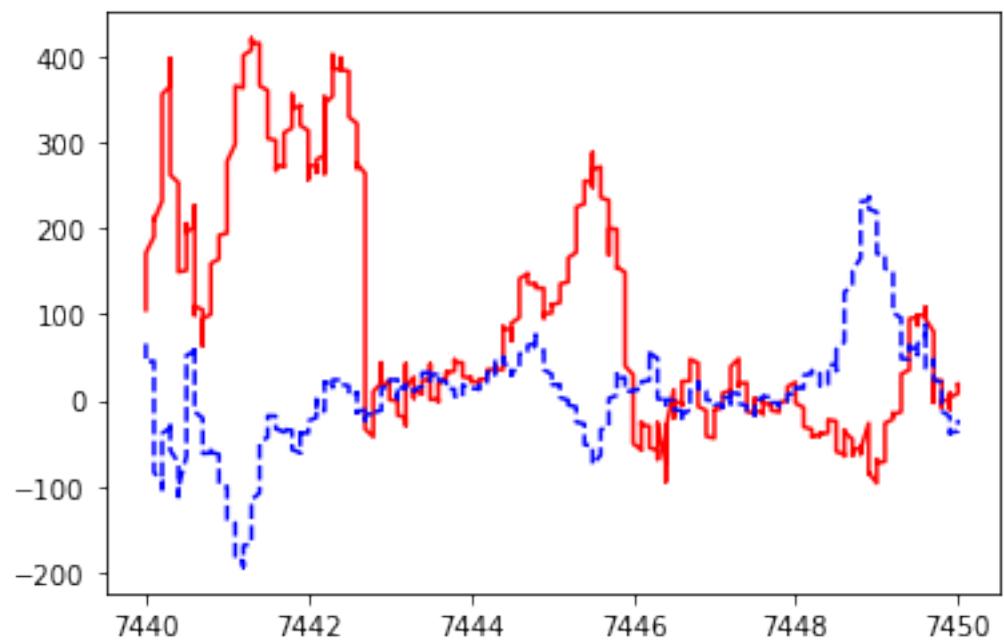


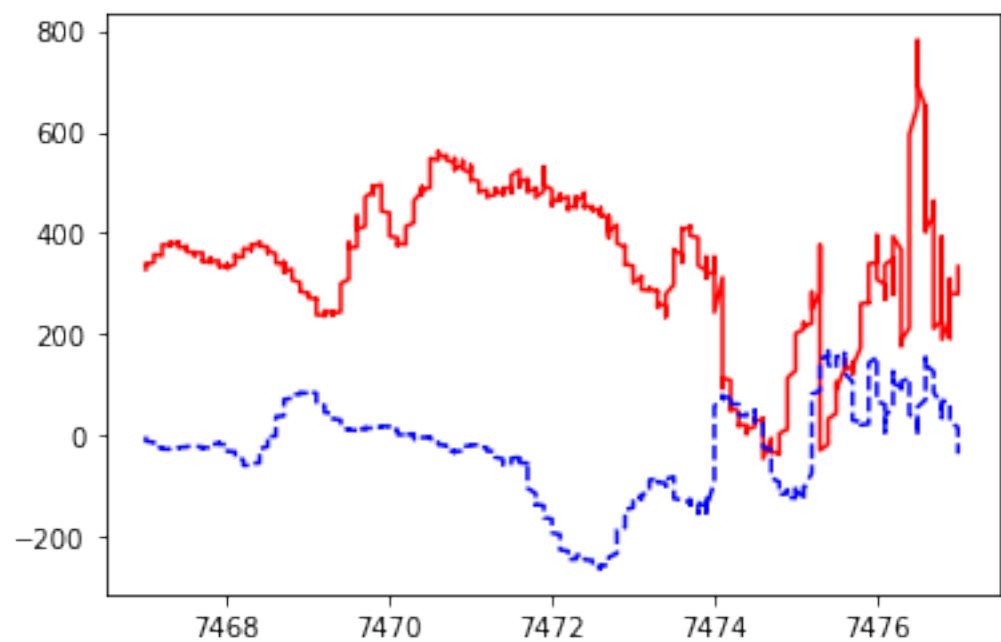
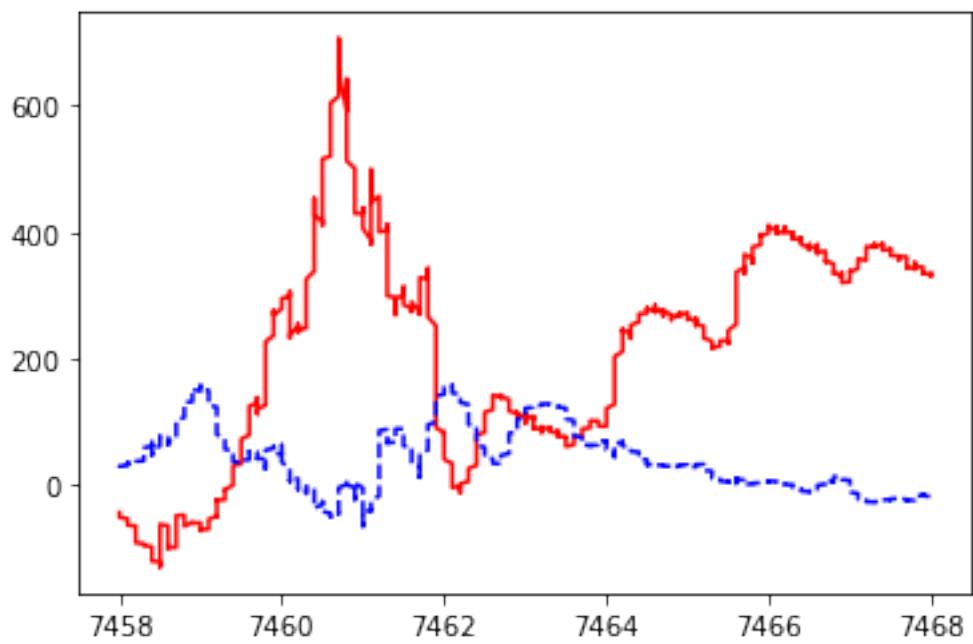


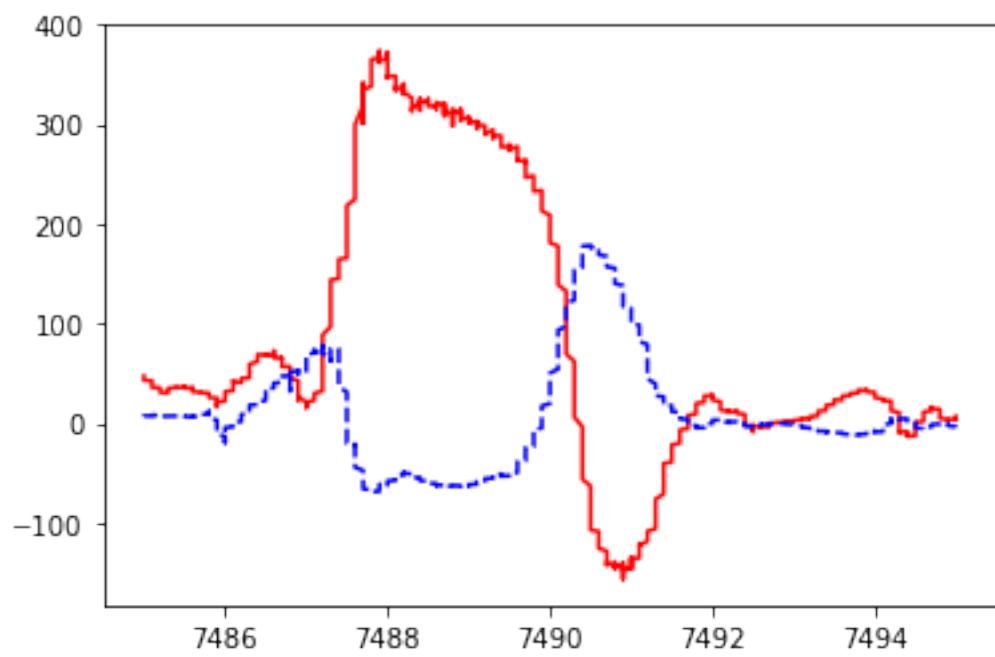
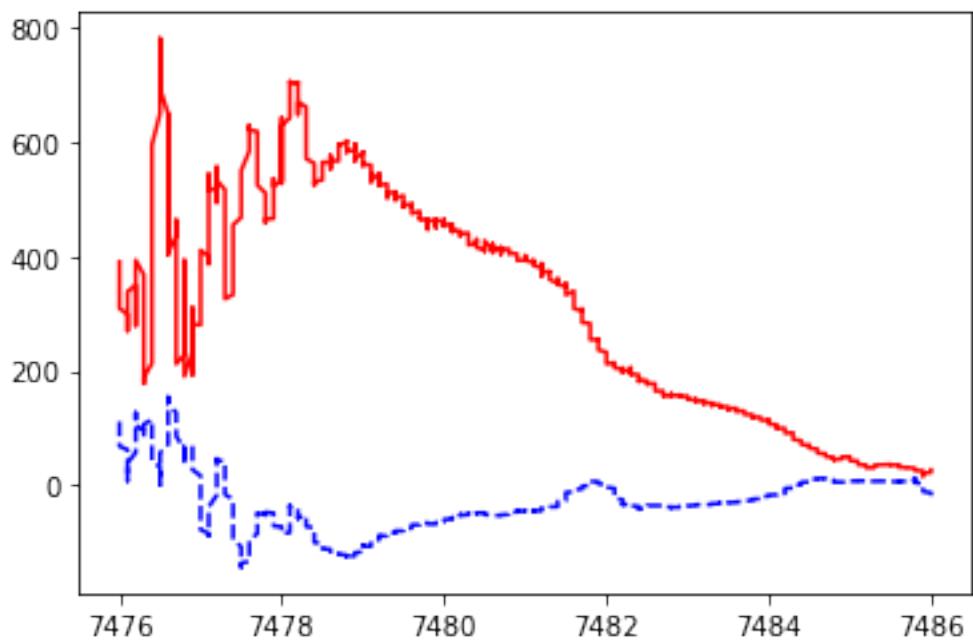


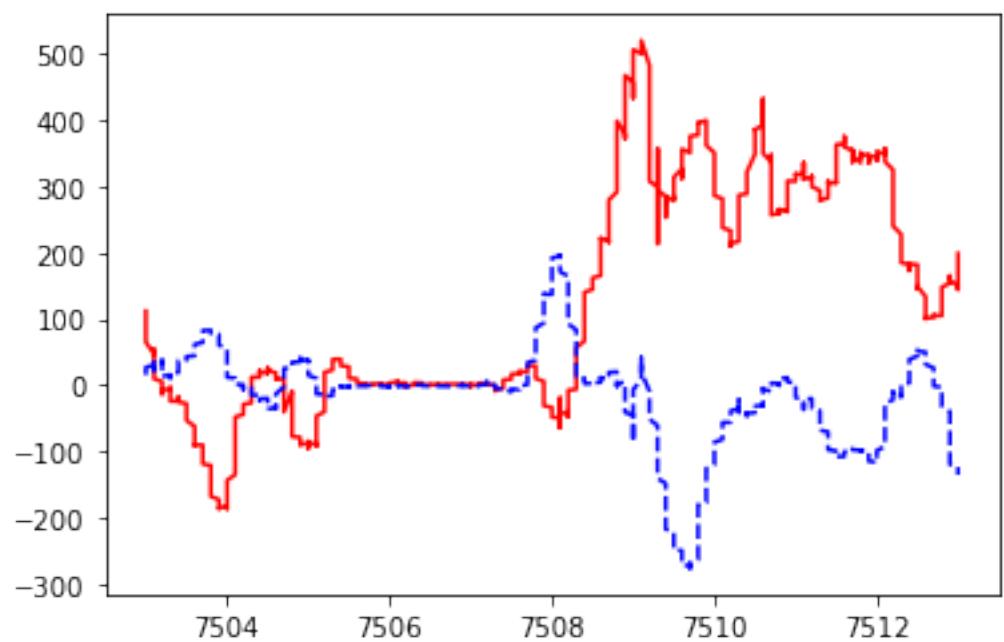
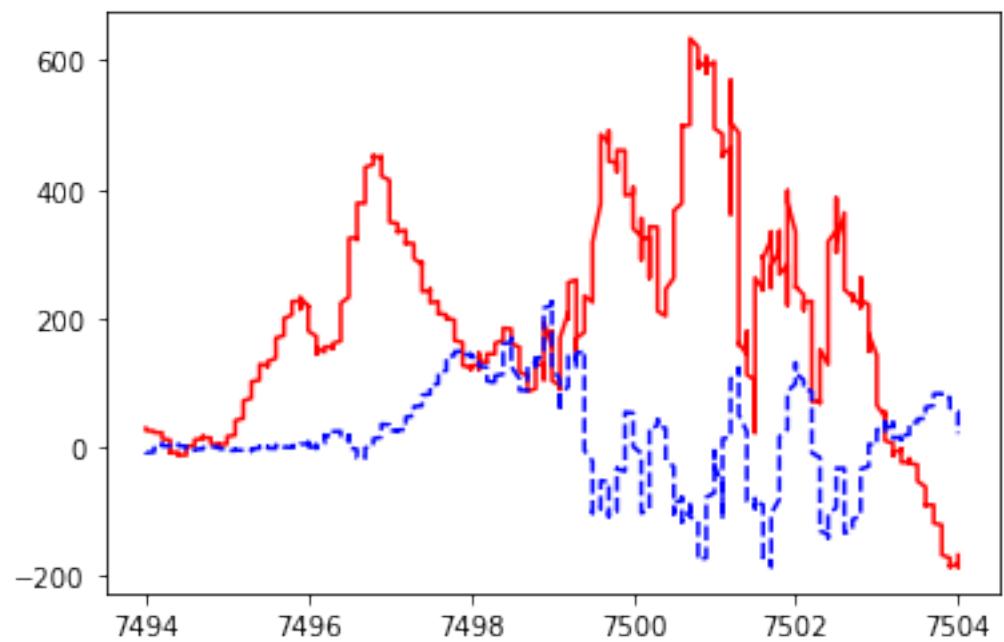


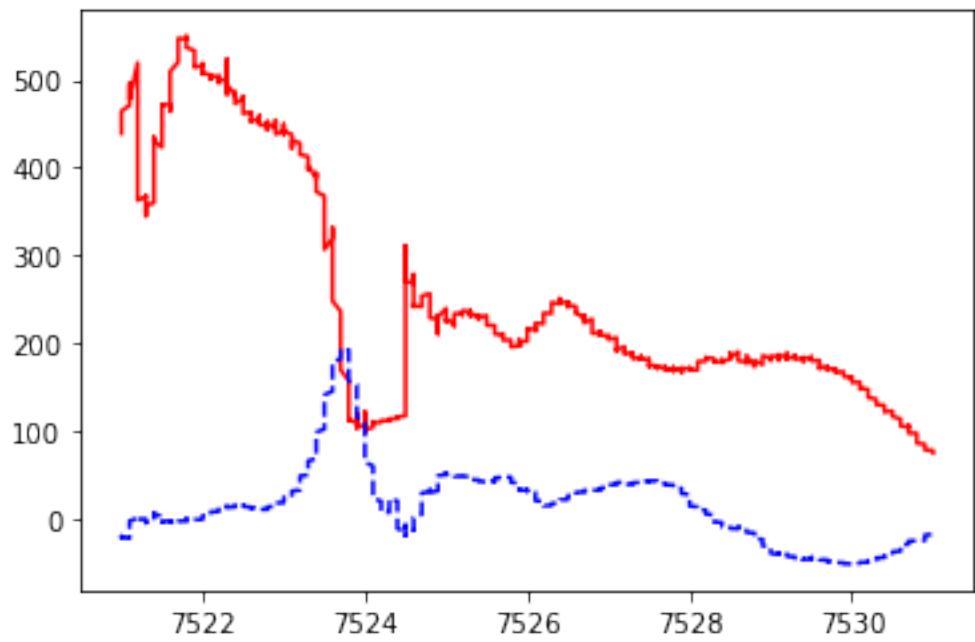
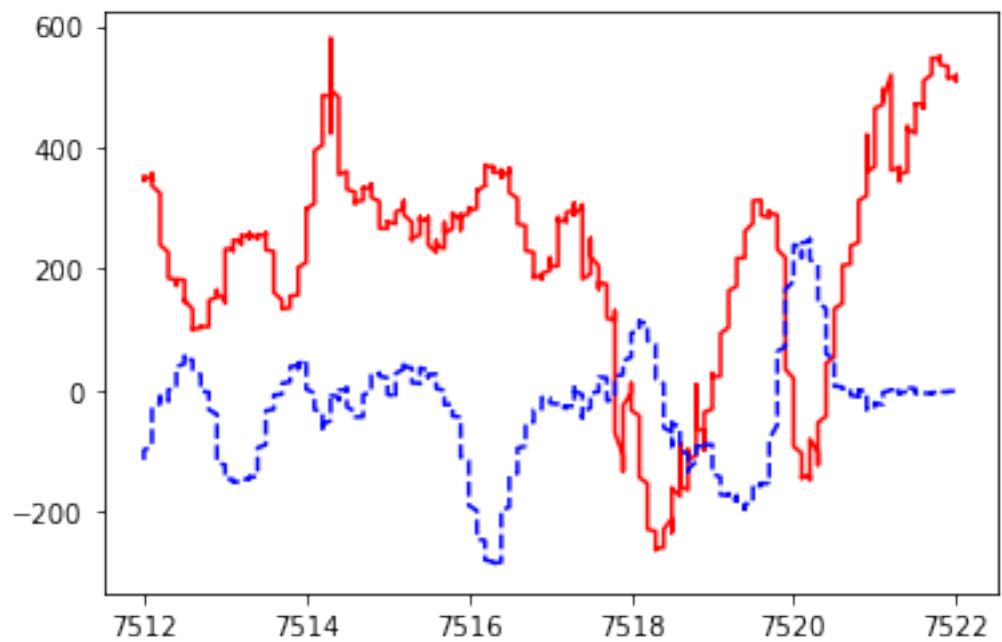


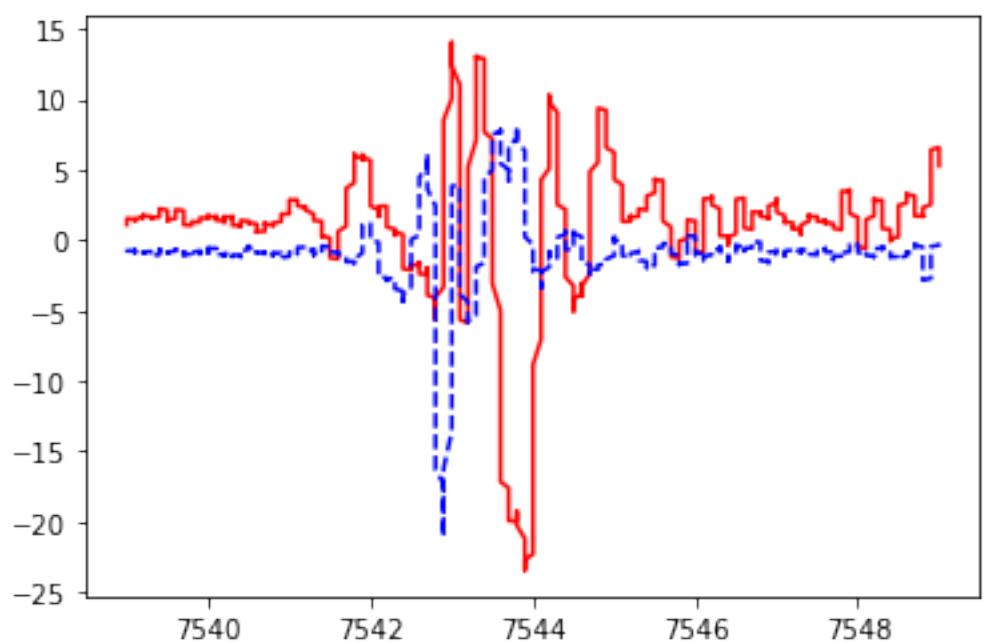
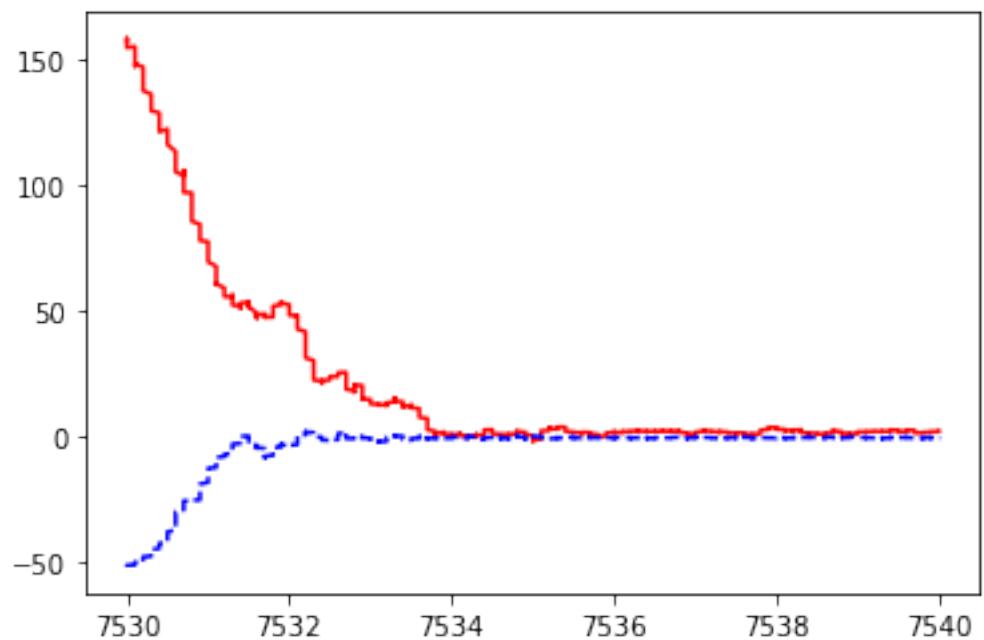


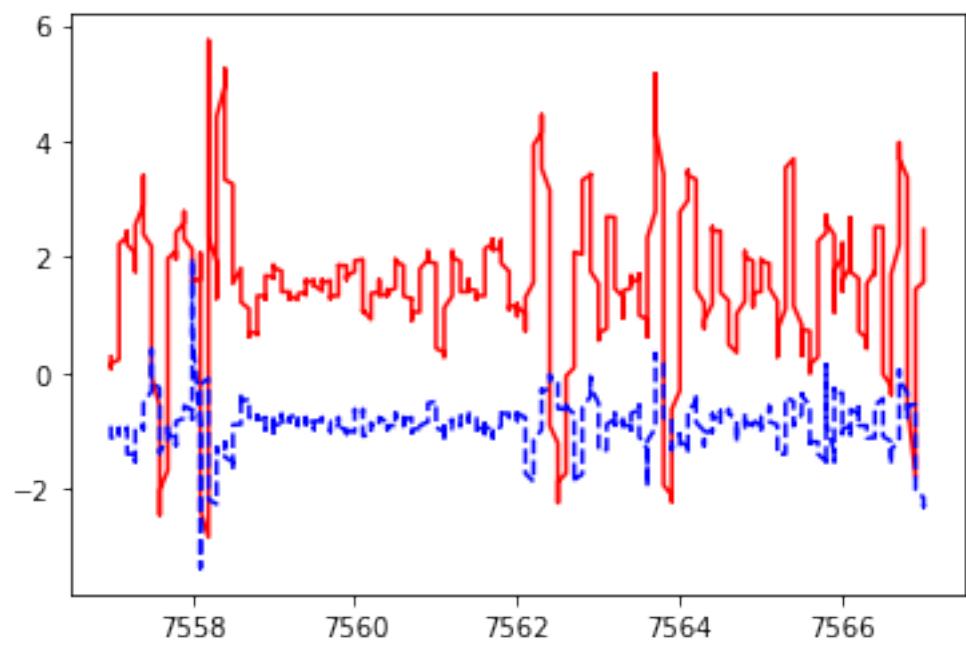
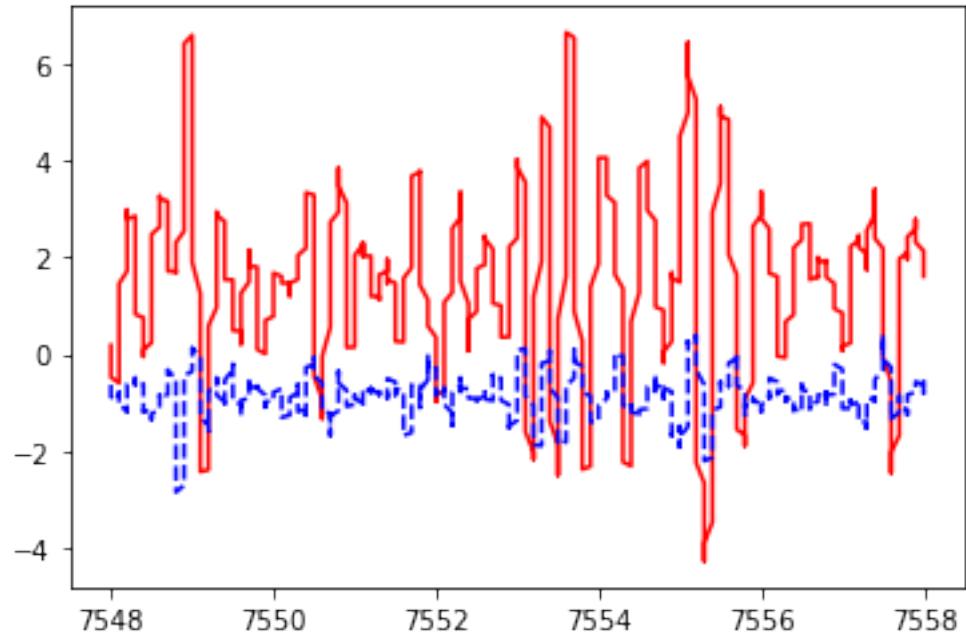


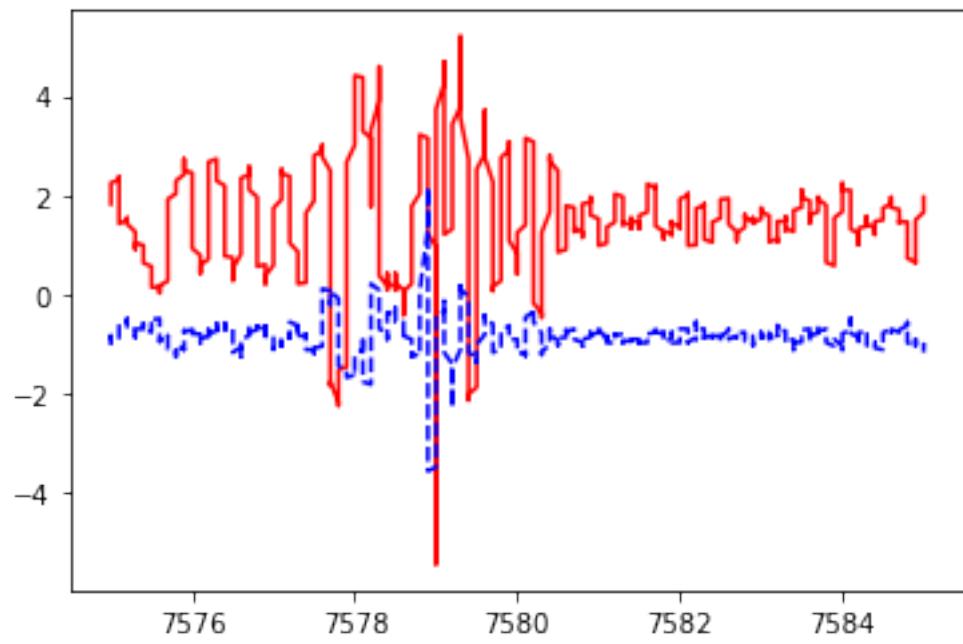
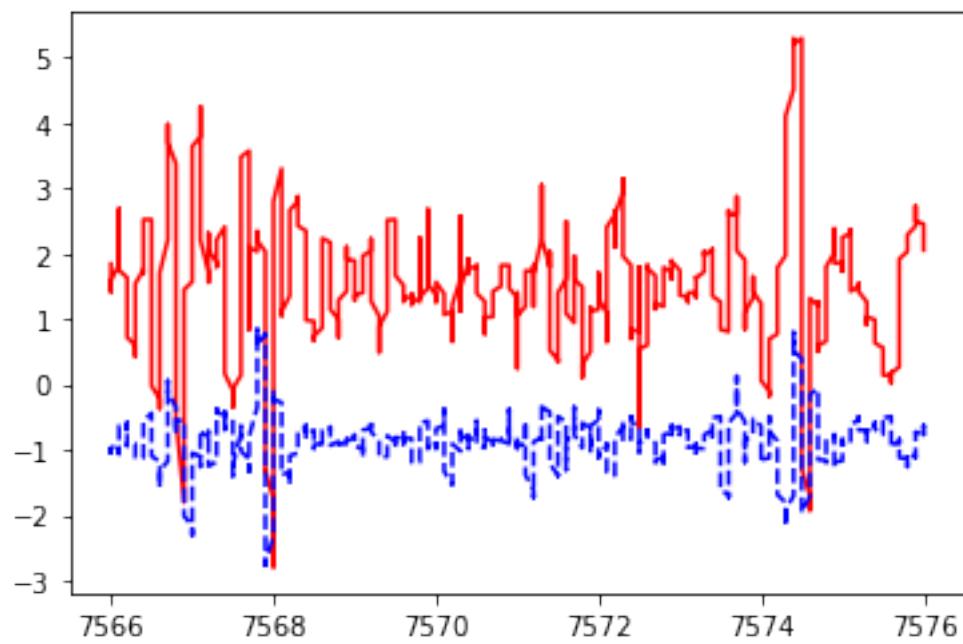


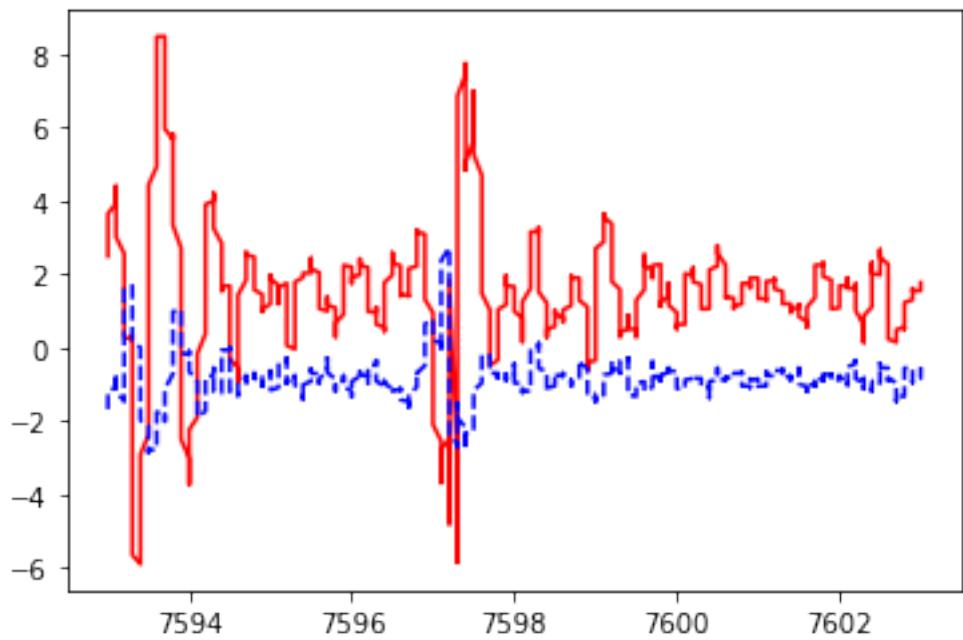
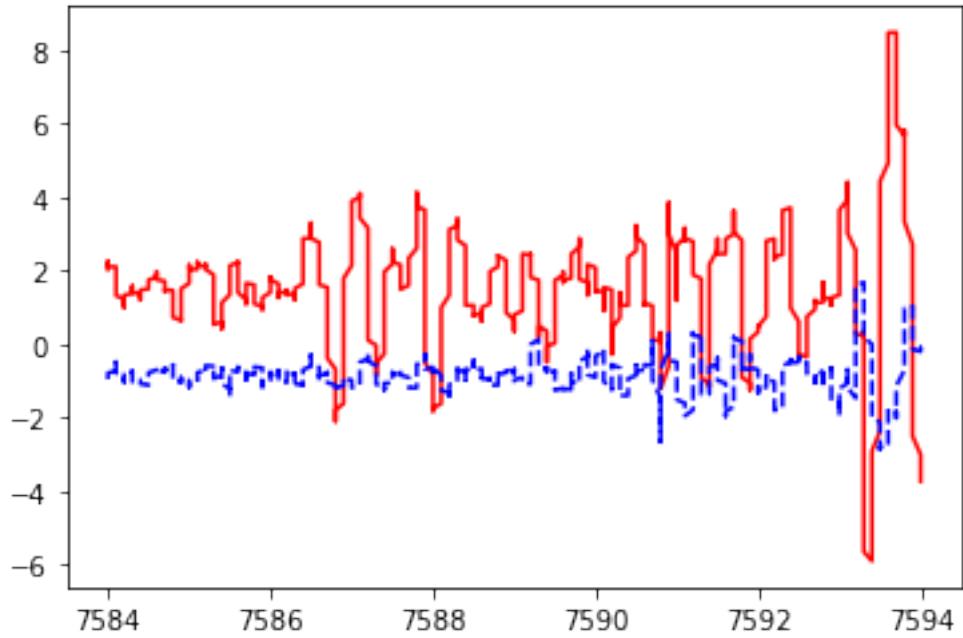


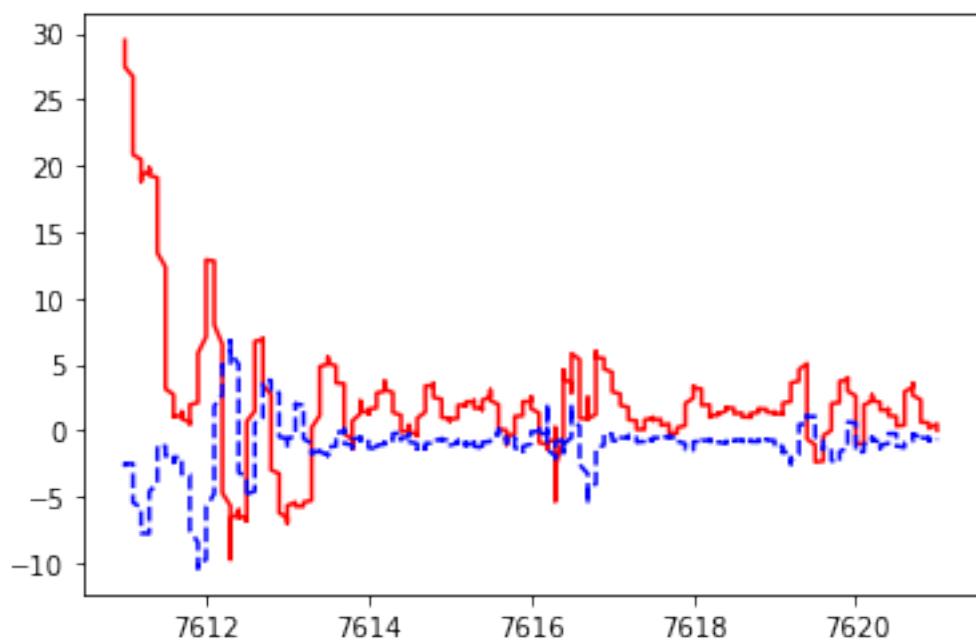
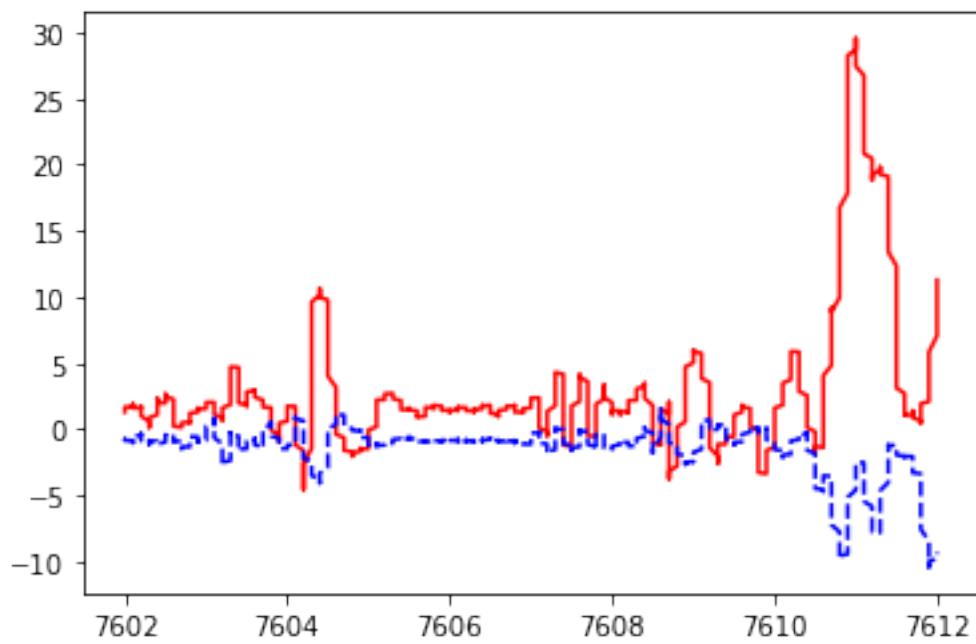


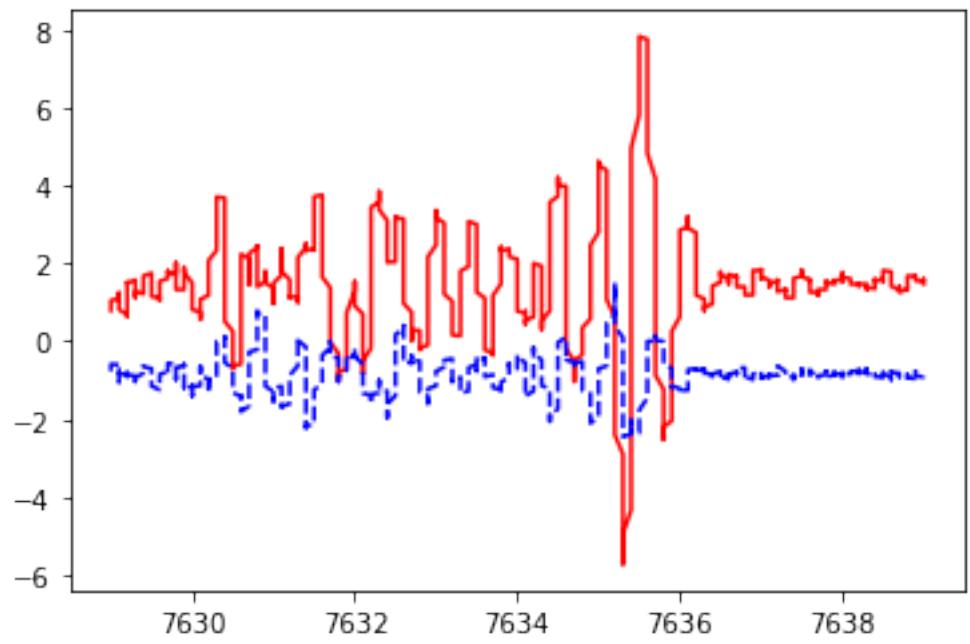
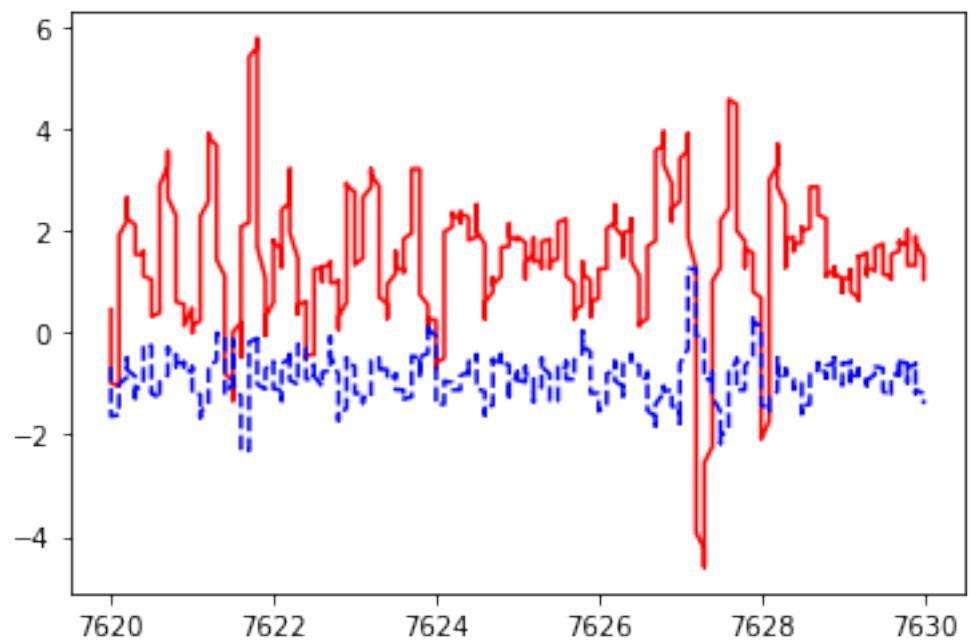


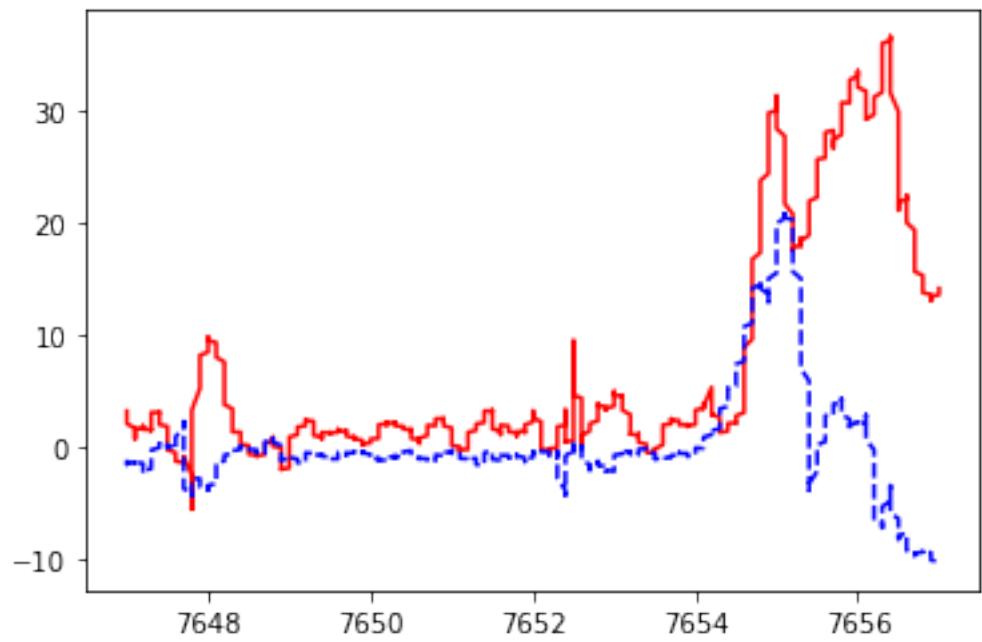
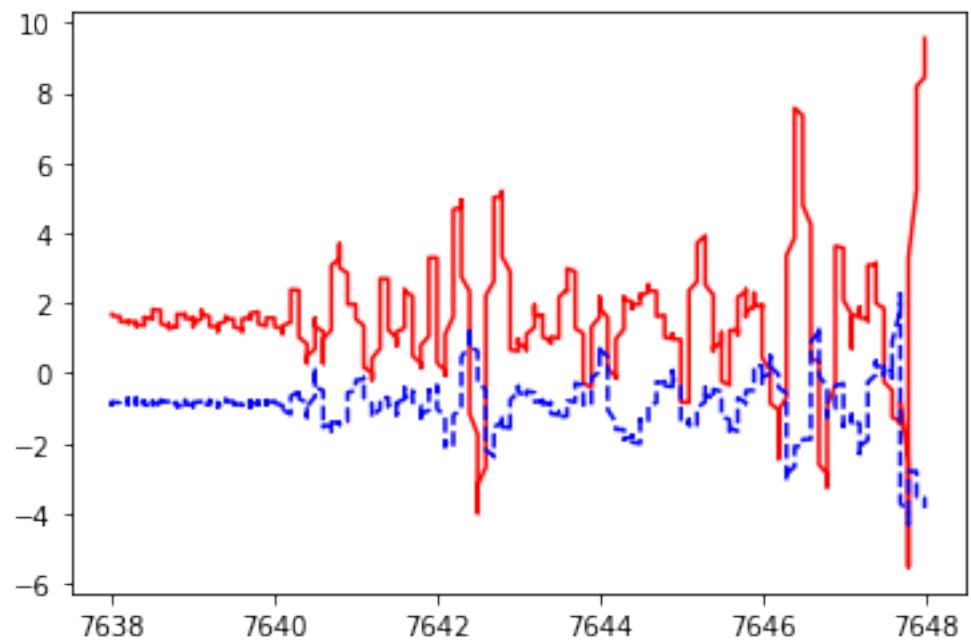


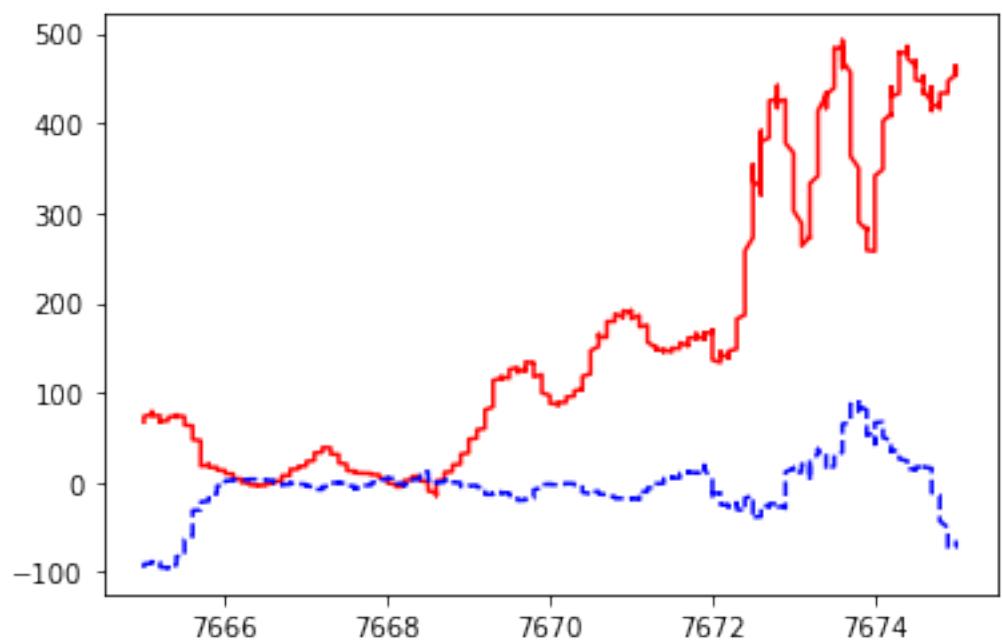
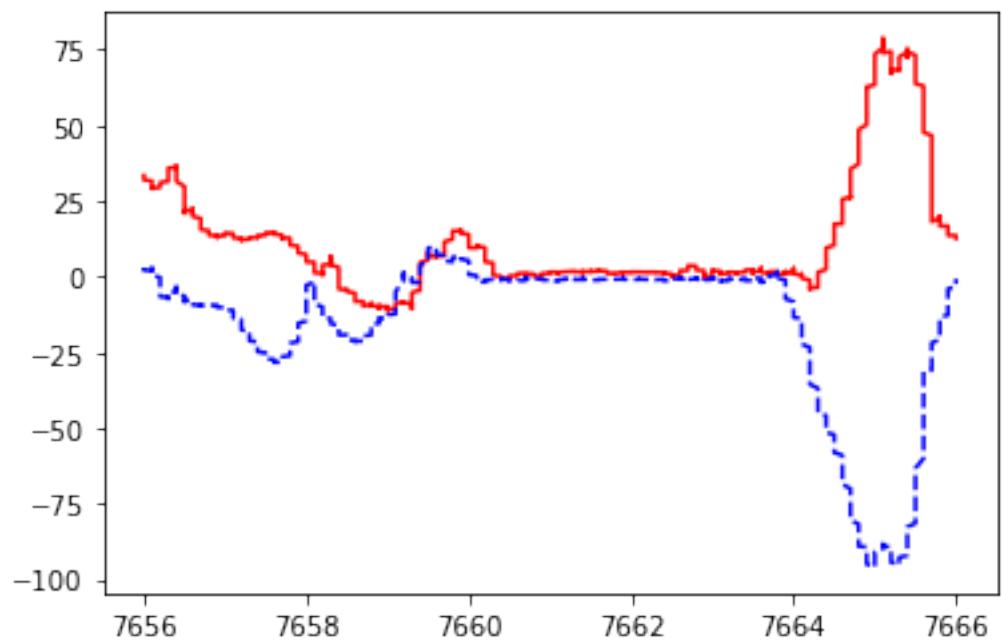


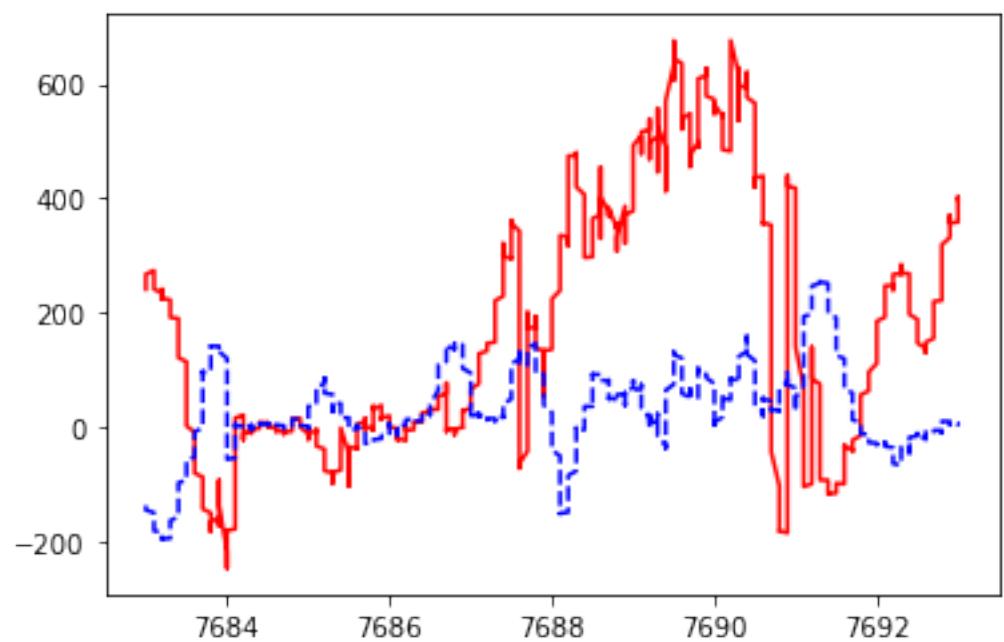
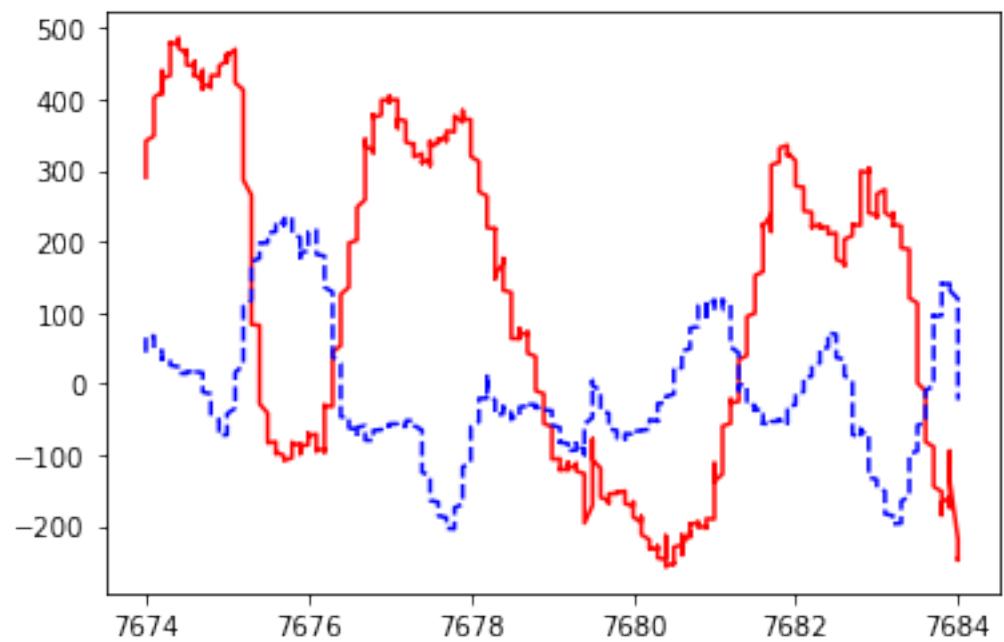


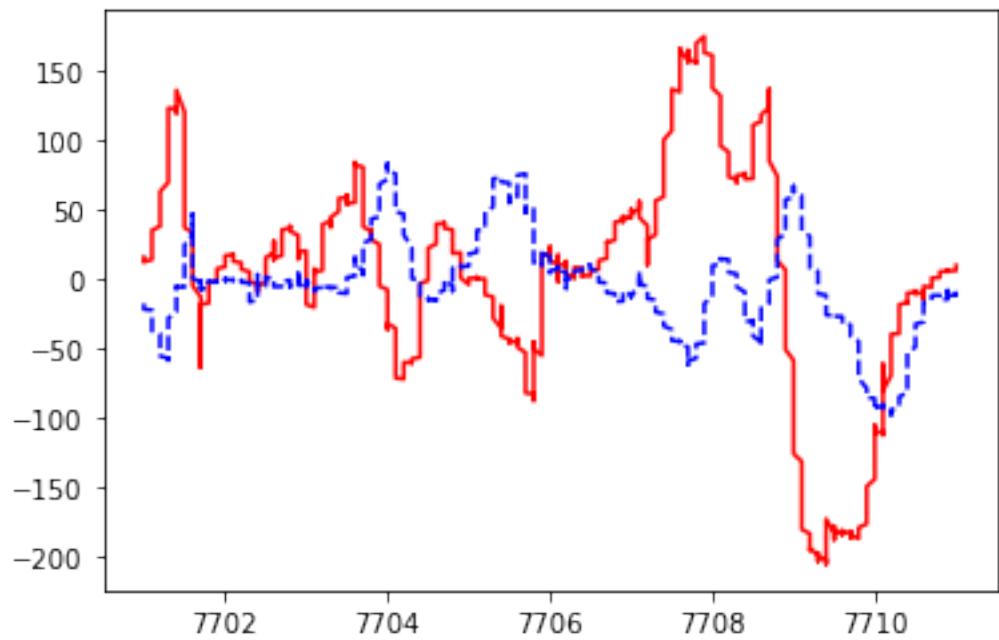
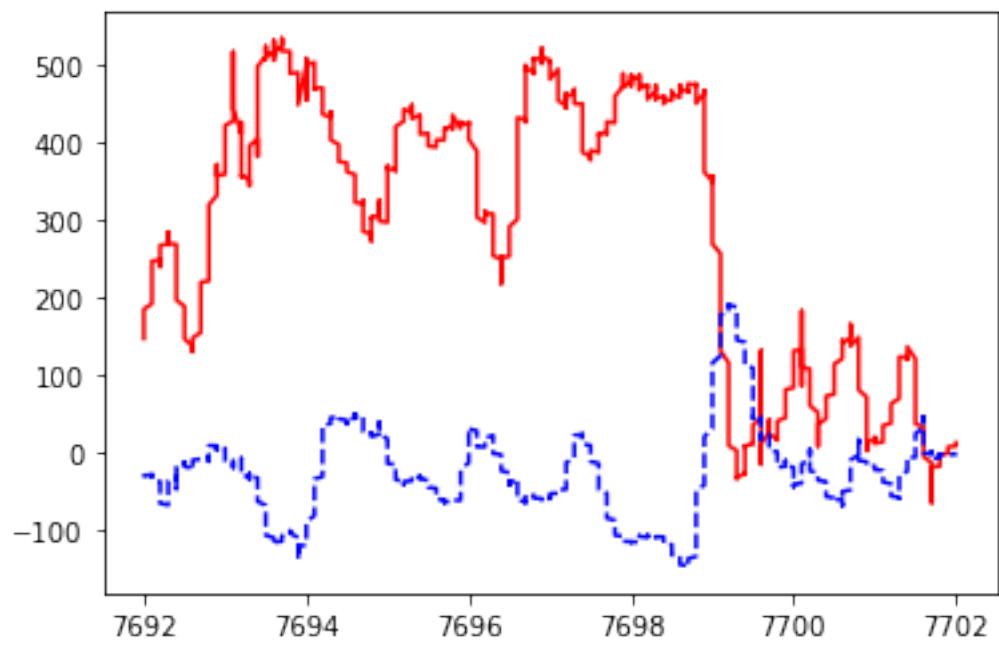


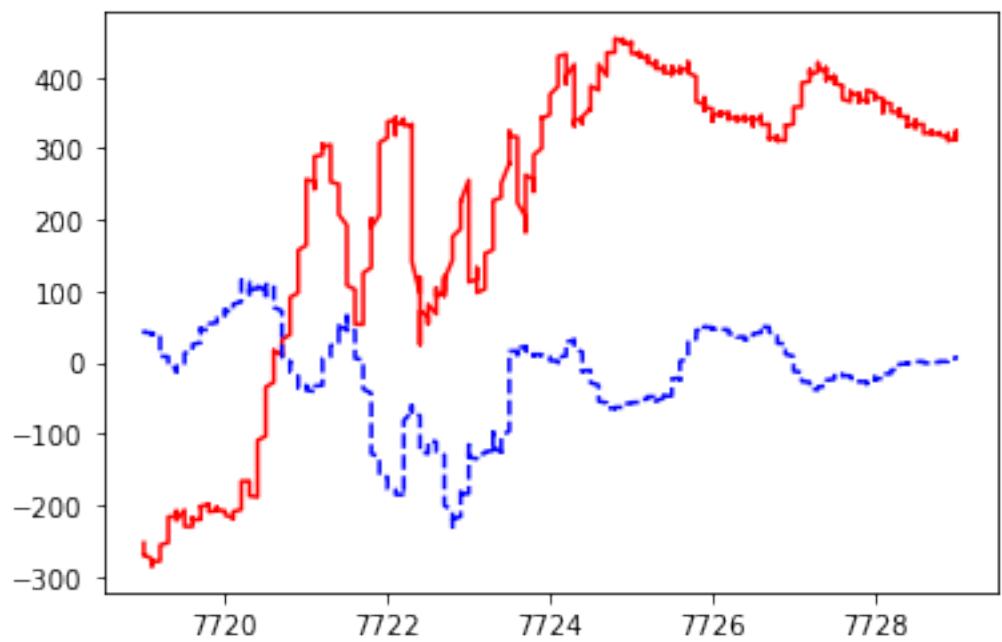
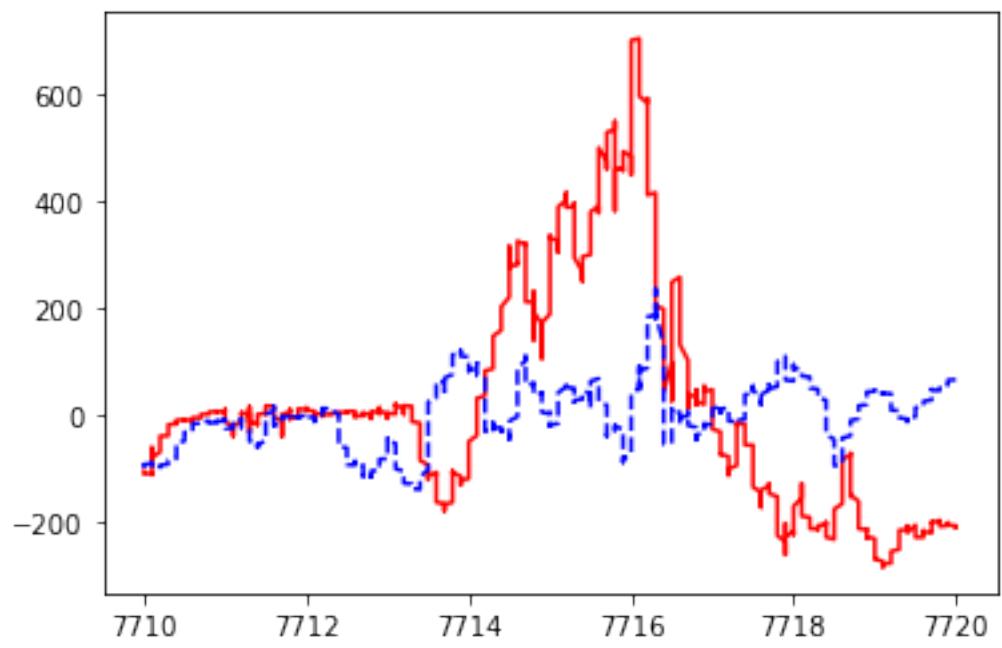


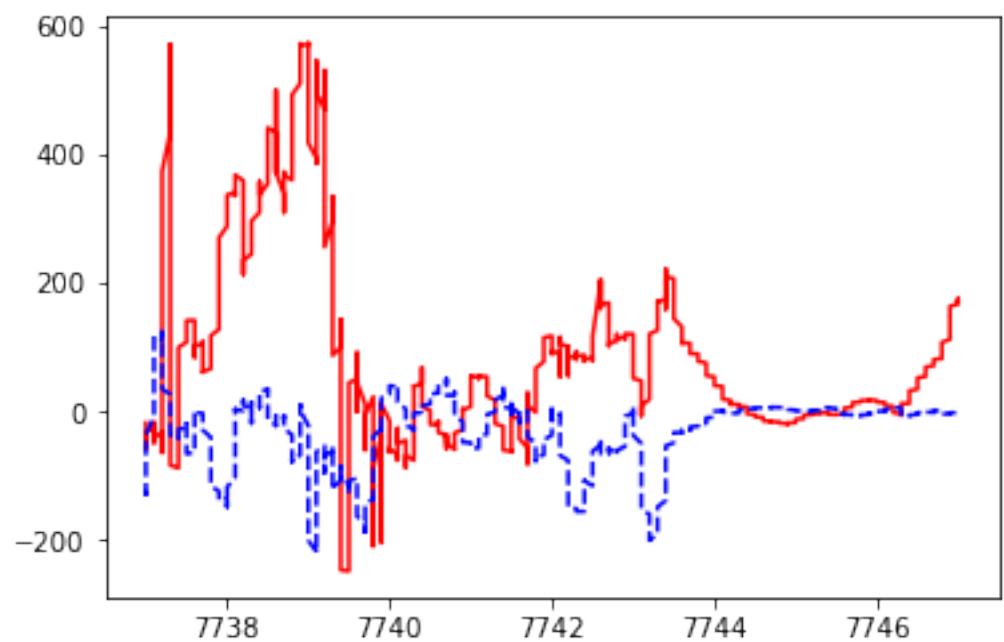
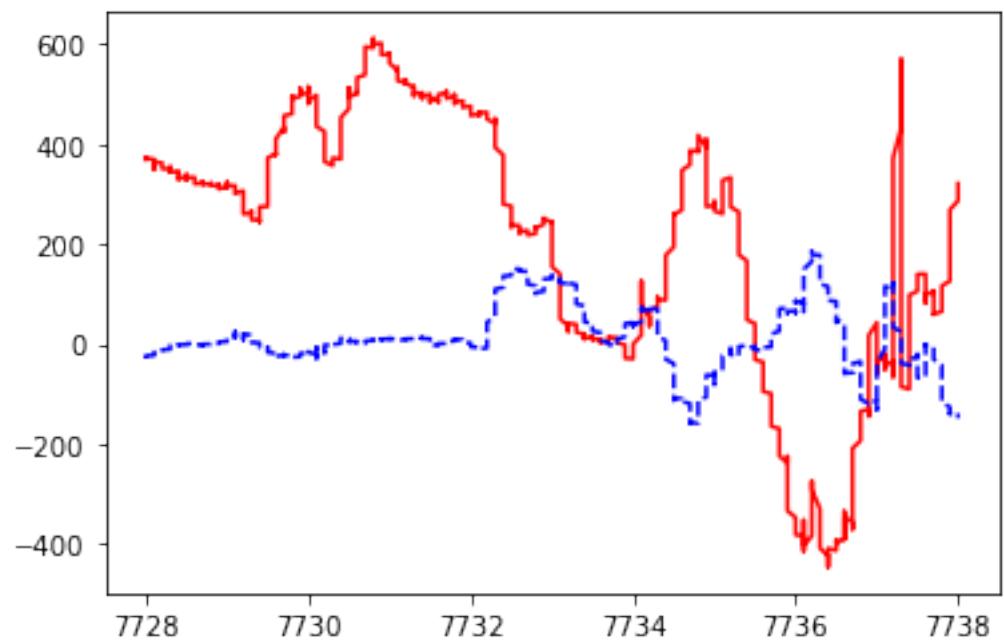


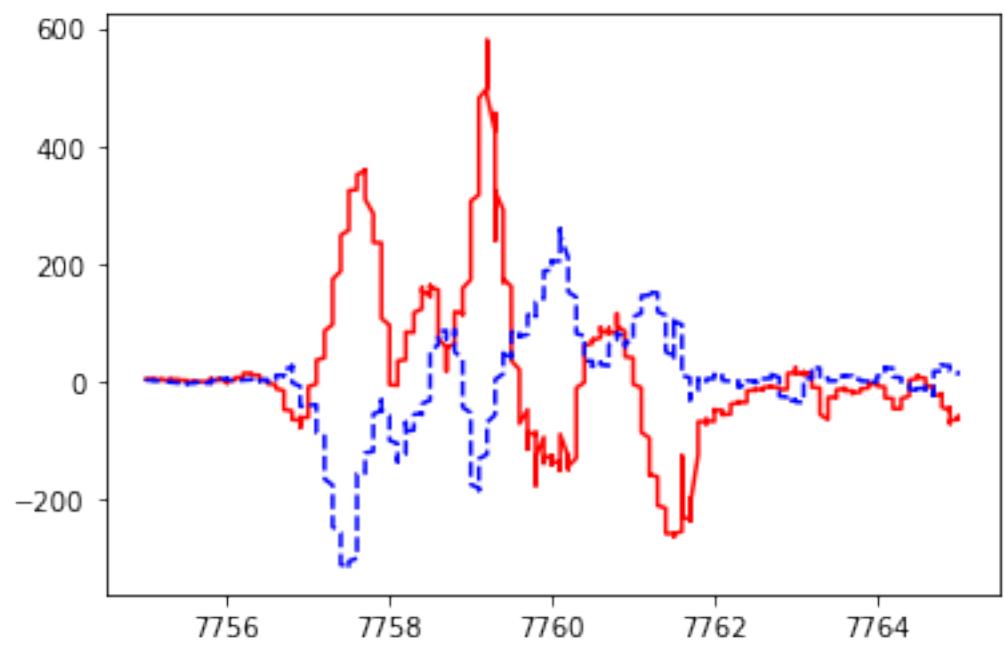
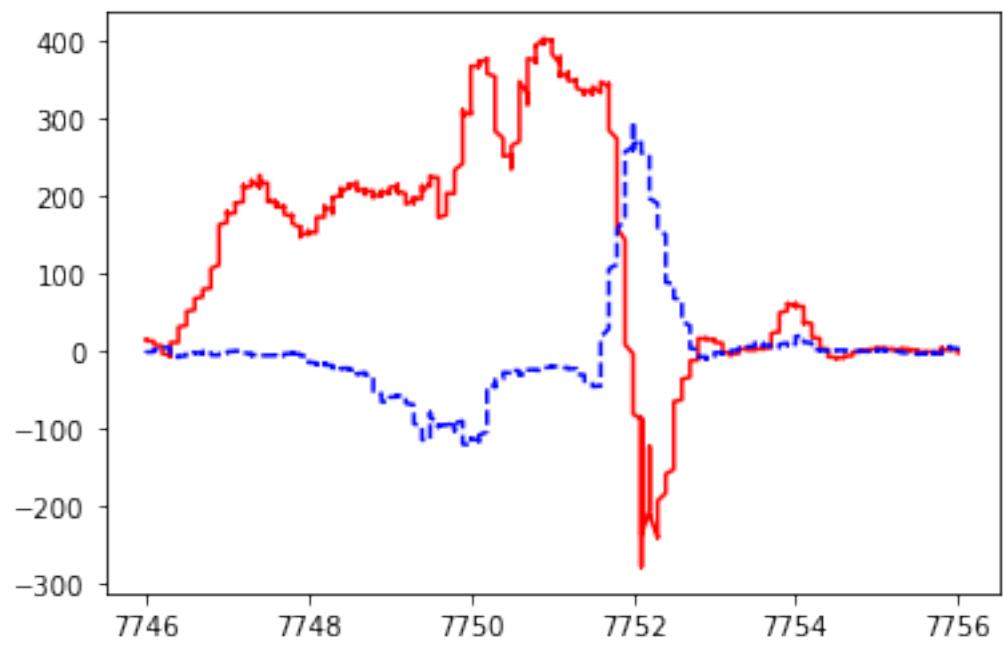


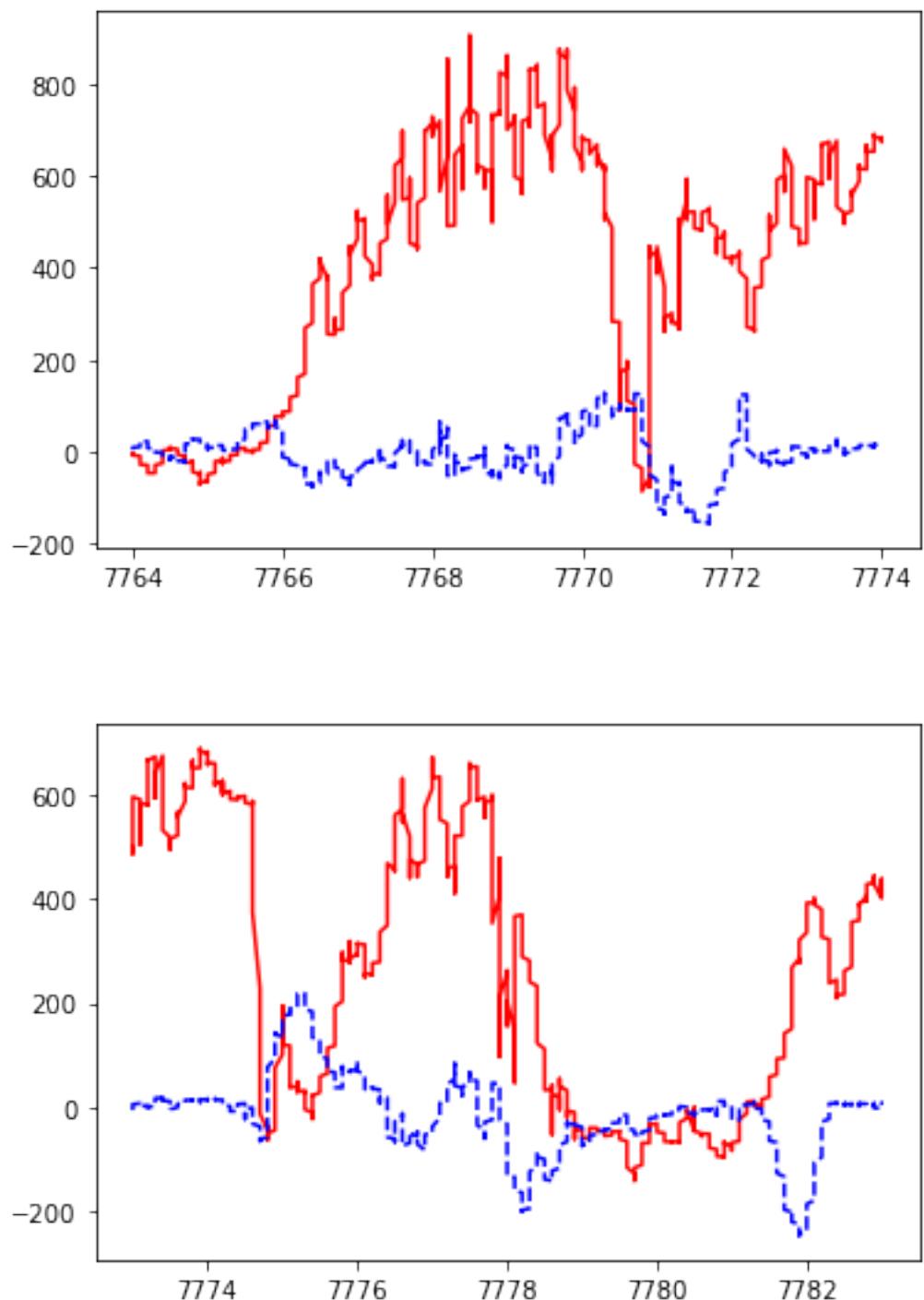


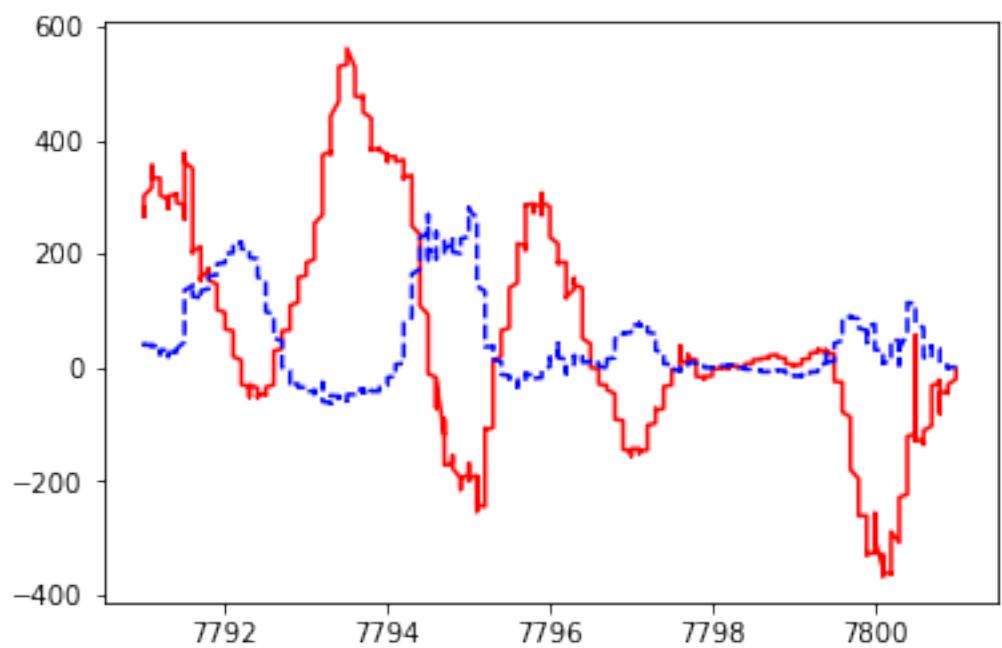
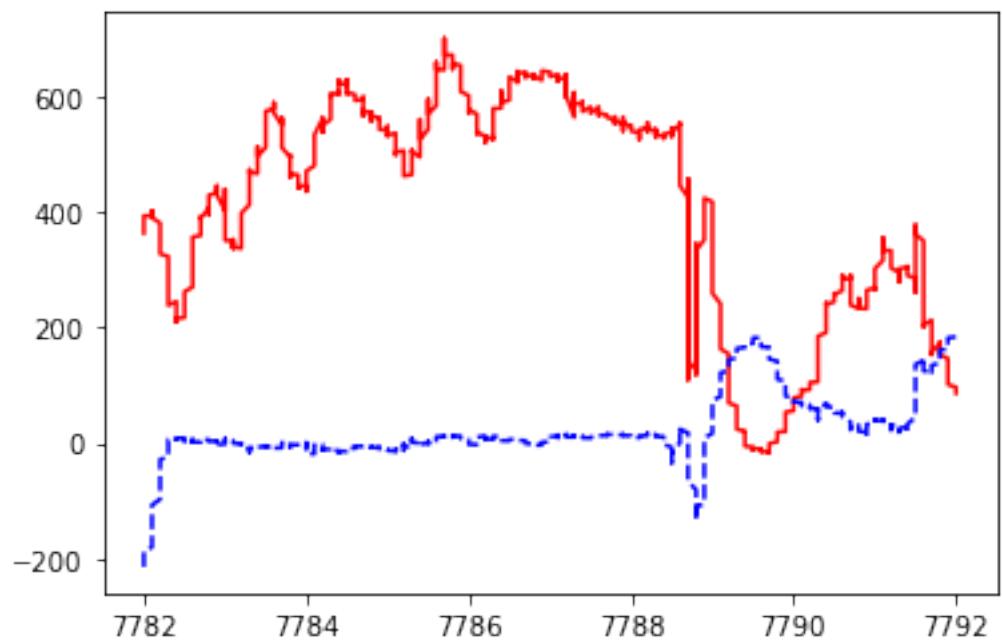


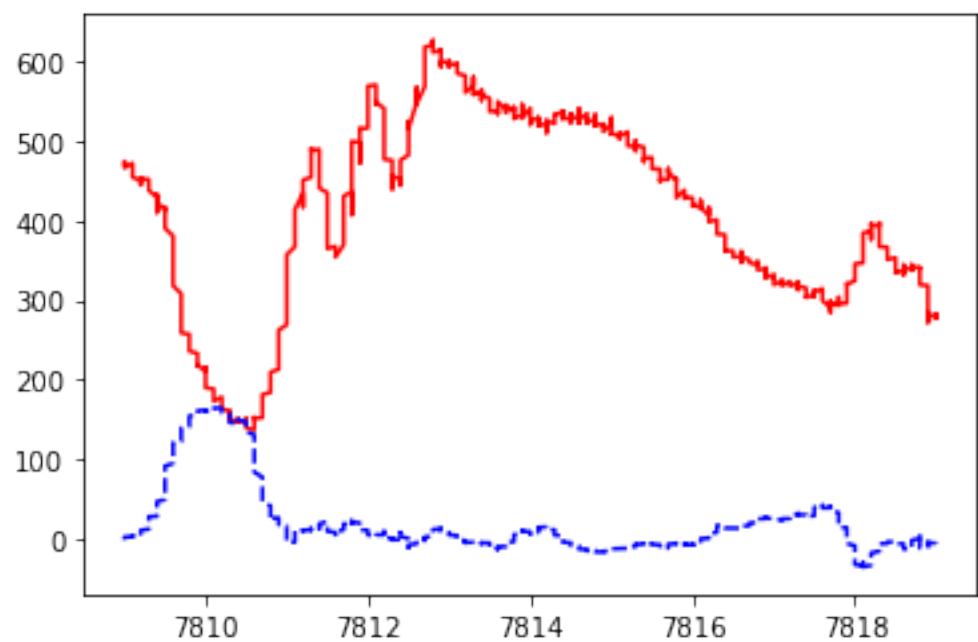
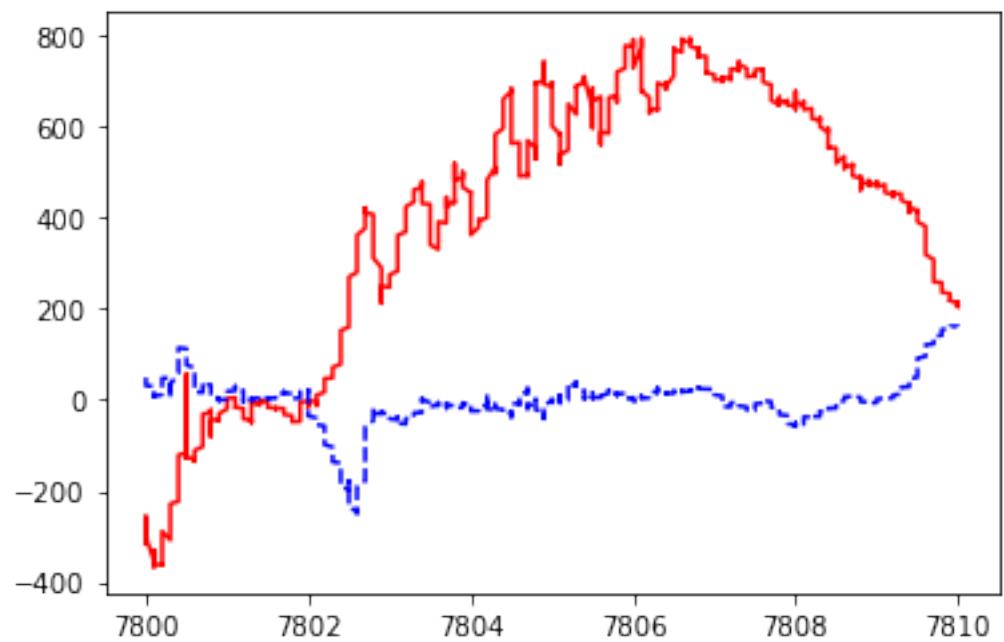


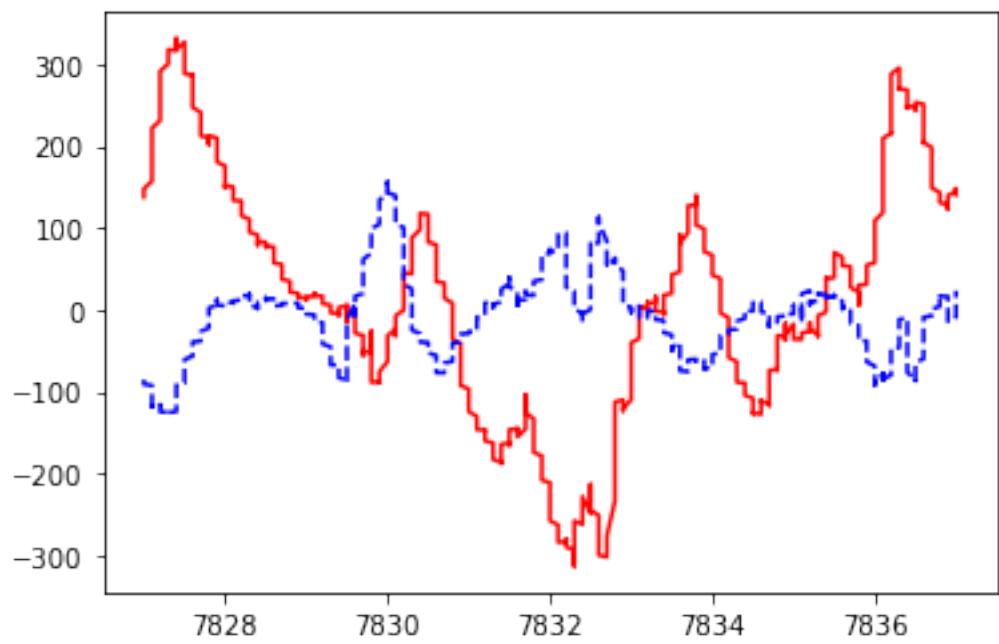
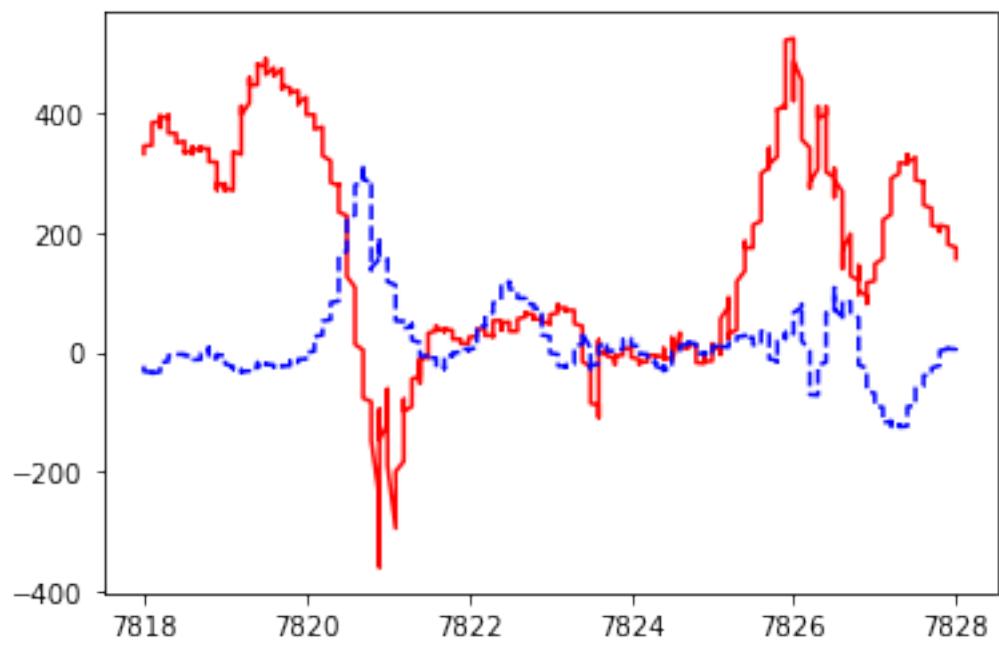


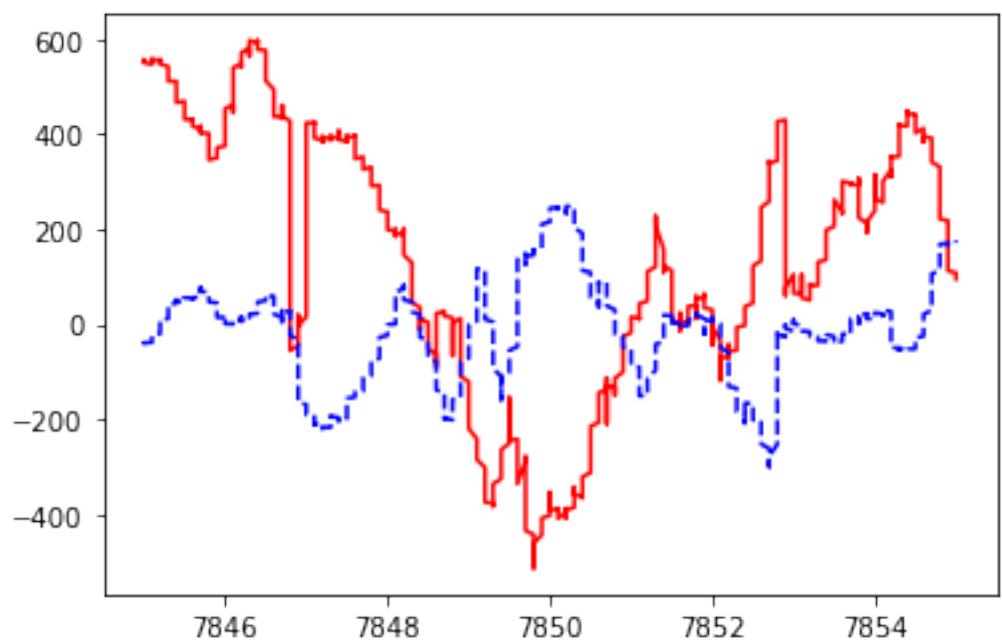
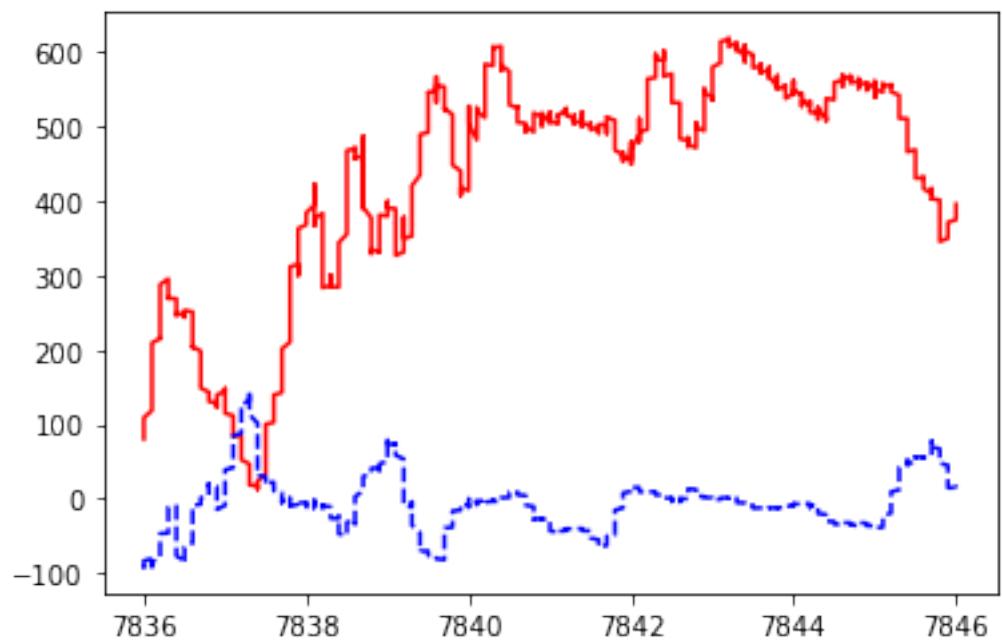


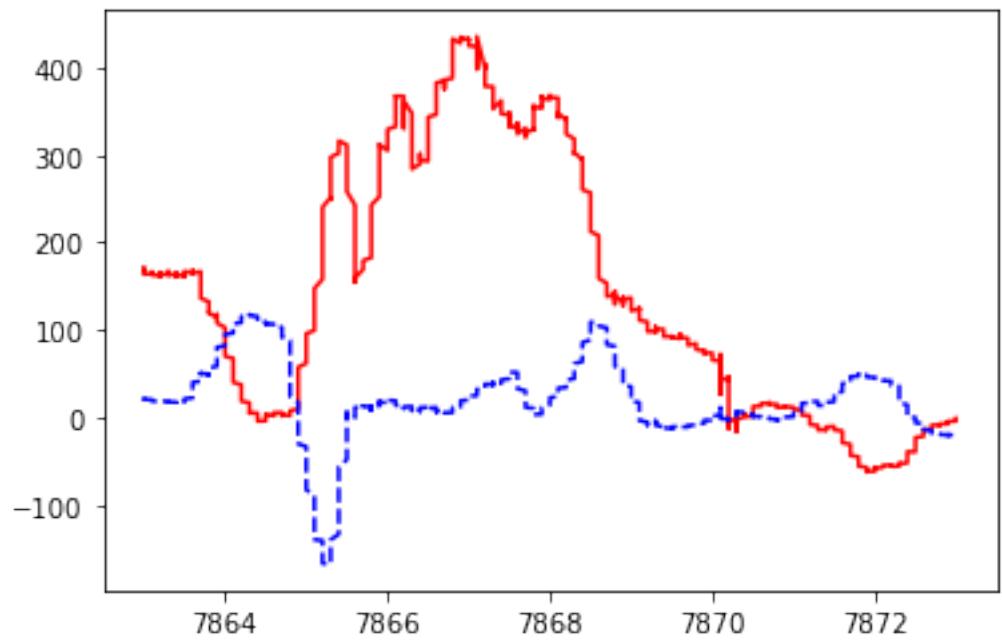
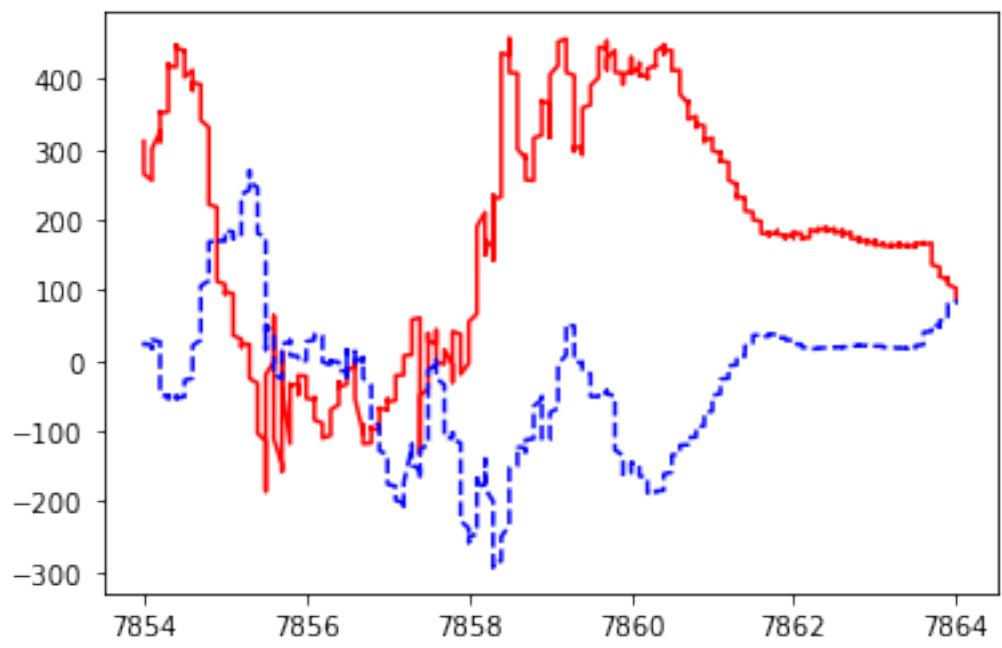


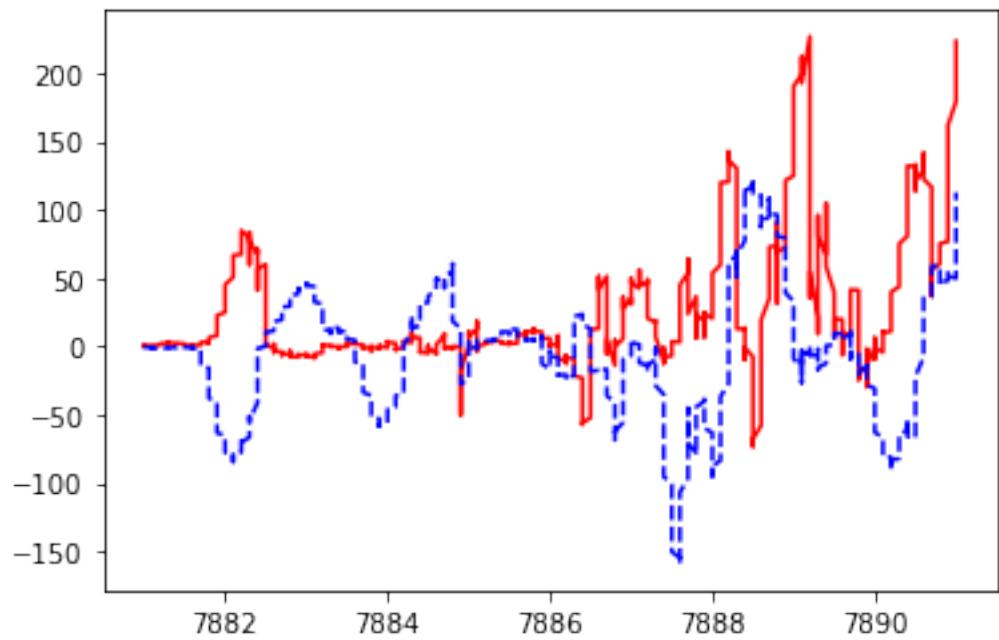
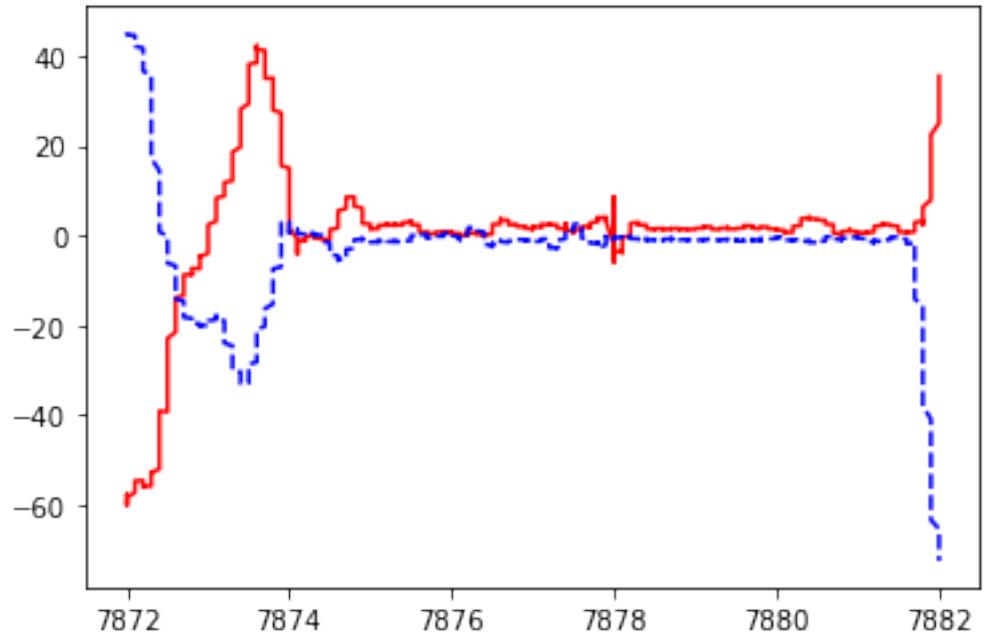


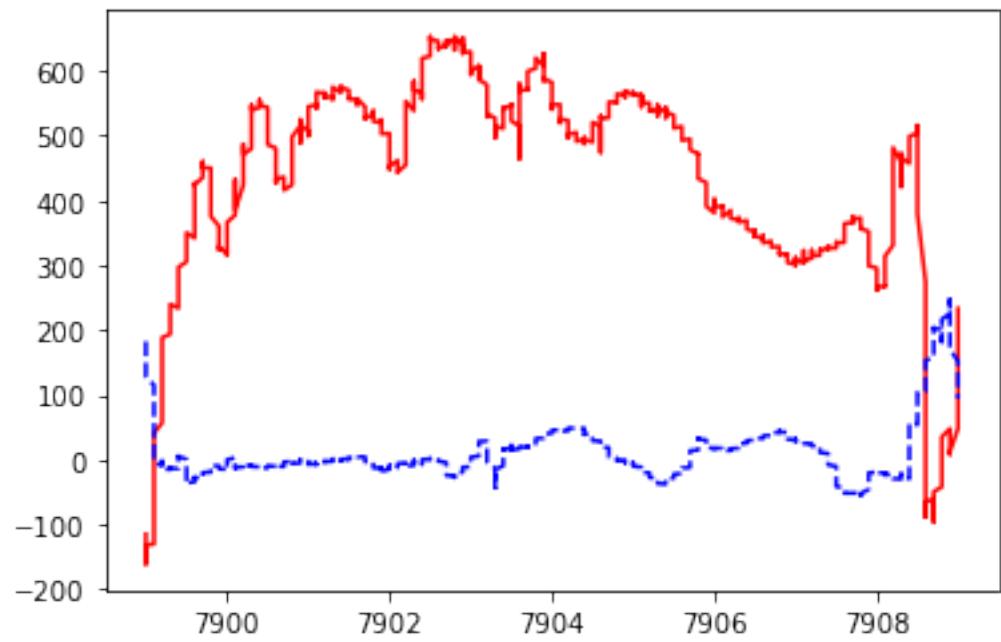
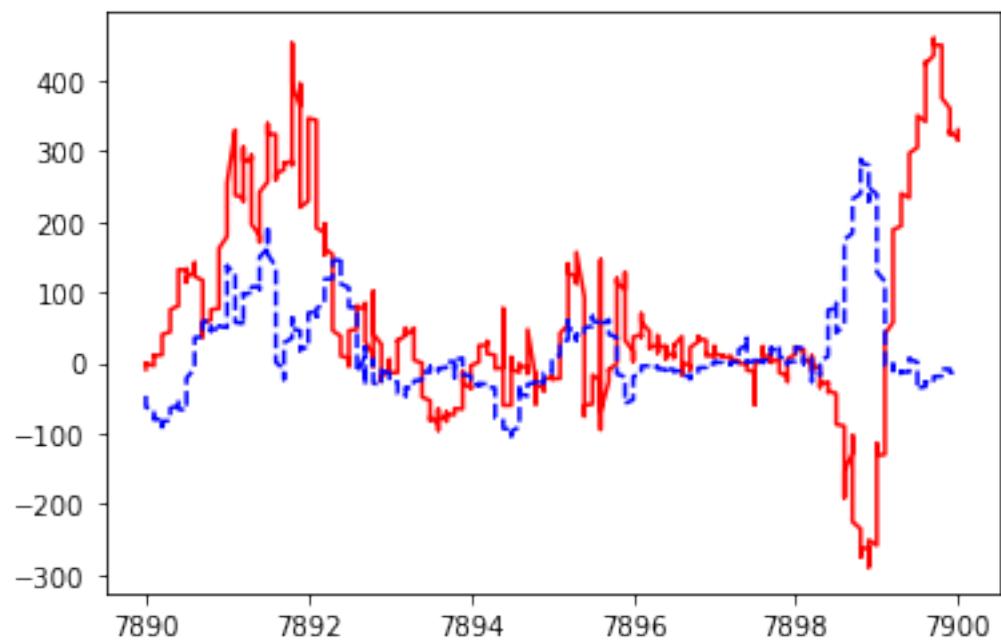


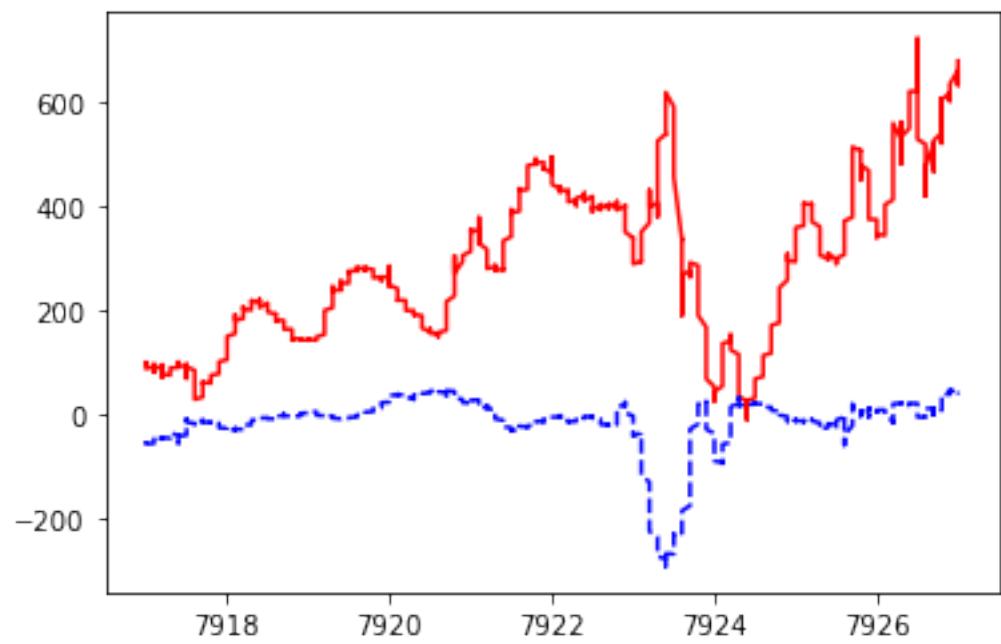
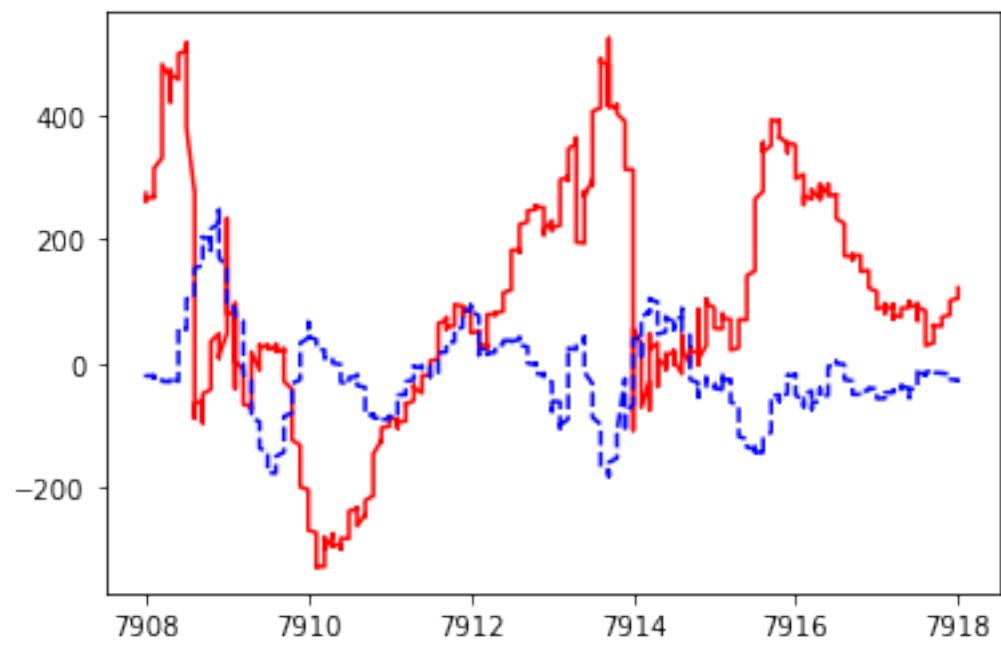


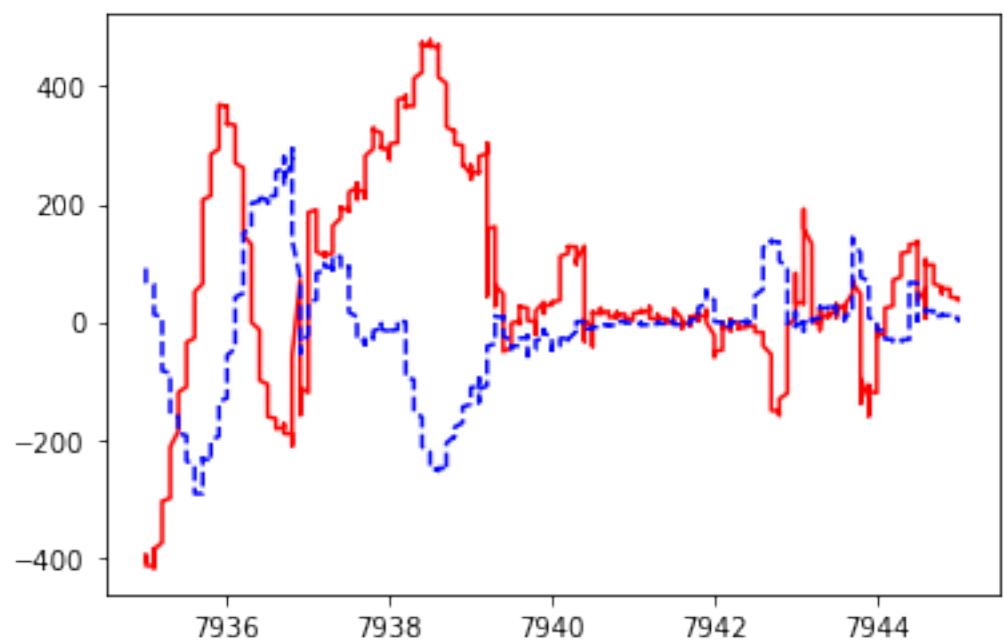
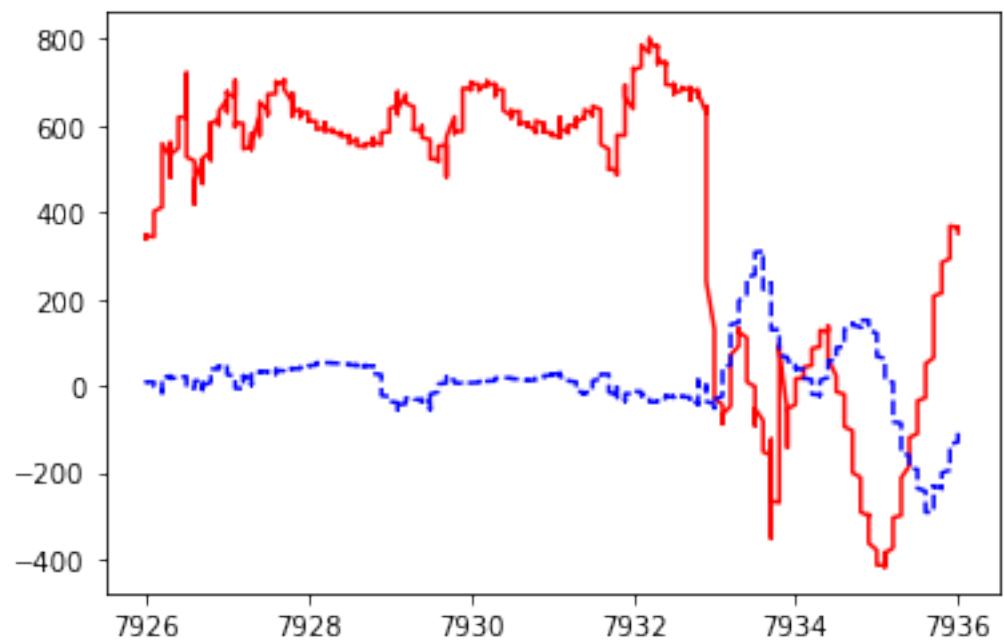


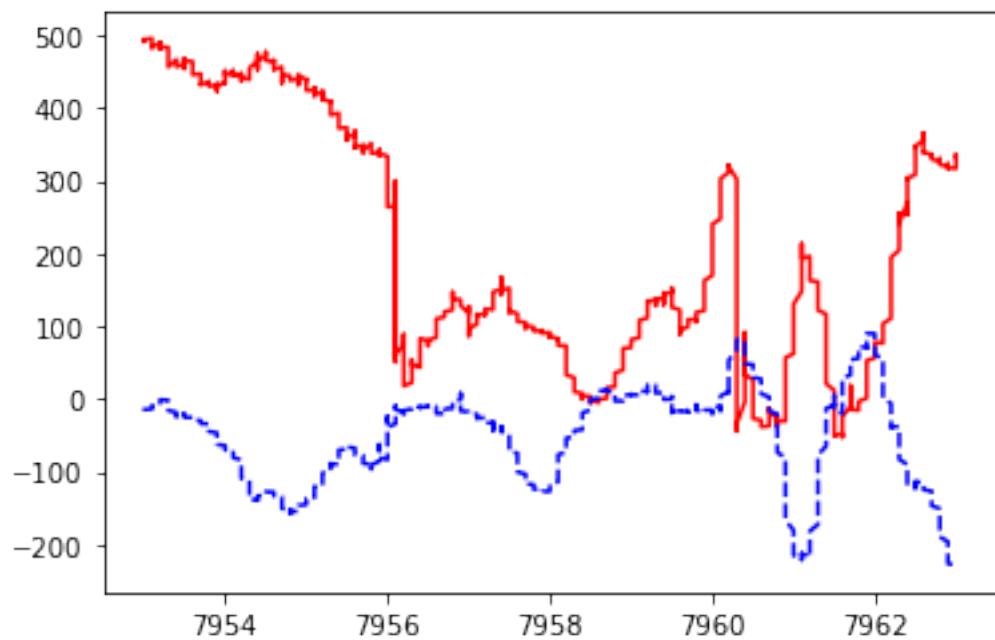
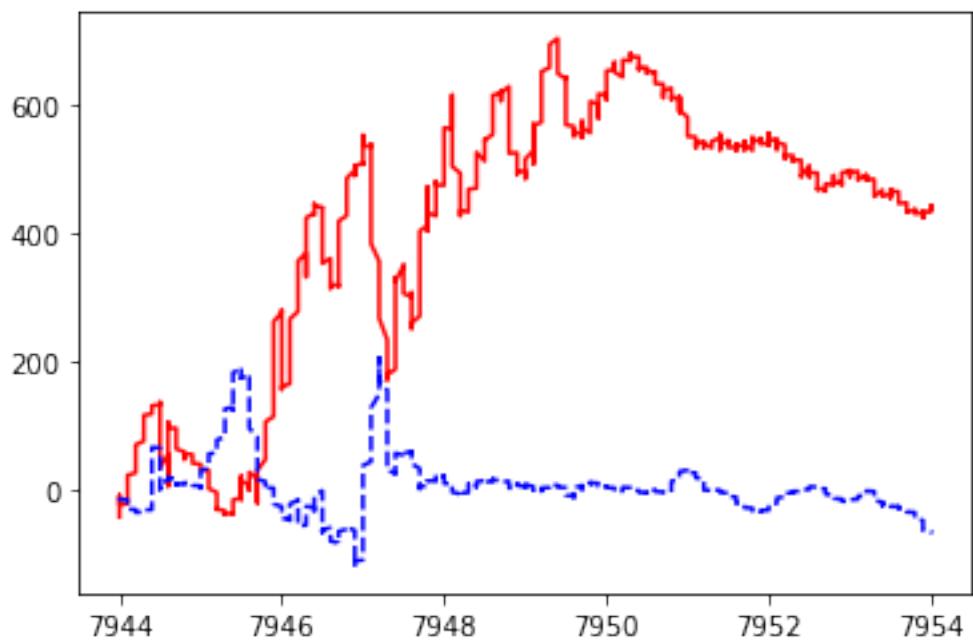


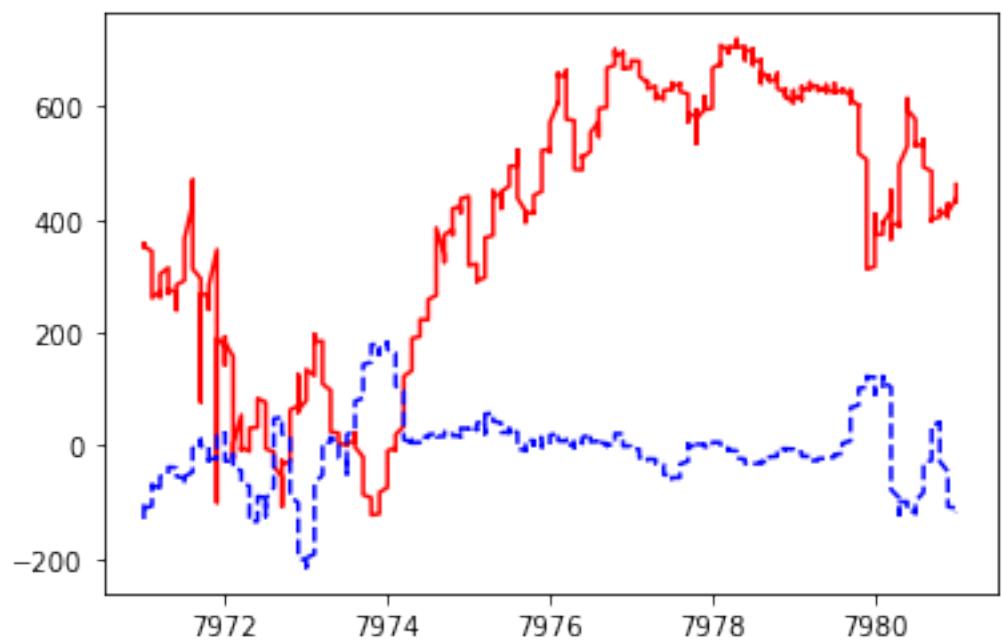
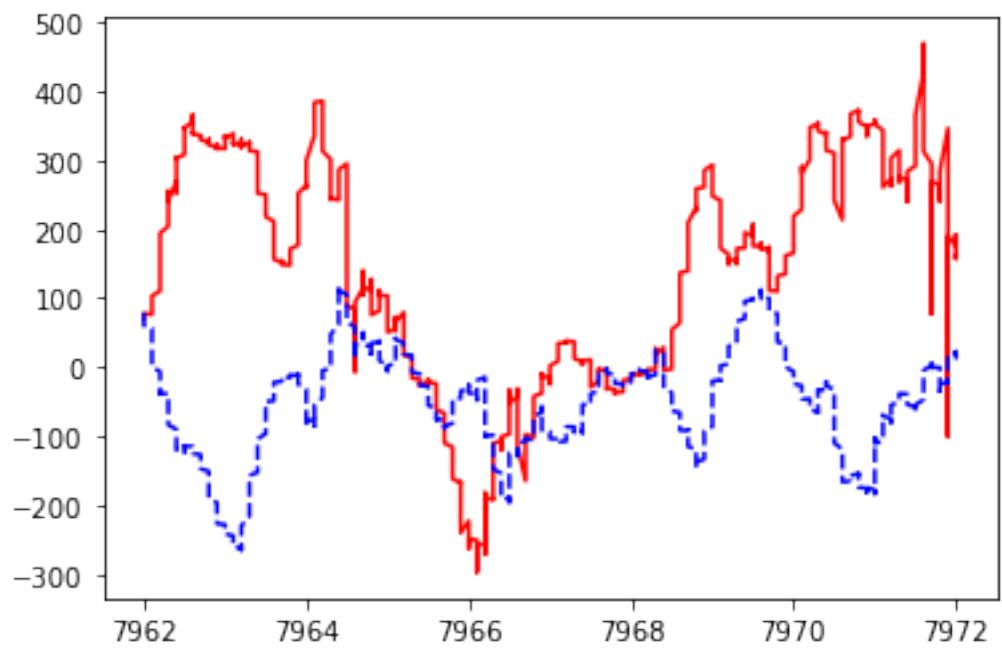


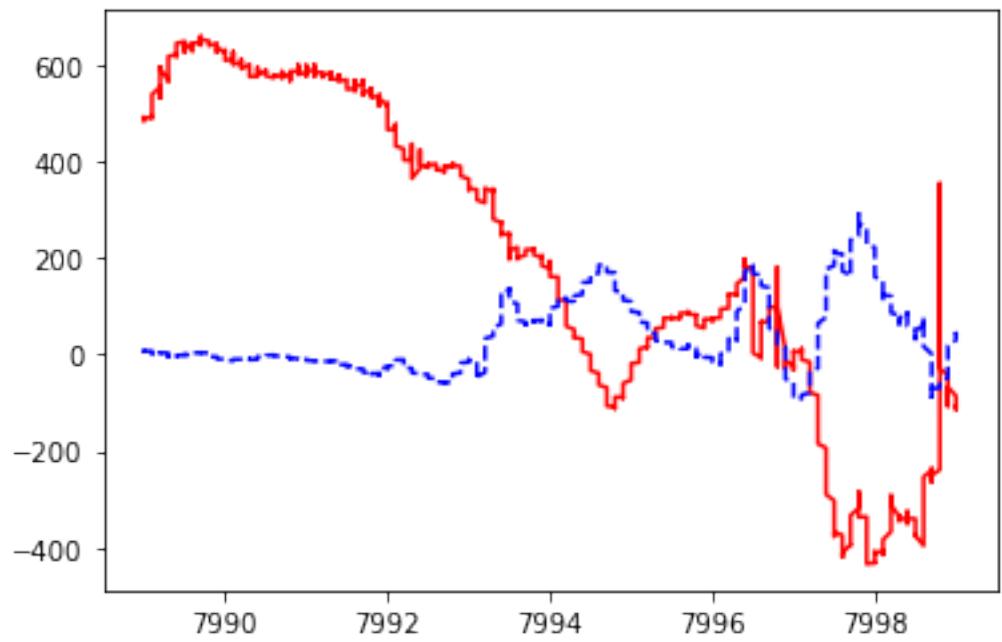
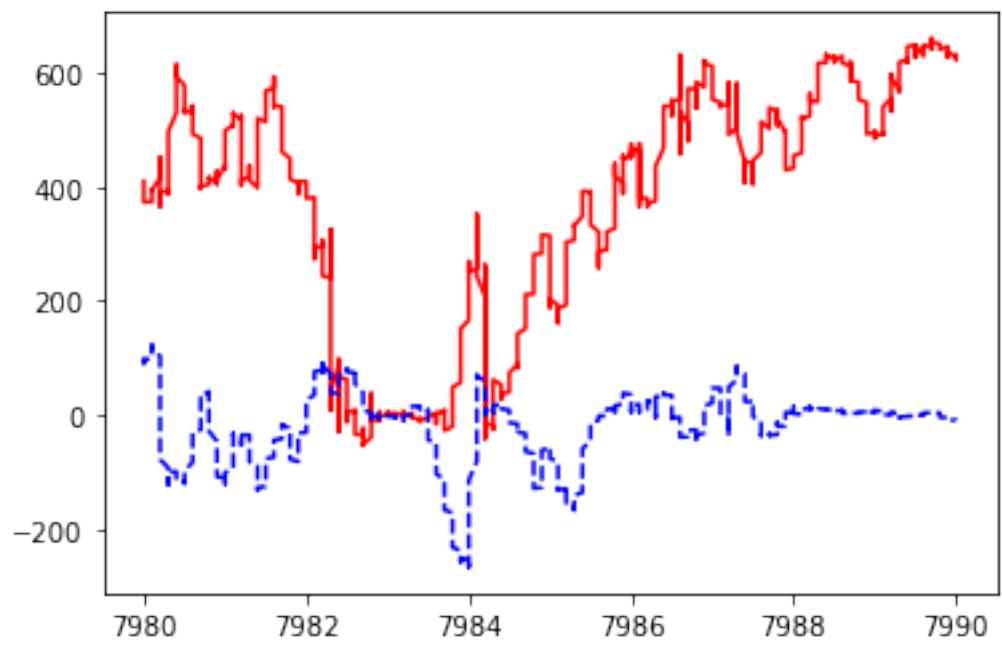


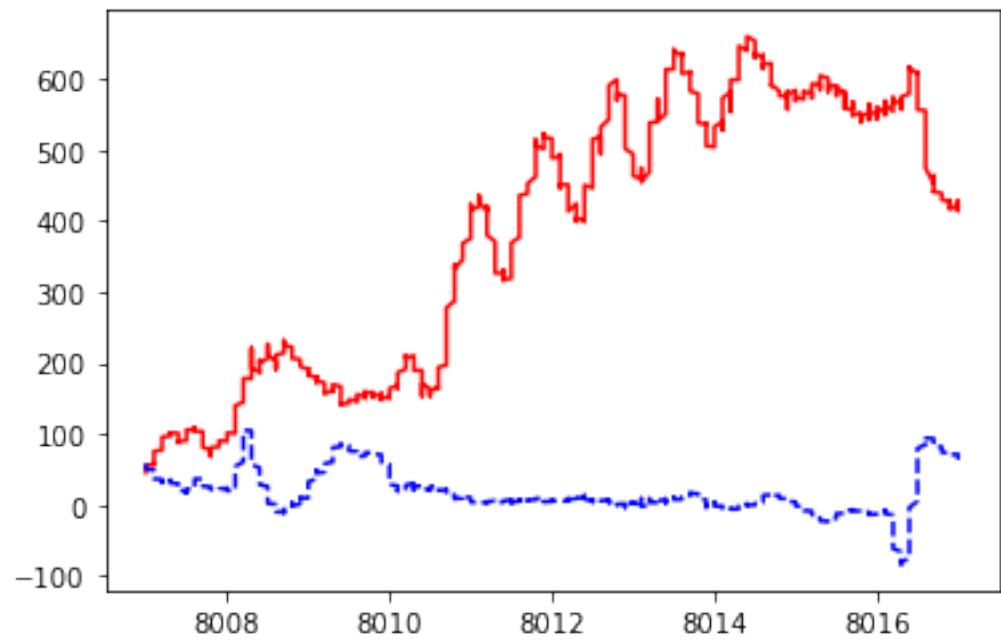
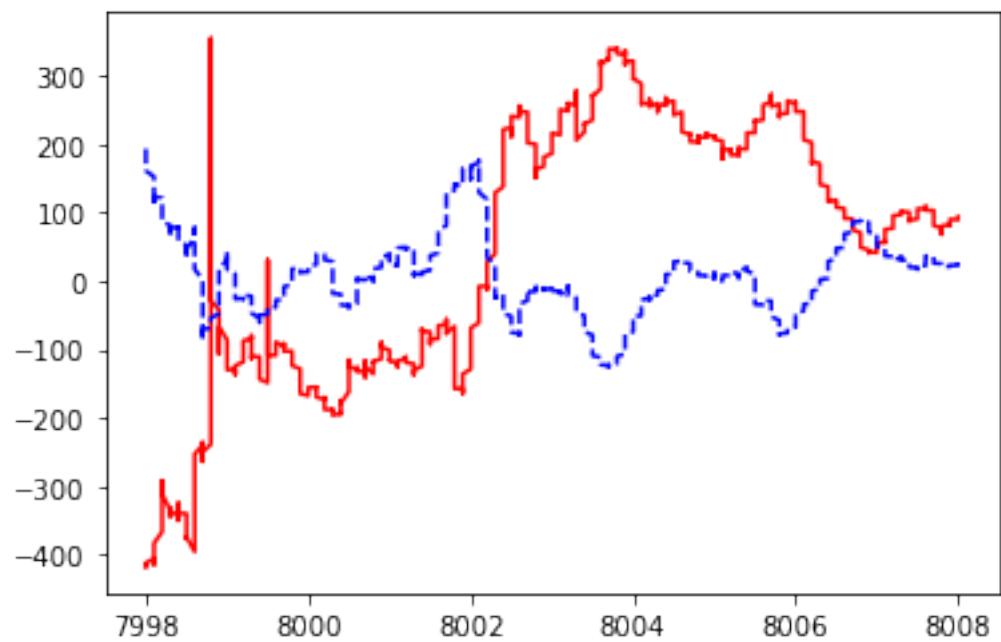


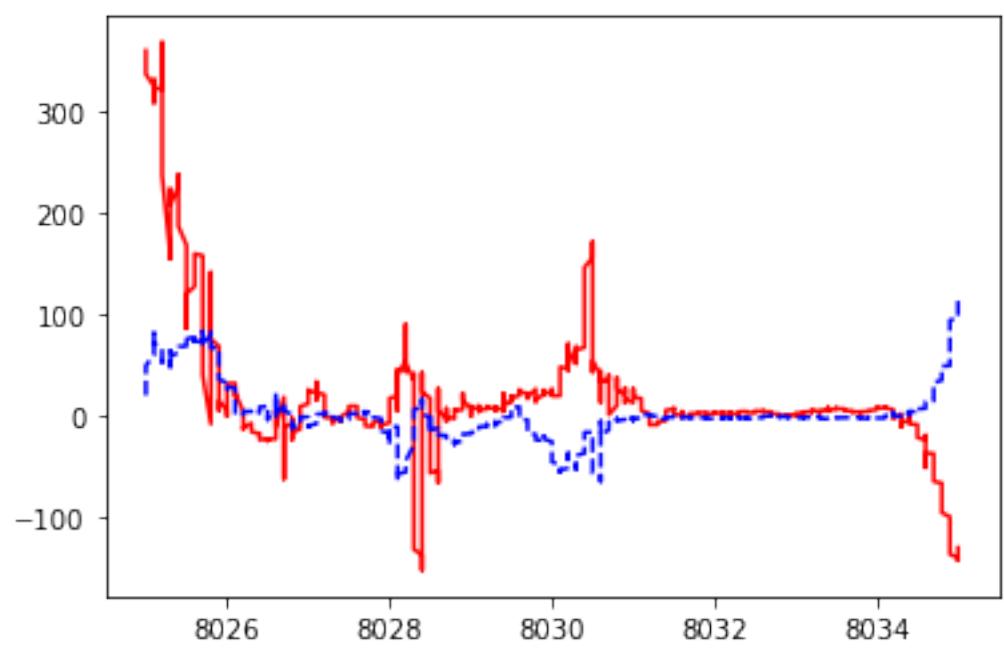
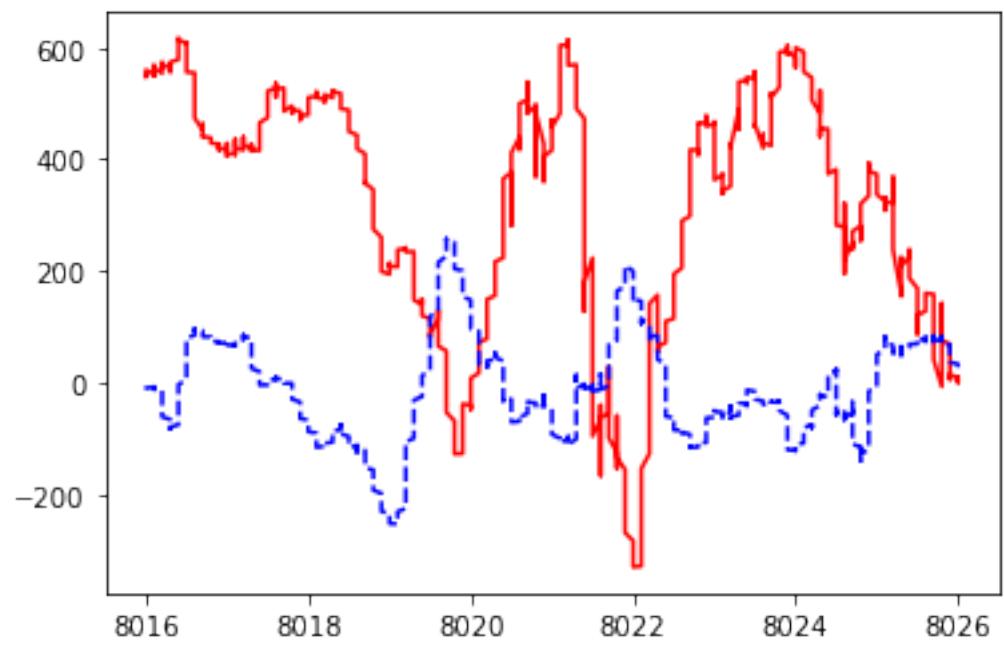


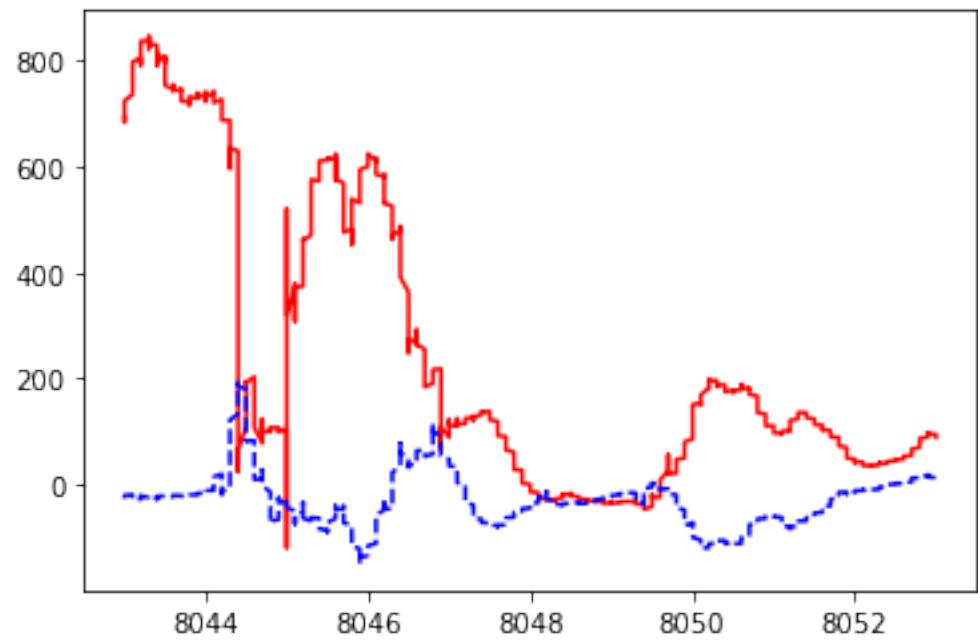
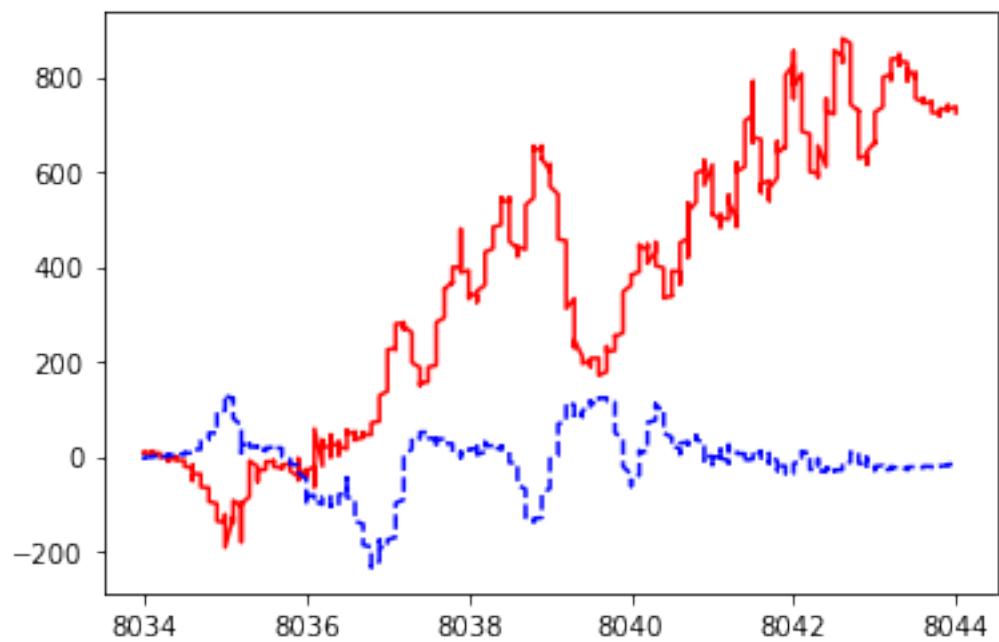


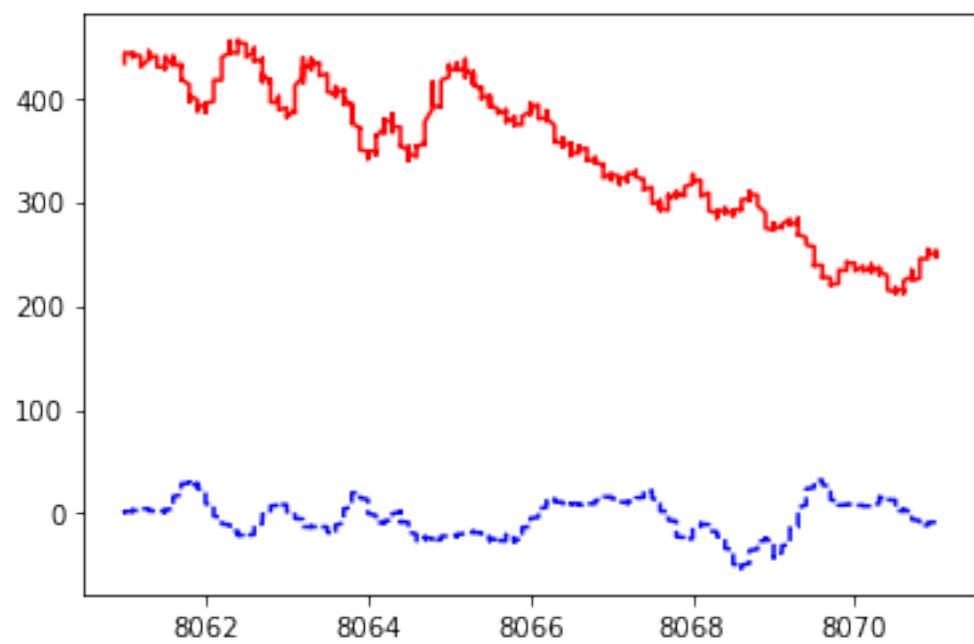
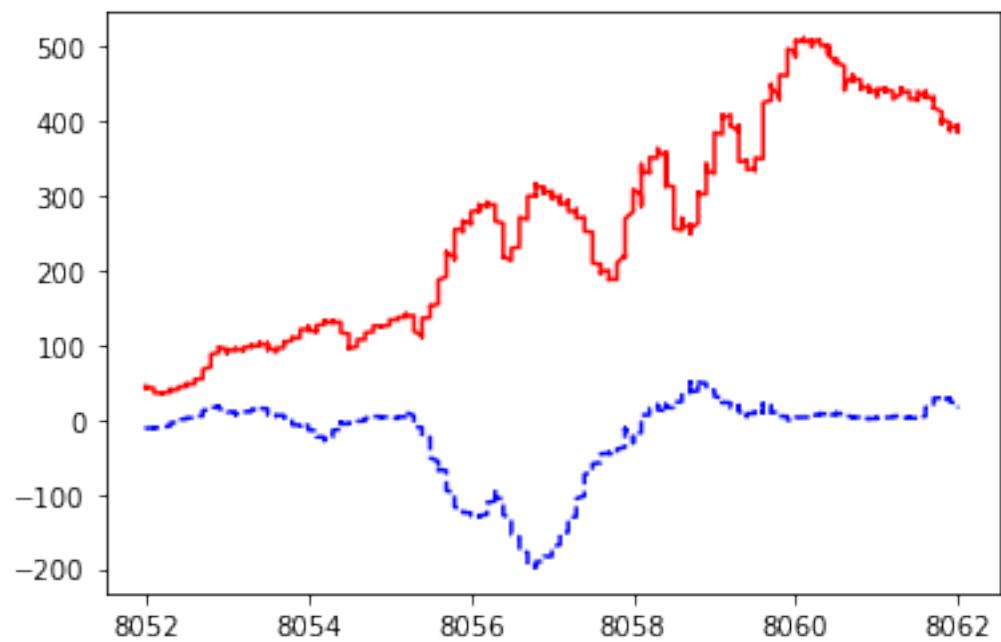


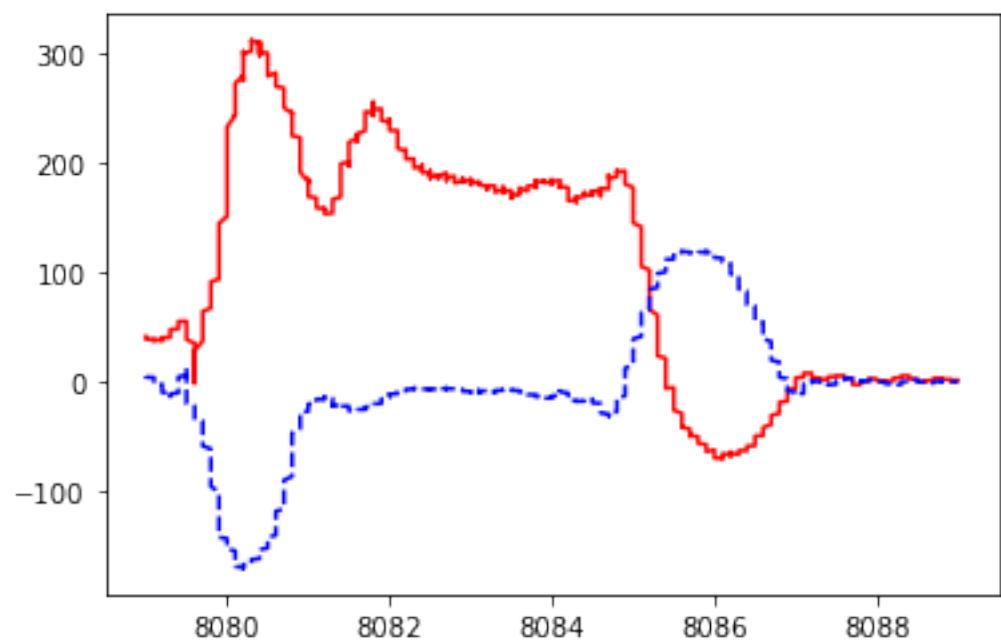
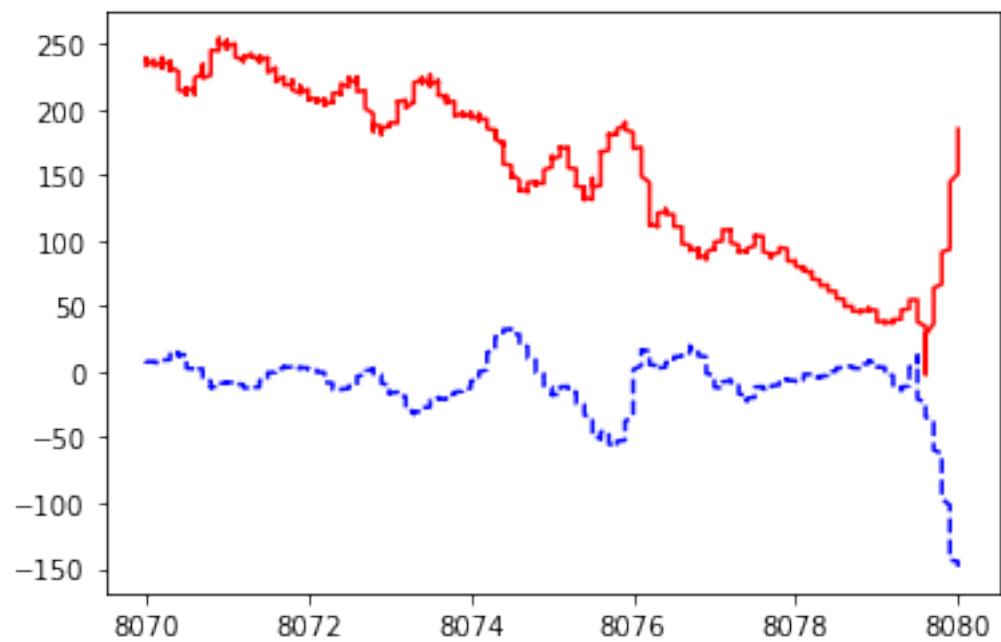


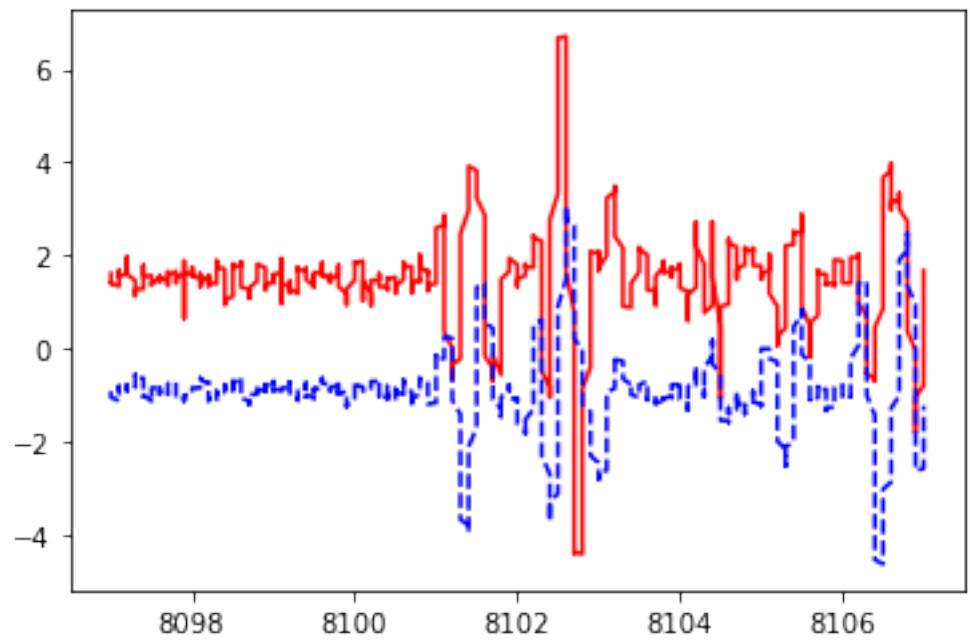
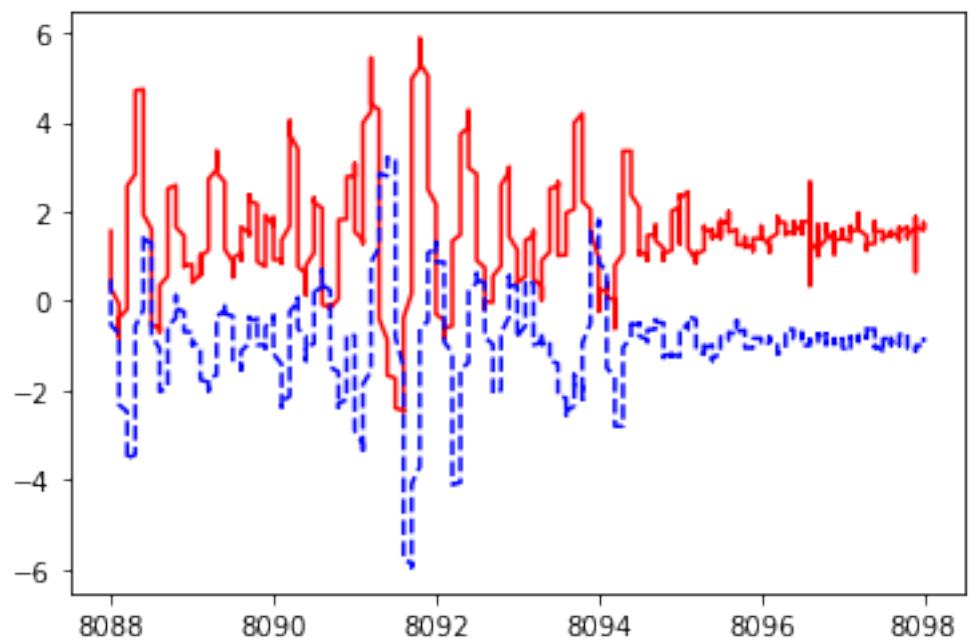


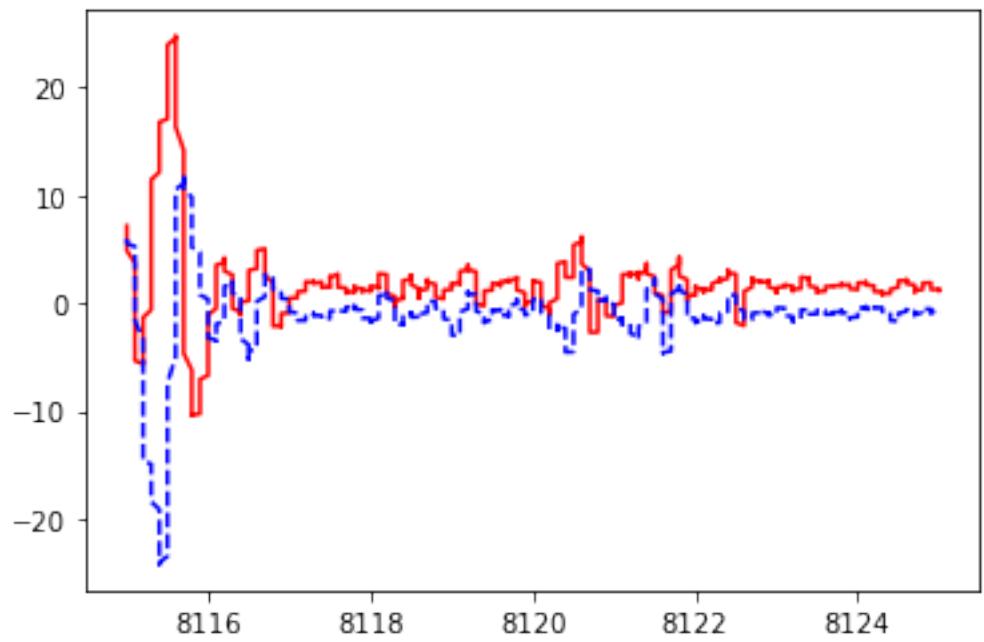
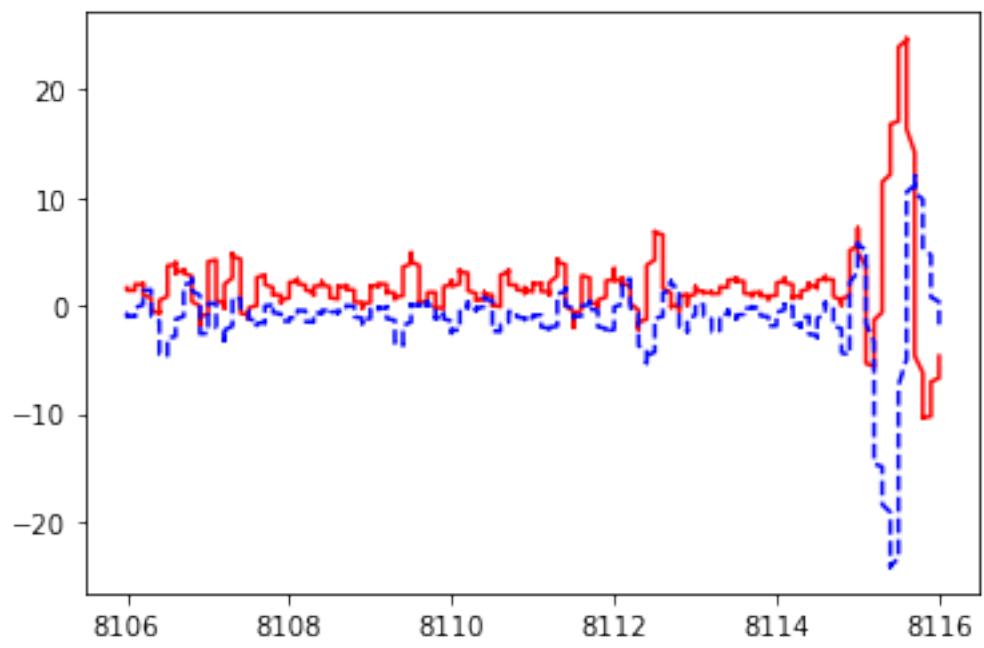


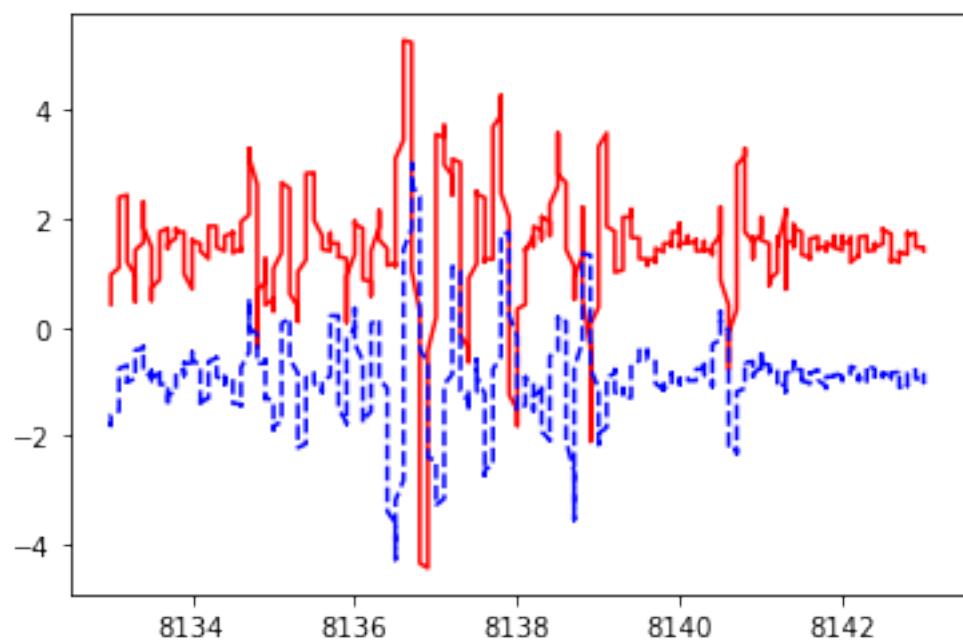
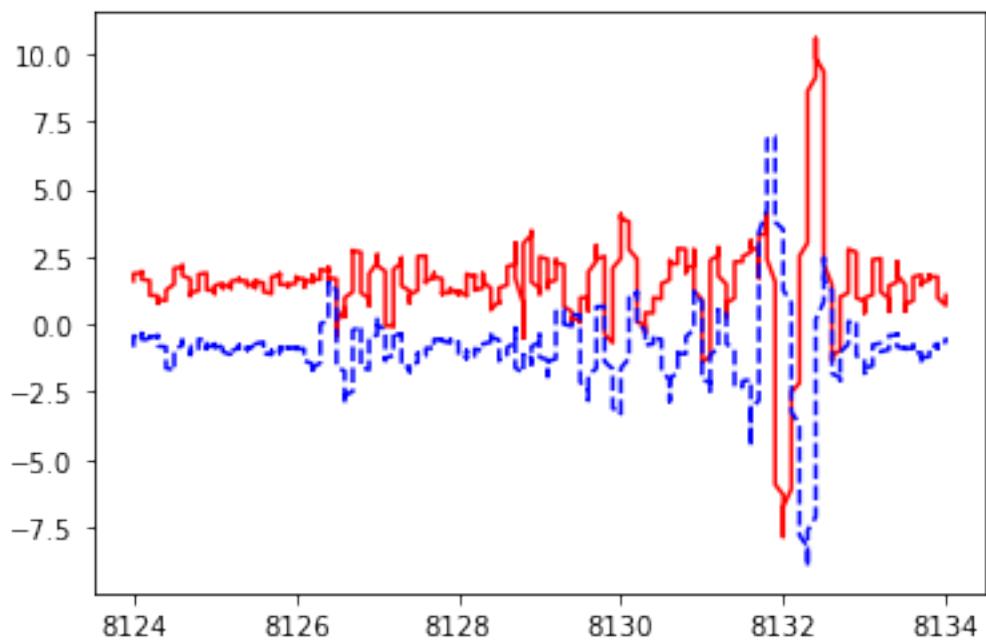


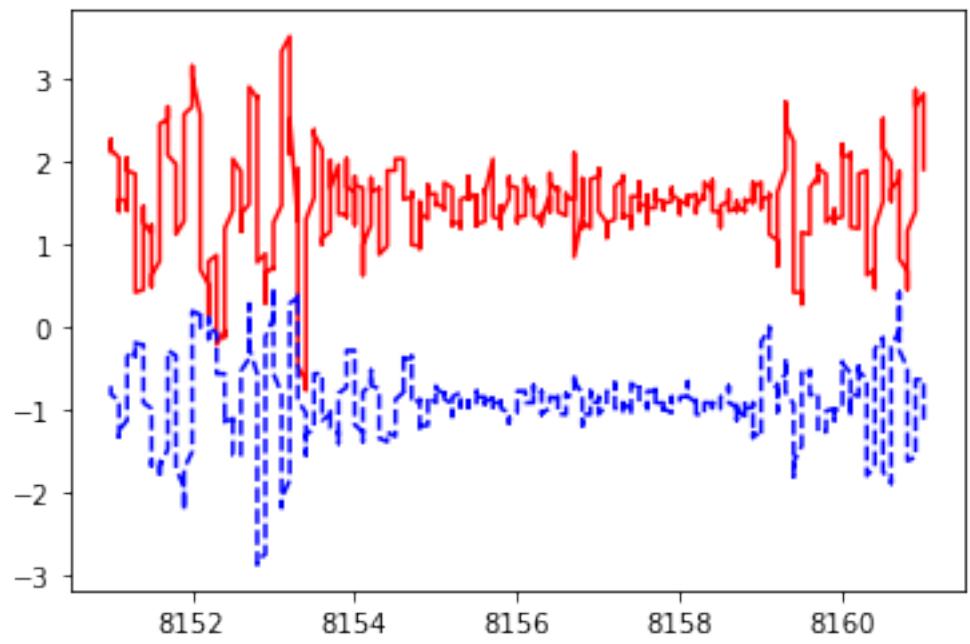
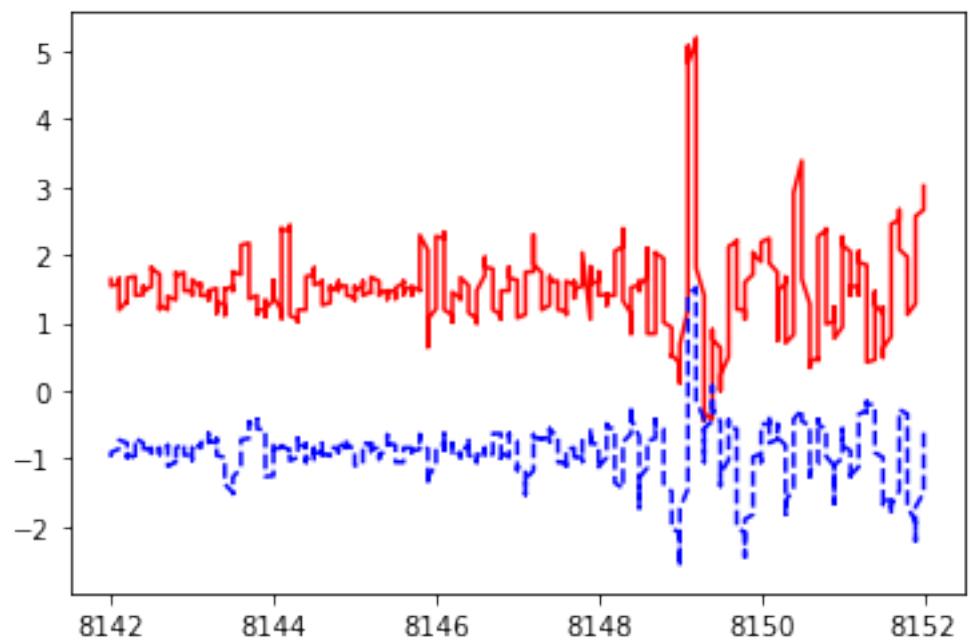


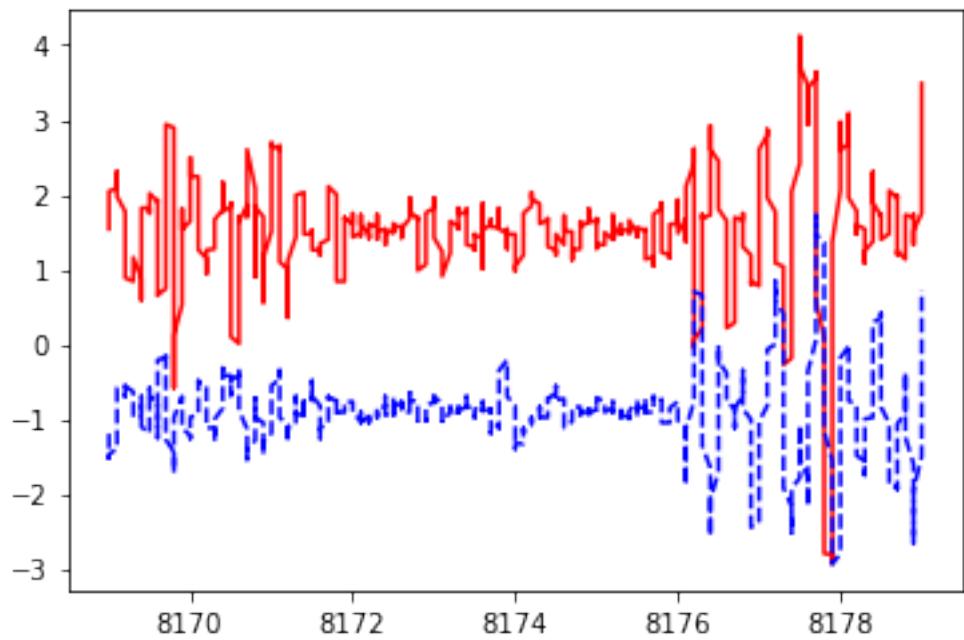
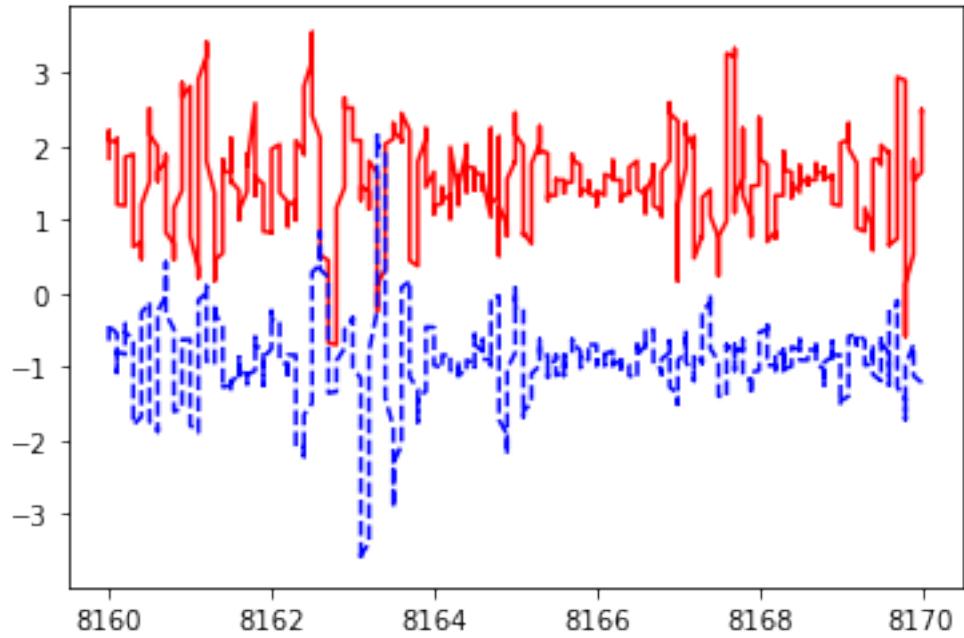


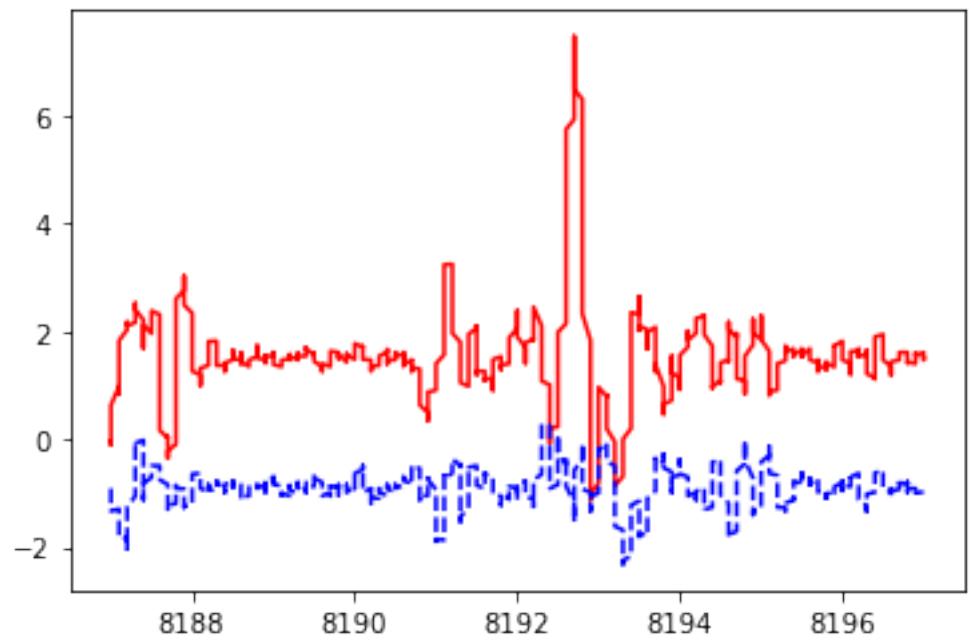
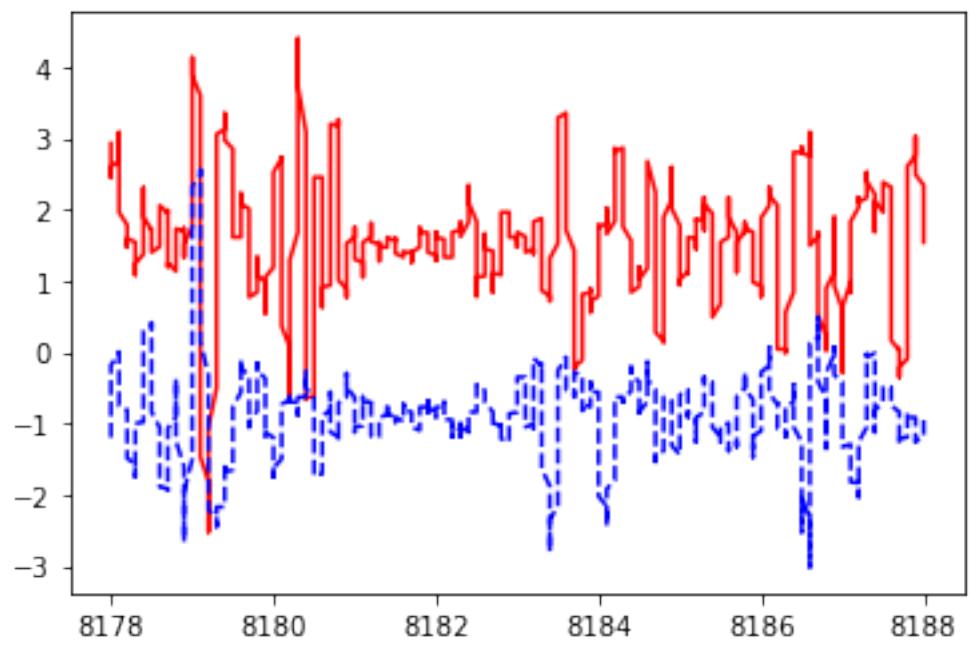


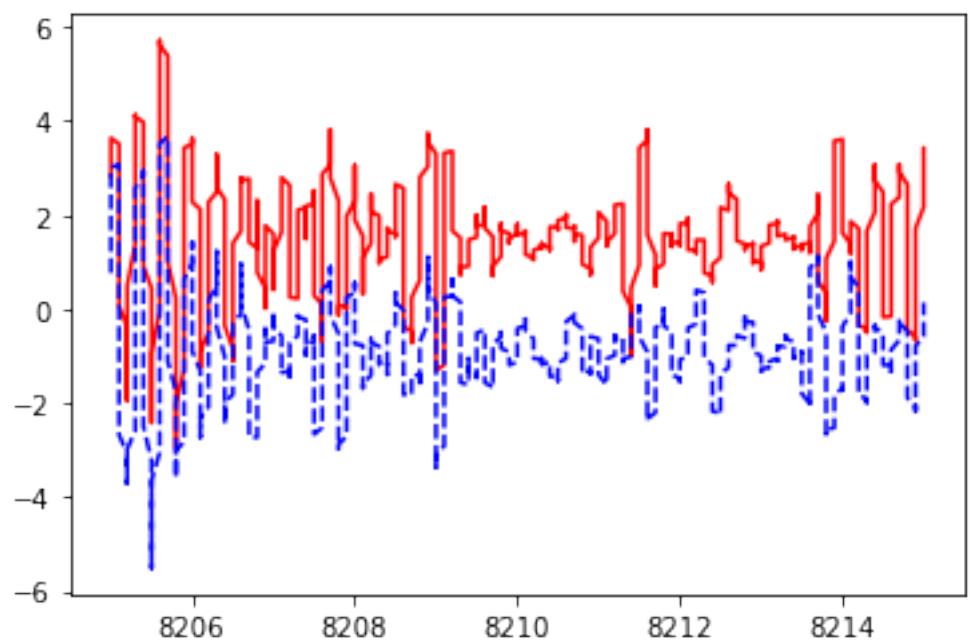
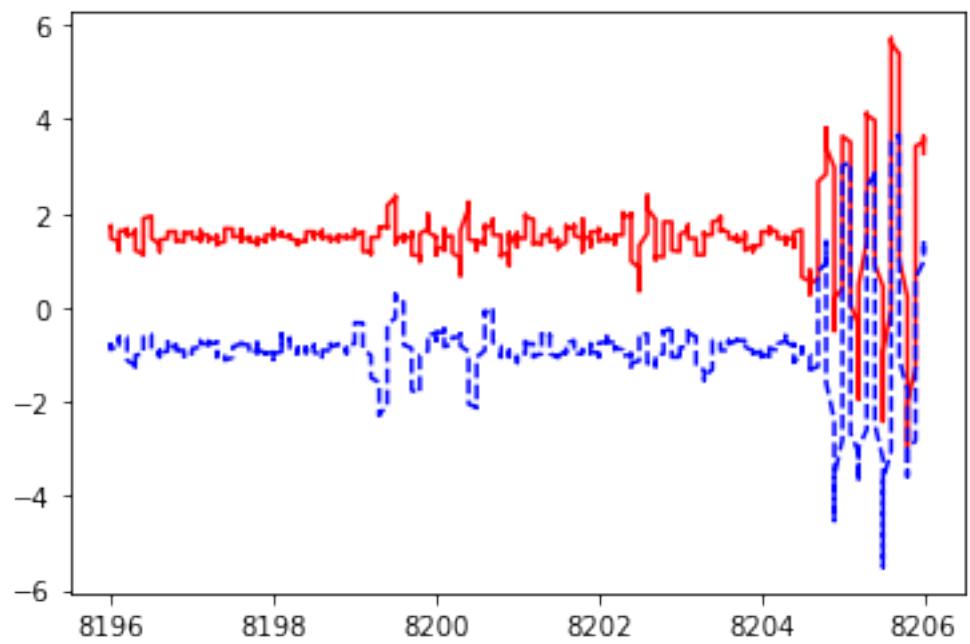


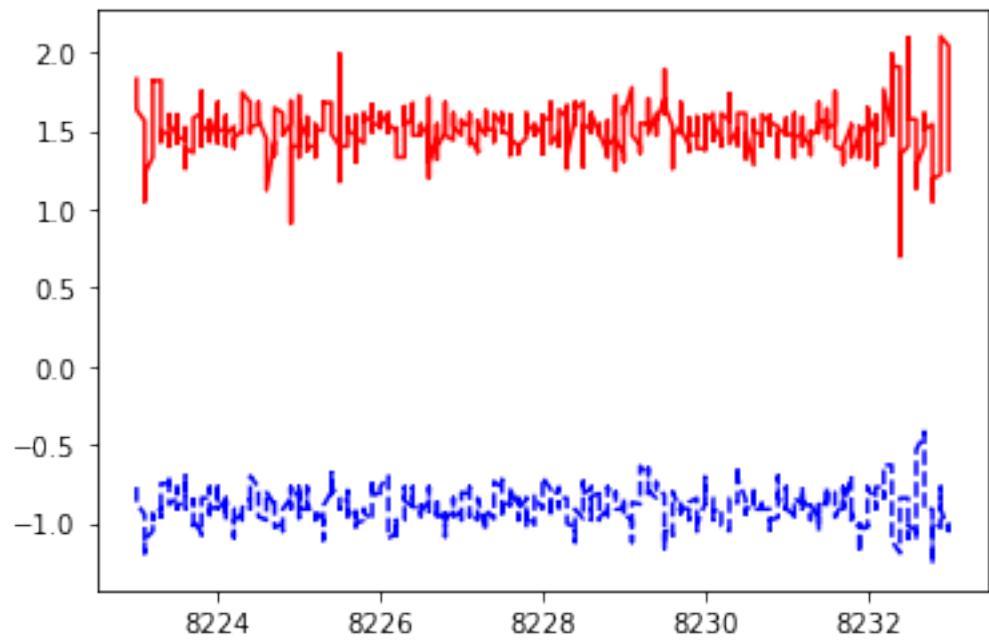
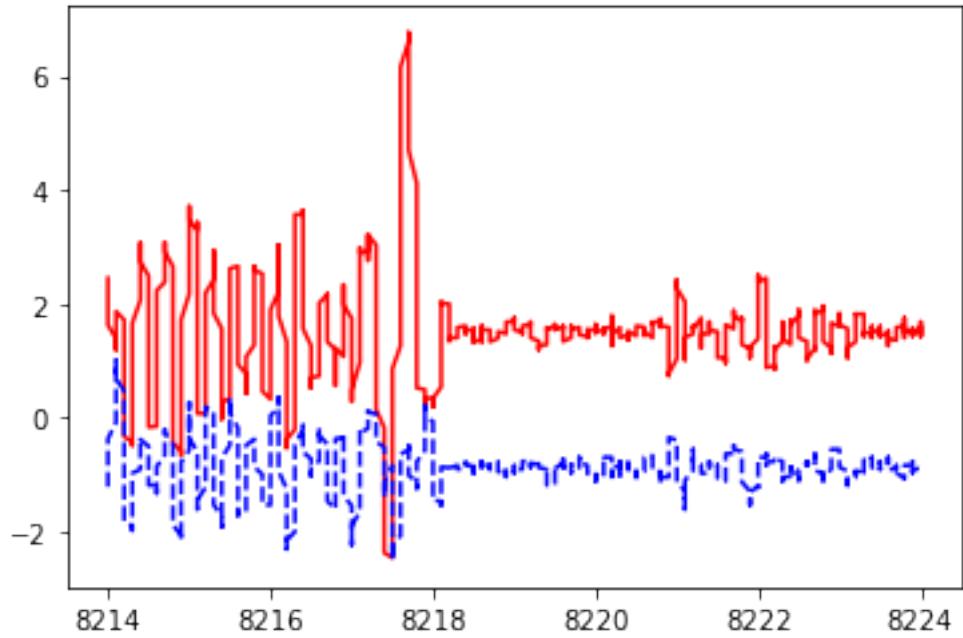


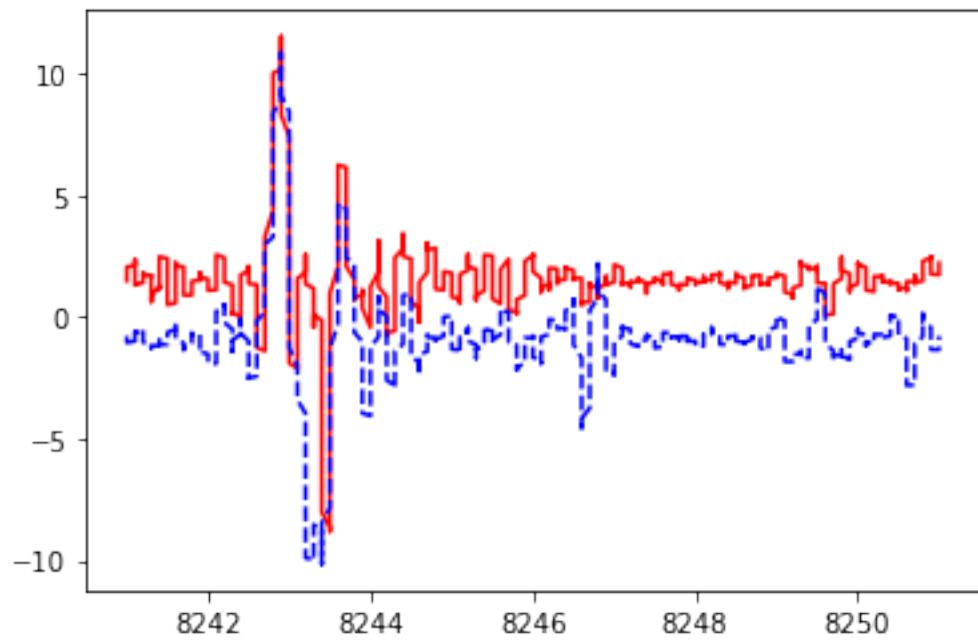
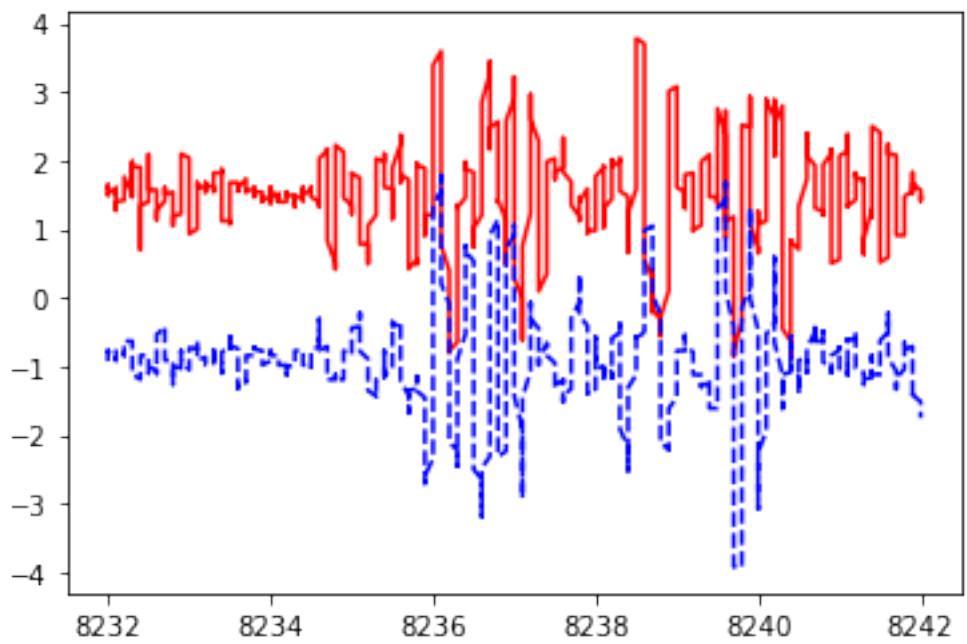


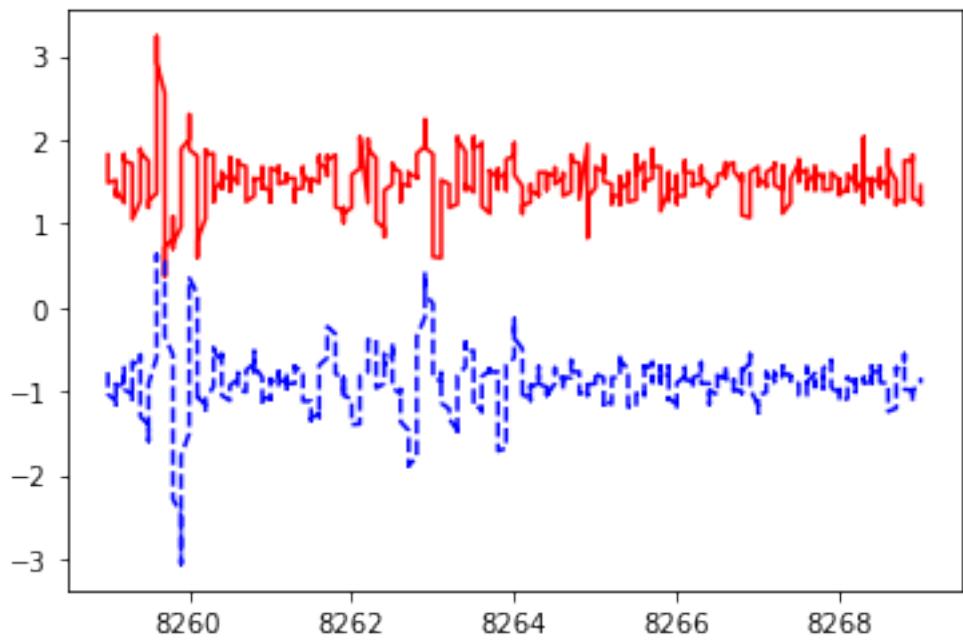
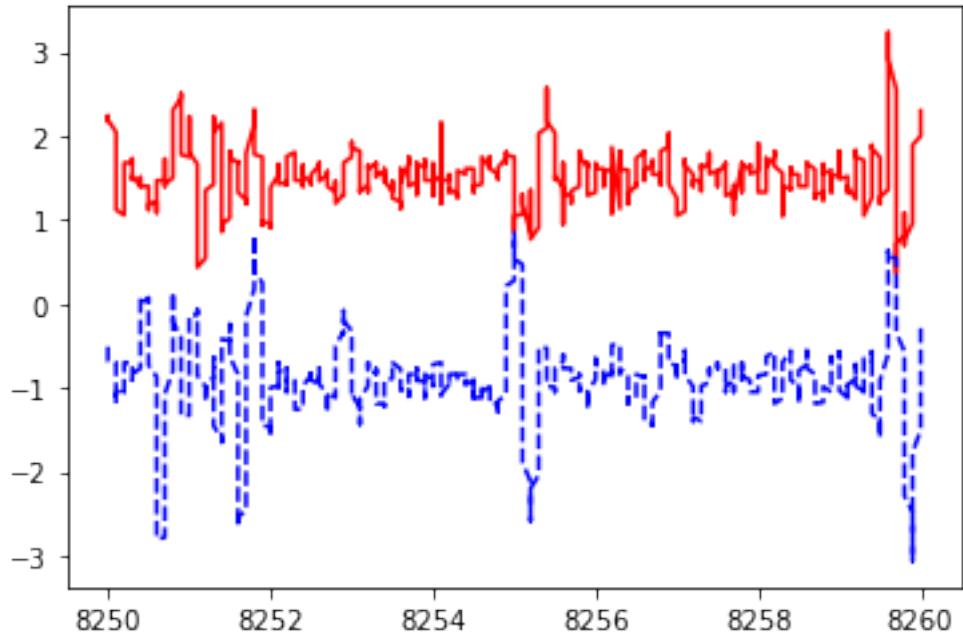


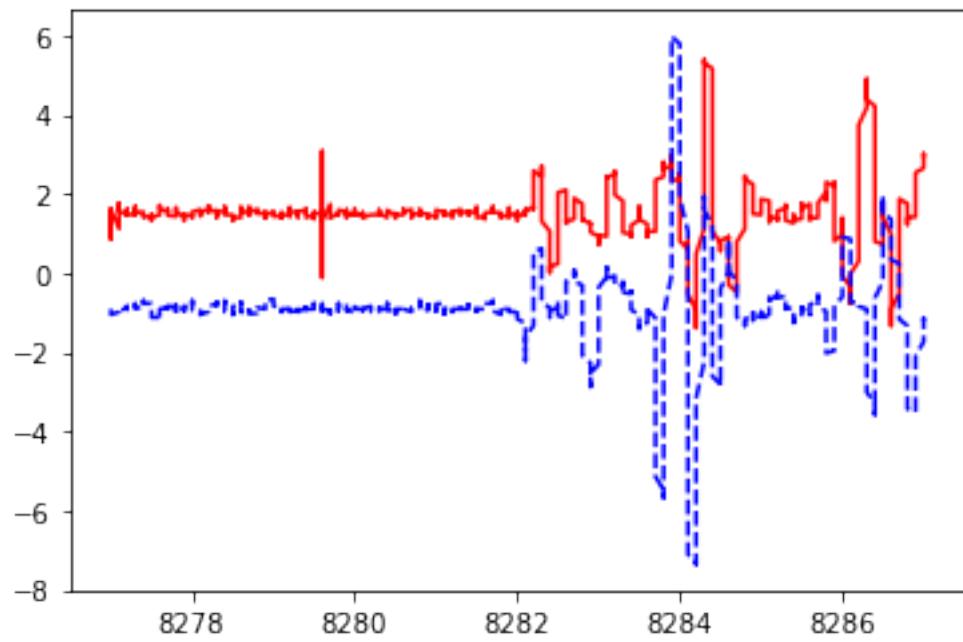
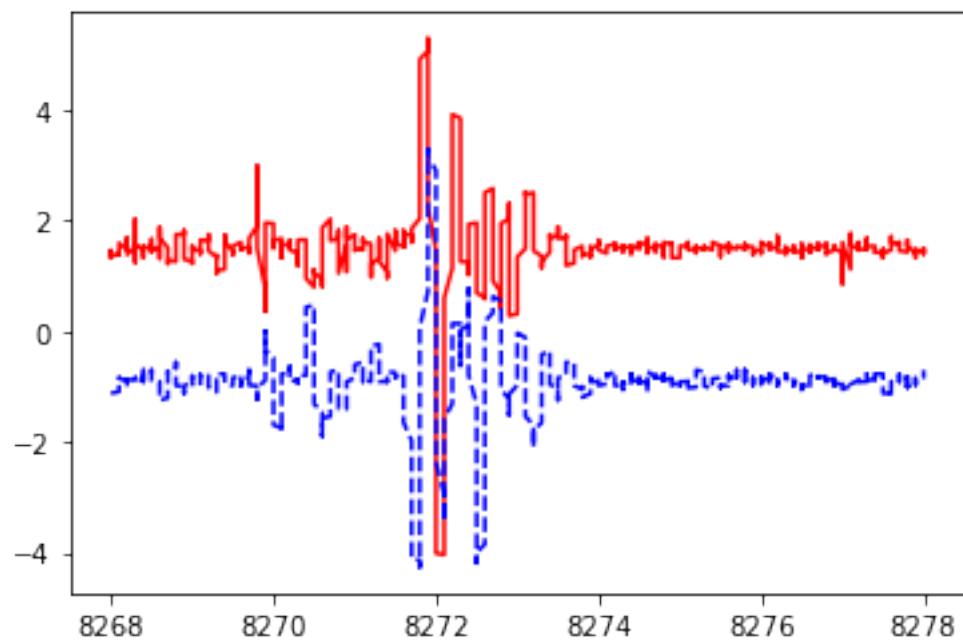


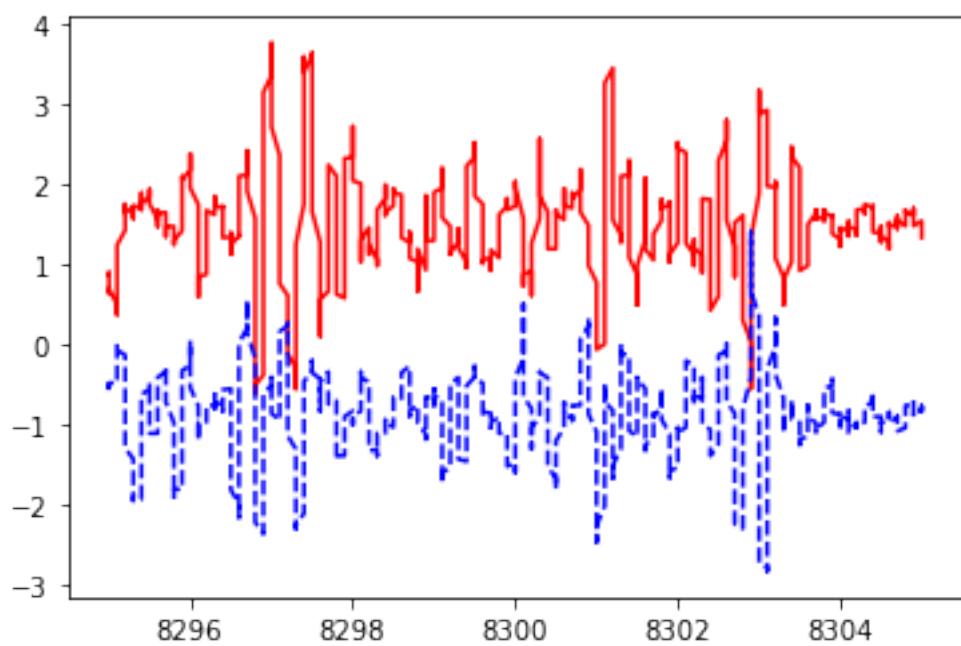
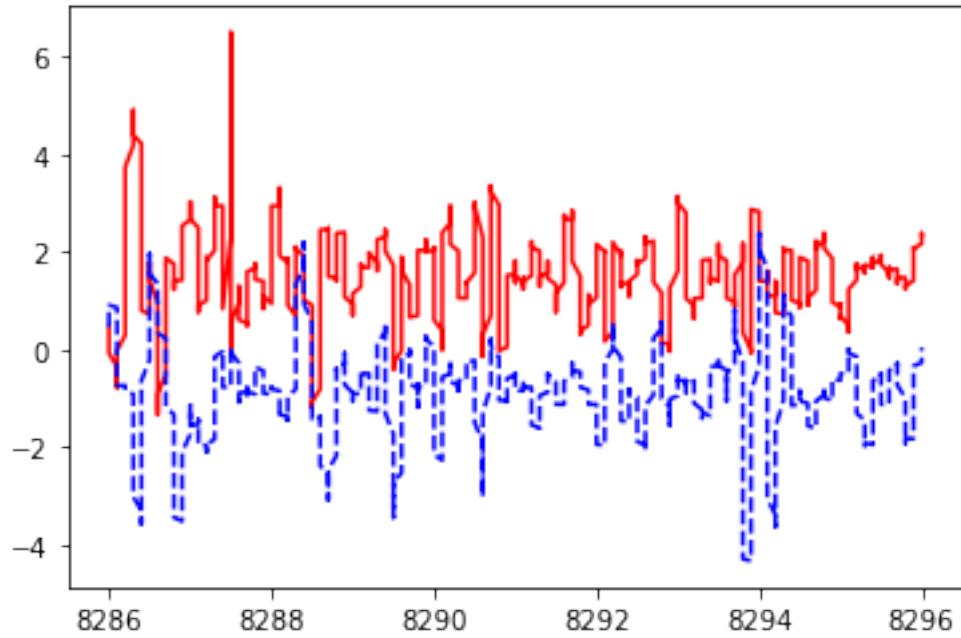


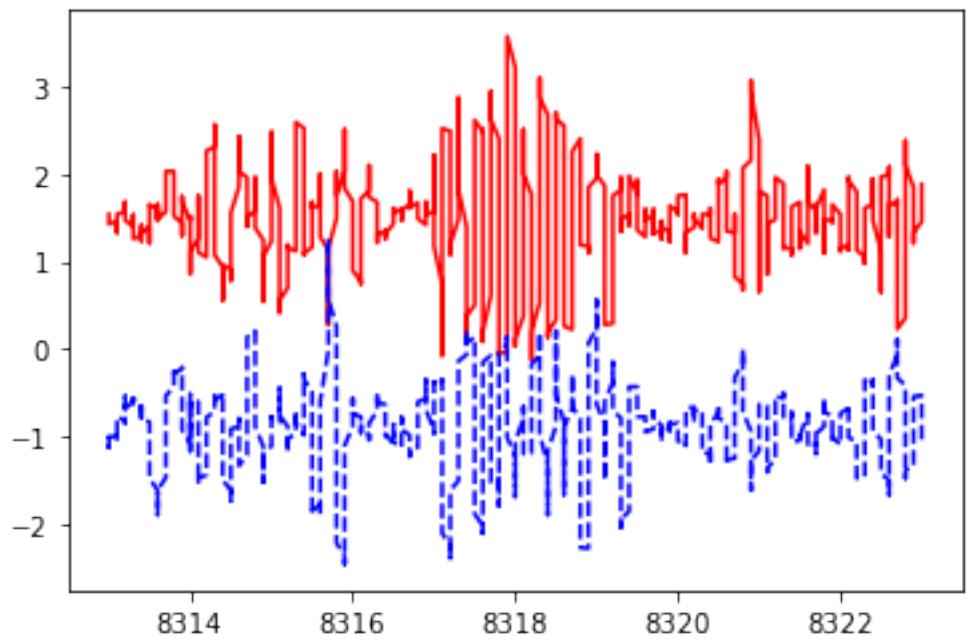
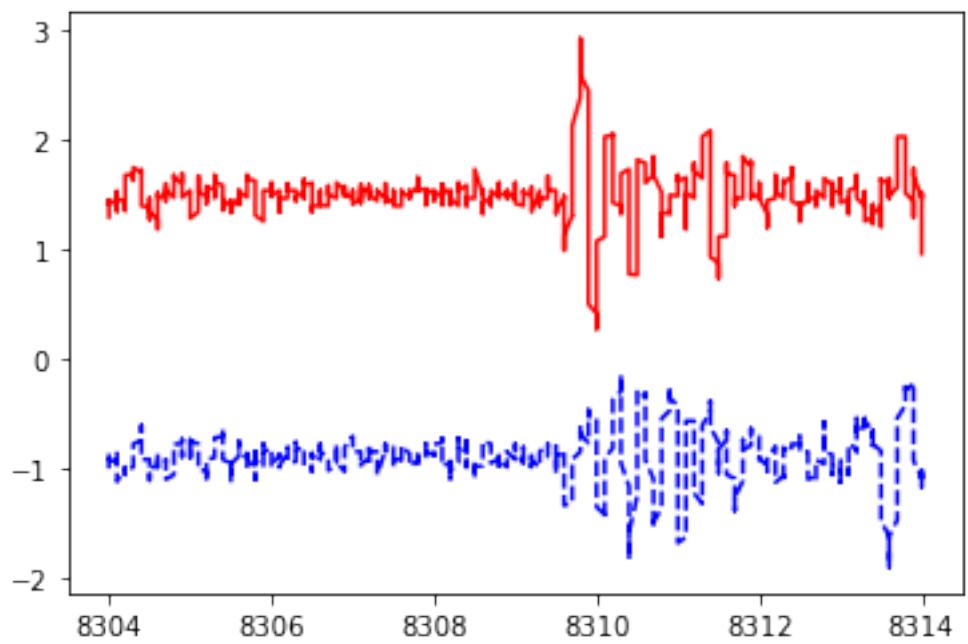


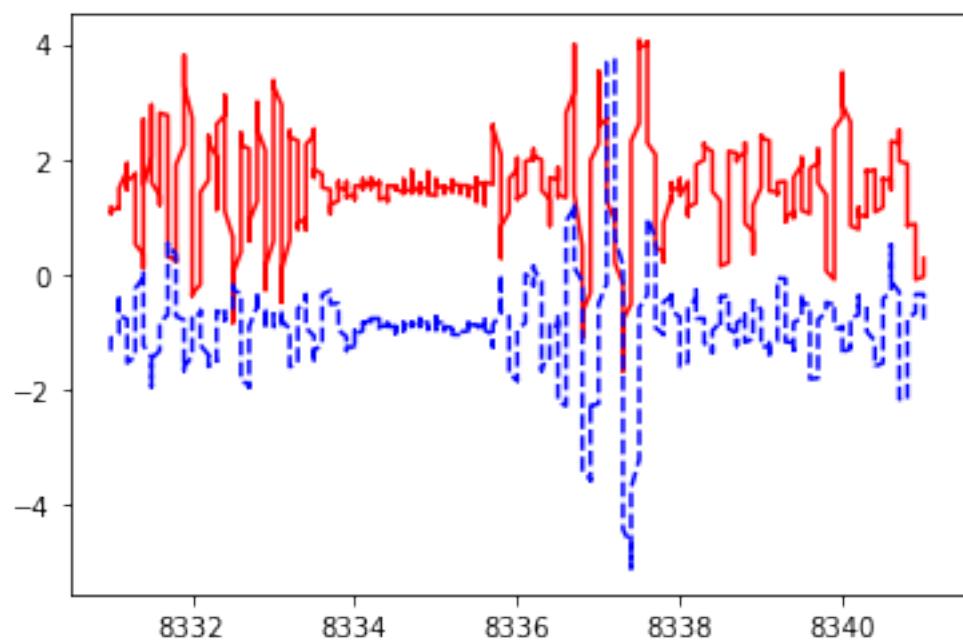
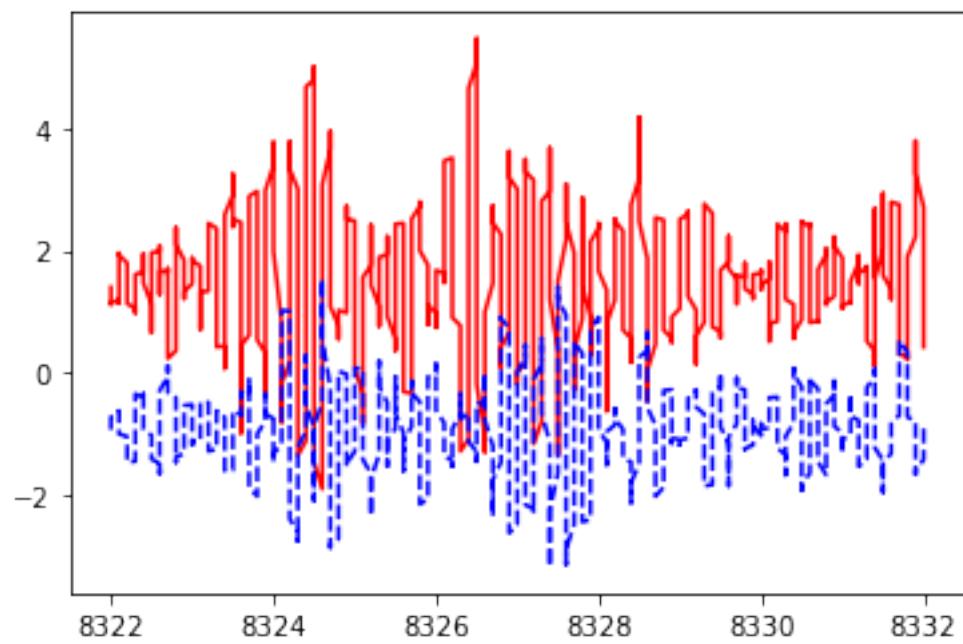


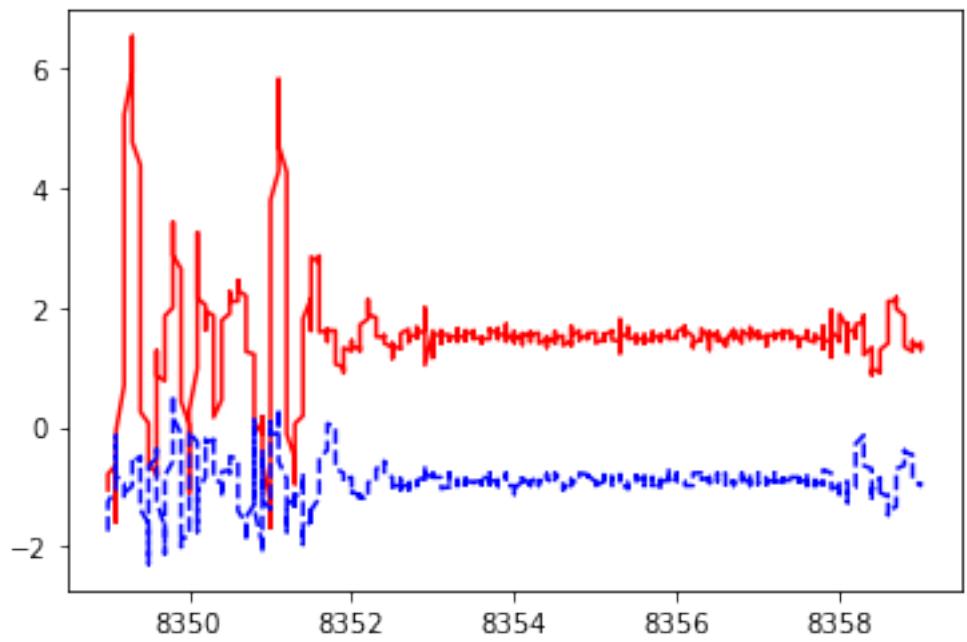
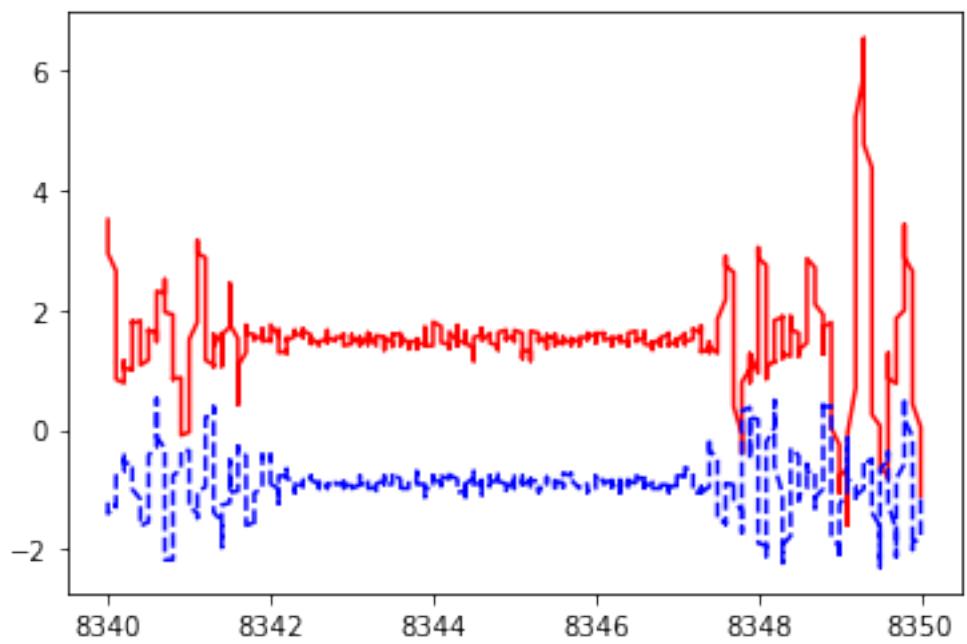


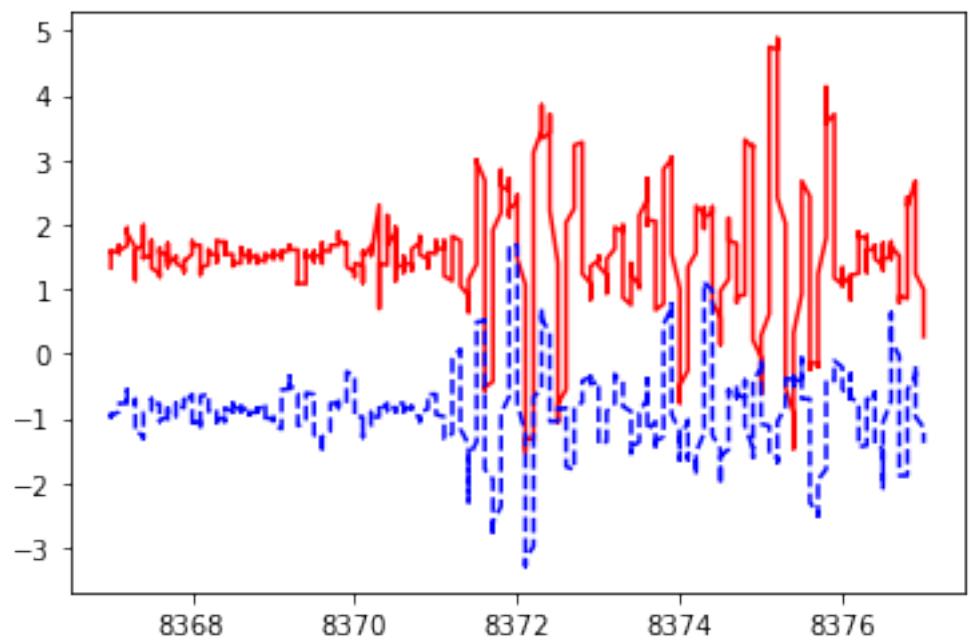
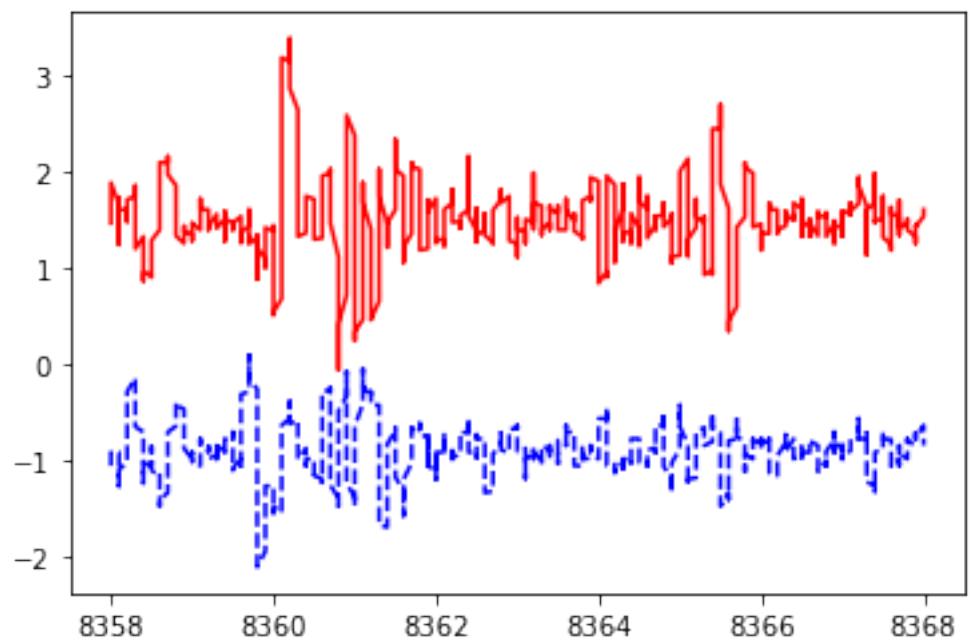


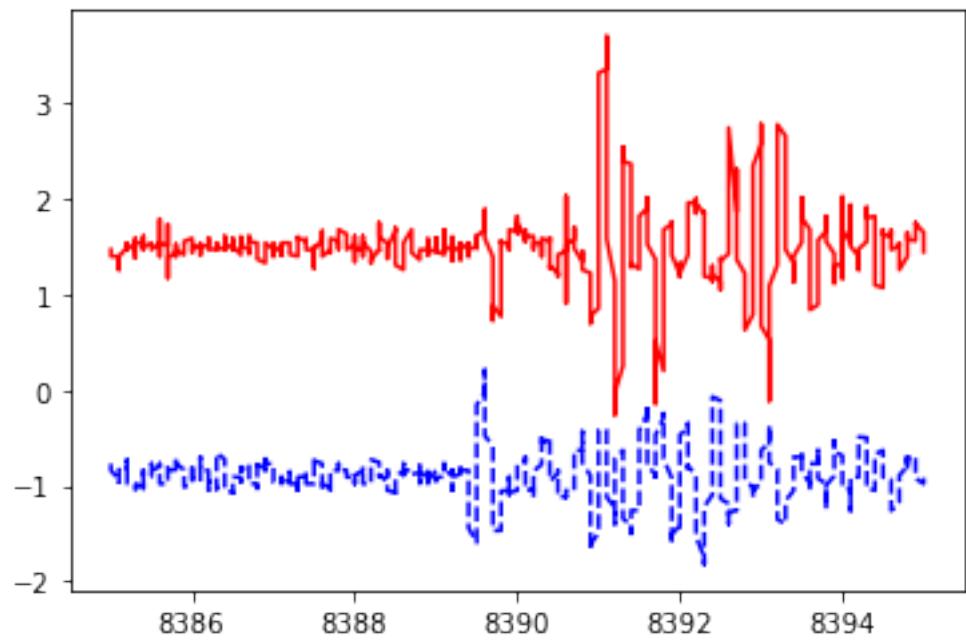
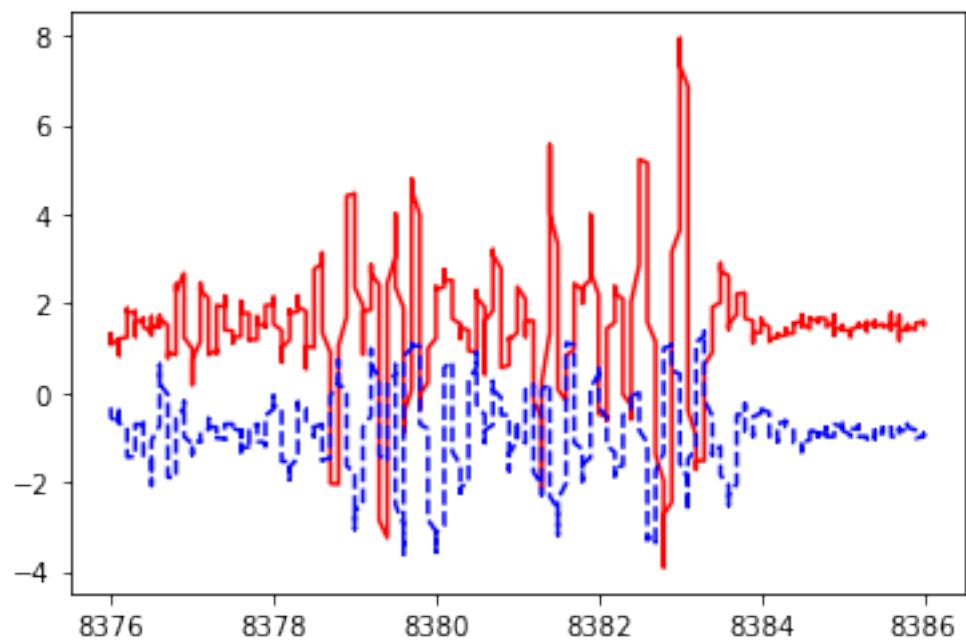


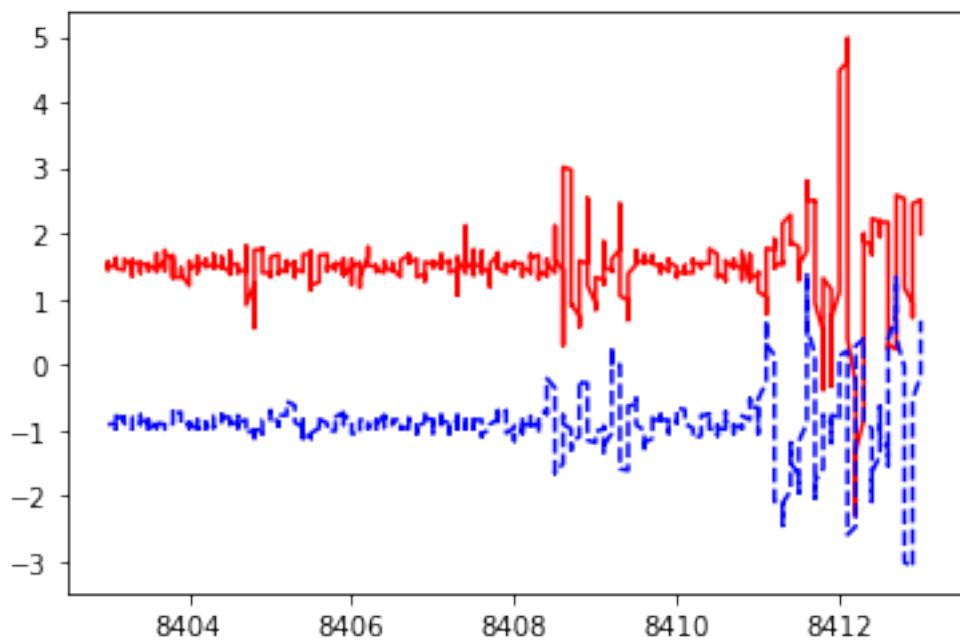
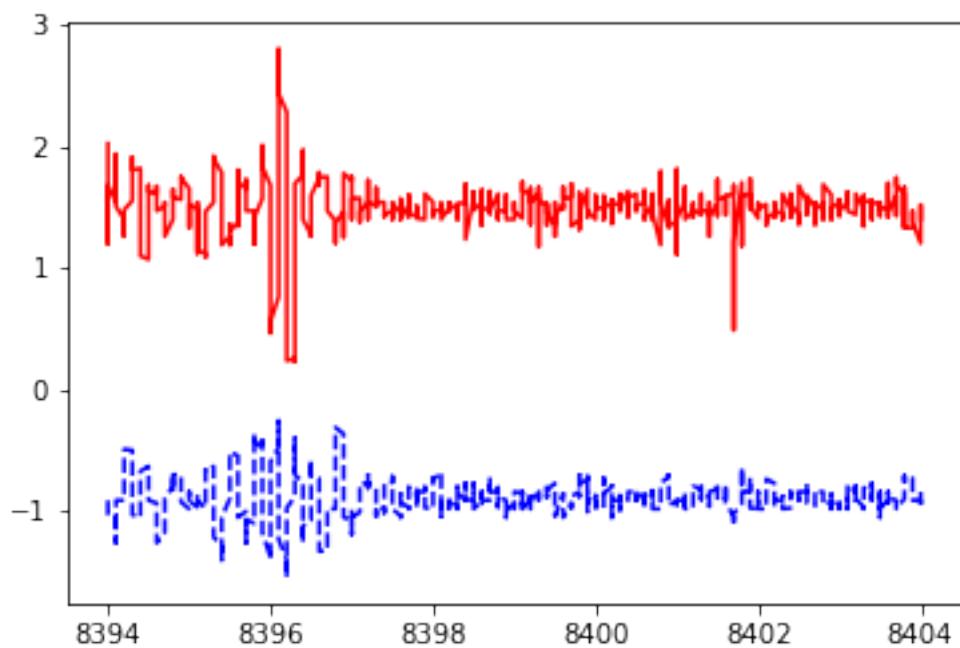


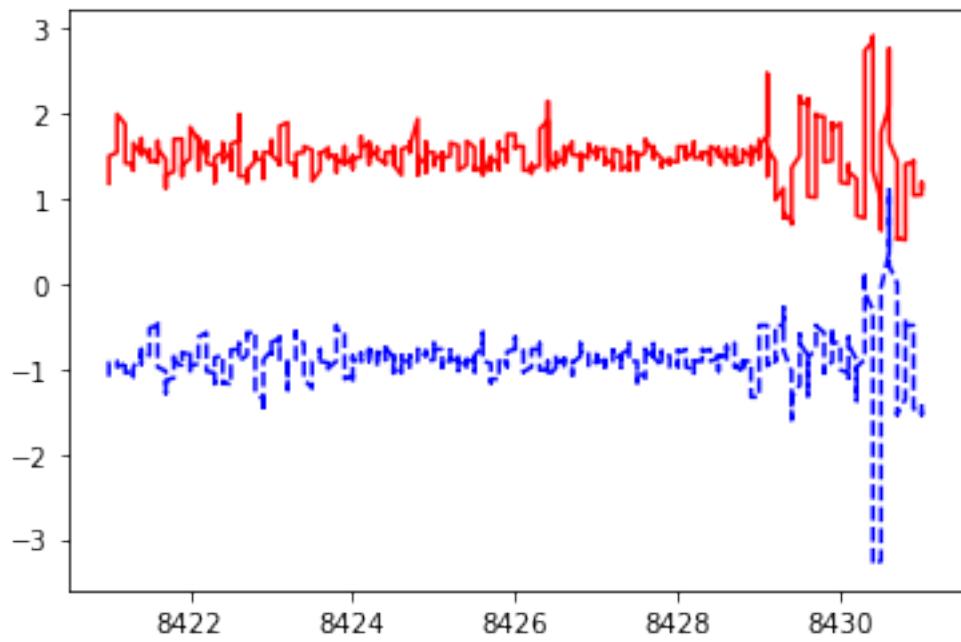
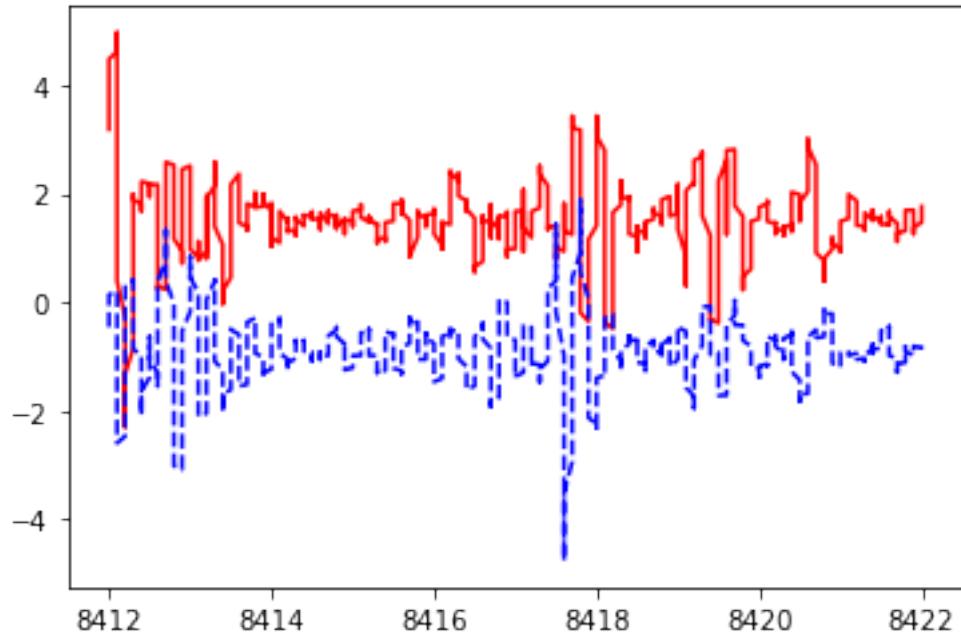


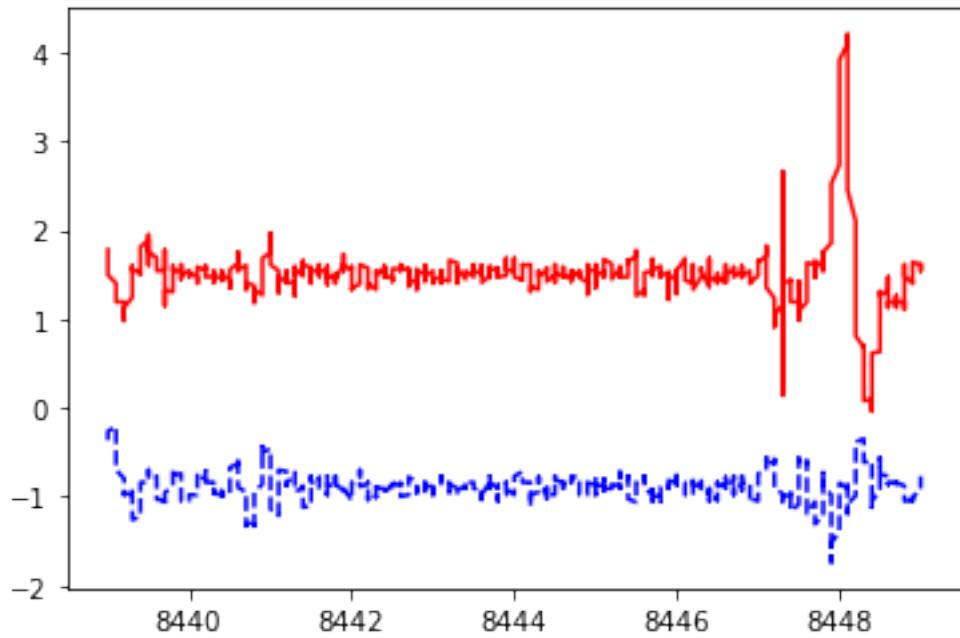
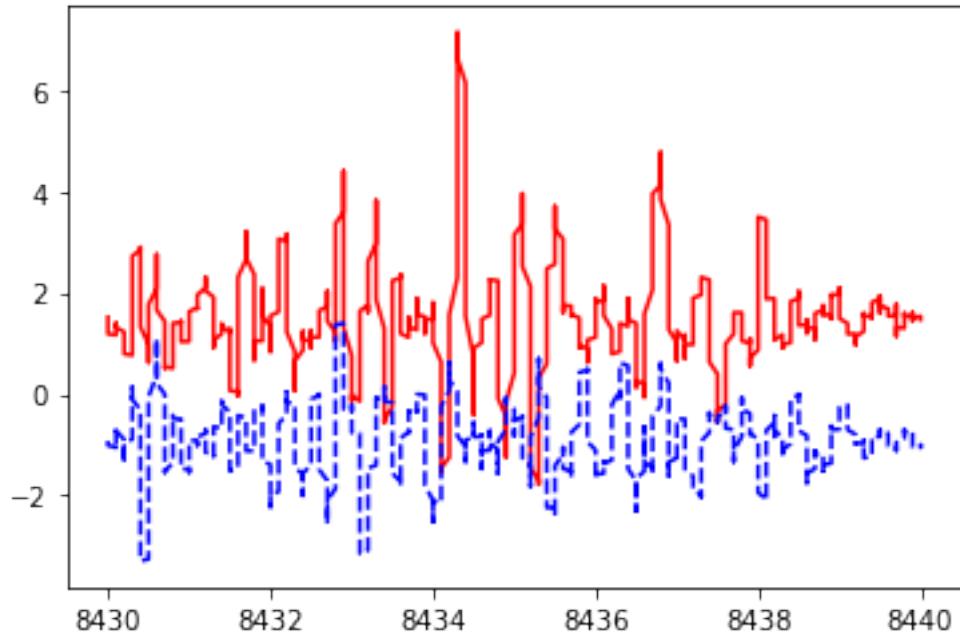


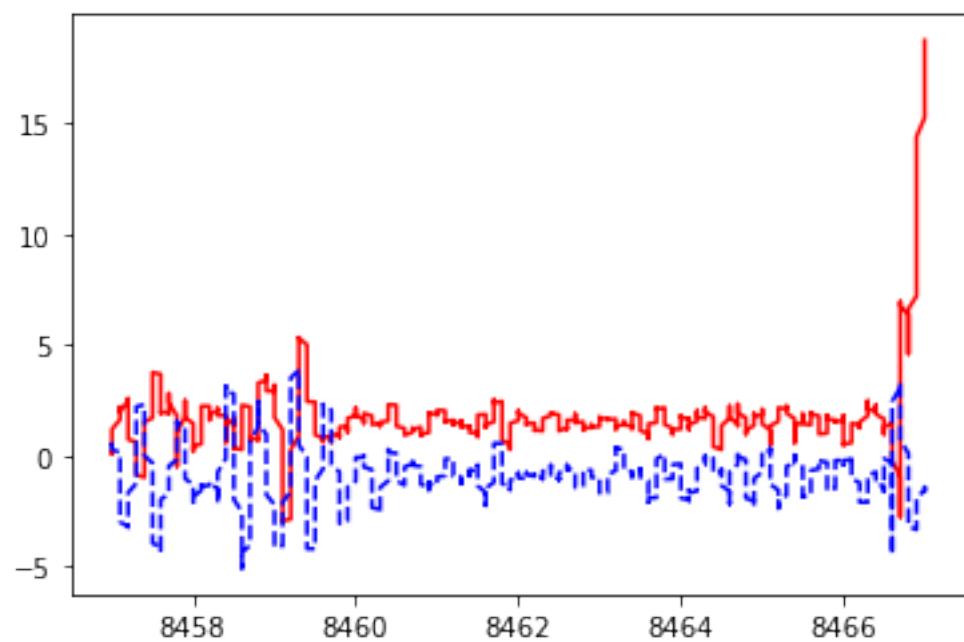
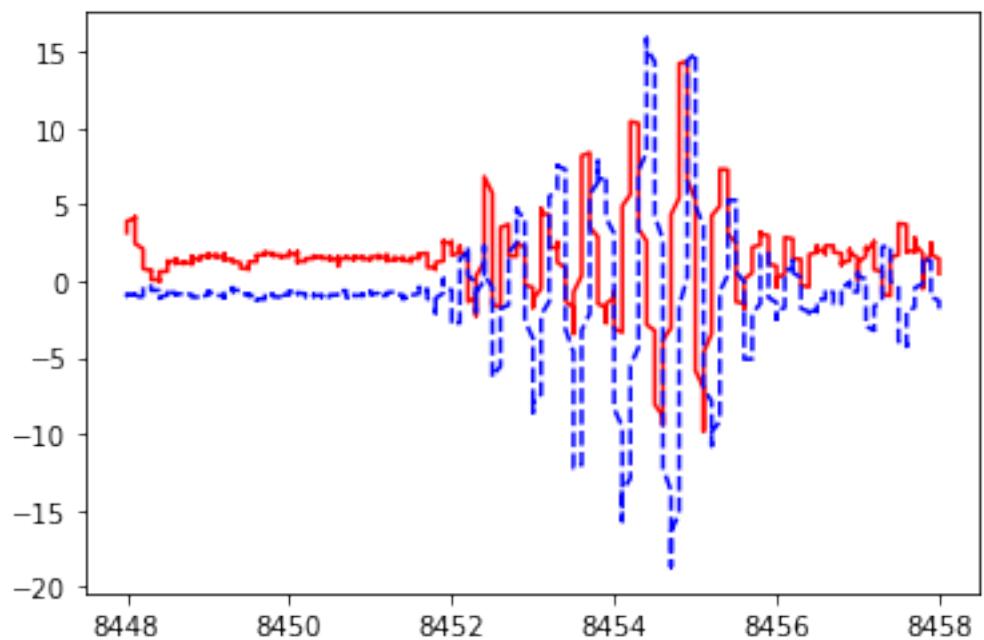


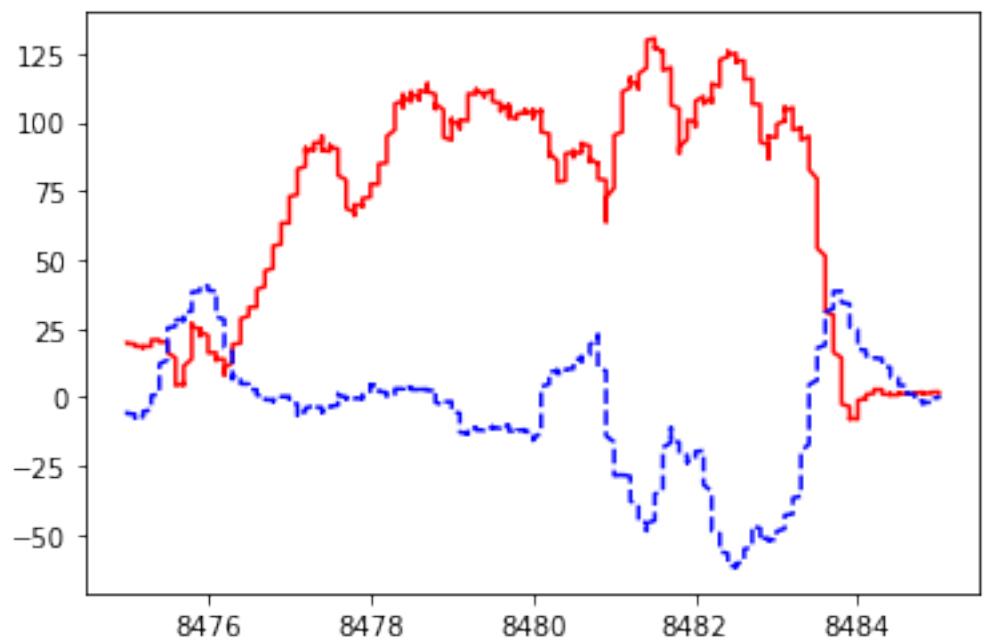
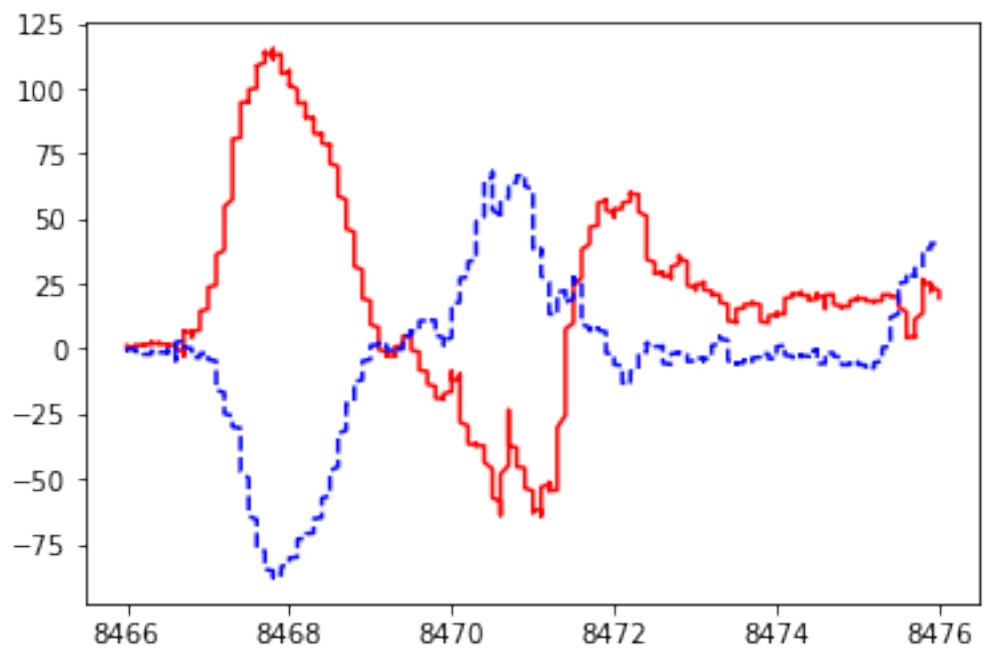


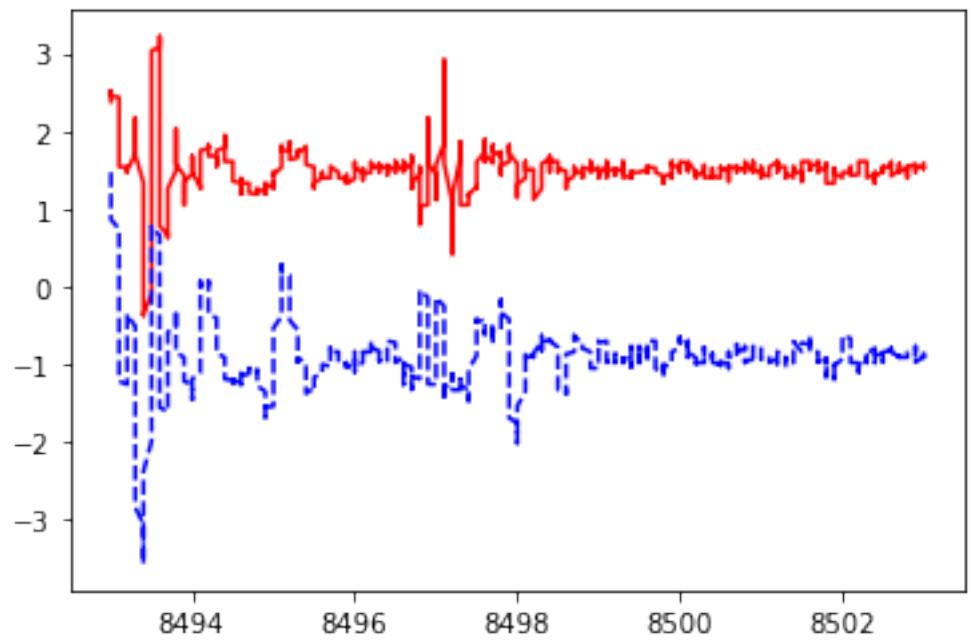
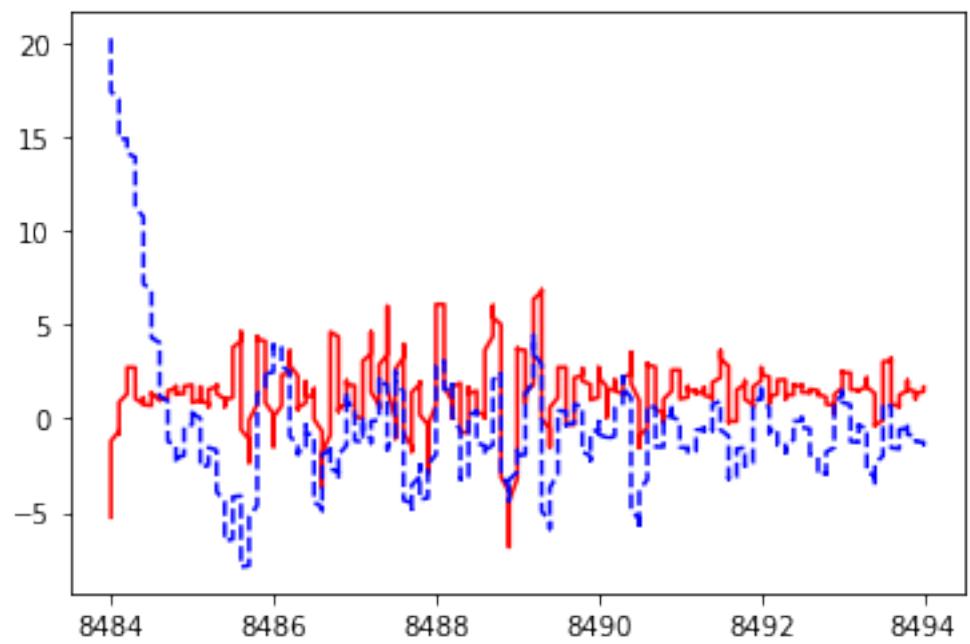


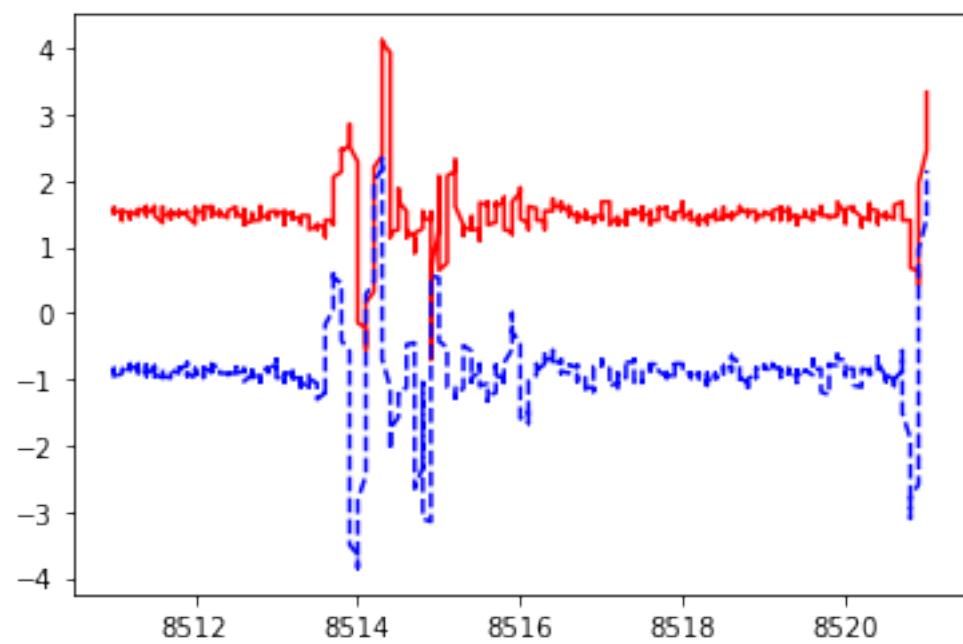
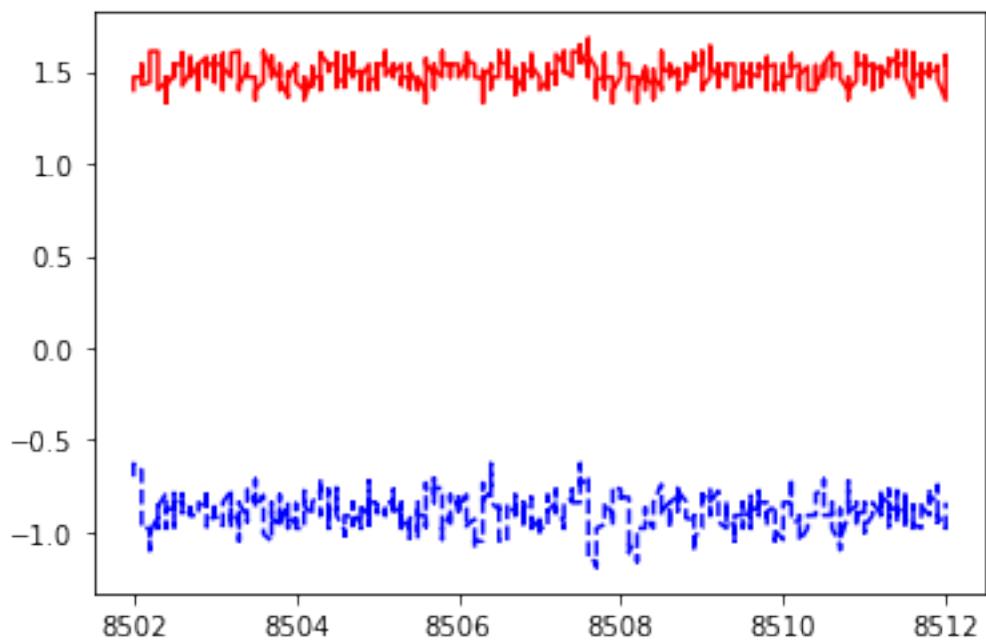


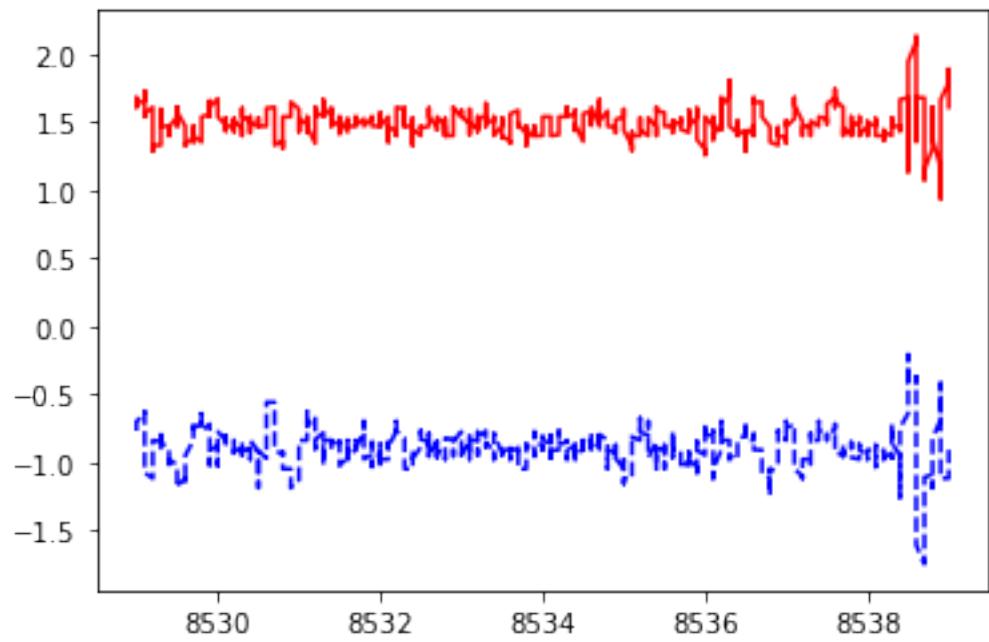
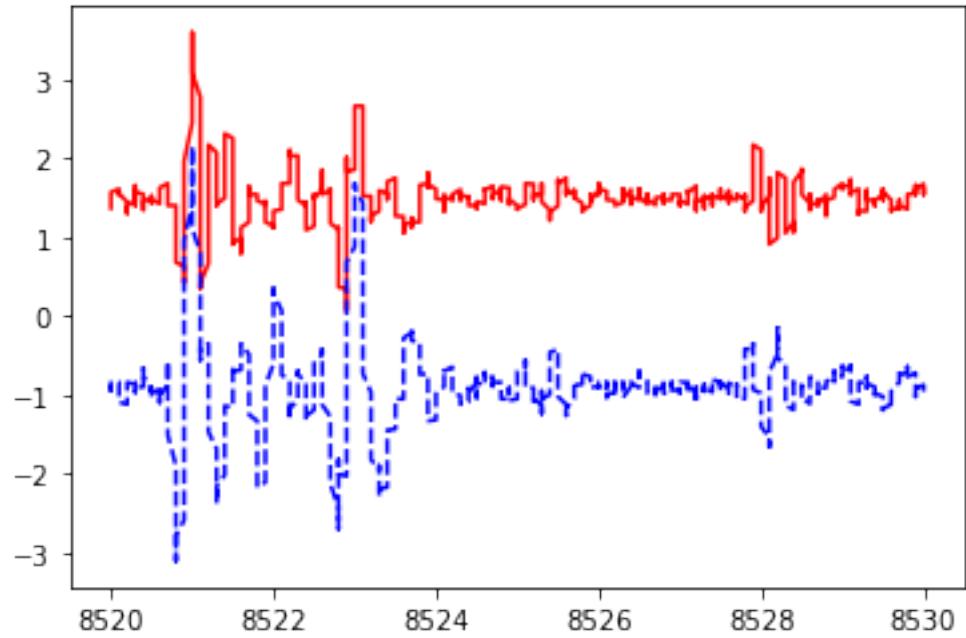


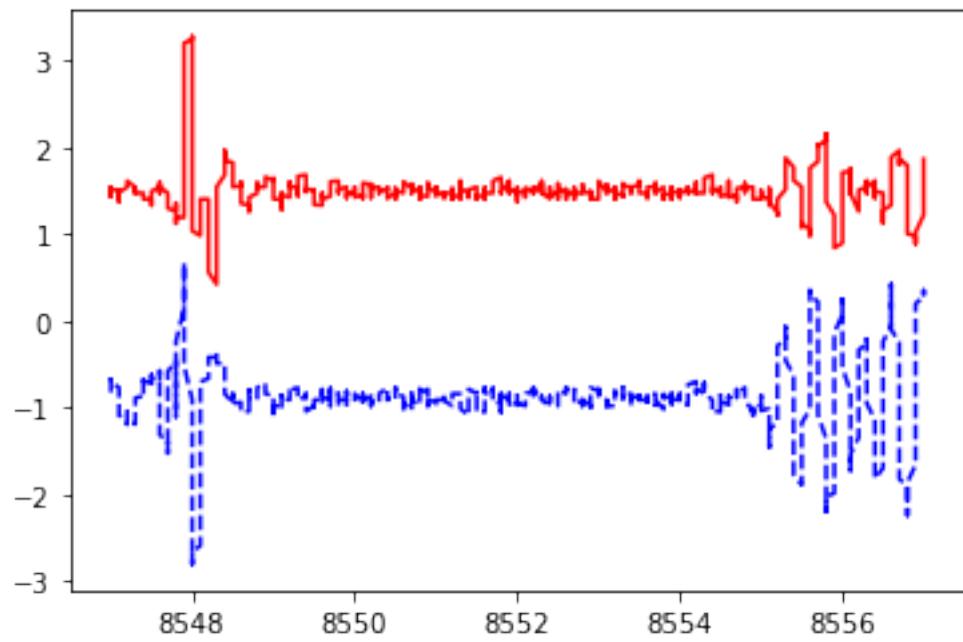
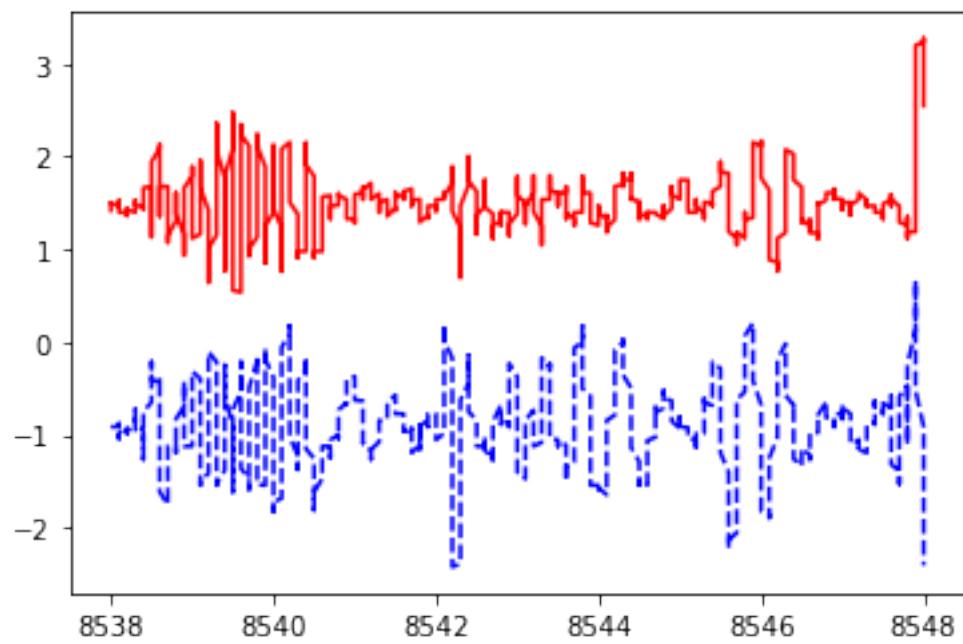


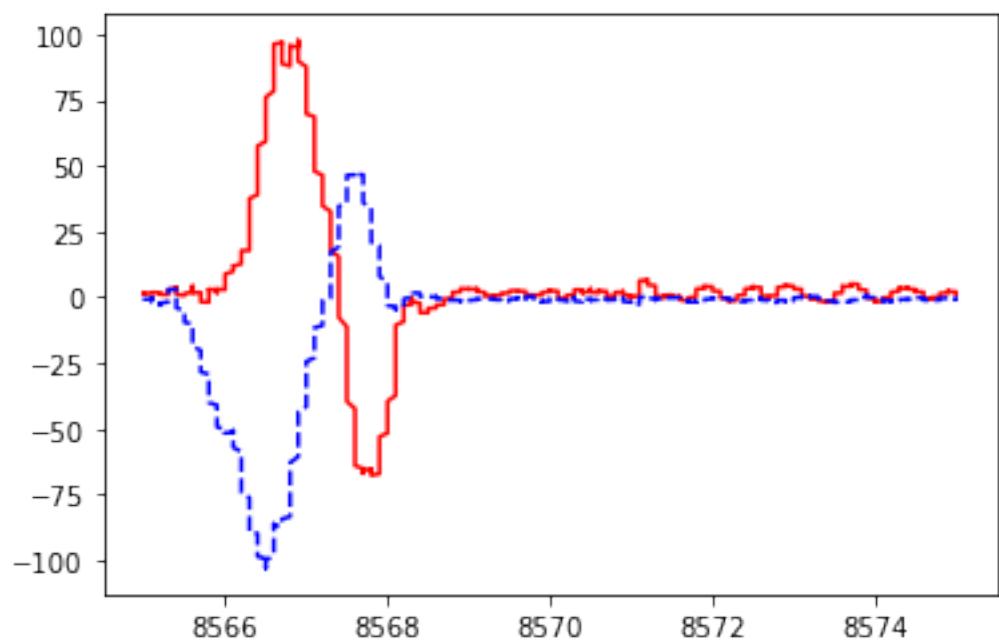
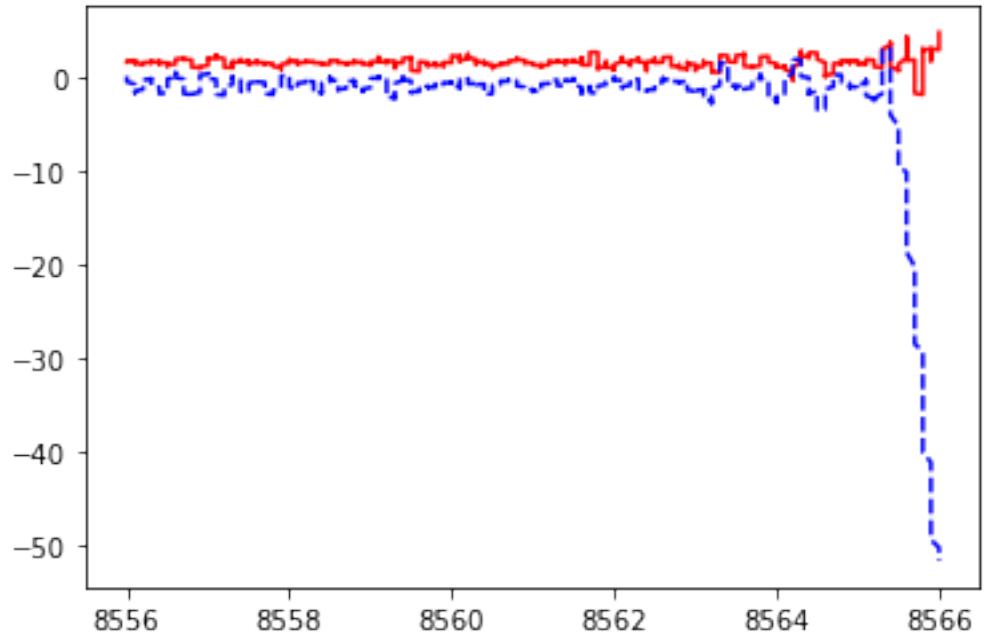


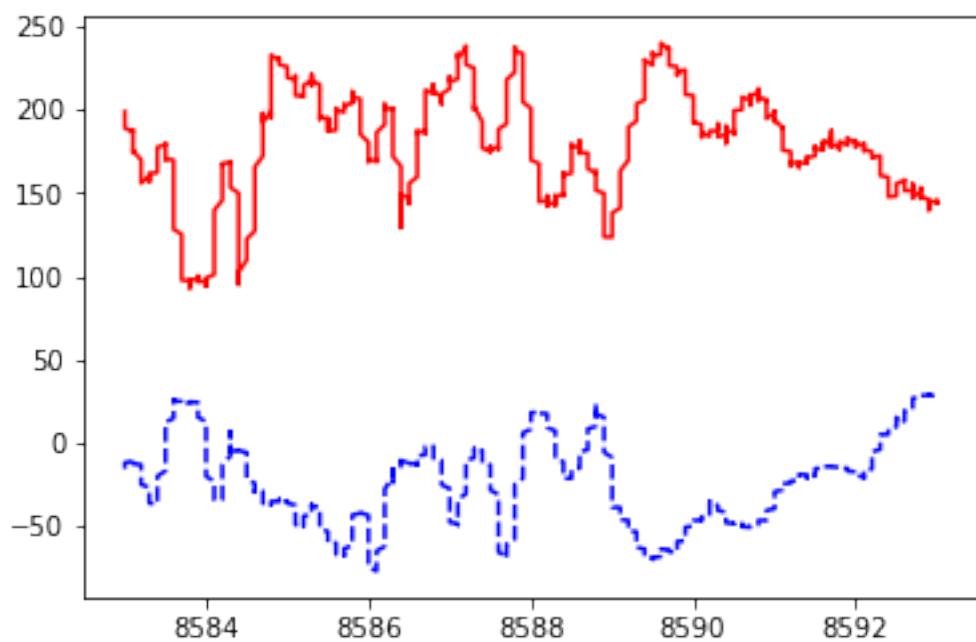
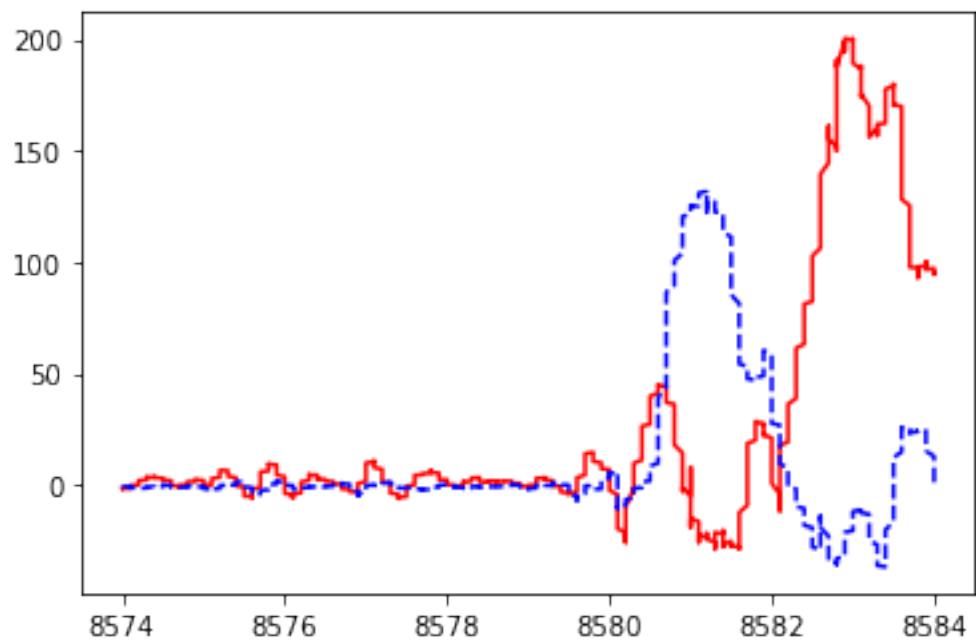


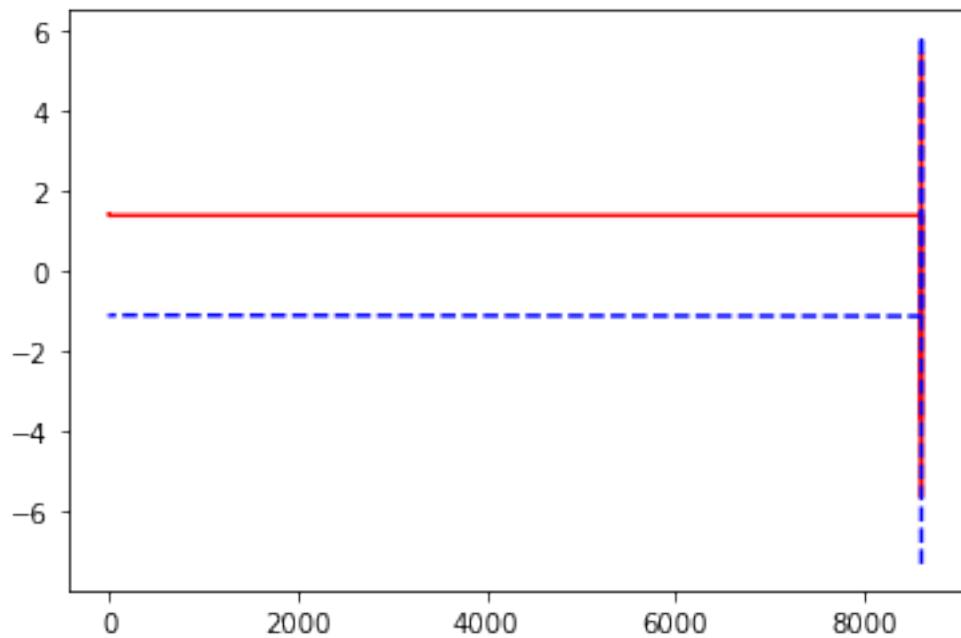
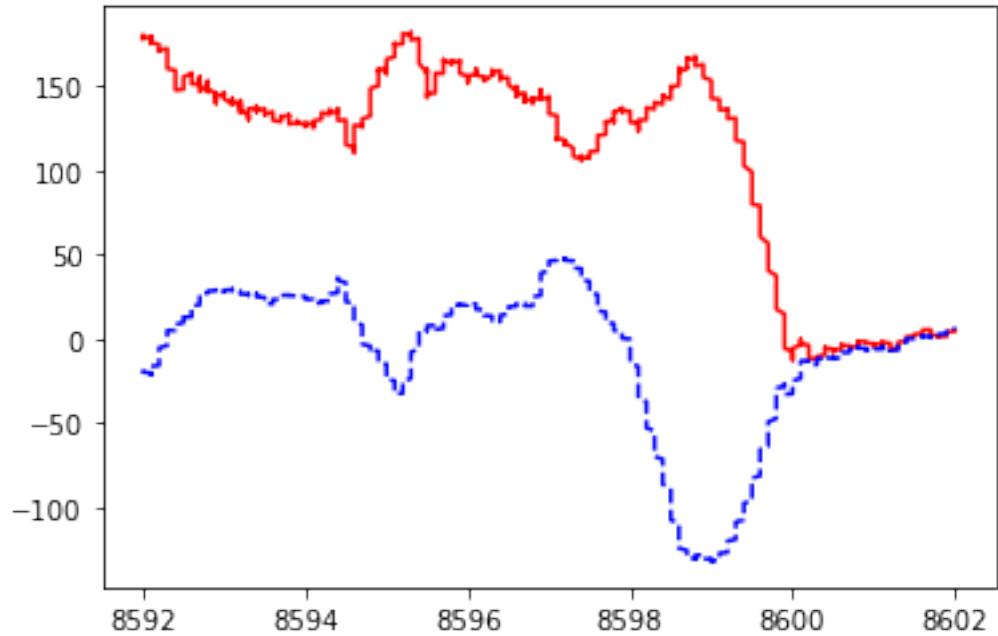






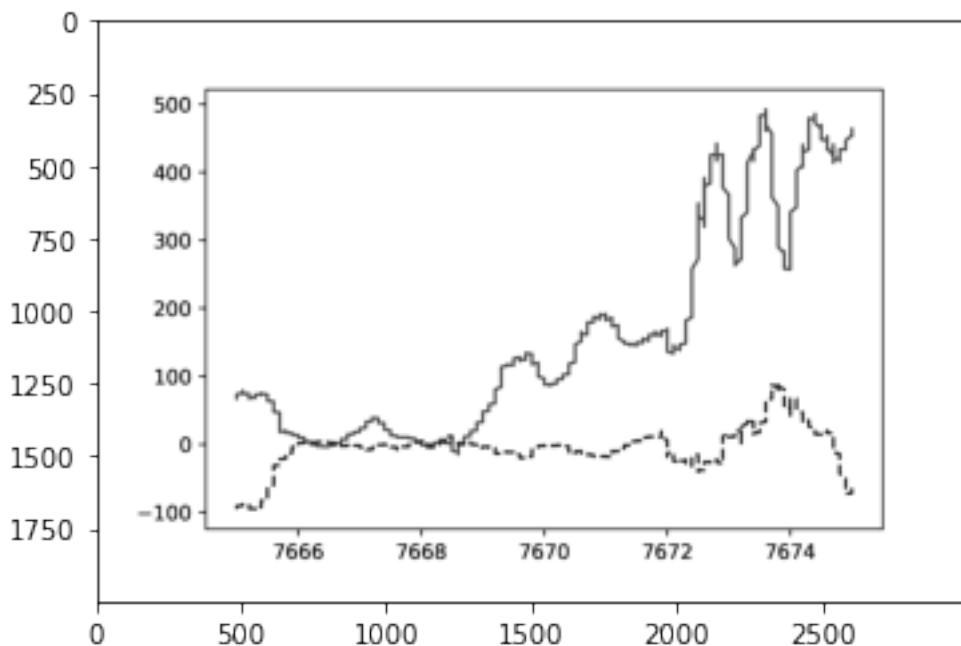






```
[35]: i = cv2.imread('/data/wheels/notebooks/Alex/PlotImgFolder/Test/0.png', cv2.  
    ↪IMREAD_GRAYSCALE)  
plt.imshow(i, cmap="gray")  
plt.show()
```

```
print(train_df)#save in a column not an row
train_df.to_csv('try.csv', header = None, index = None)
```



```
          id
0 [0.png, 1.png, 2.png, 3.png, 4.png, 5.png, 6.p...
```

1 Delete .ipynb_checkpoints

This is needed to delete a secret folder that messes the code up

```
[36]: rmdir /data/wheels/notebooks/Alex/PlotImgFolder/Test/.ipynb_checkpoints
```

```
rmdir: failed to remove
'/data/wheels/notebooks/Alex/PlotImgFolder/Test/.ipynb_checkpoints': No such
file or directory
```

```
[37]: rmdir /data/wheels/notebooks/Alex/PlotImgFolder/Img/.ipynb_checkpoints
```

```
rmdir: failed to remove
'/data/wheels/notebooks/Alex/PlotImgFolder/Img/.ipynb_checkpoints': No such file
or directory
```

```
[38]: rmdir /data/wheels/notebooks/Alex/PlotImgFolder/Train/.ipynb_checkpoints
```

```
rmdir: failed to remove
'/data/wheels/notebooks/Alex/PlotImgFolder/Train/.ipynb_checkpoints': No such
file or directory
```

```
[39]: test_string = 'p22112.png'
test_string[:-4]
```

```
[39]: 'p22112'
```

```
[40]: import cv2
import os

IMG_DIR = '/data/wheels/notebooks/Alex/PlotImgFolder'
CATEGORIES = ['Test', 'Train']
path = '/data/wheels/notebooks/Alex/PlotImgFolder'

counter=0
list = []
train_list = []
test_list = []
train_img = [] #i have to add action per image (THIS IS THE MAIN PROBLEM)
test_img = []
for category in CATEGORIES:
    path = os.path.join(IMG_DIR, category) #this makes one iteration for one ↴
    ↴ folder and another one for another folder

    for img in os.listdir(path): #I have to try doing this through the dataset
        img_array = cv2.imread(os.path.join(path, img), cv2.
    ↴IMREAD_GRAYSCALE) #not greyscale or we won't recognise which line means what
        img_array = img_array/255
        img_array = img_array.astype('float32')

path = '/data/wheels/notebooks/Alex/PlotImgFolder'

counter=0
list = []
train_list = []
test_list = []
for category in CATEGORIES:
    path = os.path.join(IMG_DIR, category) #this makes one iteration for one ↴
    ↴ folder and another one for another folder
    for img in os.listdir(path): #iterate through all the images in the ↴
    ↴ corresponding dir
        img_array = cv2.imread(os.path.join(path, img), cv2.
    ↴IMREAD_GRAYSCALE) #not greyscale or we won't recognise which line means what
```

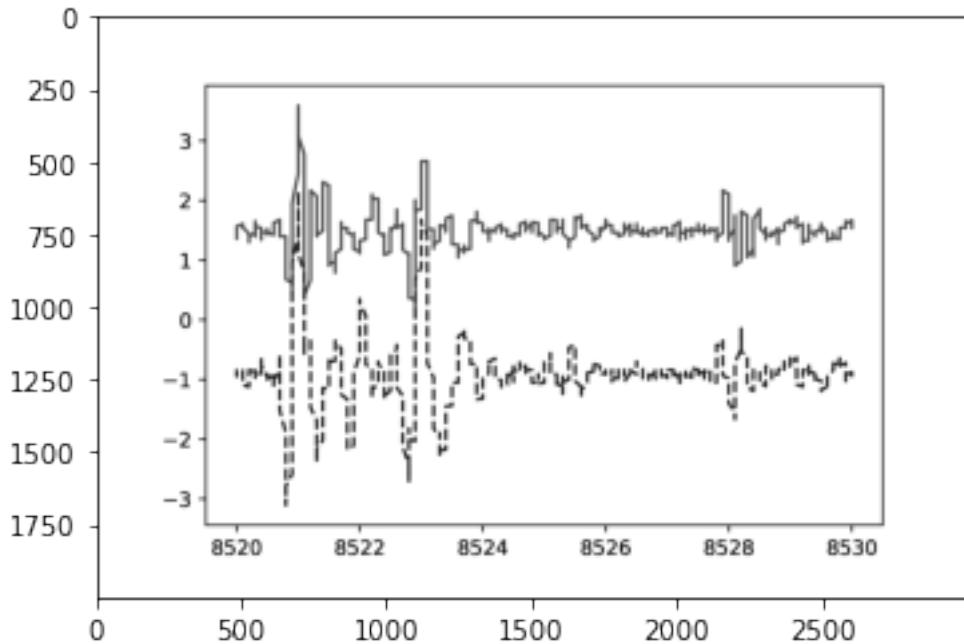
```

    print(type(img_array), ' -- ', counter, ' -- ', os.path.
→join(path, img))#problem comes with .ipynb_checkpoints
    img_array = img_array/255
    img_array = img_array.astype('float32')
    list.append(img[:-4])#this was going to be the dataframe part but im
→making one dataframe for train and other for test
    print(list[counter])
    counter+=1

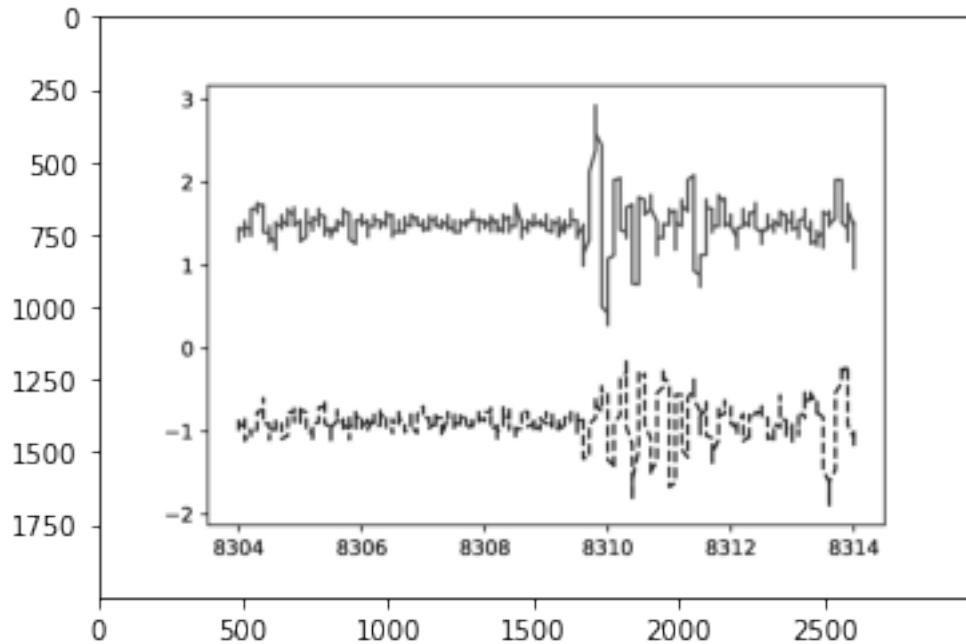
    plt.imshow(img_array, cmap="gray")
    plt.show()

```

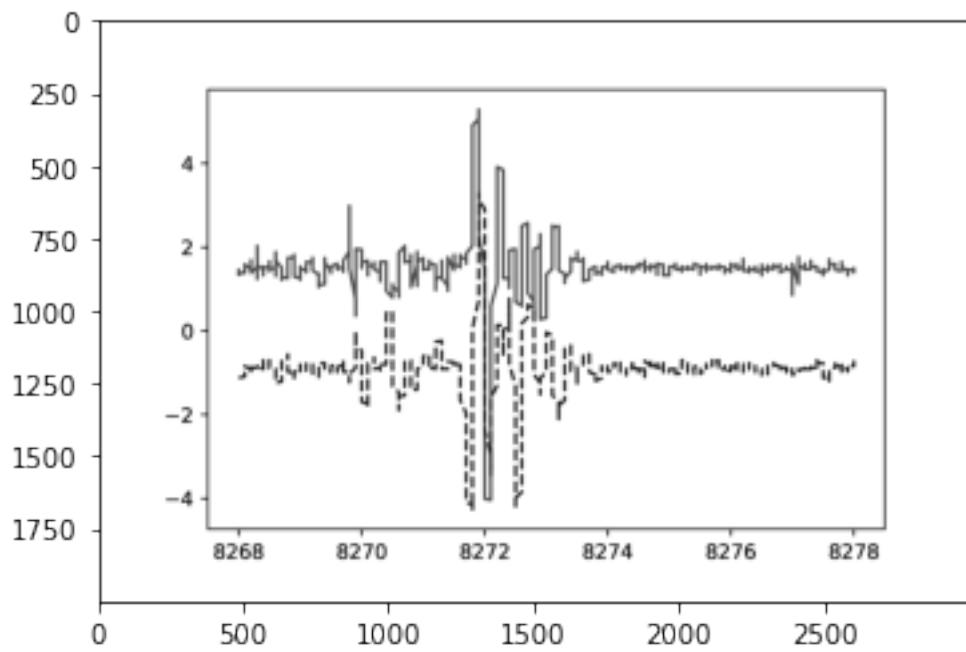
<class 'numpy.ndarray'> -- 0 --
 /data/wheels/notebooks/Alex/PlotImgFolder/Test/95.png
 95



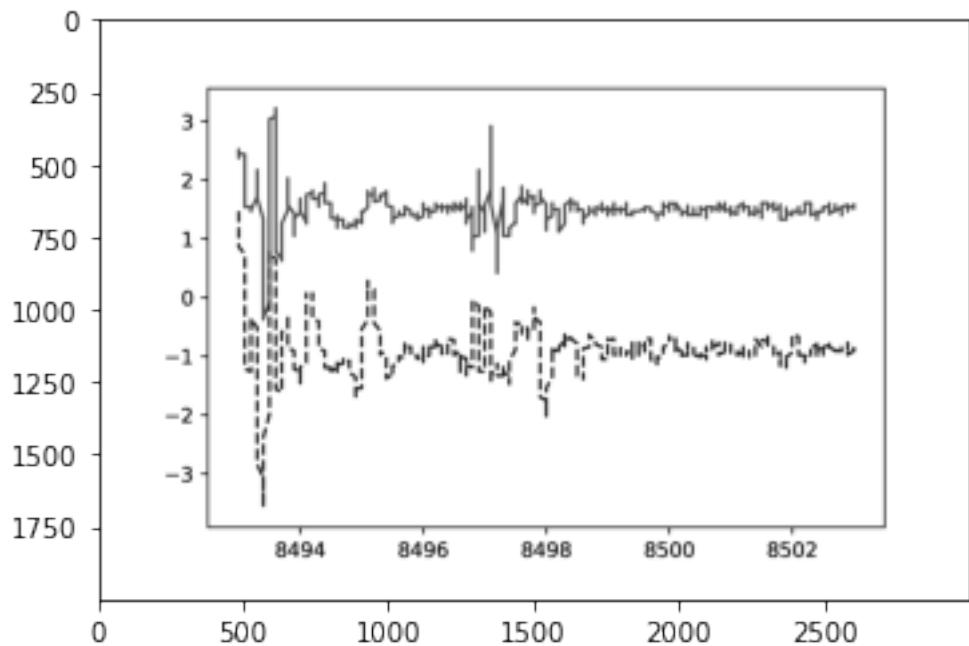
<class 'numpy.ndarray'> -- 1 --
 /data/wheels/notebooks/Alex/PlotImgFolder/Test/71.png
 71



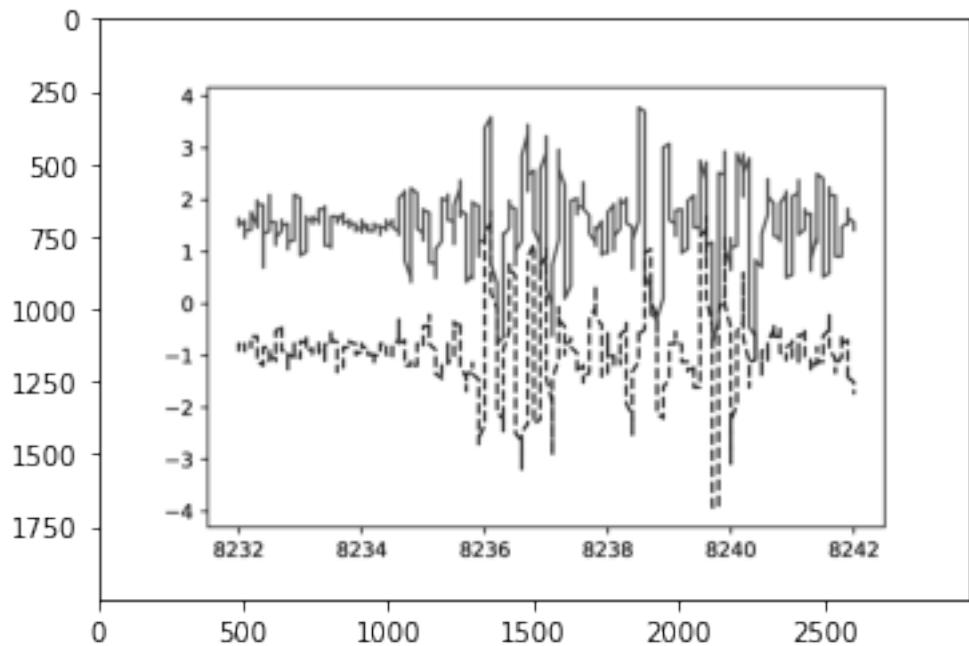
```
<class 'numpy.ndarray'>      --      2      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/67.png
67
```



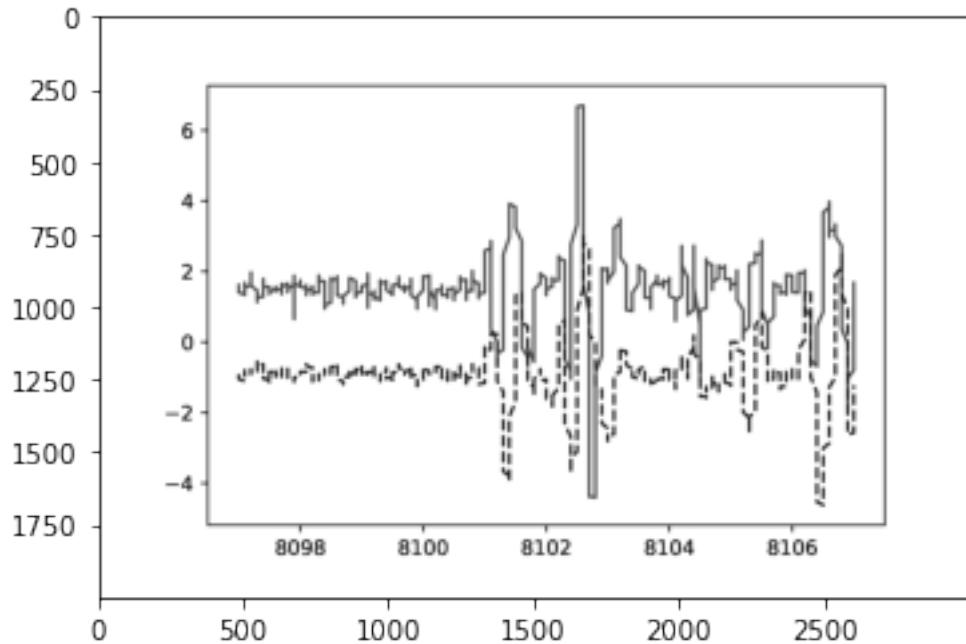
```
<class 'numpy.ndarray'> -- 3 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/92.png
92
```



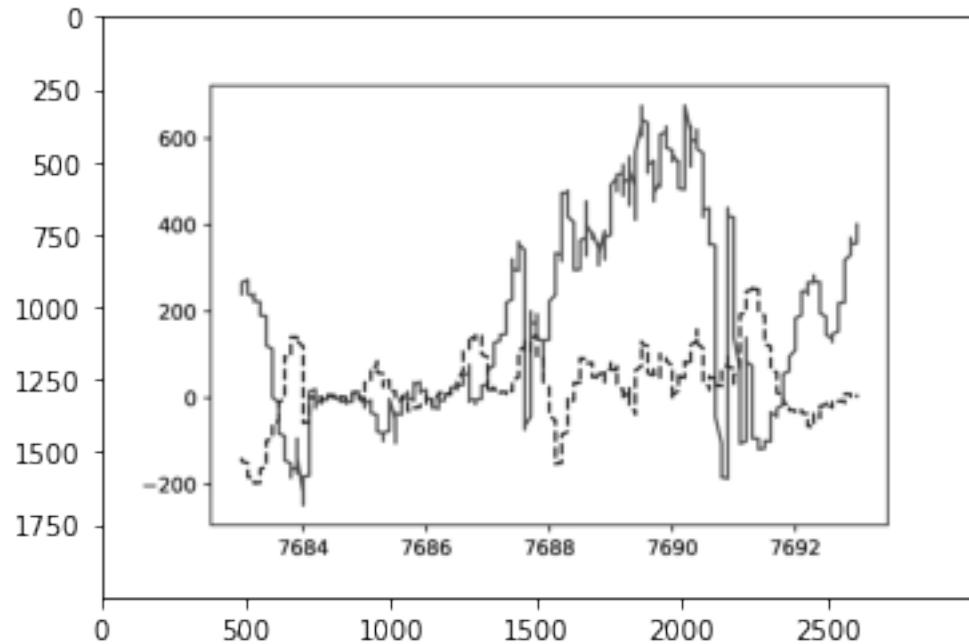
```
<class 'numpy.ndarray'> -- 4 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/63.png
63
```



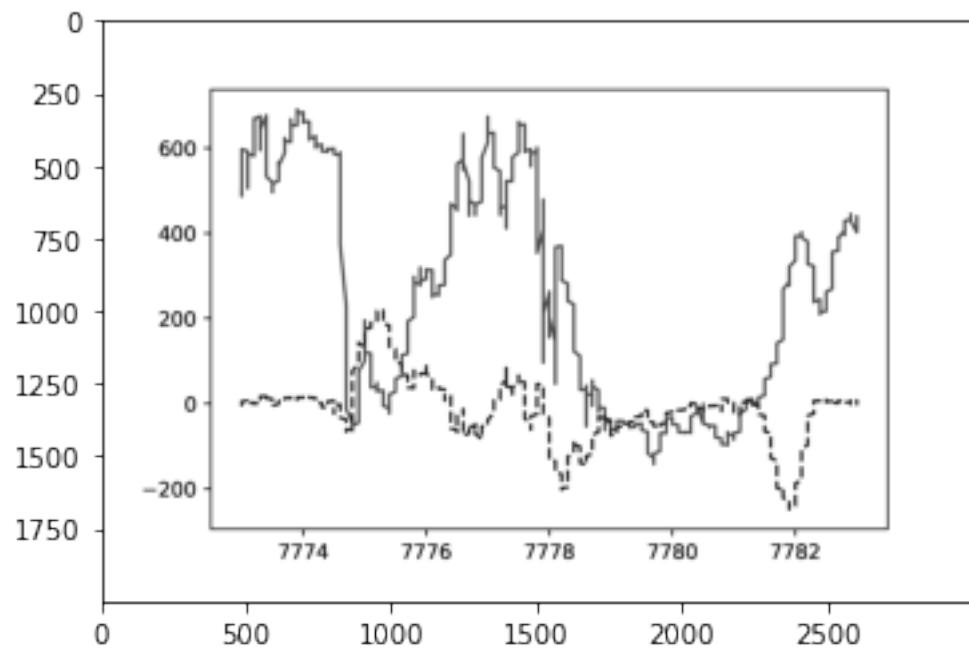
```
<class 'numpy.ndarray'>      --      5      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/48.png
48
```



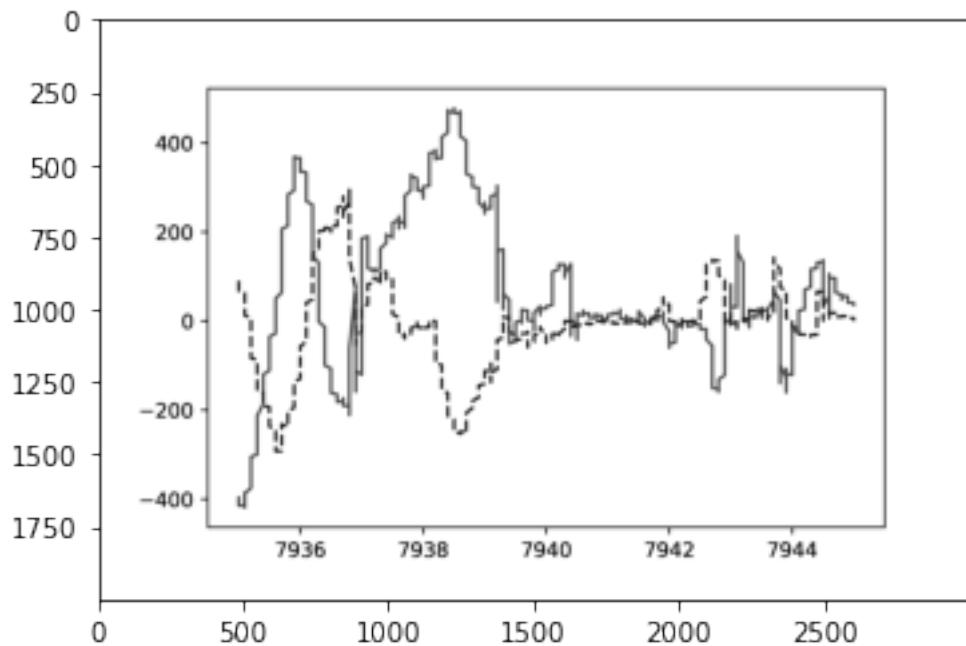
```
<class 'numpy.ndarray'>      --      6      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/2.png
2
```



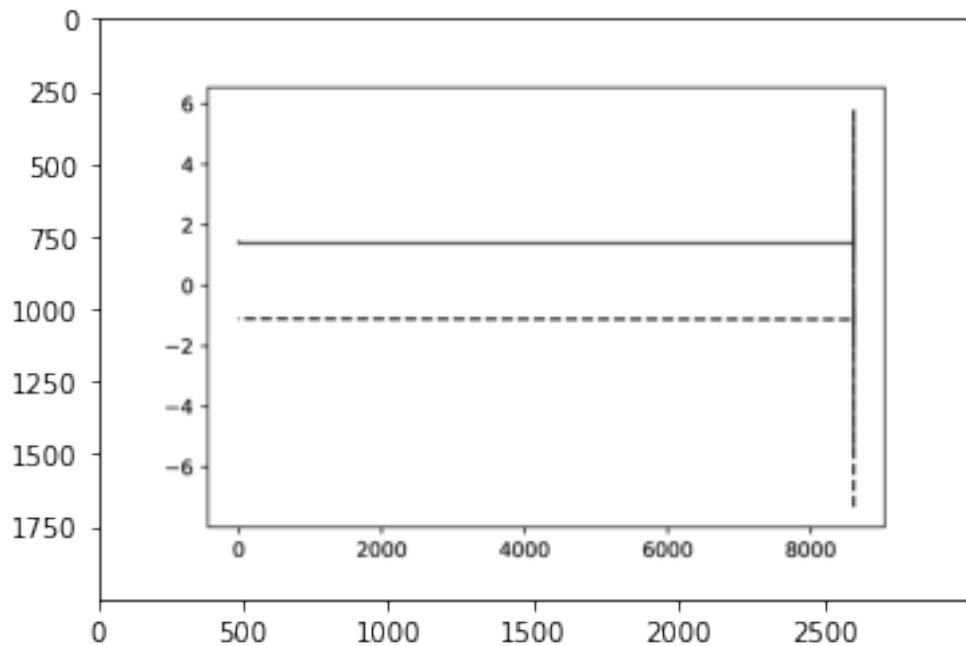
```
<class 'numpy.ndarray'>      --      7      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/12.png
12
```



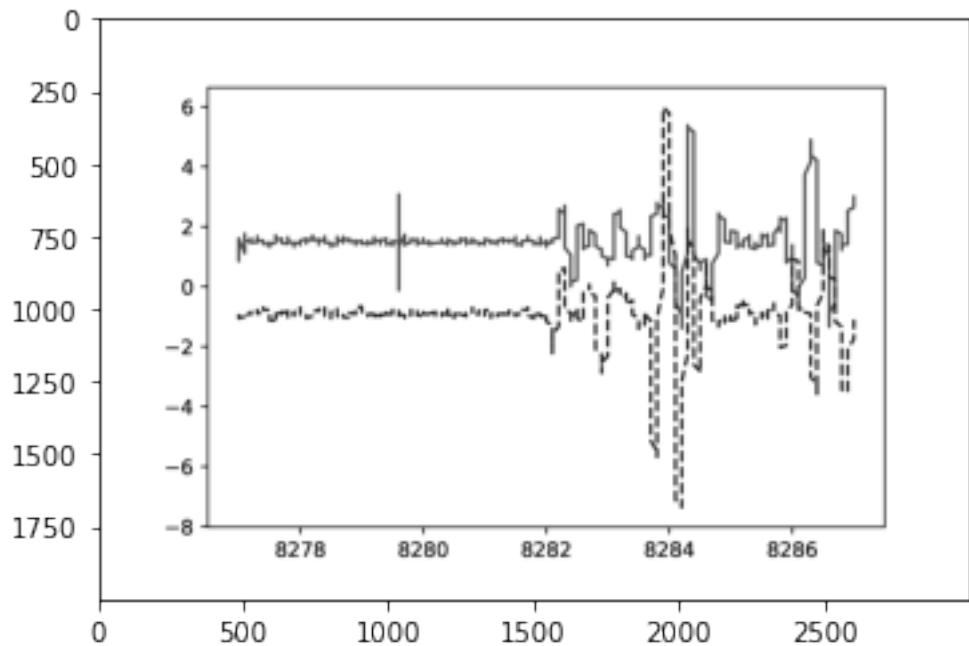
```
<class 'numpy.ndarray'> -- 8 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/30.png
30
```



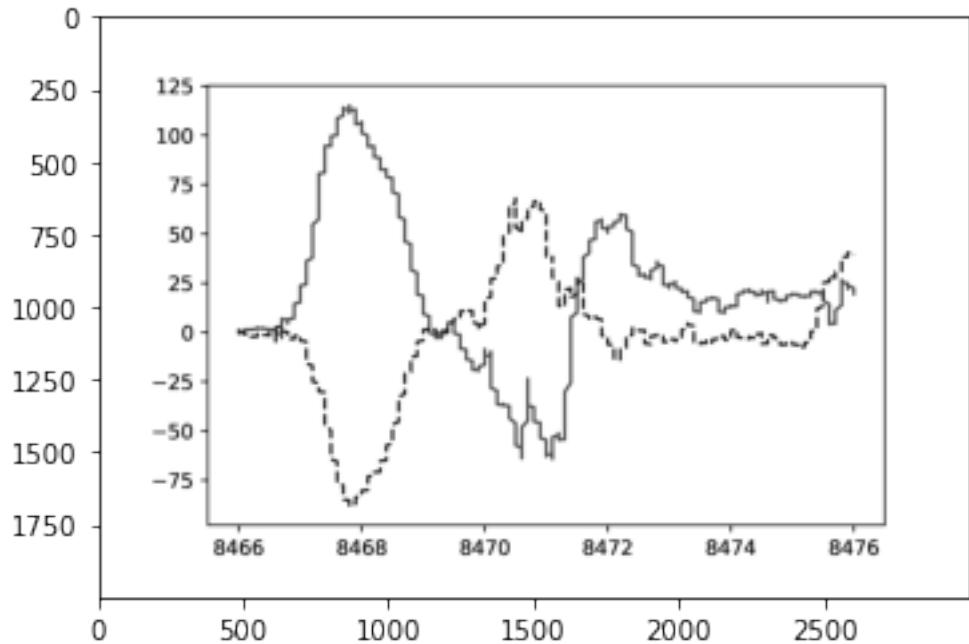
```
<class 'numpy.ndarray'> -- 9 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/104.png
104
```



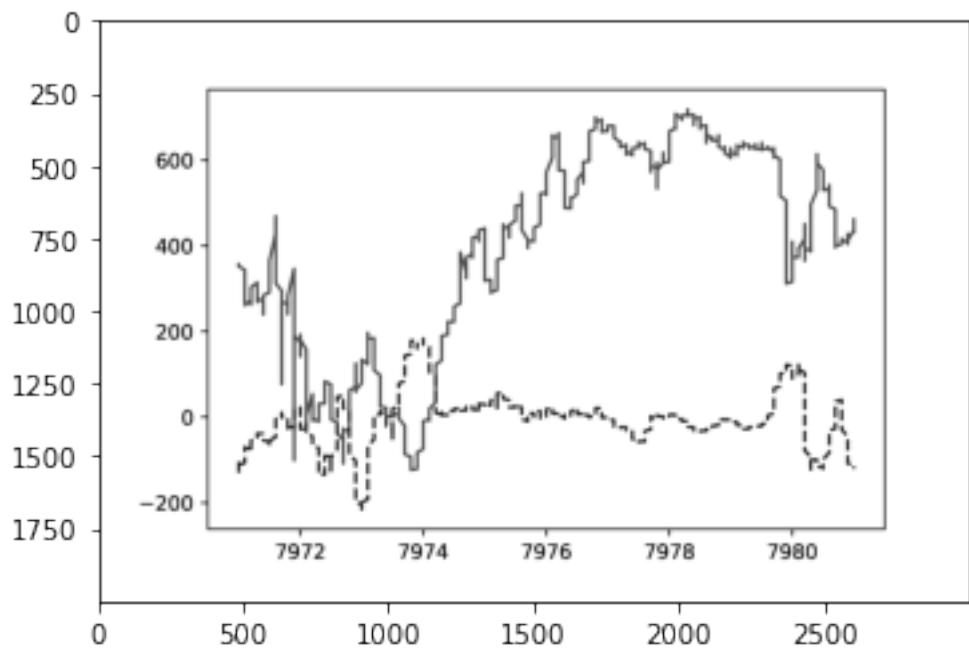
```
<class 'numpy.ndarray'>      --    10    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/68.png
68
```



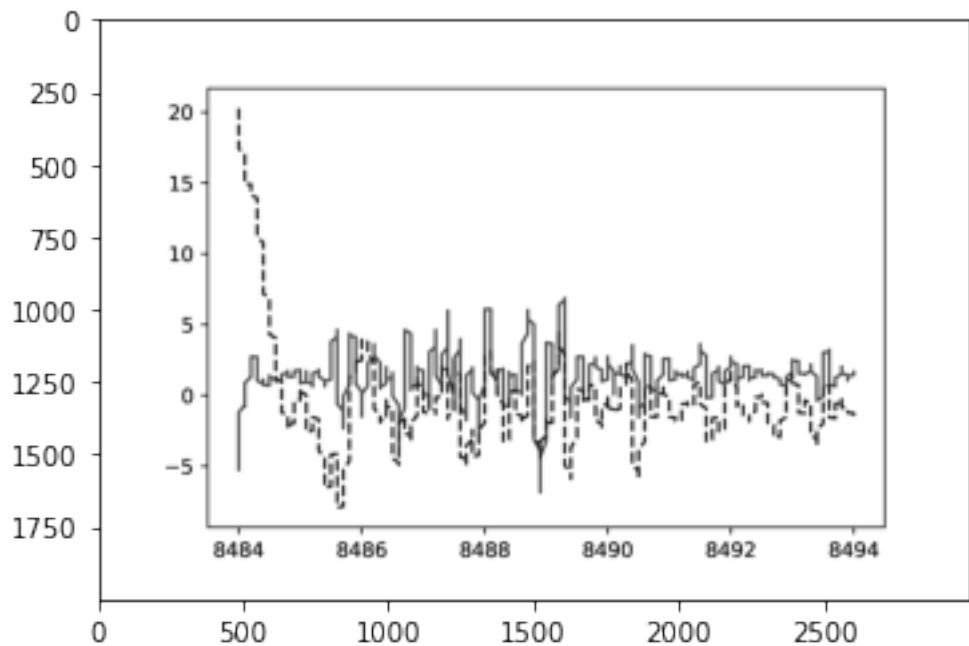
```
<class 'numpy.ndarray'>      --    11    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/89.png
89
```



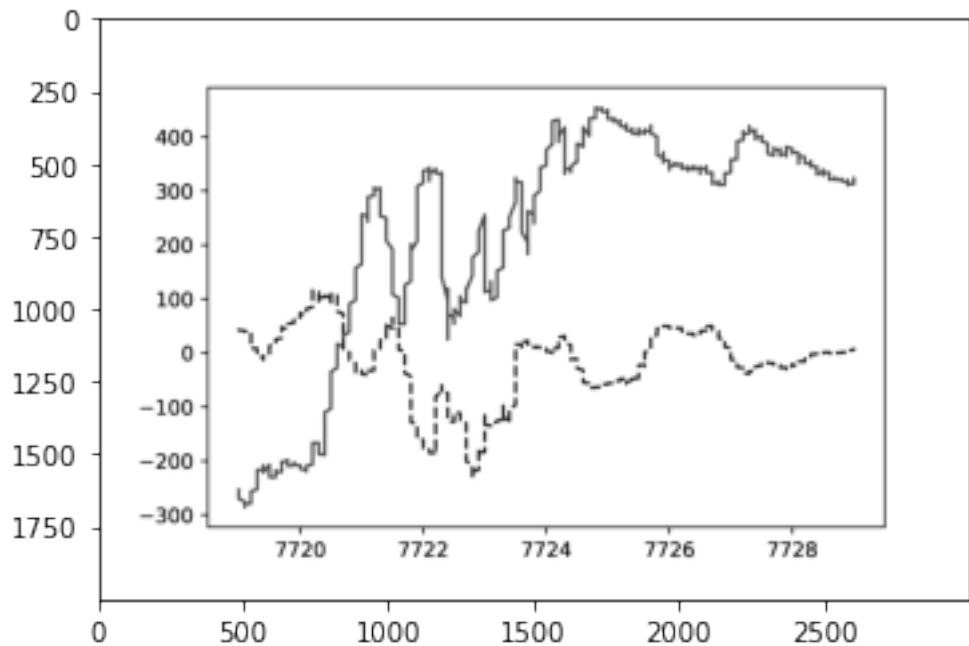
```
<class 'numpy.ndarray'>      --   12   --
/datas/wheels/notebooks/Alex/PlotImgFolder/Test/34.png
34
```



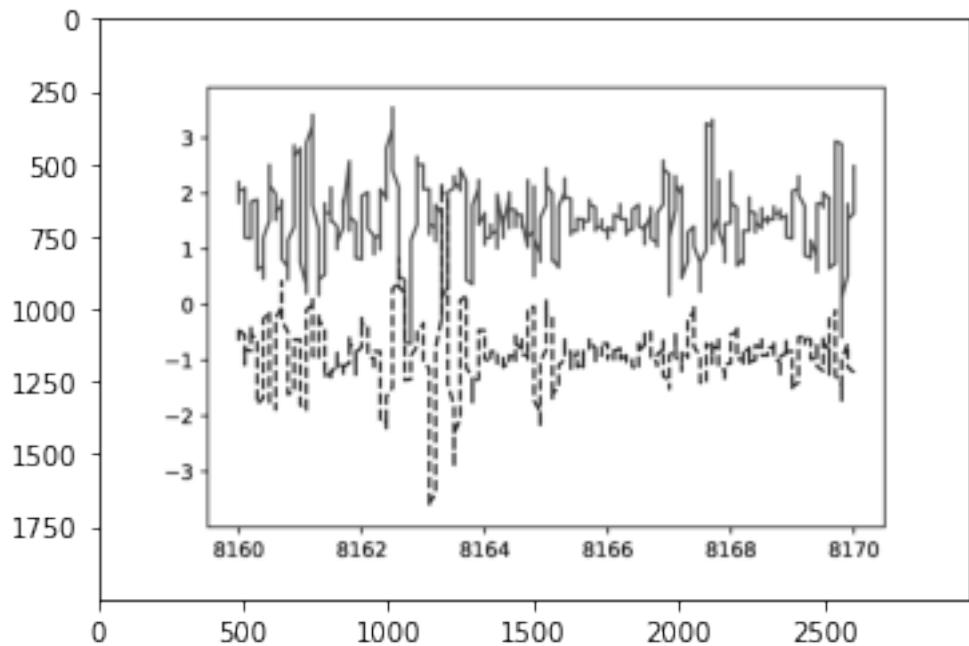
```
<class 'numpy.ndarray'> -- 13 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/91.png
91
```



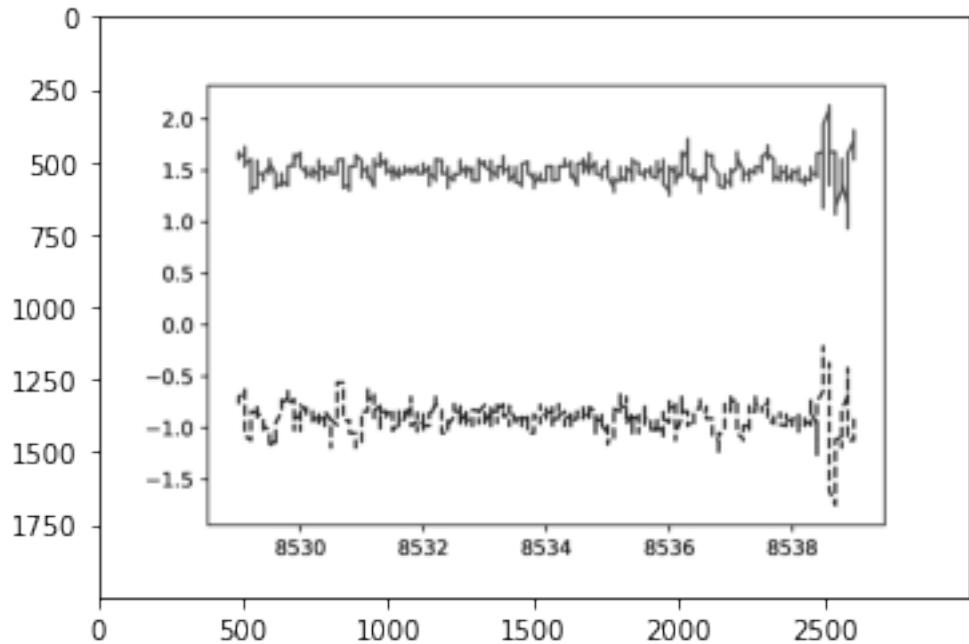
```
<class 'numpy.ndarray'> -- 14 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/6.png
6
```



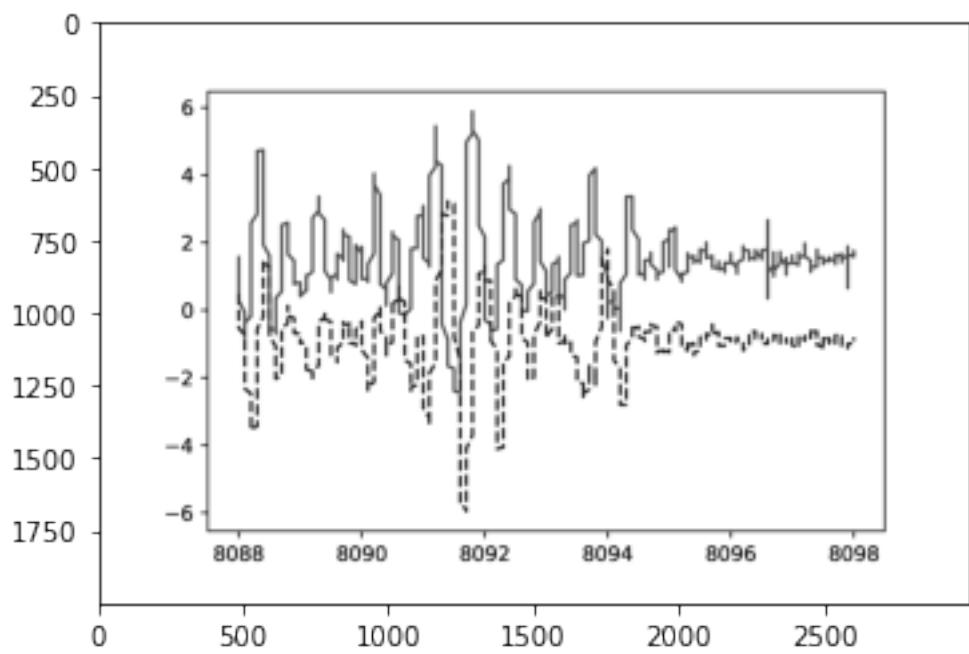
```
<class 'numpy.ndarray'>      --      15      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/55.png
55
```



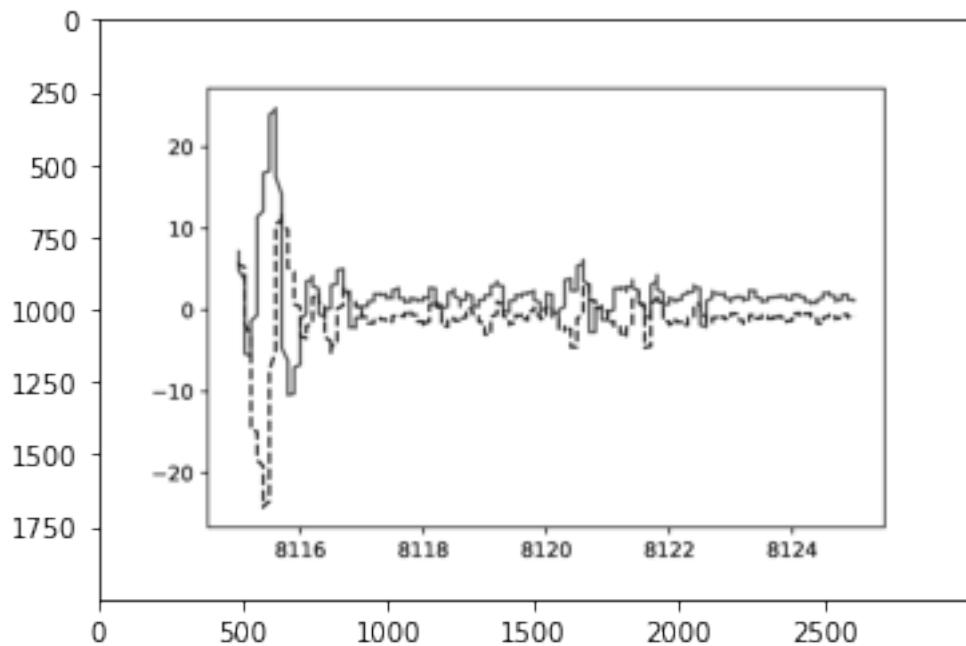
```
<class 'numpy.ndarray'>      --      16      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/96.png
96
```



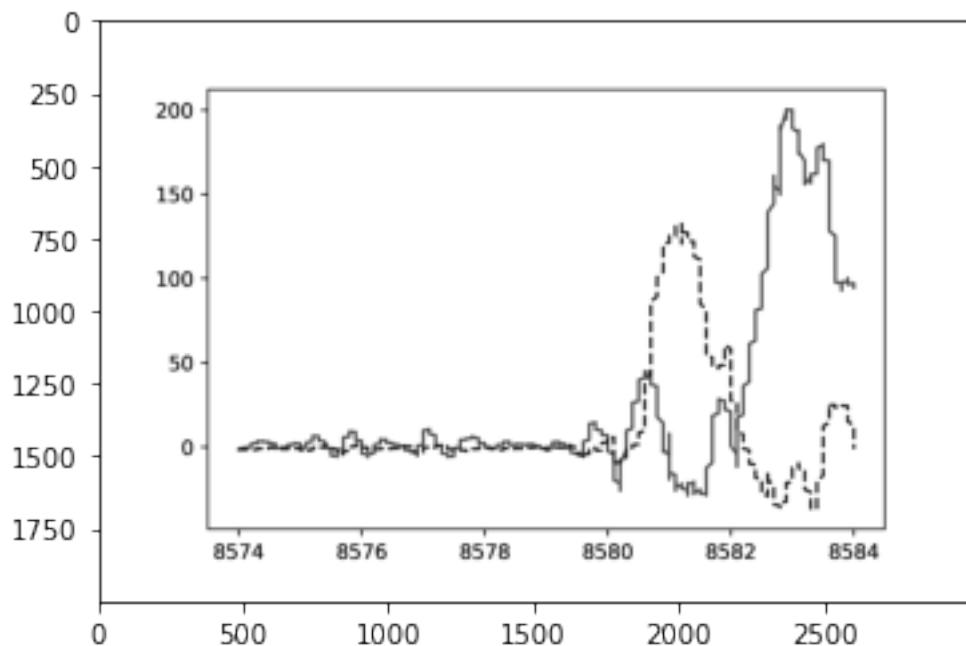
```
<class 'numpy.ndarray'>      --    17    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/47.png
47
```



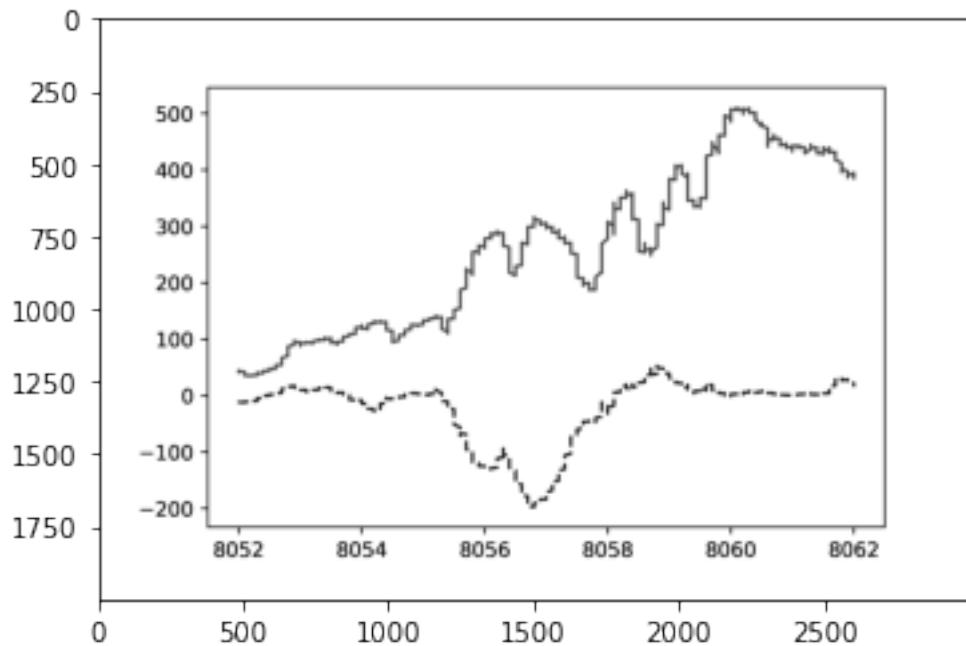
```
<class 'numpy.ndarray'> -- 18 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/50.png
50
```



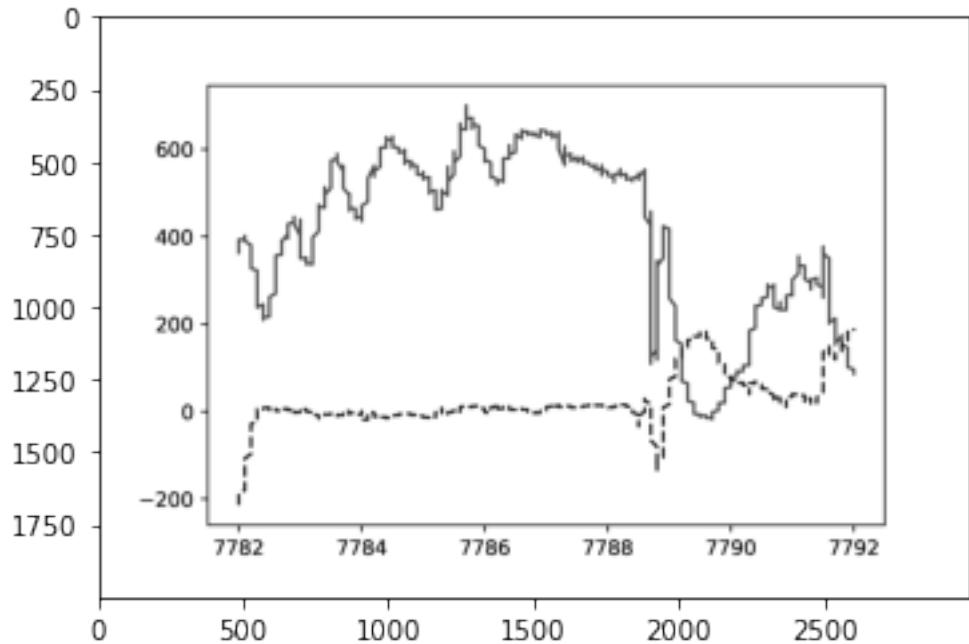
```
<class 'numpy.ndarray'> -- 19 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/101.png
101
```



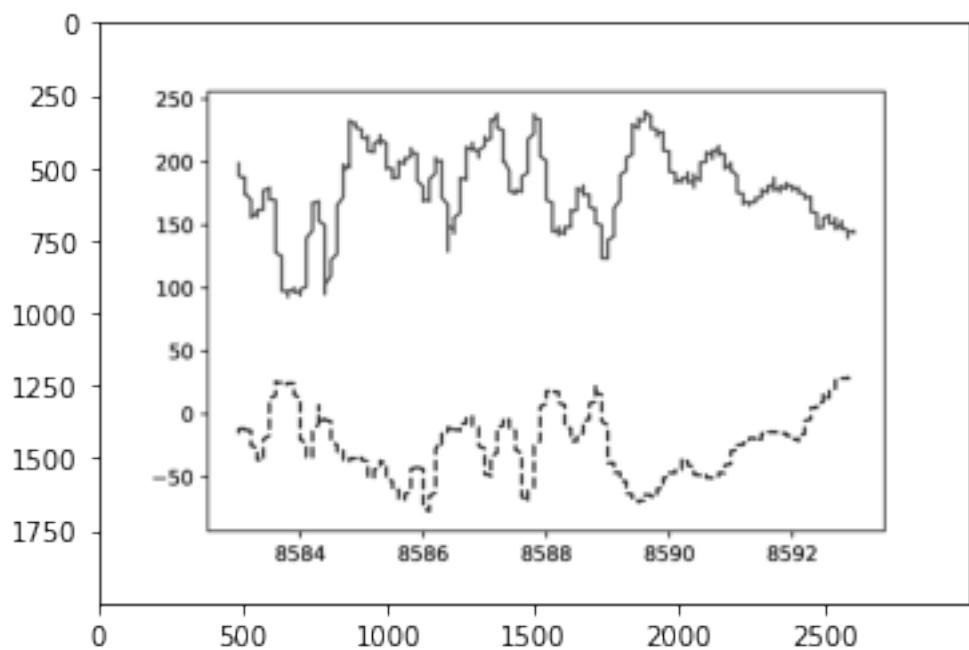
```
<class 'numpy.ndarray'>      --    20    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/43.png
43
```



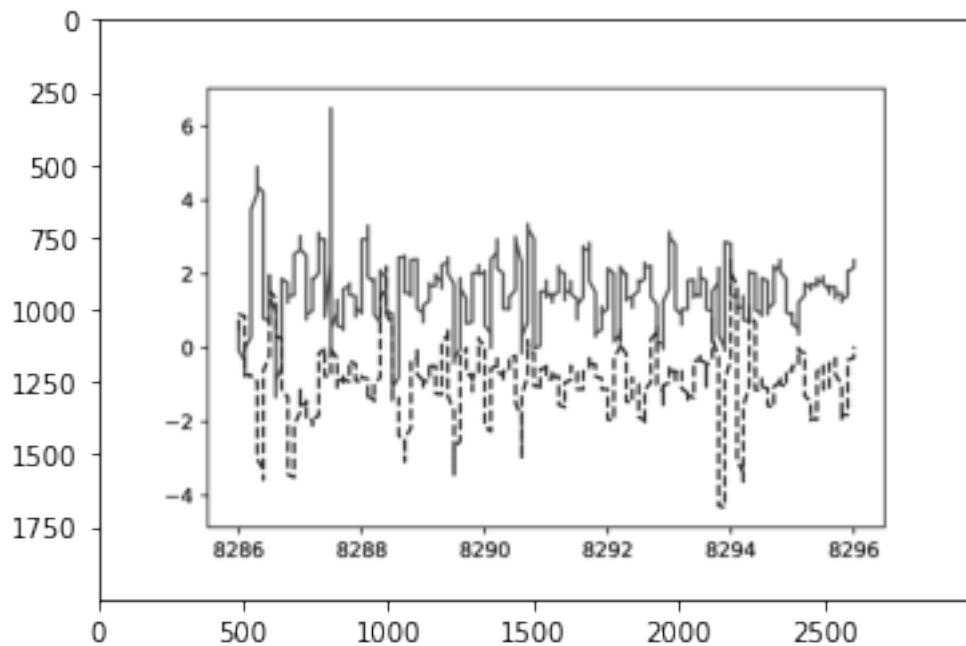
```
<class 'numpy.ndarray'>      --    21    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/13.png
13
```



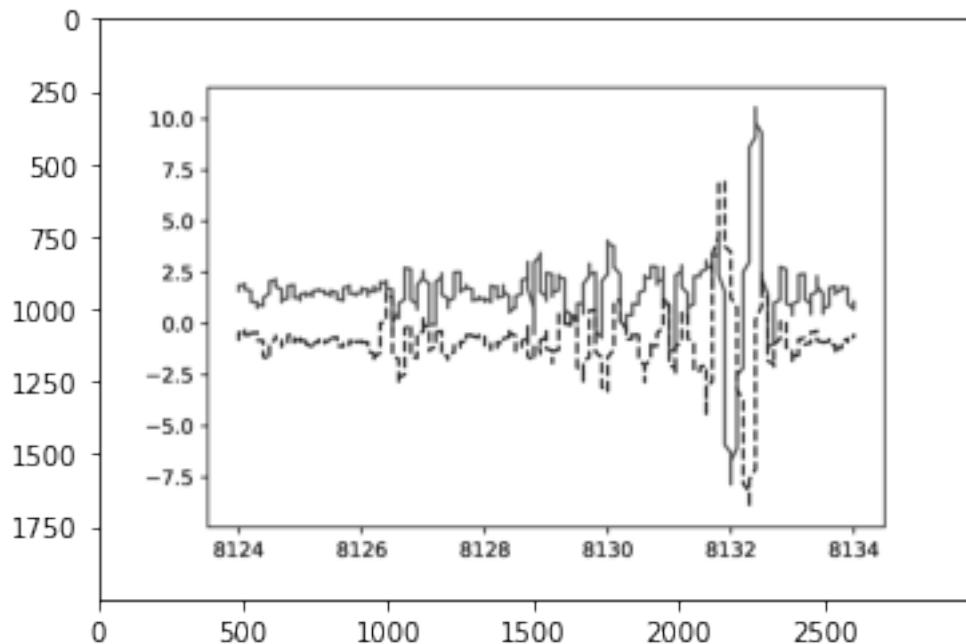
```
<class 'numpy.ndarray'>      --  22   --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/102.png
102
```



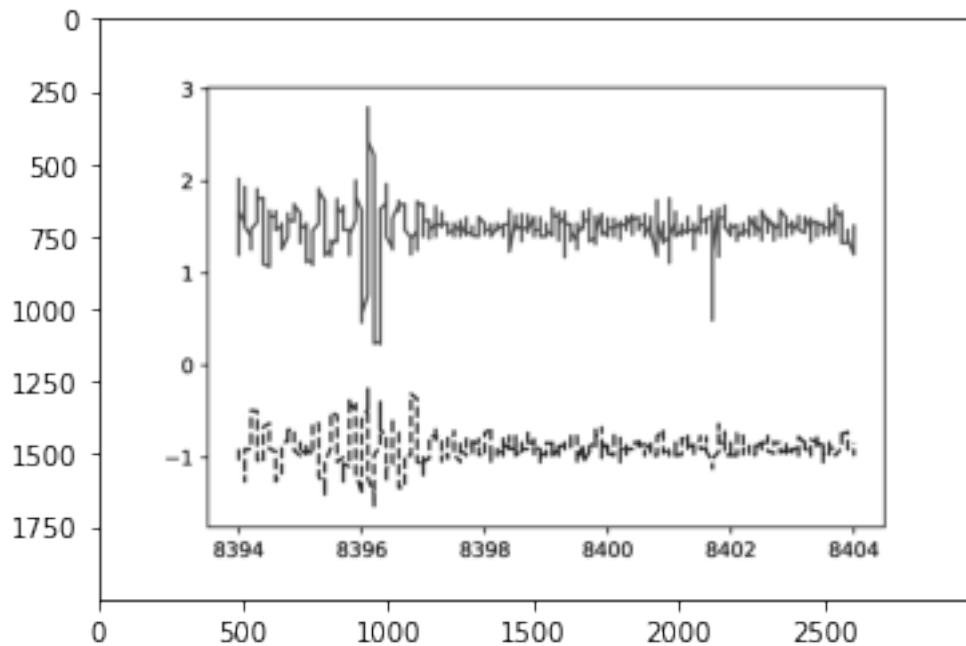
```
<class 'numpy.ndarray'> -- 23 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/69.png
69
```



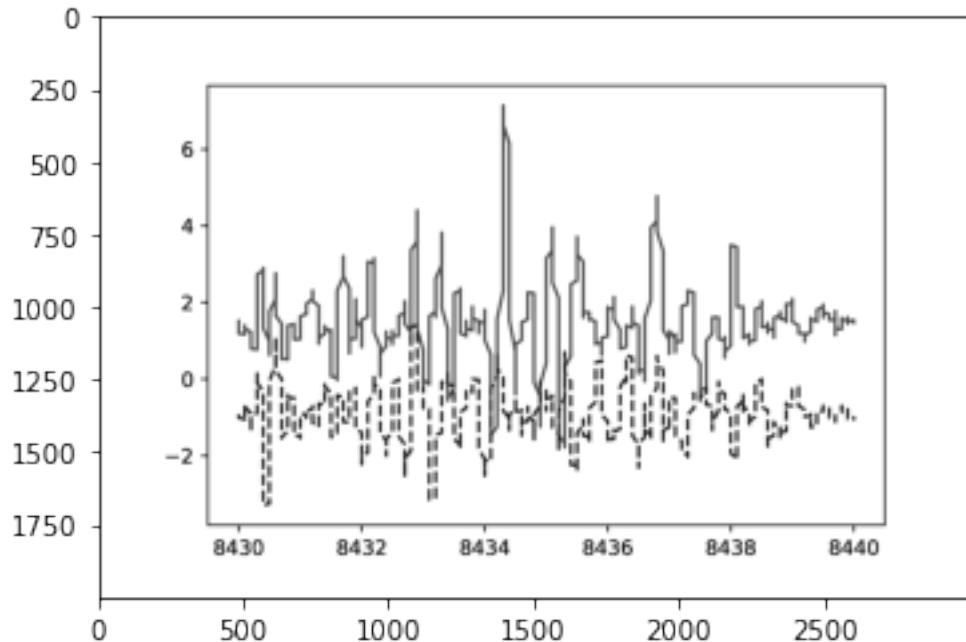
```
<class 'numpy.ndarray'> -- 24 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/51.png
51
```



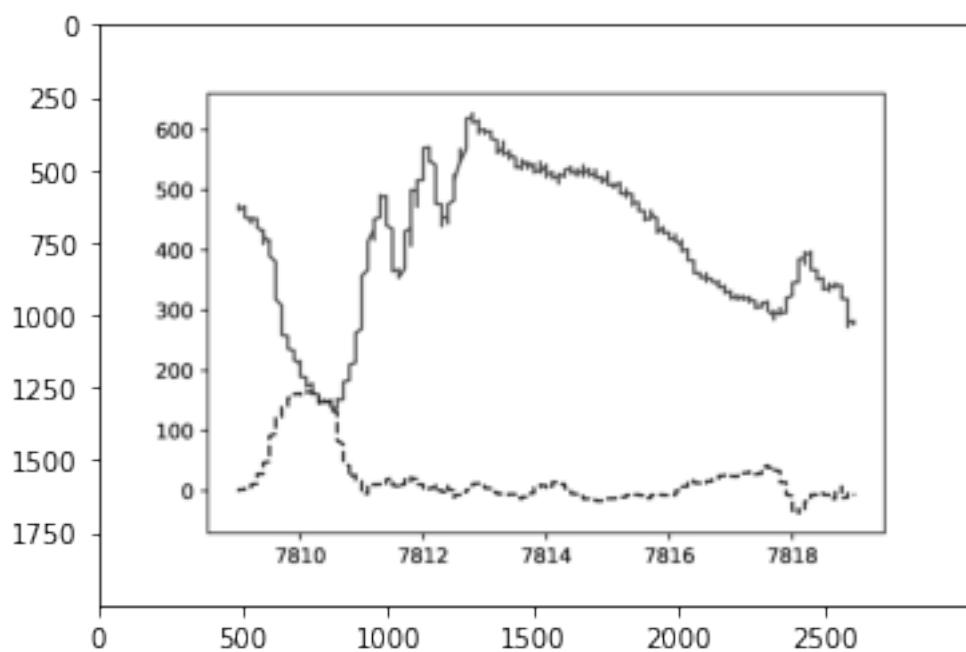
```
<class 'numpy.ndarray'>      --      25      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/81.png
81
```



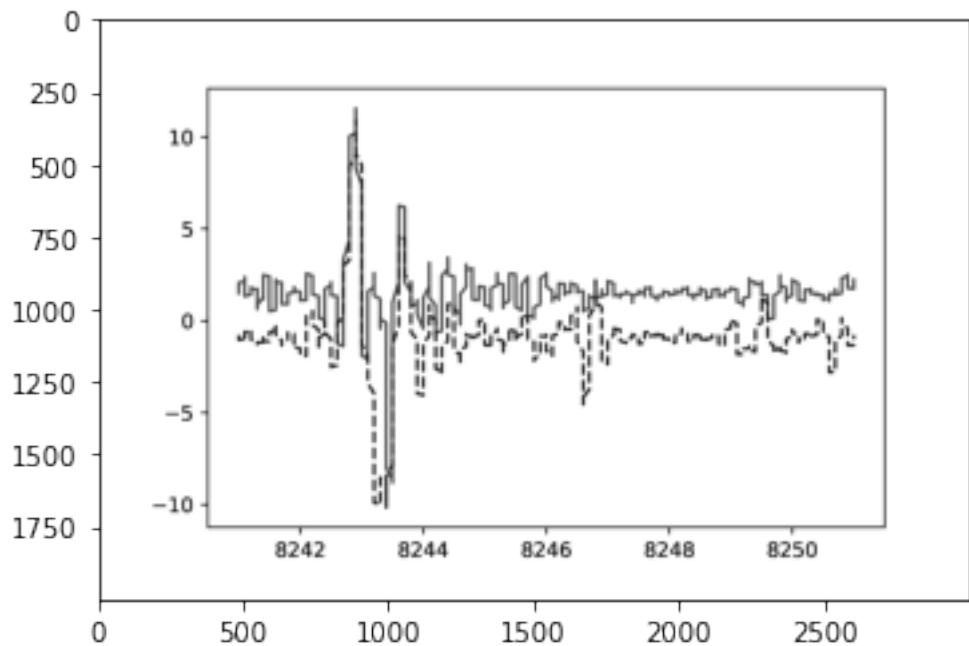
```
<class 'numpy.ndarray'>      --      26      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/85.png
85
```



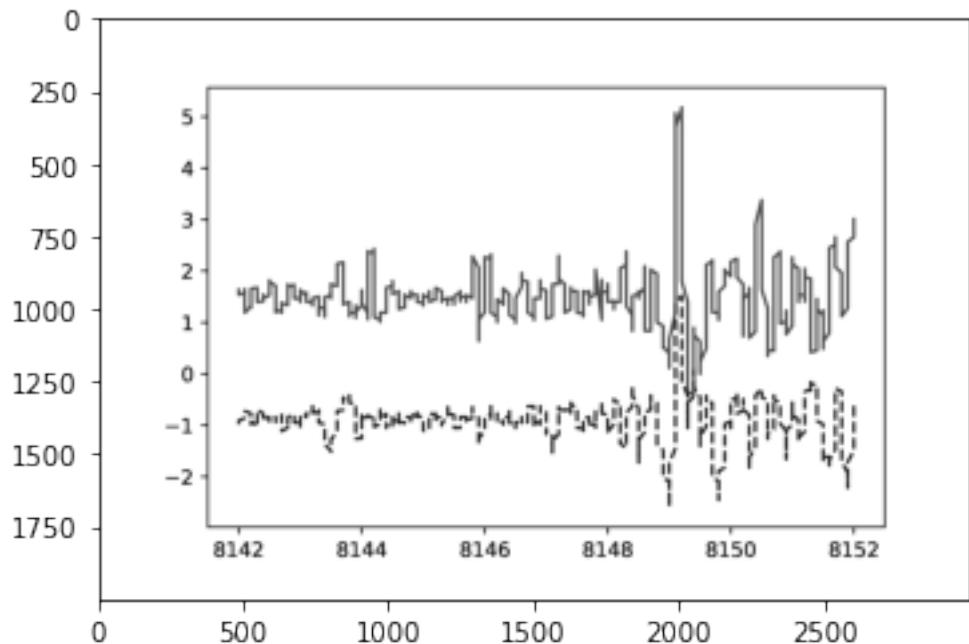
```
<class 'numpy.ndarray'>      --  27   --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/16.png
16
```



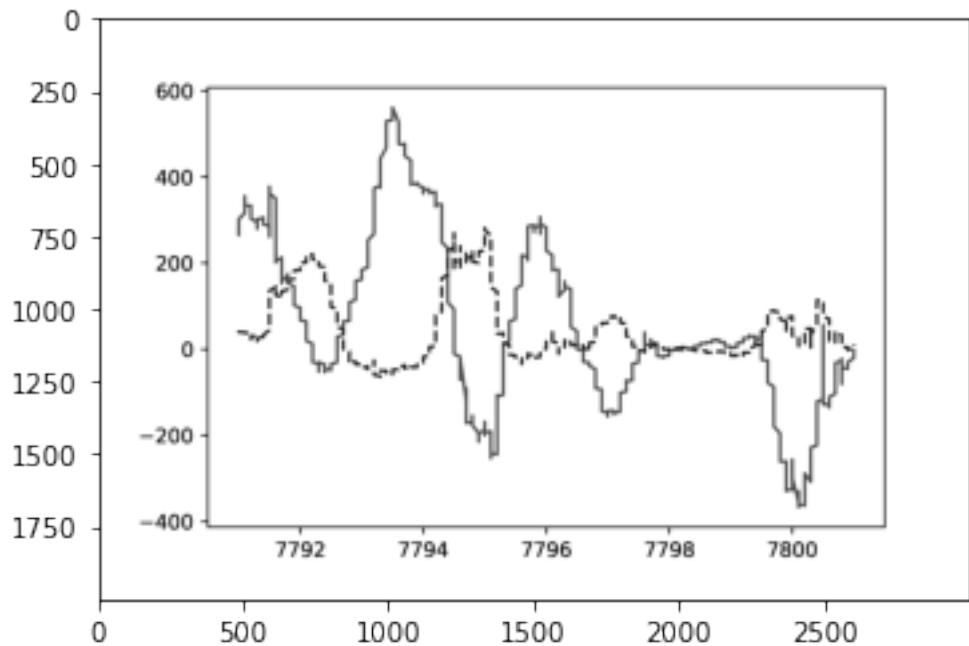
```
<class 'numpy.ndarray'> -- 28 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/64.png
64
```



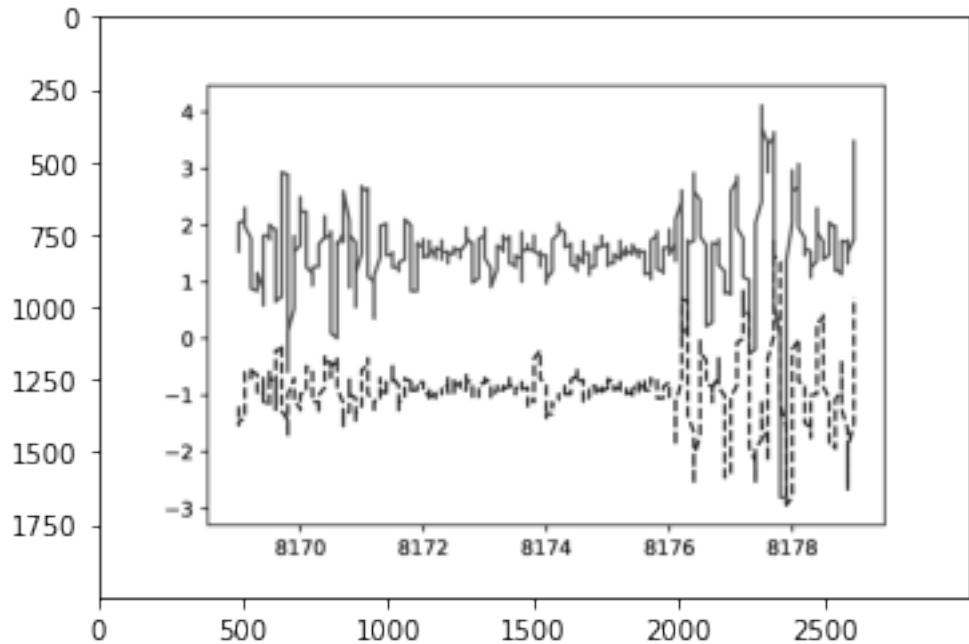
```
<class 'numpy.ndarray'> -- 29 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/53.png
53
```



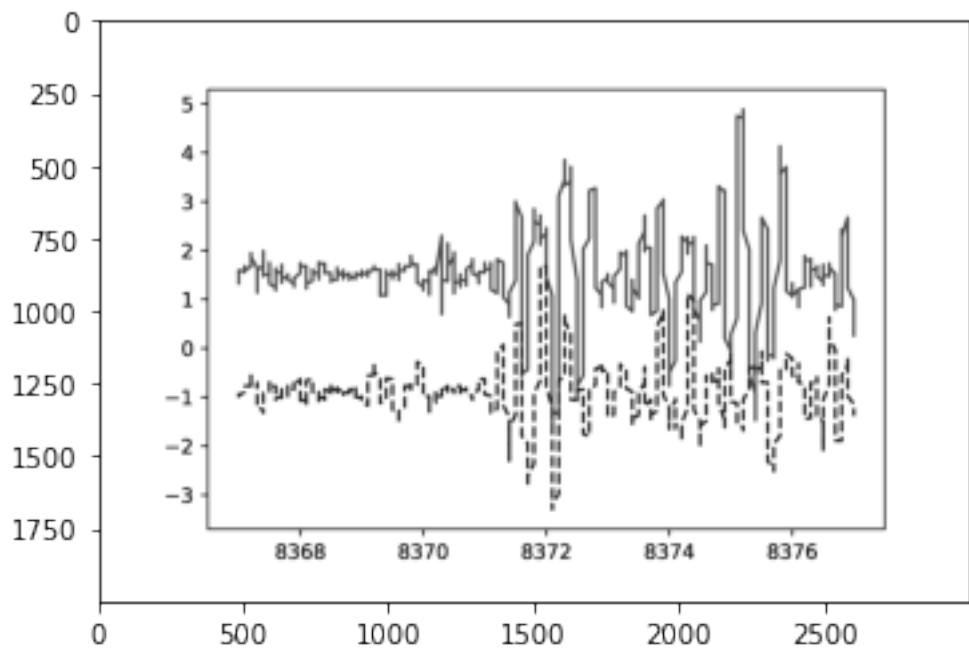
```
<class 'numpy.ndarray'>      --      30      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/14.png
14
```



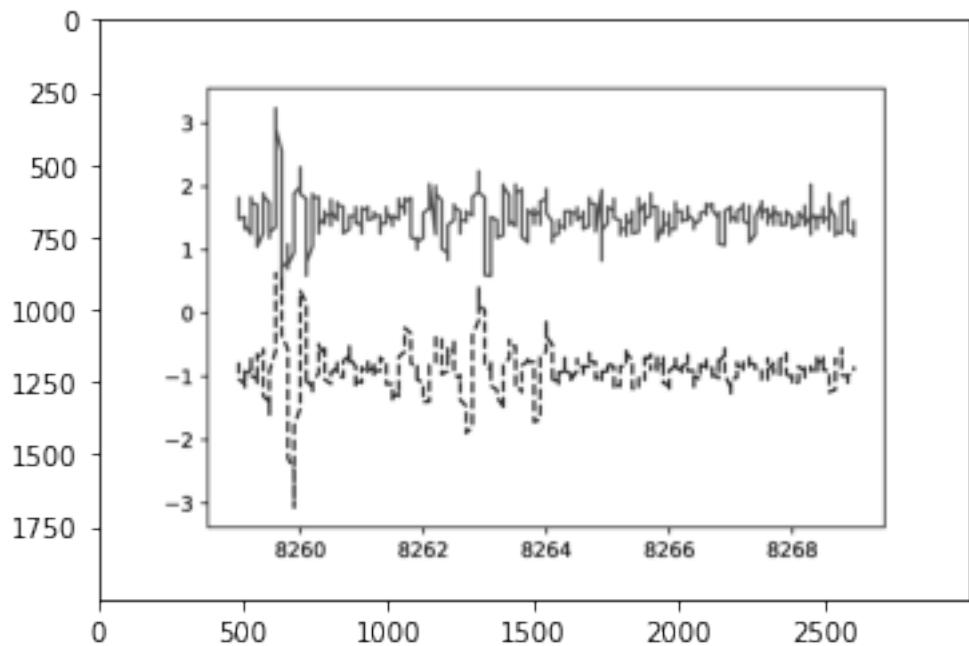
```
<class 'numpy.ndarray'>      --      31      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/56.png
56
```



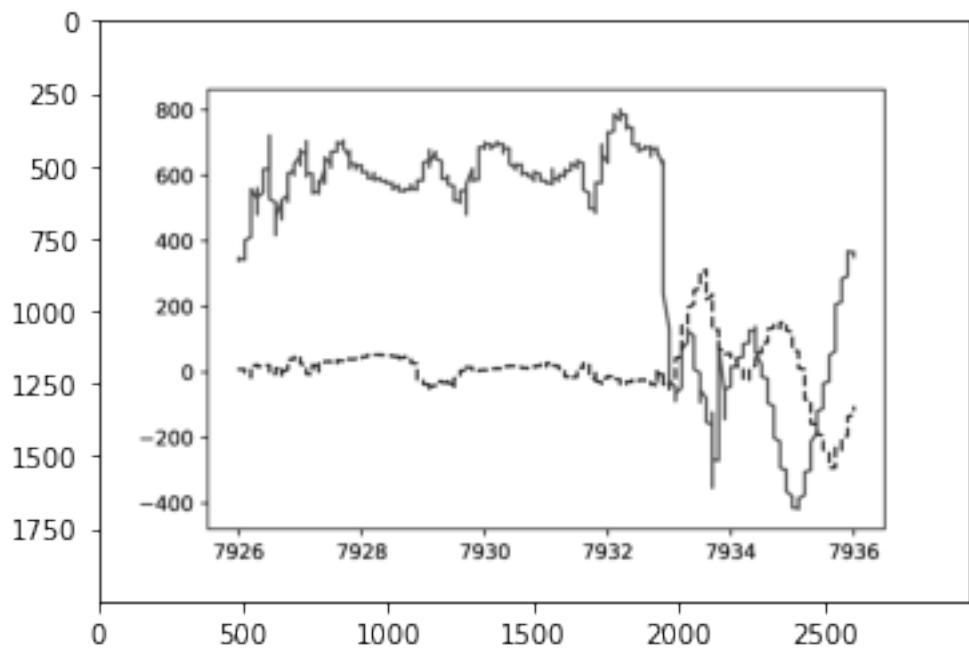
```
<class 'numpy.ndarray'>      --      32      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/78.png
78
```



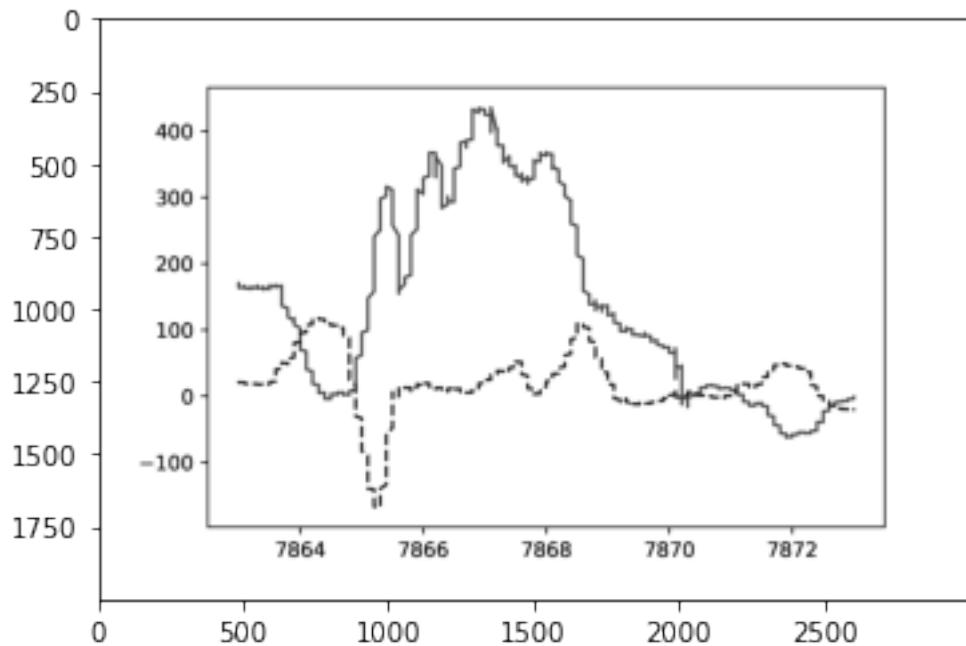
```
<class 'numpy.ndarray'> -- 33 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/66.png
66
```



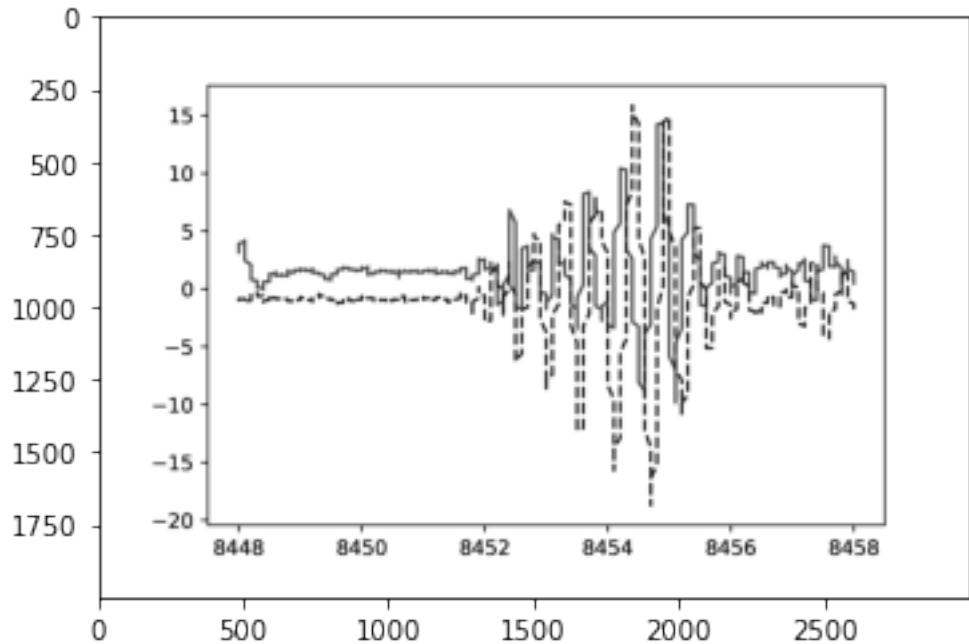
```
<class 'numpy.ndarray'> -- 34 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/29.png
29
```



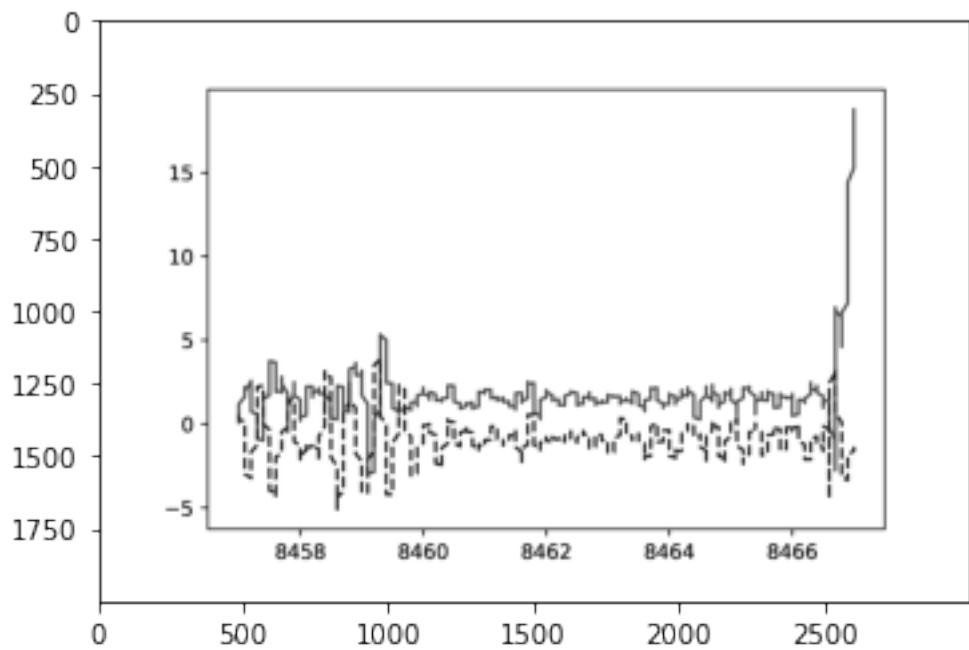
```
<class 'numpy.ndarray'>      --      35      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/22.png
22
```



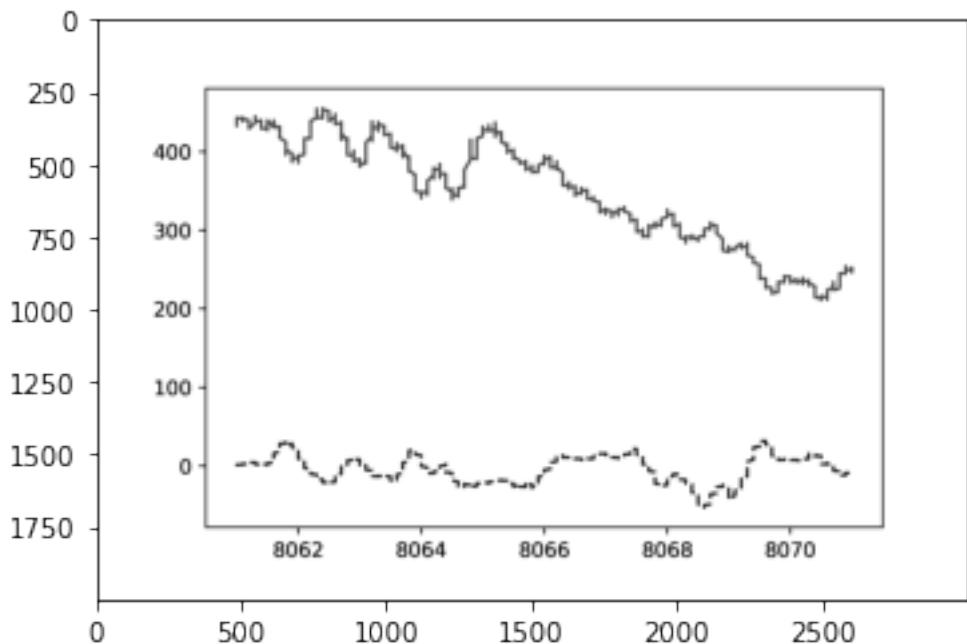
```
<class 'numpy.ndarray'>      --      36      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/87.png
87
```



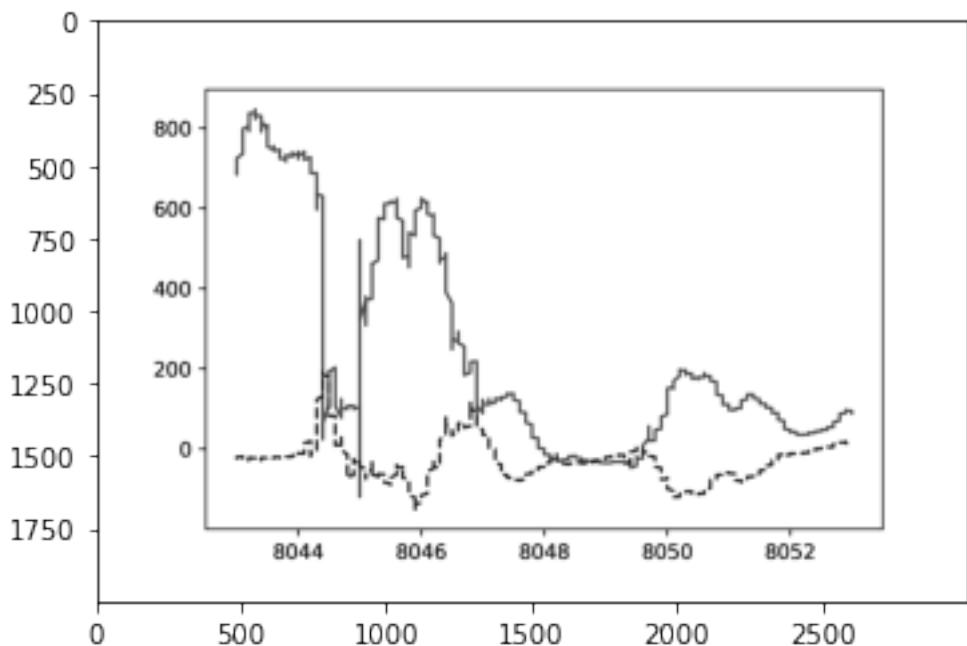
```
<class 'numpy.ndarray'>      --      37      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/88.png
88
```



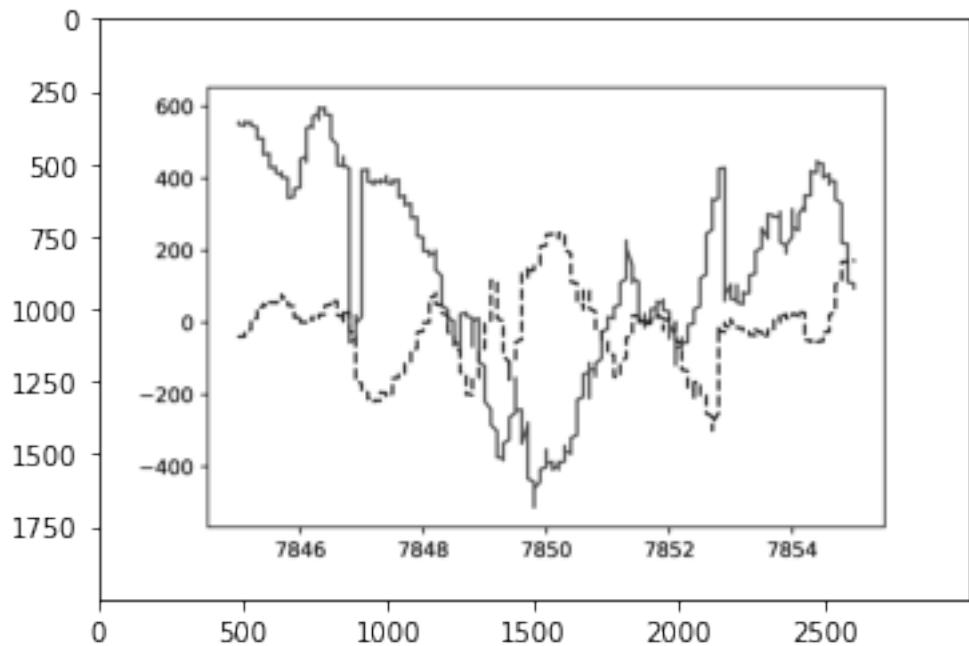
```
<class 'numpy.ndarray'> -- 38 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/44.png
44
```



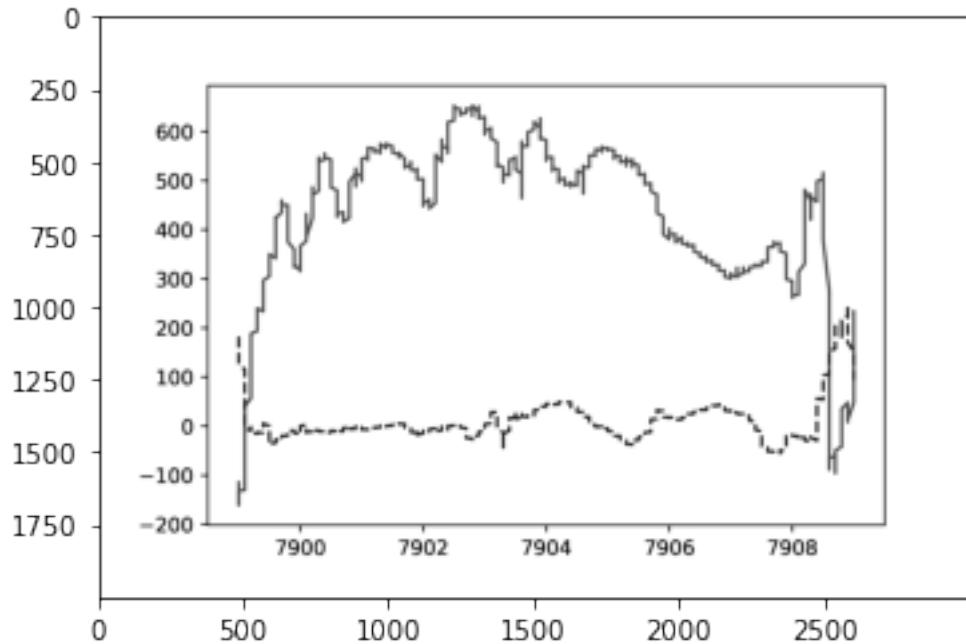
```
<class 'numpy.ndarray'> -- 39 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/42.png
42
```



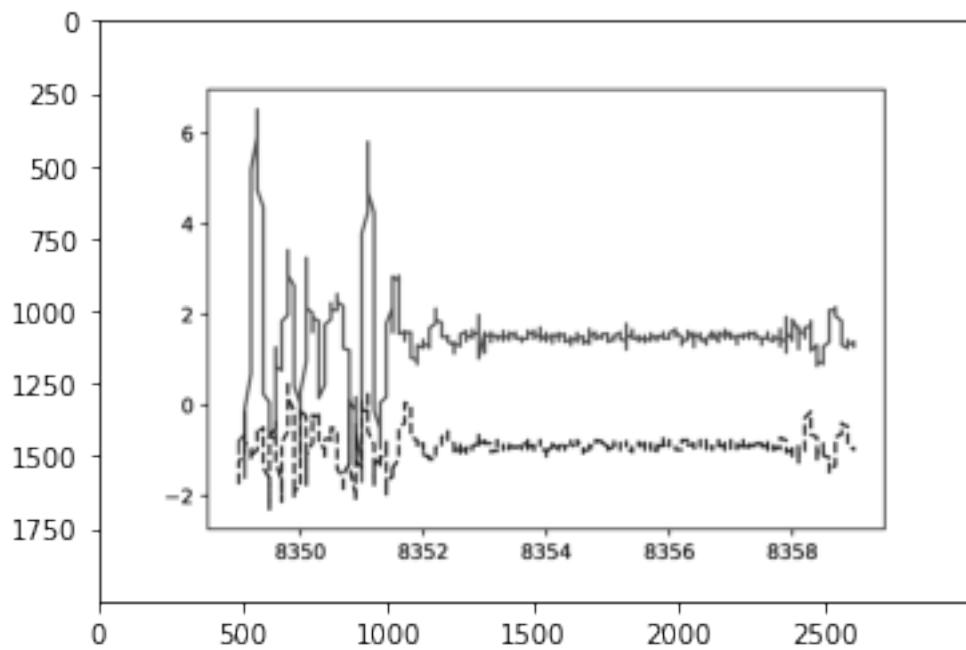
```
<class 'numpy.ndarray'>      --    40    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/20.png
20
```



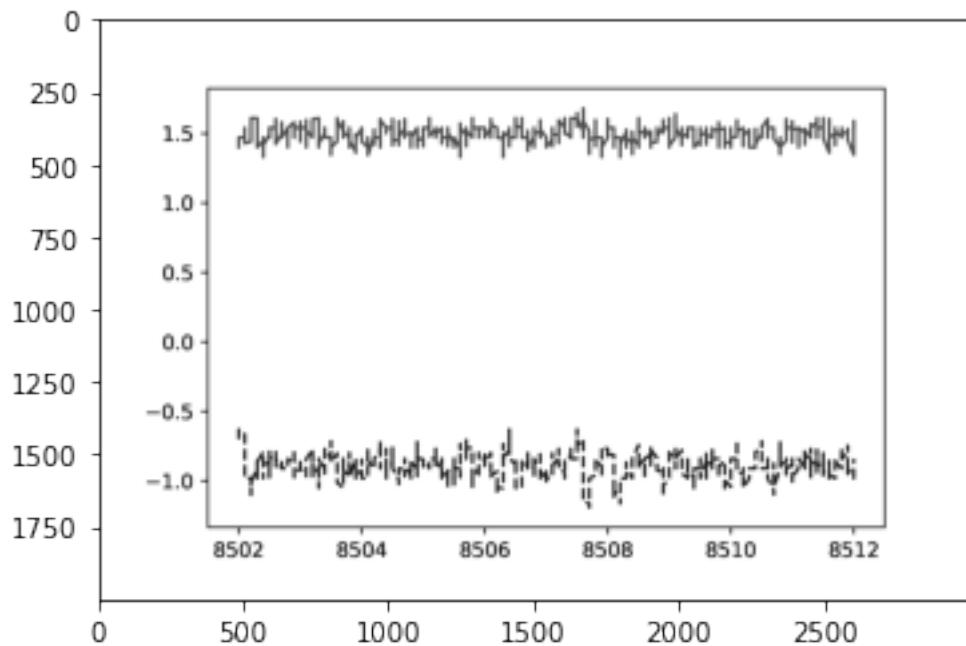
```
<class 'numpy.ndarray'>      --    41    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/26.png
26
```



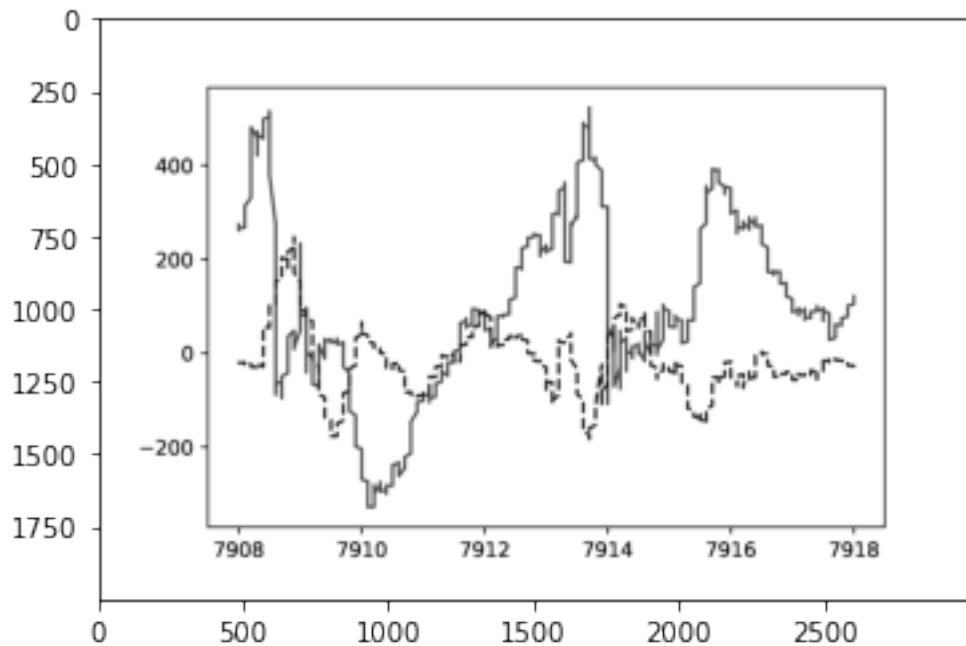
```
<class 'numpy.ndarray'>      --    42    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/76.png
76
```



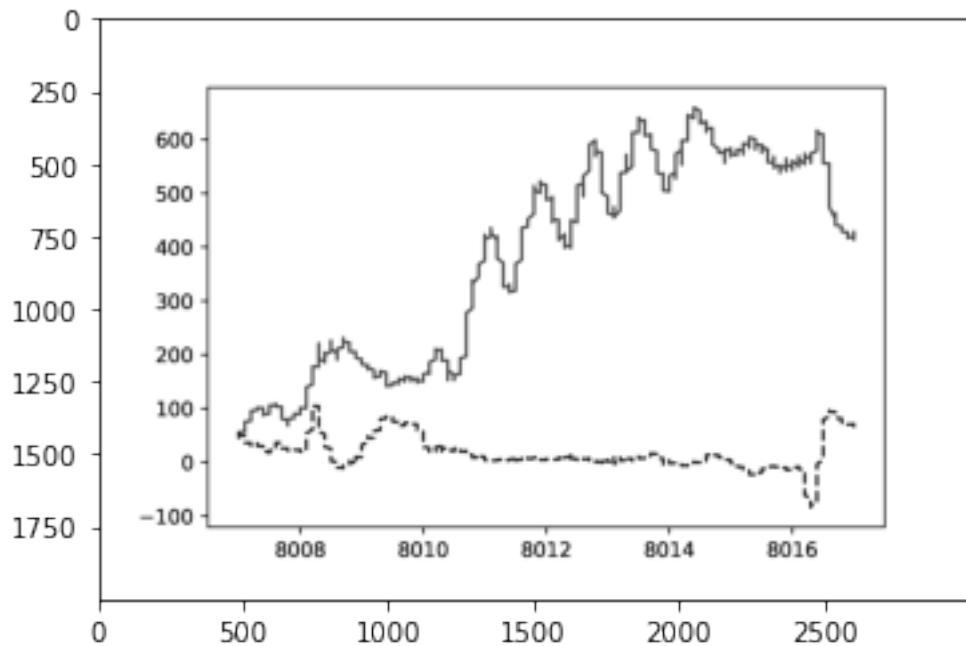
```
<class 'numpy.ndarray'> -- 43 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/93.png
93
```



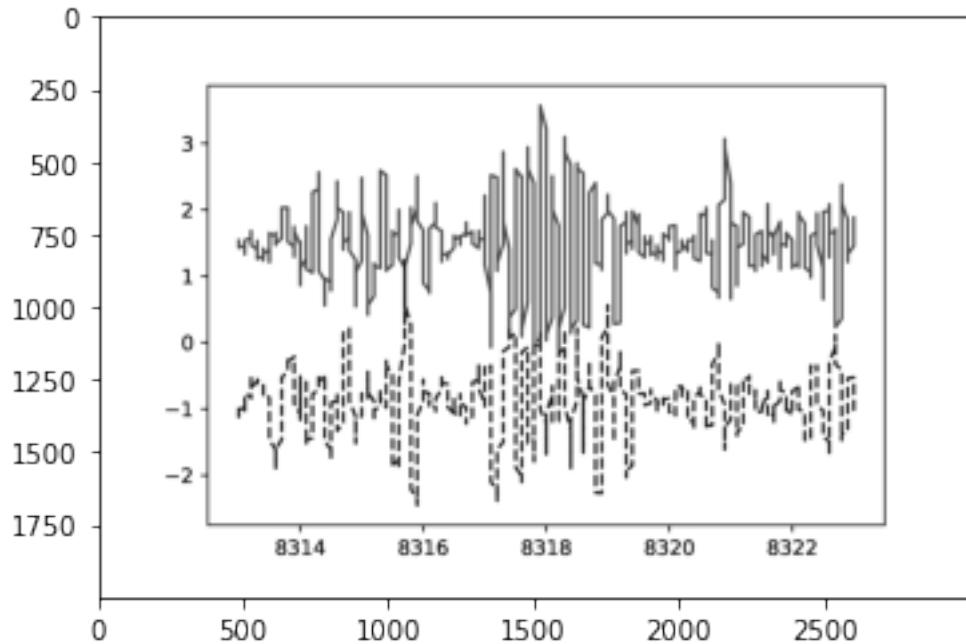
```
<class 'numpy.ndarray'> -- 44 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/27.png
27
```



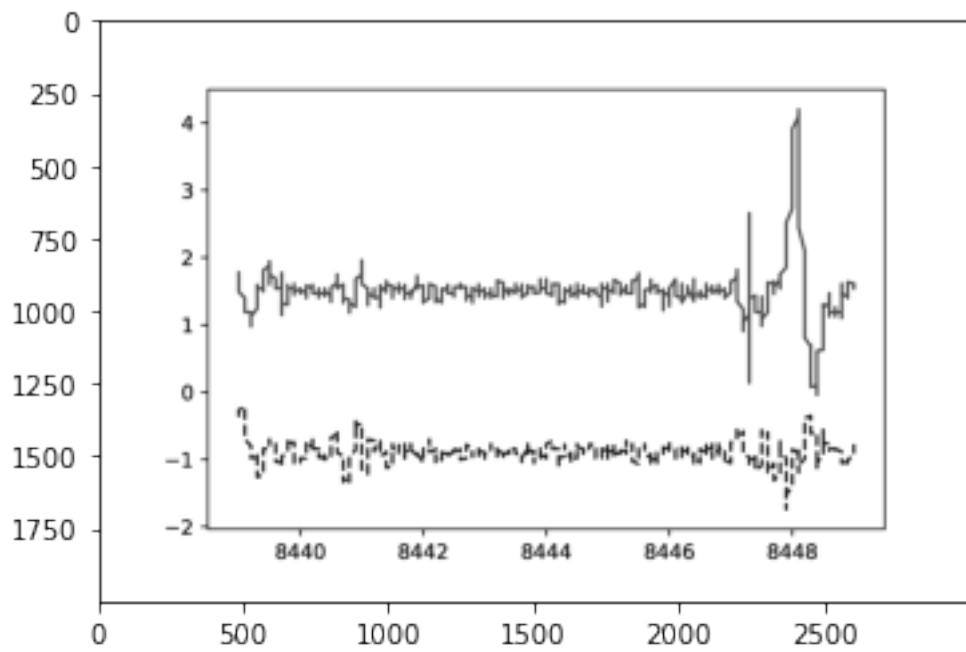
```
<class 'numpy.ndarray'>      --      45      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/38.png
38
```



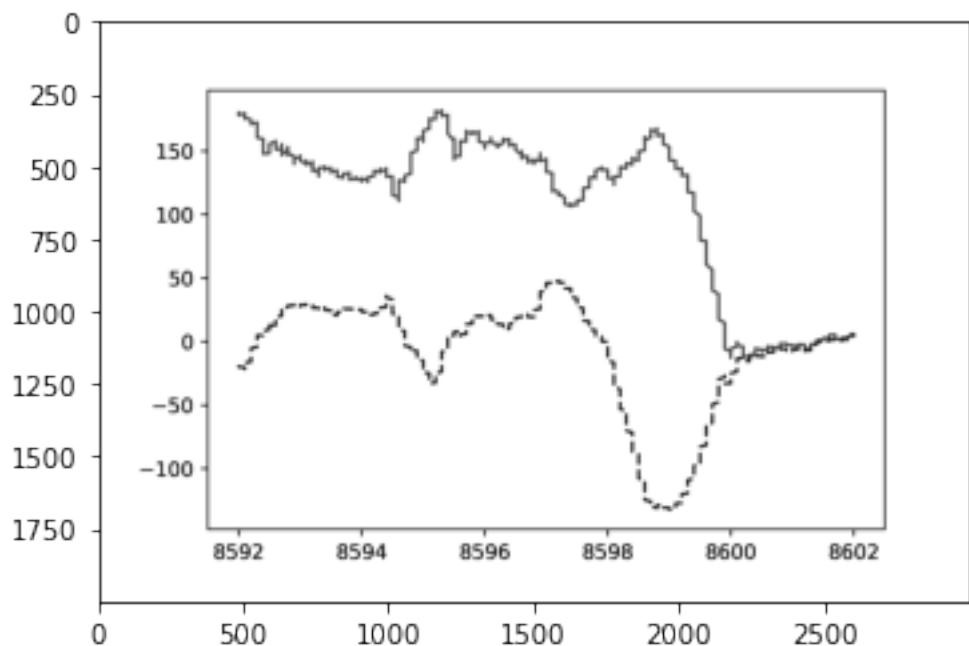
```
<class 'numpy.ndarray'>      --      46      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/72.png
72
```



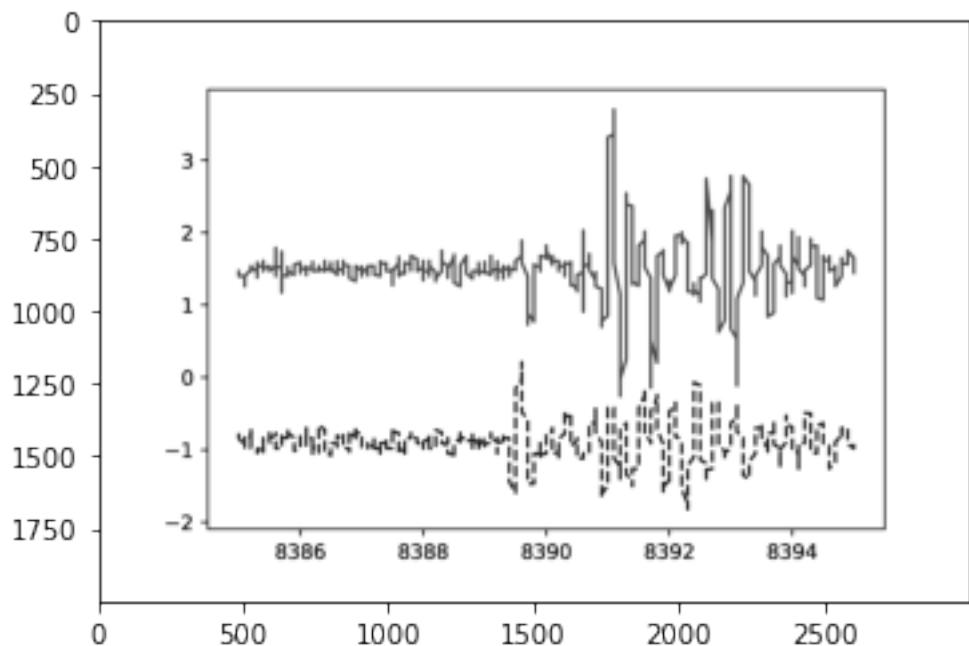
```
<class 'numpy.ndarray'>      --    47    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/86.png
86
```



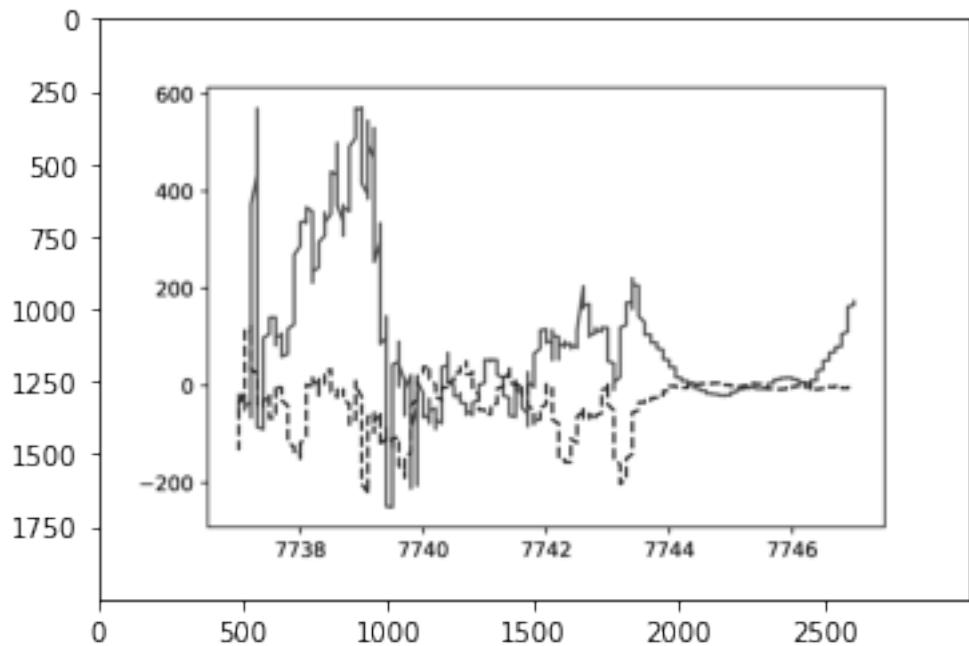
```
<class 'numpy.ndarray'> -- 48 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/103.png
103
```



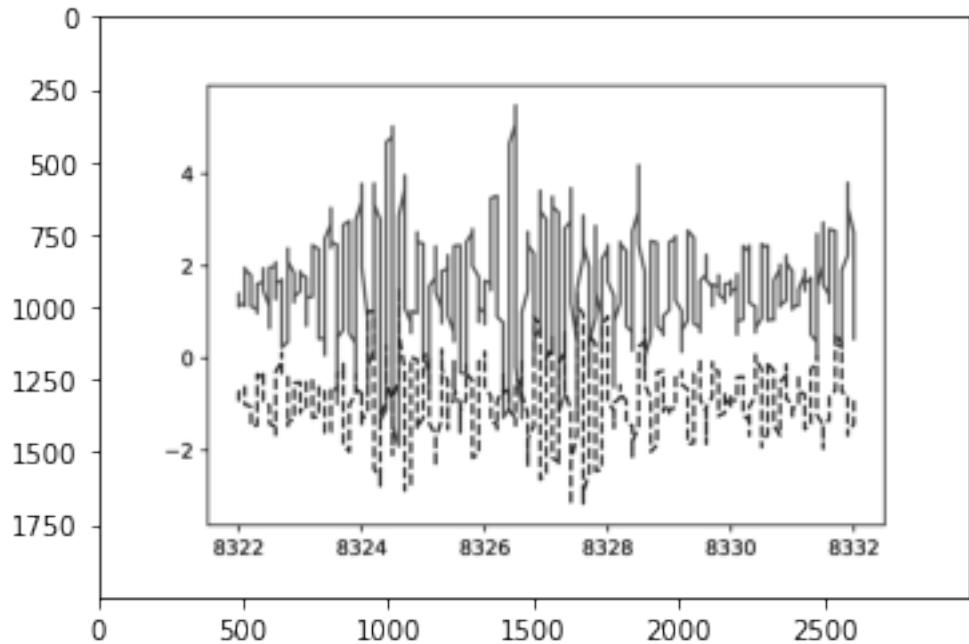
```
<class 'numpy.ndarray'> -- 49 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/80.png
80
```



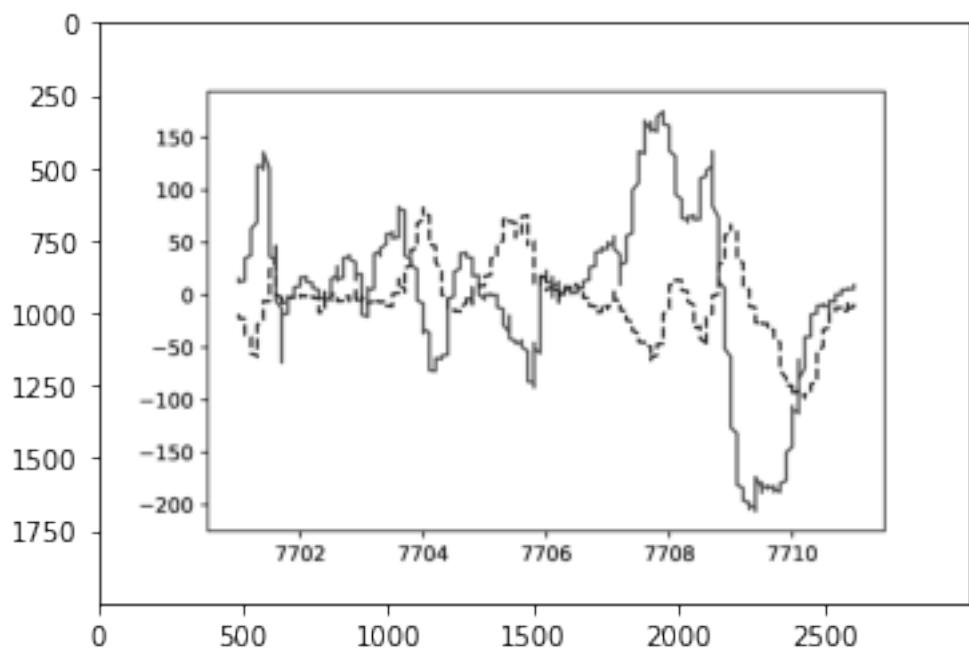
```
<class 'numpy.ndarray'>      --      50      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/8.png
8
```



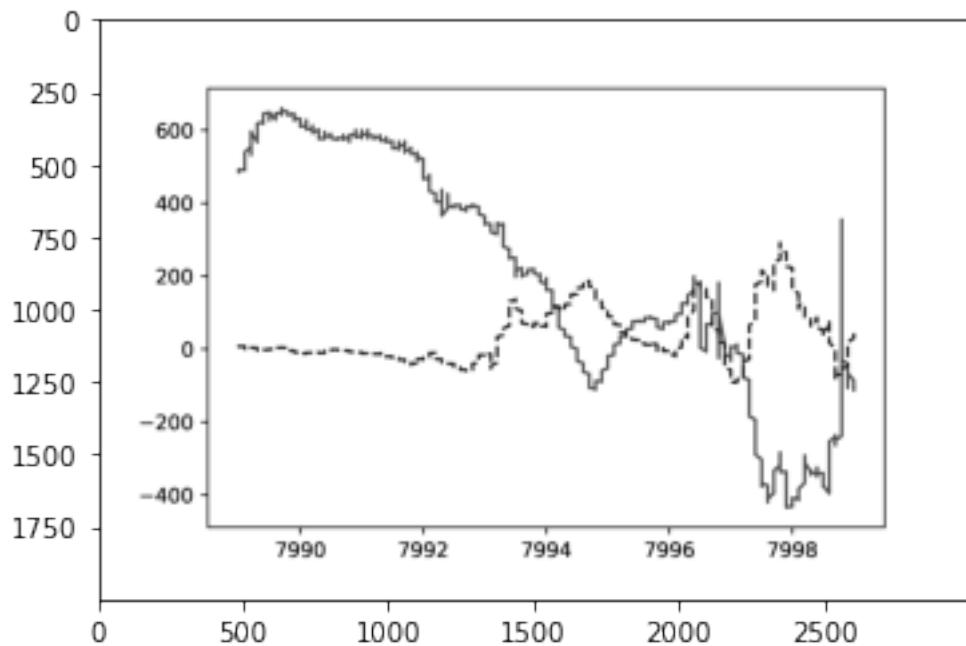
```
<class 'numpy.ndarray'>      --      51      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/73.png
73
```



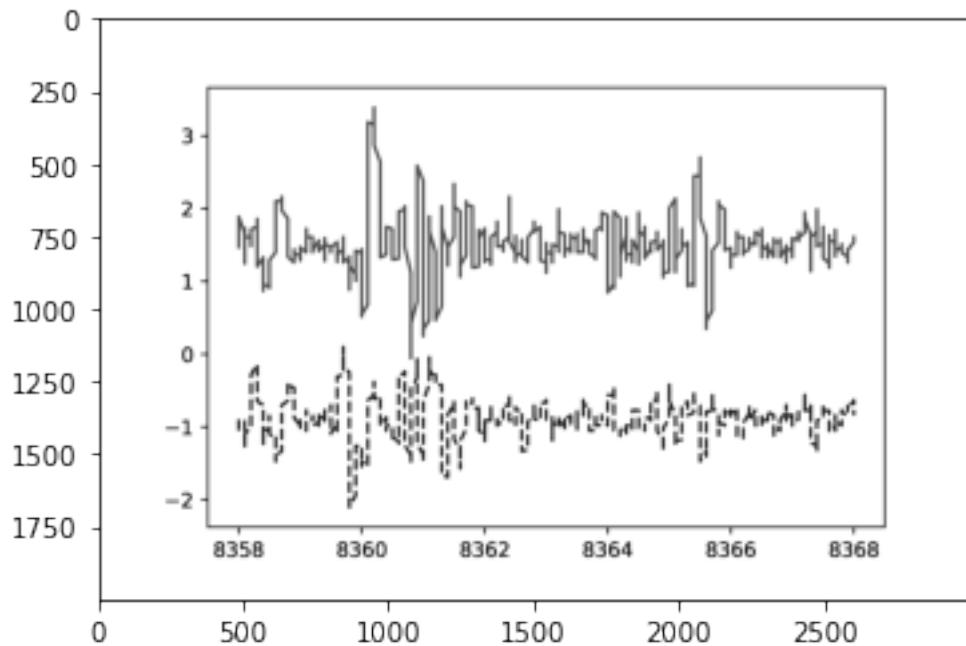
```
<class 'numpy.ndarray'>      --      52      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/4.png
4
```



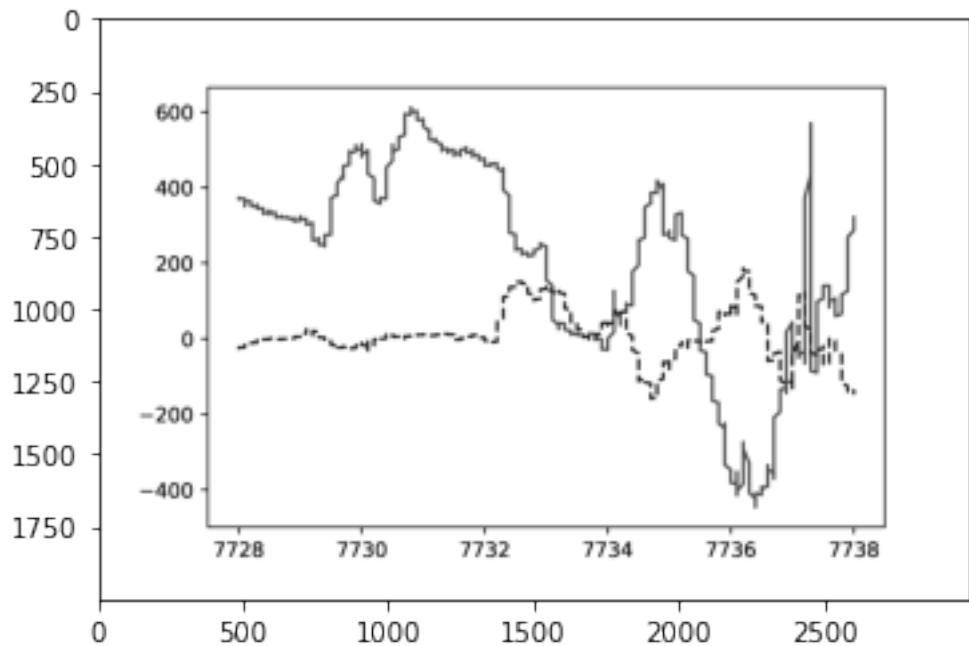
```
<class 'numpy.ndarray'> -- 53 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/36.png
36
```



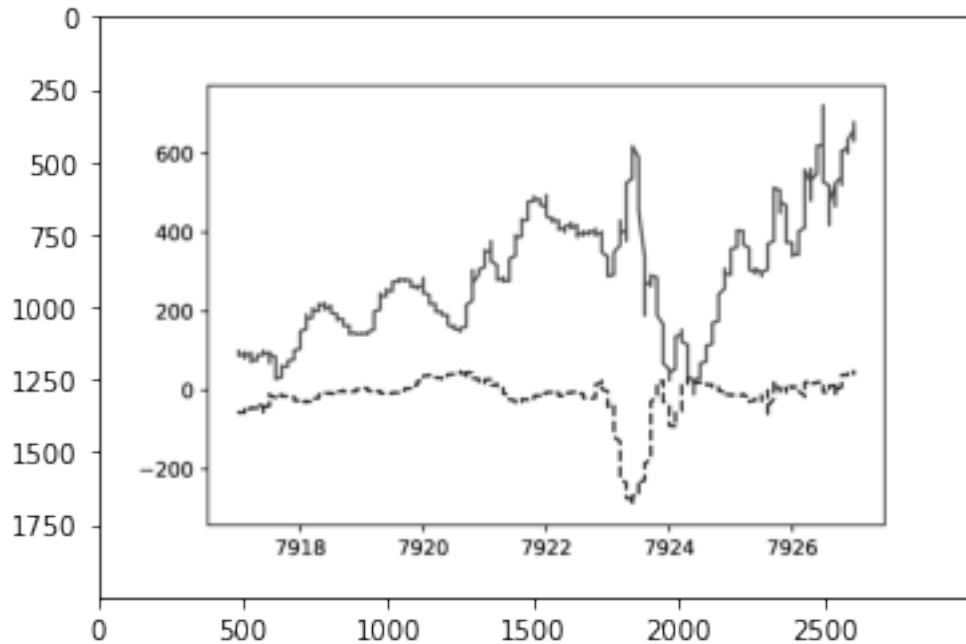
```
<class 'numpy.ndarray'> -- 54 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/77.png
77
```



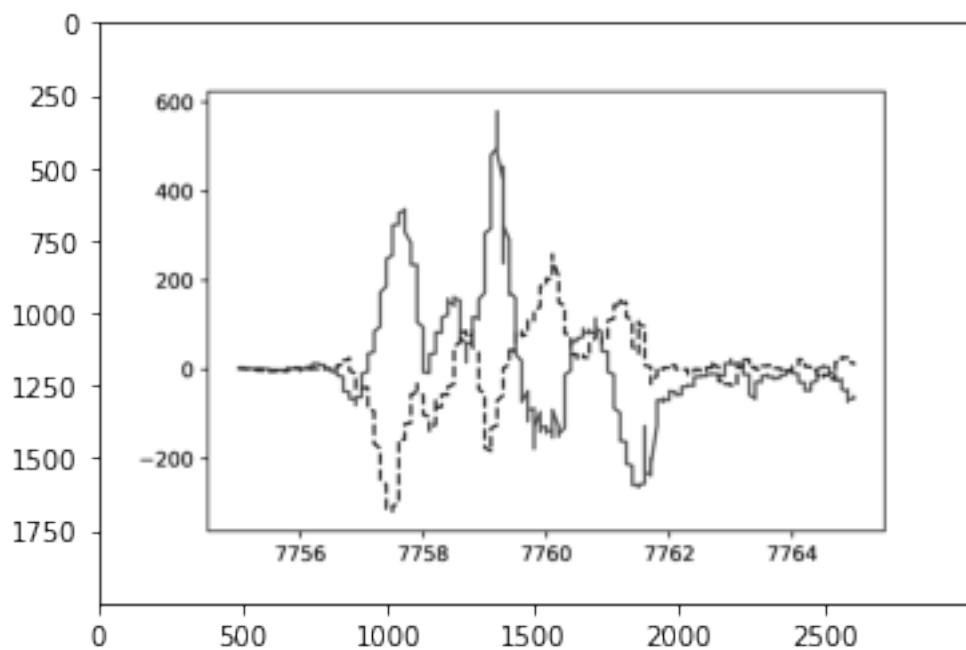
```
<class 'numpy.ndarray'>      --      55      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/7.png
7
```



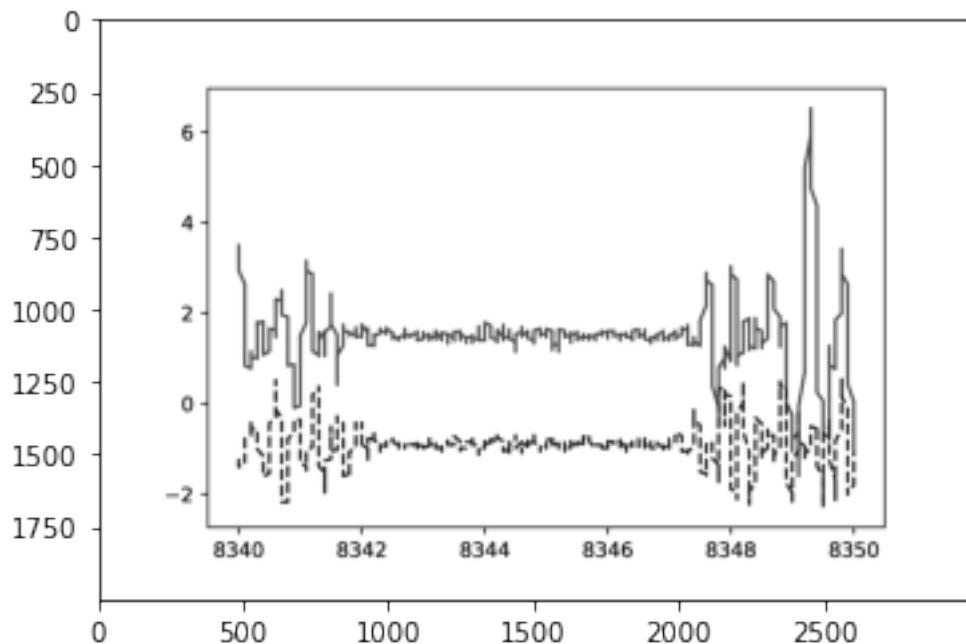
```
<class 'numpy.ndarray'>      --      56      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/28.png
28
```



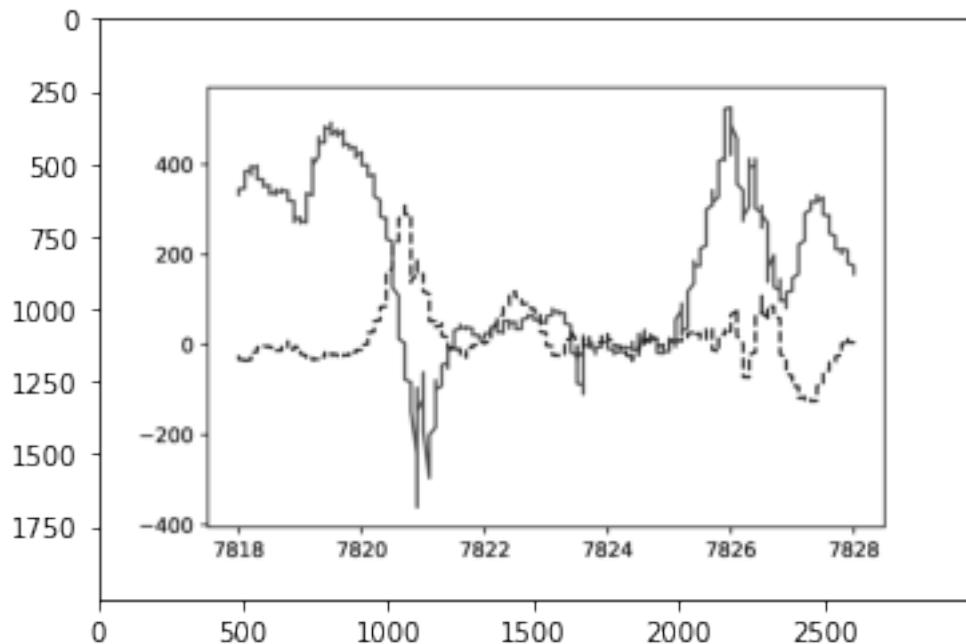
```
<class 'numpy.ndarray'>      --      57      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/10.png
10
```



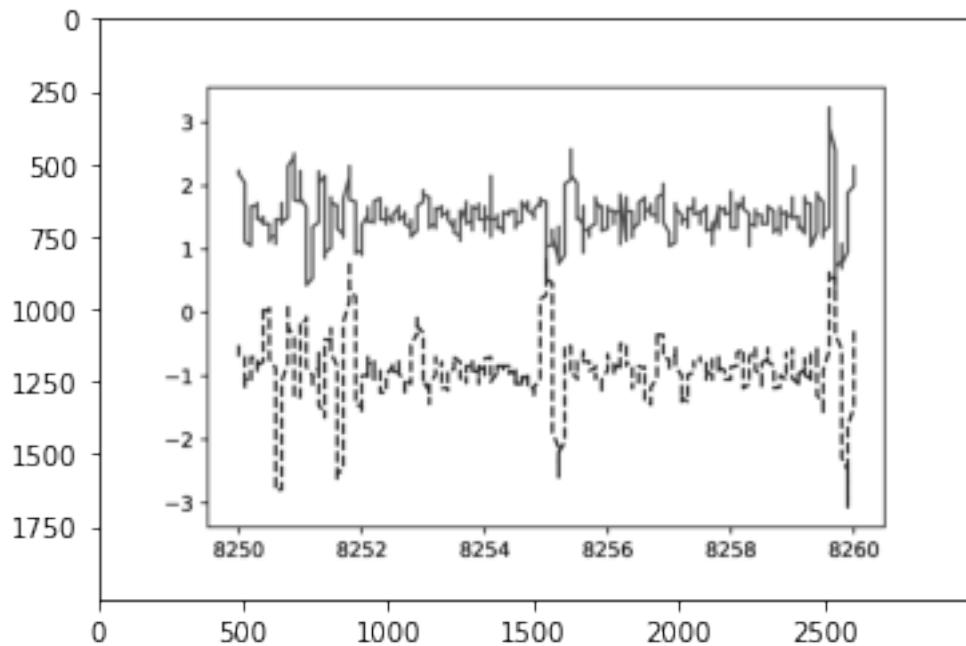
```
<class 'numpy.ndarray'>      --      58      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/75.png
75
```



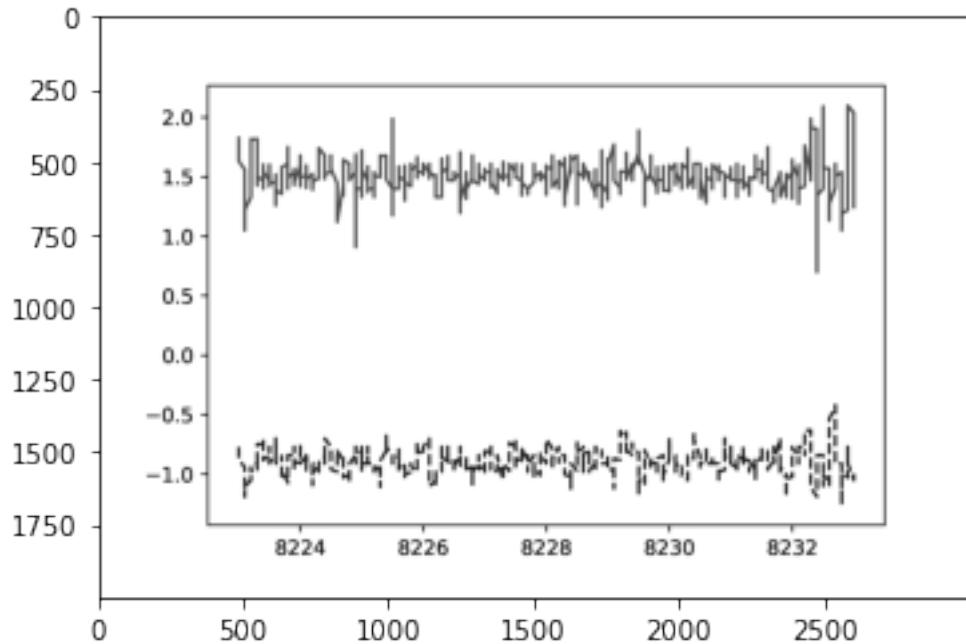
```
<class 'numpy.ndarray'>      --      59      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/17.png
17
```



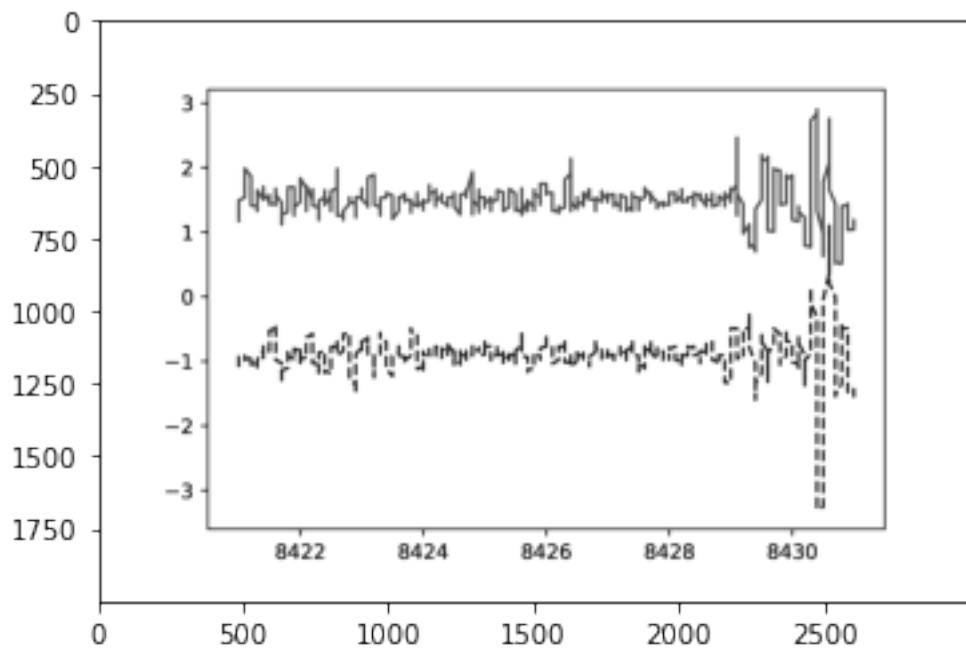
```
<class 'numpy.ndarray'>      --      60      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/65.png
65
```



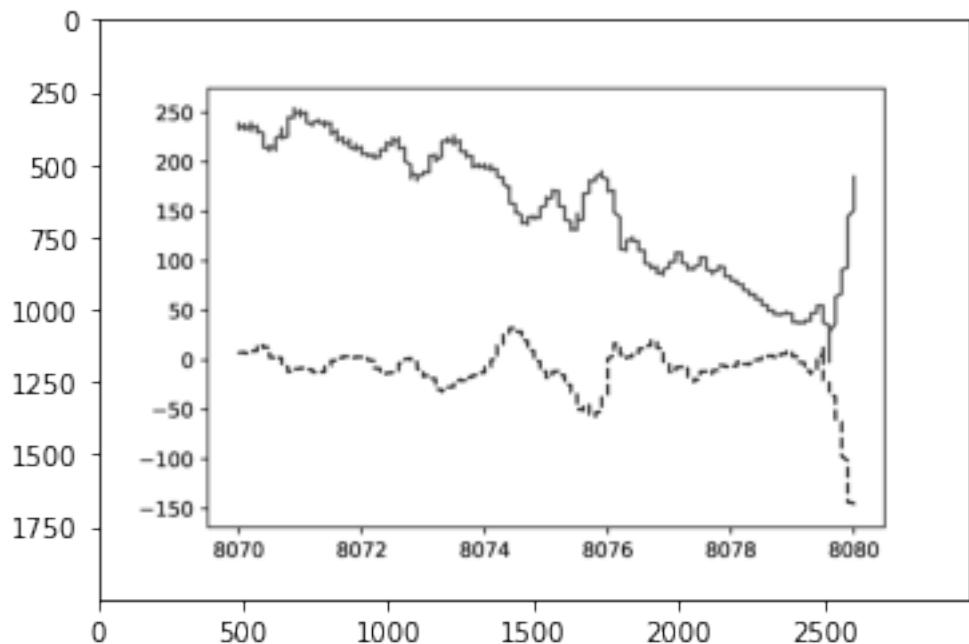
```
<class 'numpy.ndarray'>      --      61      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/62.png
62
```



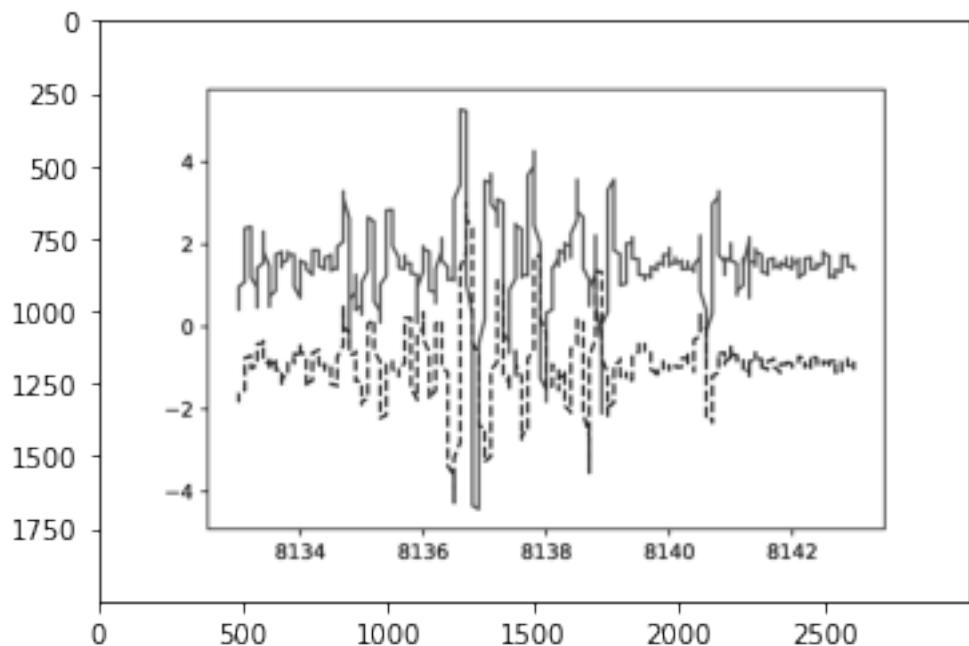
```
<class 'numpy.ndarray'>      --      62      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/84.png
84
```



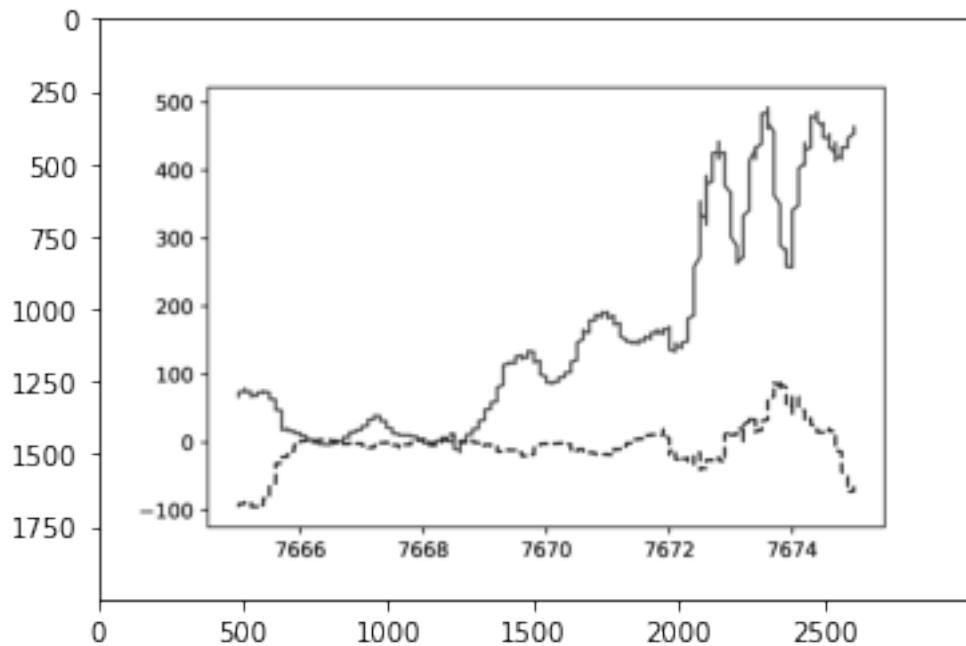
```
<class 'numpy.ndarray'> -- 63 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/45.png
45
```



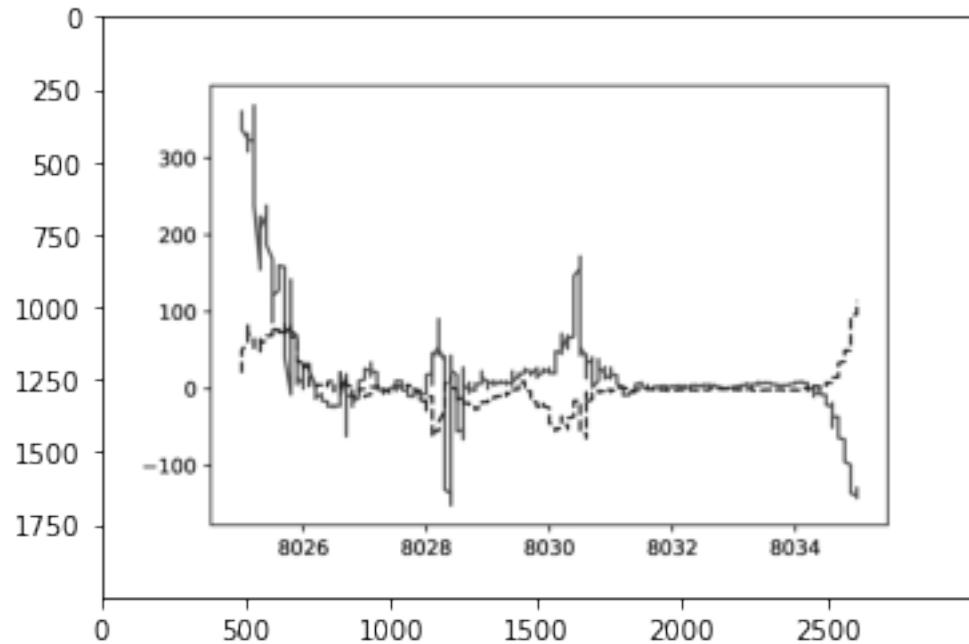
```
<class 'numpy.ndarray'> -- 64 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/52.png
52
```



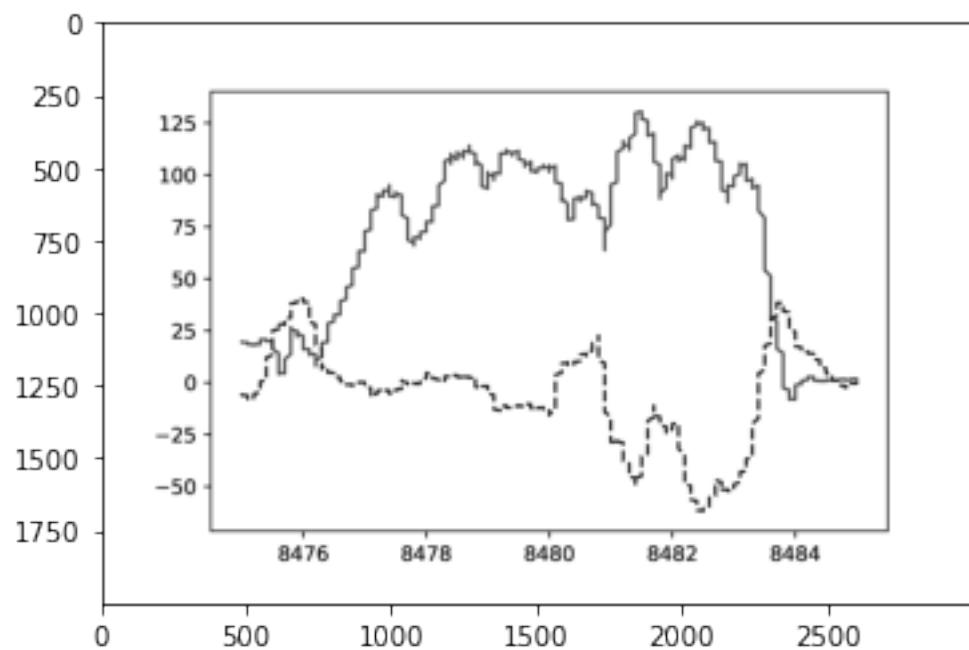
```
<class 'numpy.ndarray'>      --      65      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/0.png
0
```



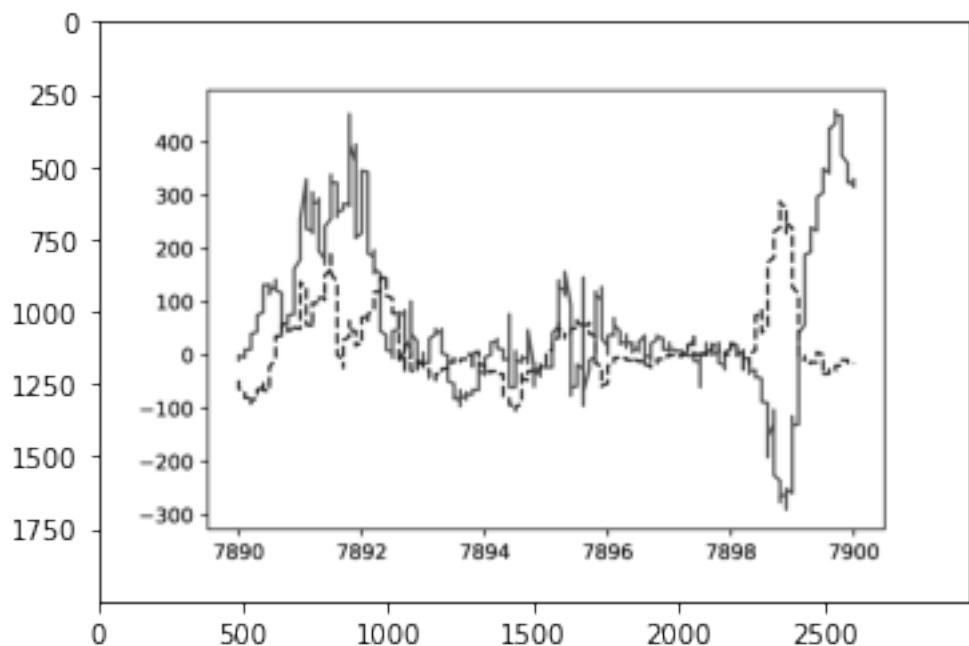
```
<class 'numpy.ndarray'>      --      66      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/40.png
40
```



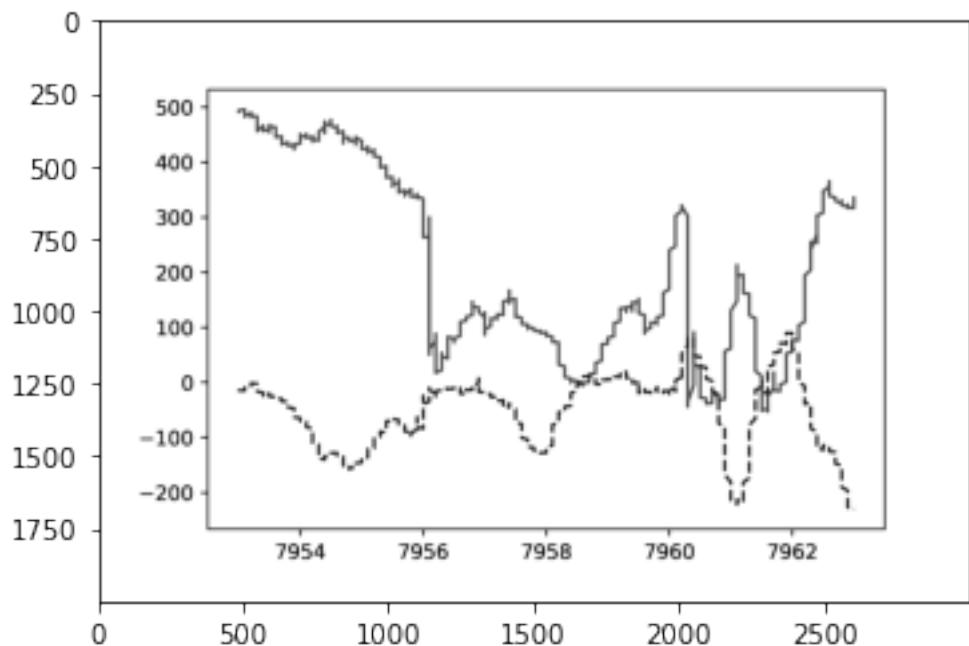
```
<class 'numpy.ndarray'>      --   67   --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/90.png
90
```



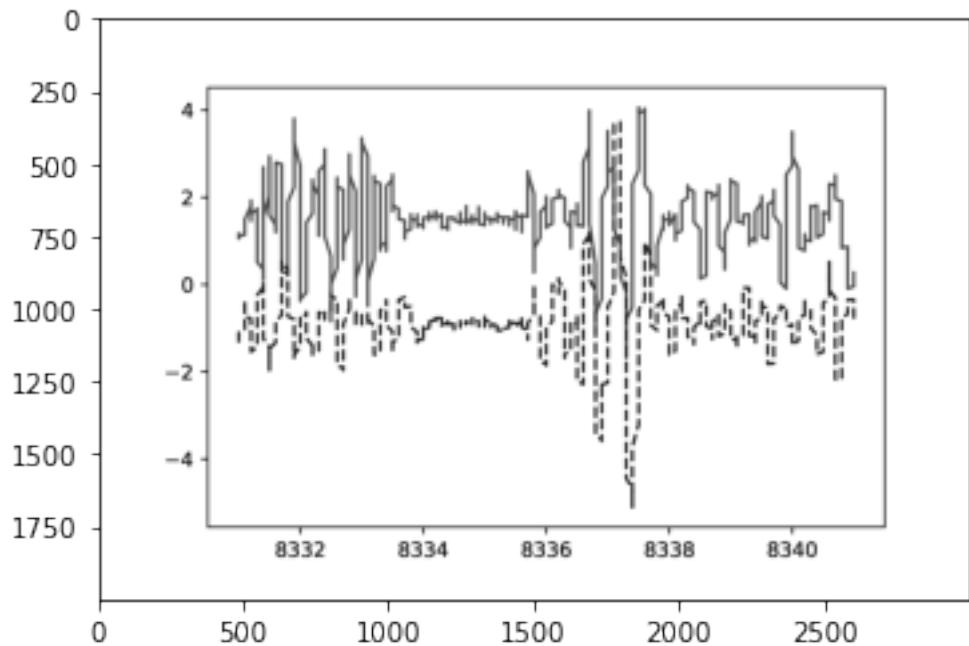
```
<class 'numpy.ndarray'> -- 68 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/25.png
25
```



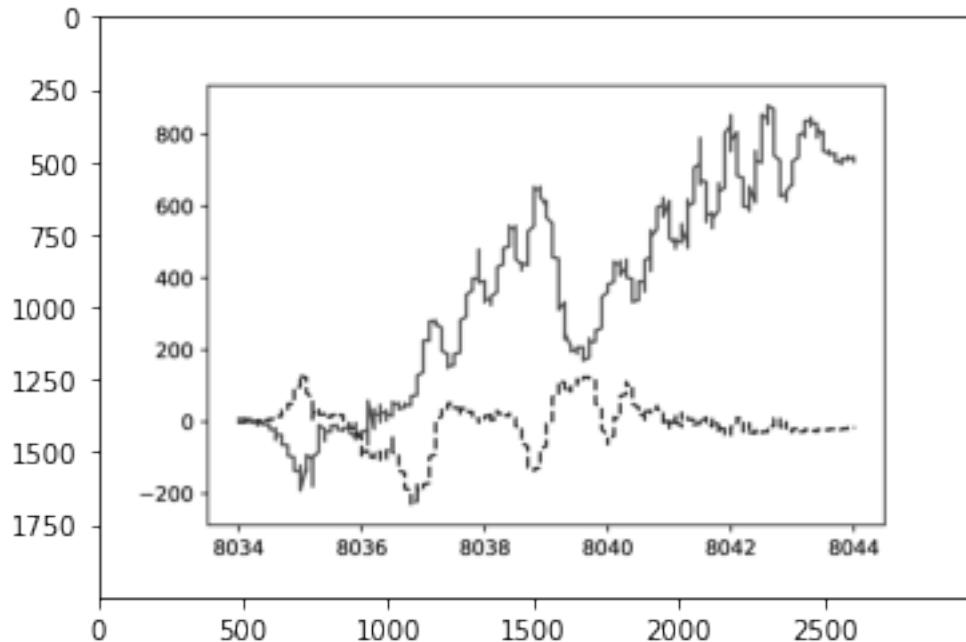
```
<class 'numpy.ndarray'> -- 69 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/32.png
32
```



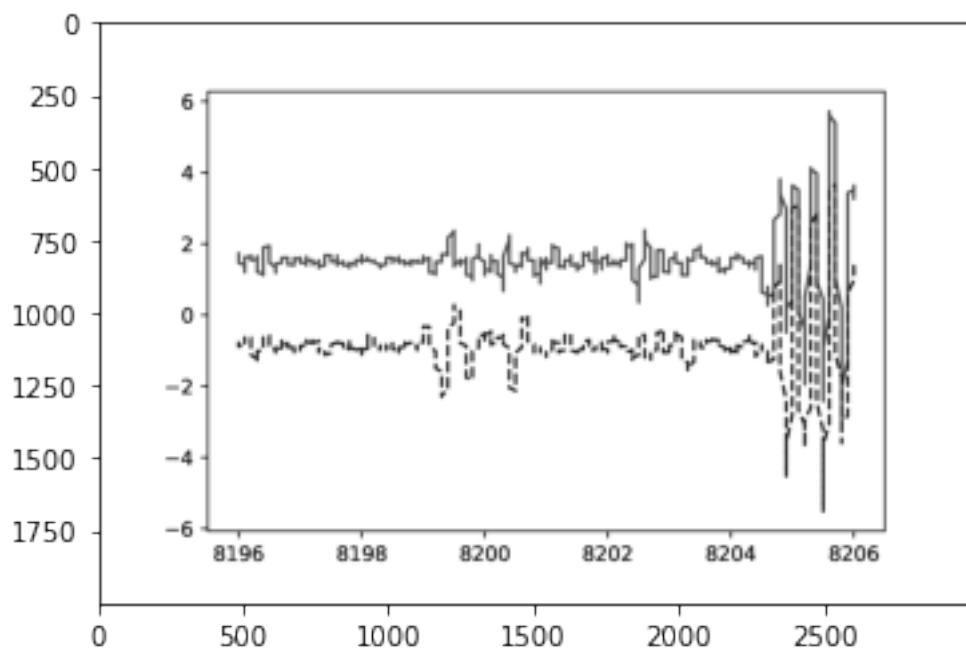
```
<class 'numpy.ndarray'>      --    70    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/74.png
74
```



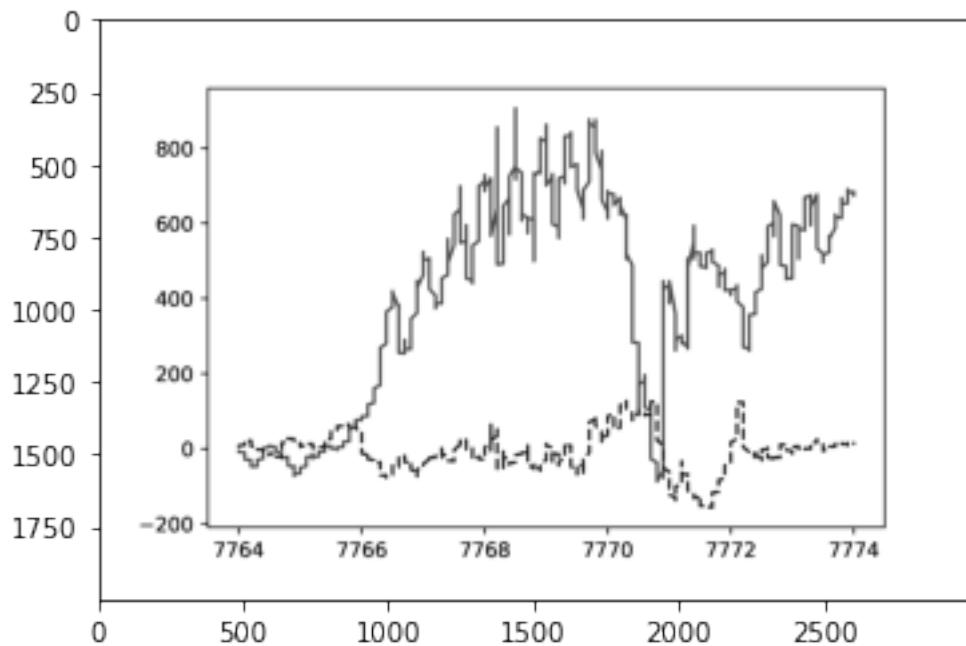
```
<class 'numpy.ndarray'>      --    71    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/41.png
41
```



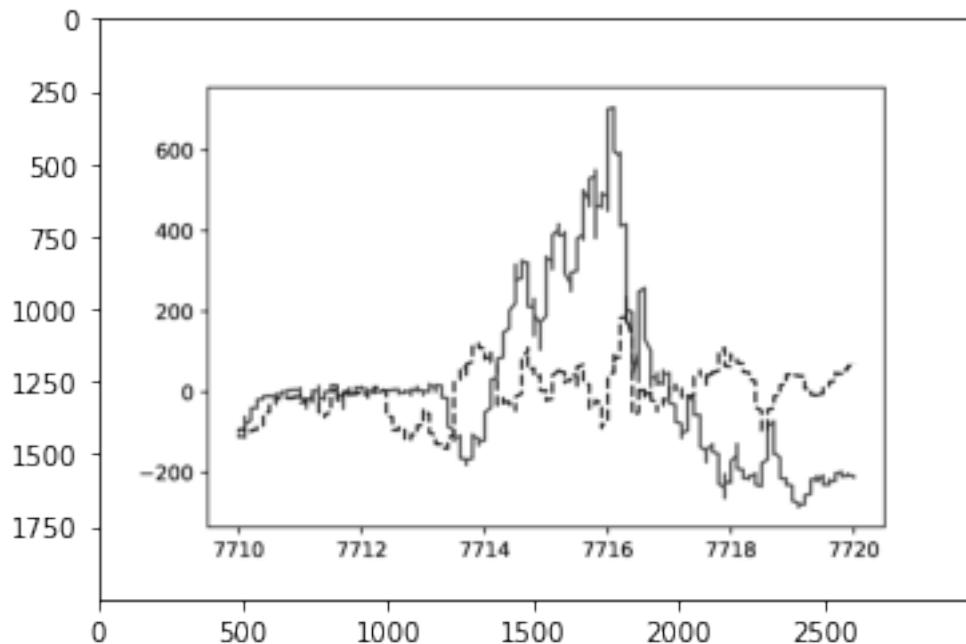
```
<class 'numpy.ndarray'>      --    72    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/59.png
59
```



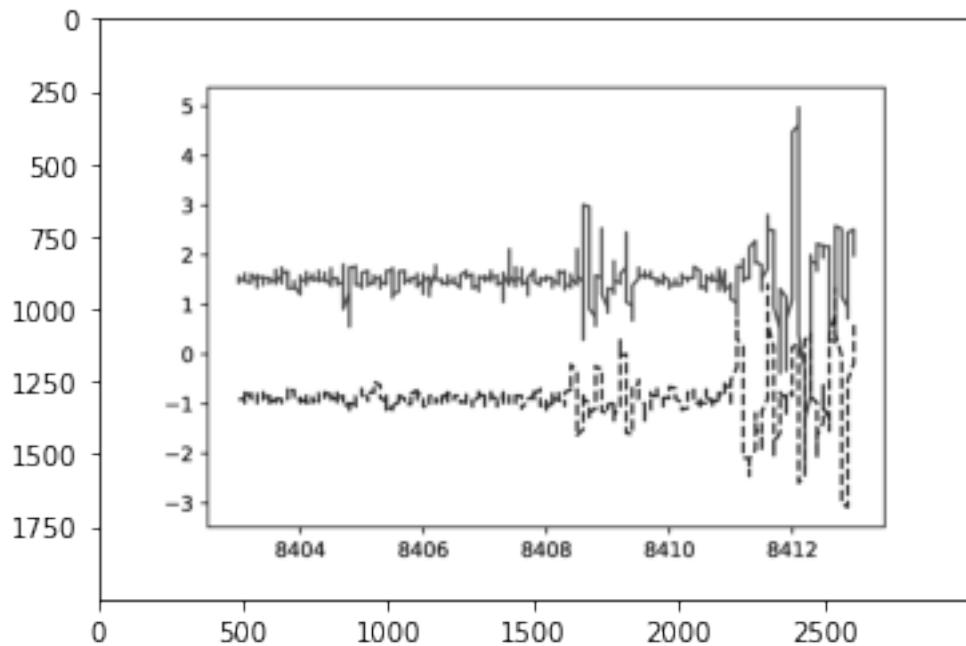
```
<class 'numpy.ndarray'> -- 73 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/11.png
11
```



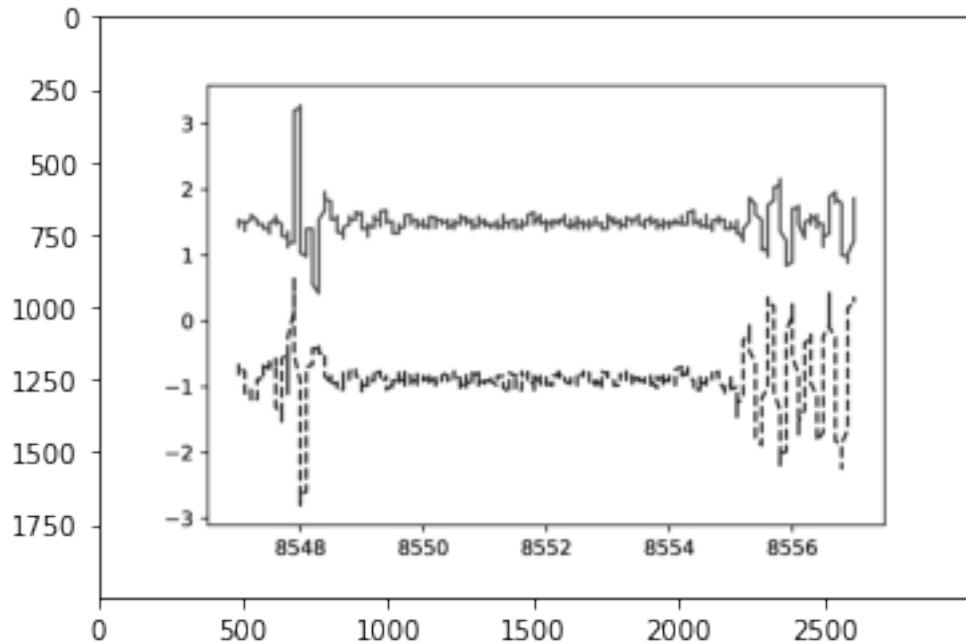
```
<class 'numpy.ndarray'> -- 74 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/5.png
5
```



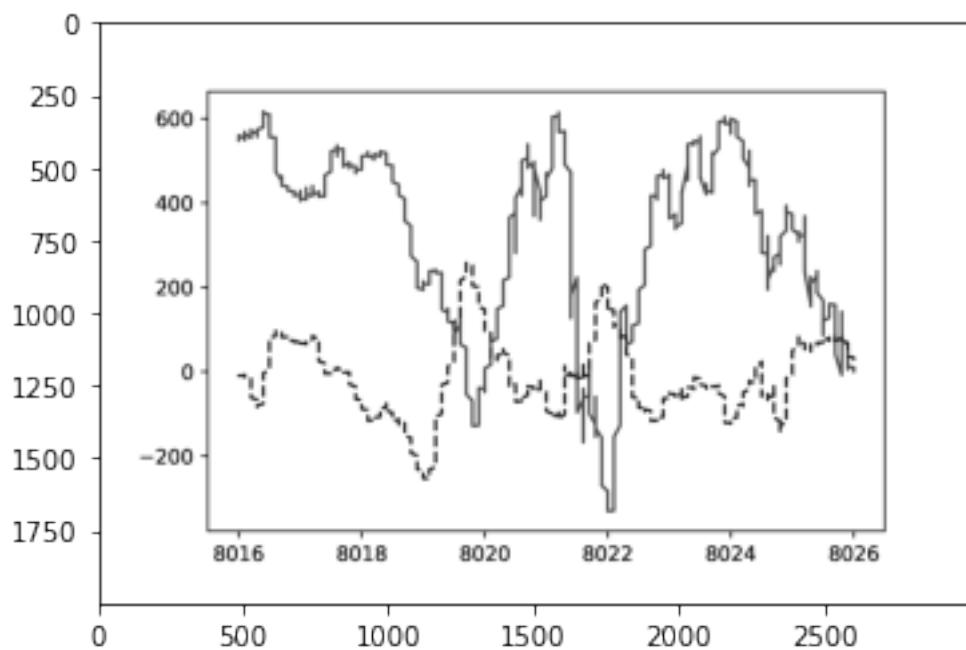
```
<class 'numpy.ndarray'>      --    75    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/82.png
82
```



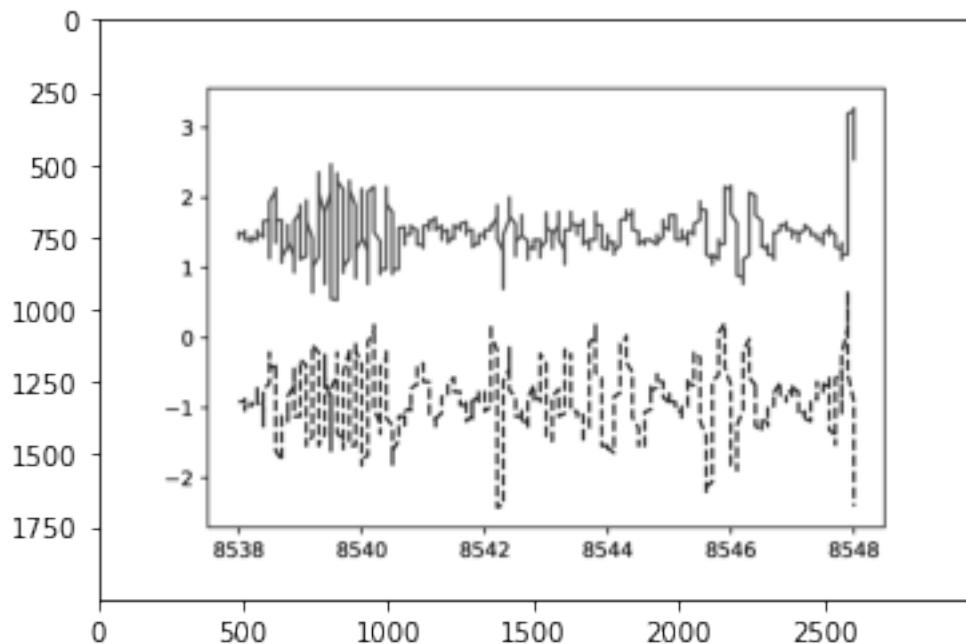
```
<class 'numpy.ndarray'>      --    76    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/98.png
98
```



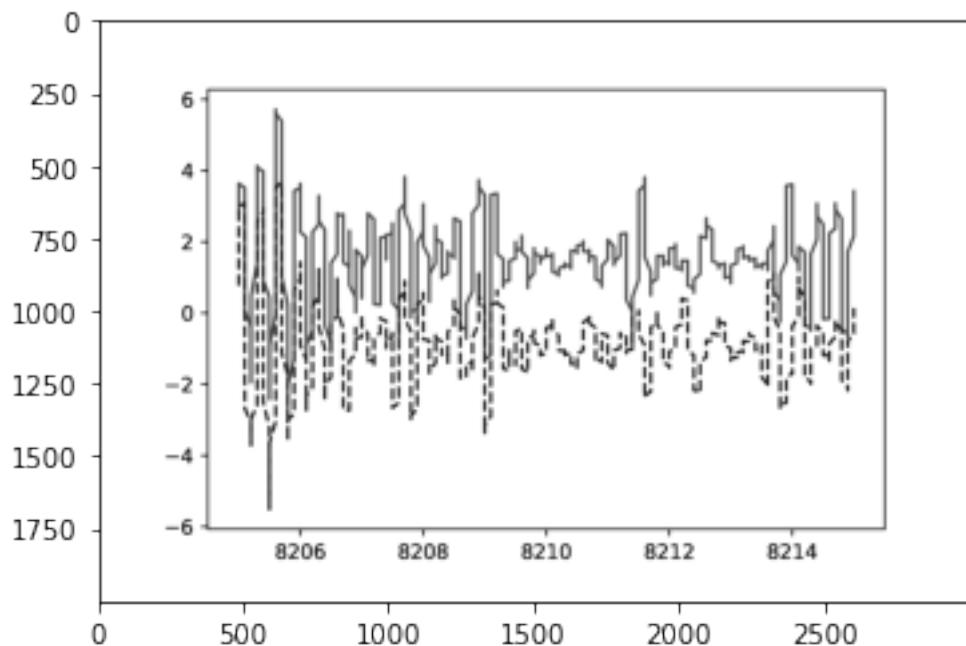
```
<class 'numpy.ndarray'>      --    77    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/39.png
39
```



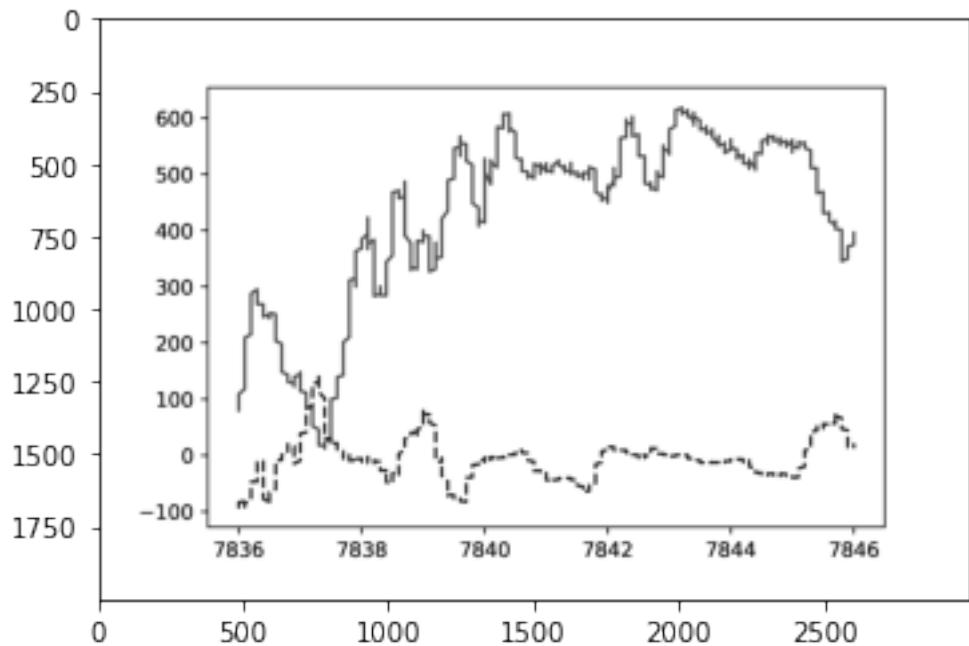
```
<class 'numpy.ndarray'> -- 78 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/97.png
97
```



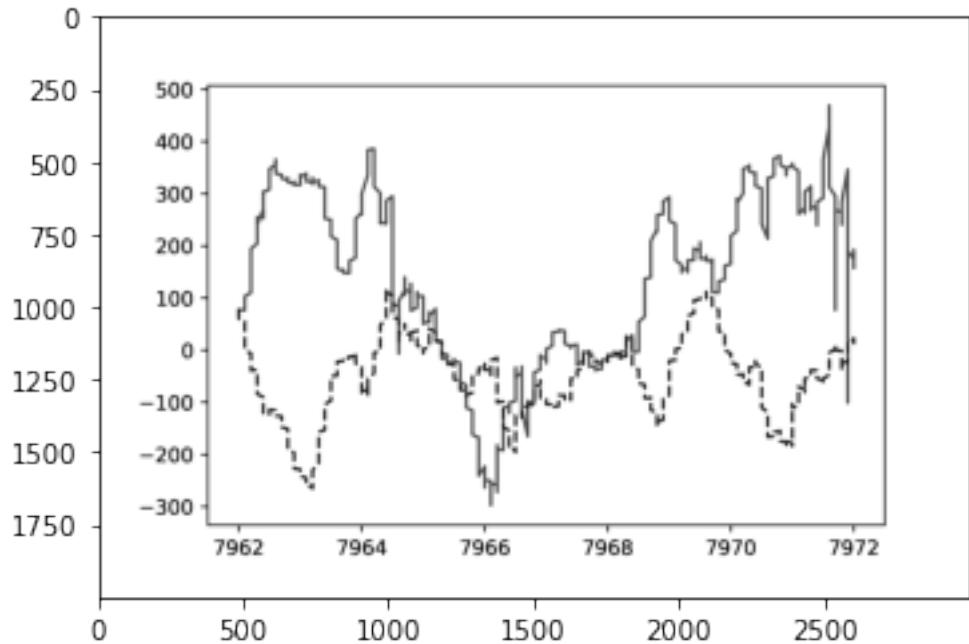
```
<class 'numpy.ndarray'> -- 79 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/60.png
60
```



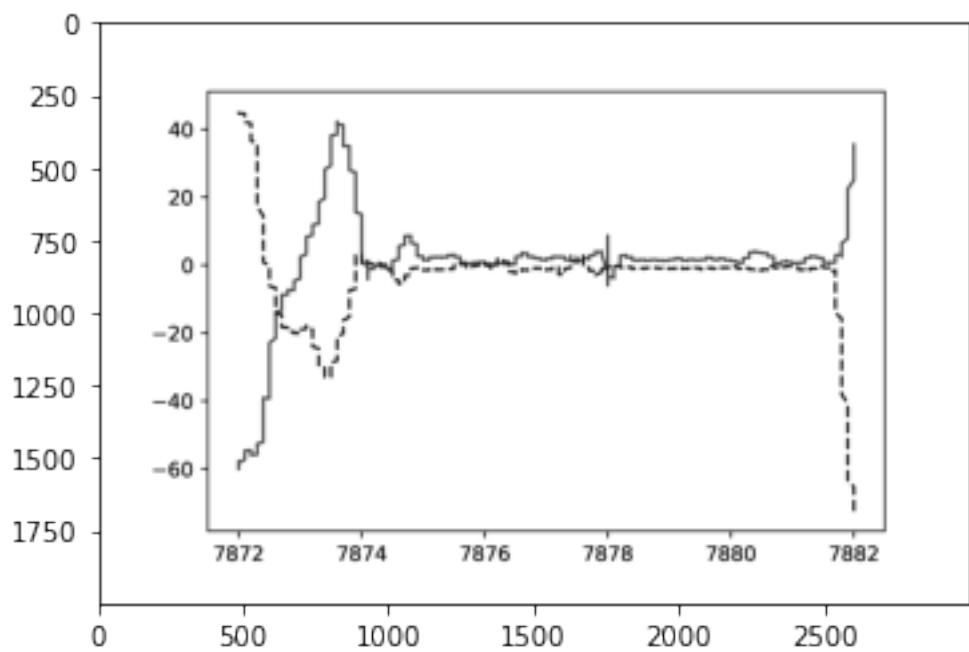
```
<class 'numpy.ndarray'>      --     80    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/19.png
19
```



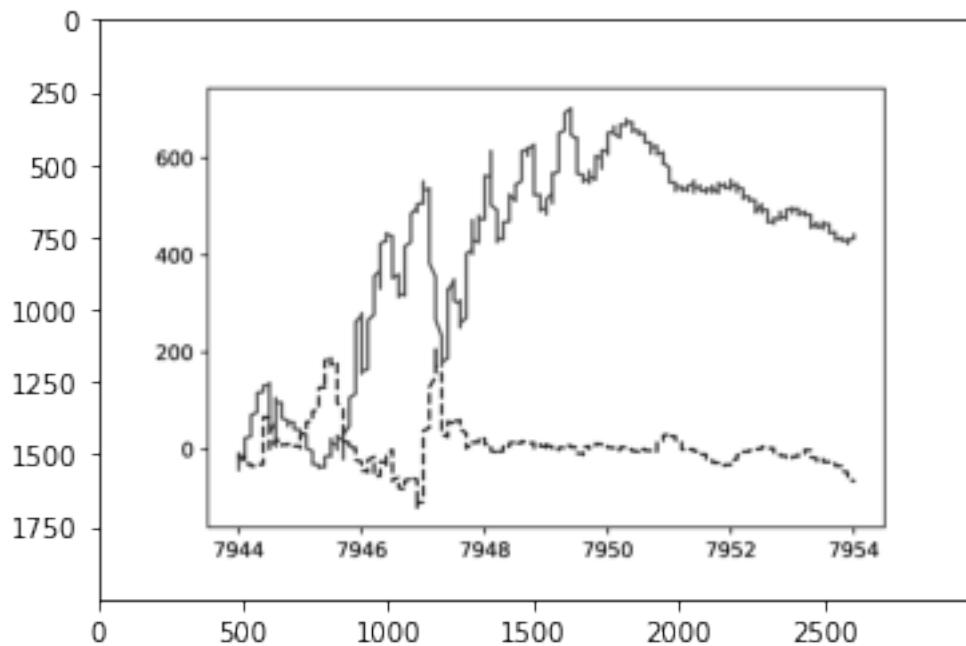
```
<class 'numpy.ndarray'>      --     81    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/33.png
33
```



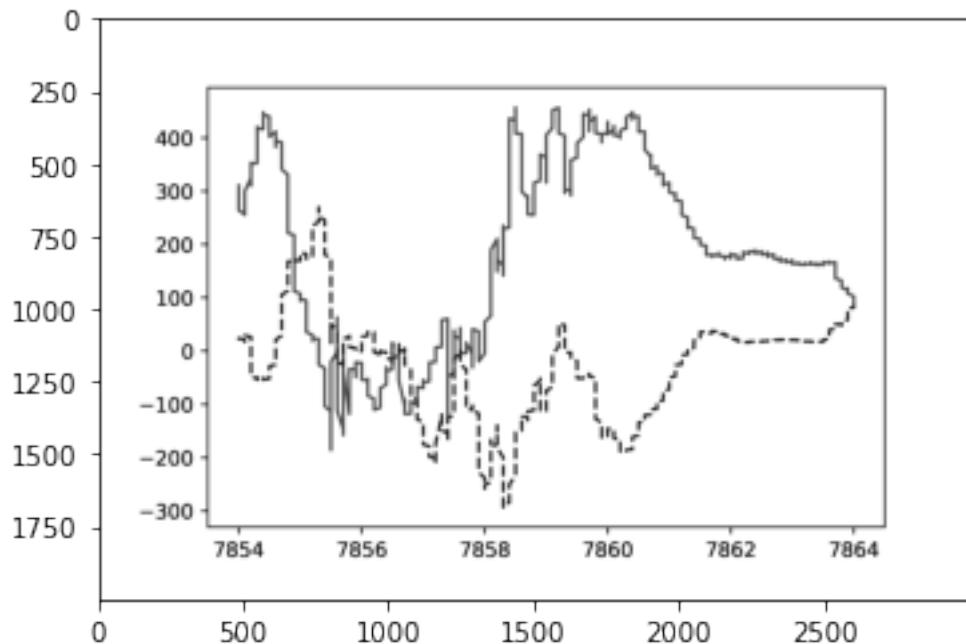
```
<class 'numpy.ndarray'>      --     82    --
/daten/wheels/notebooks/Alex/PlotImgFolder/Test/23.png
23
```



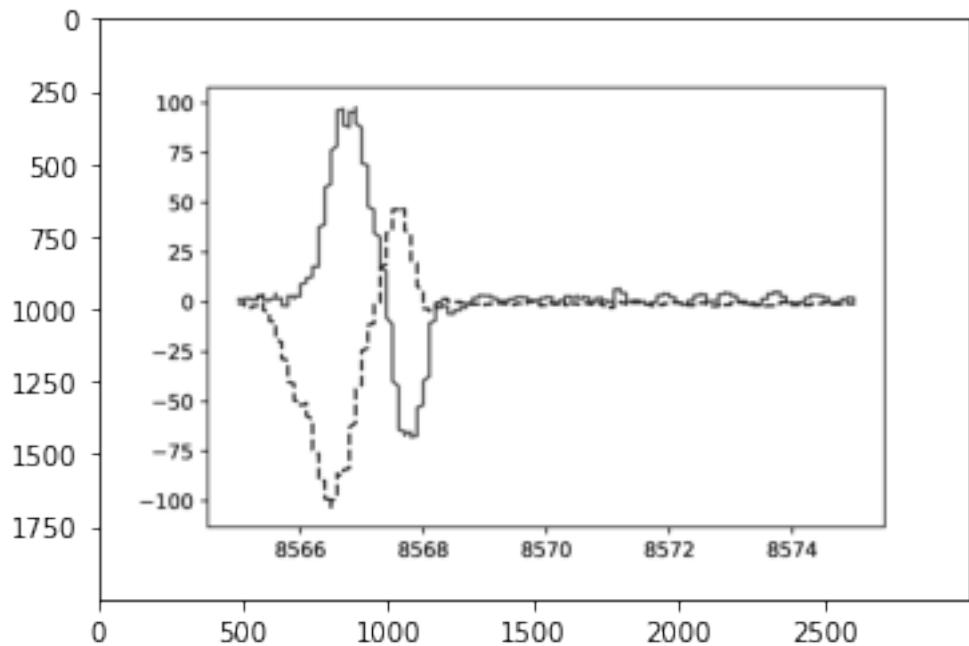
```
<class 'numpy.ndarray'> -- 83 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/31.png
31
```



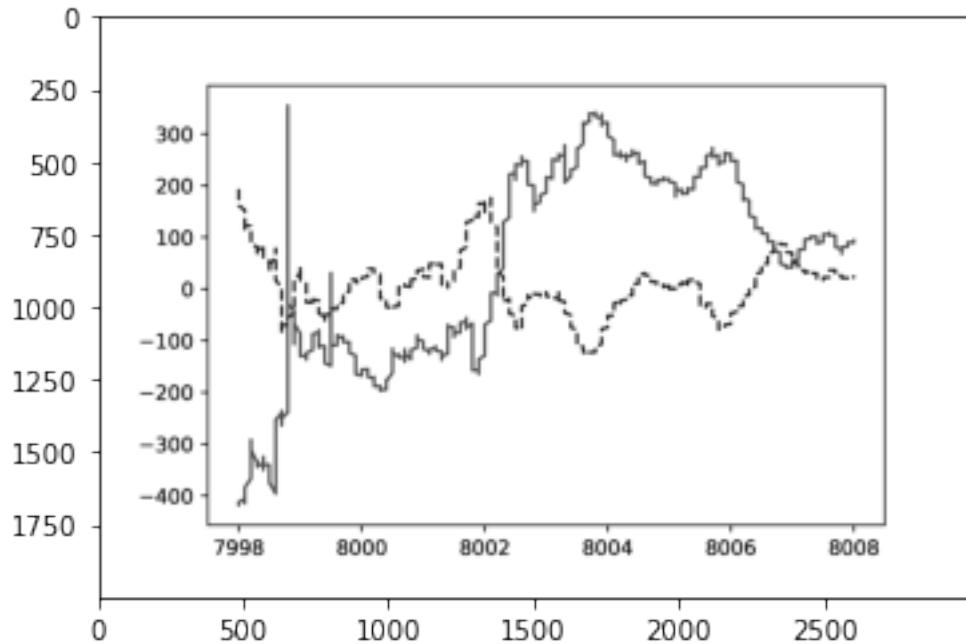
```
<class 'numpy.ndarray'> -- 84 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/21.png
21
```



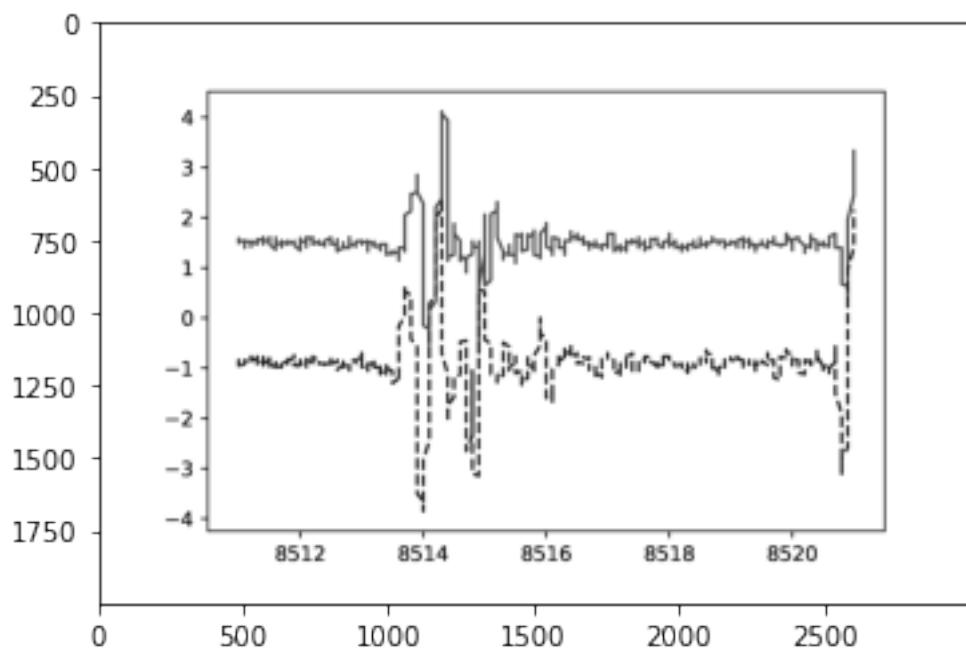
```
<class 'numpy.ndarray'>      --     85    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/100.png
100
```



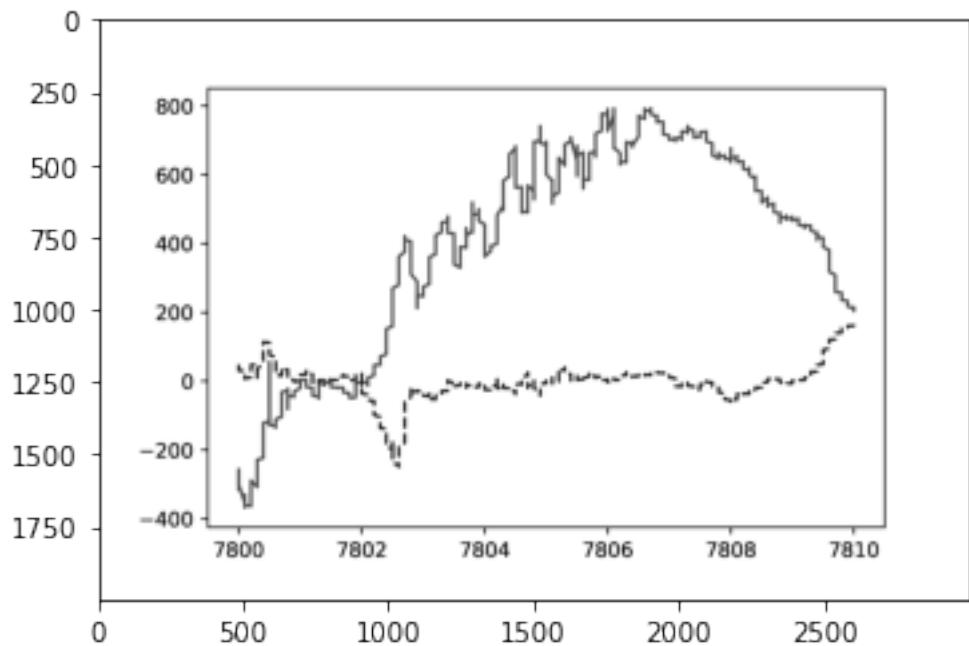
```
<class 'numpy.ndarray'>      --     86    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/37.png
37
```



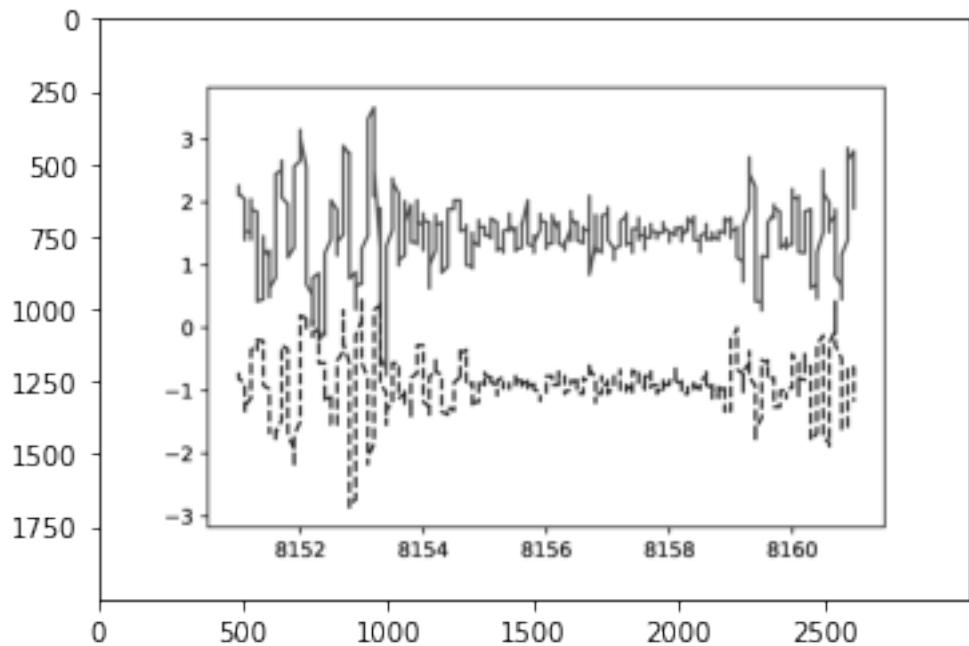
```
<class 'numpy.ndarray'>      --     87    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/94.png
94
```



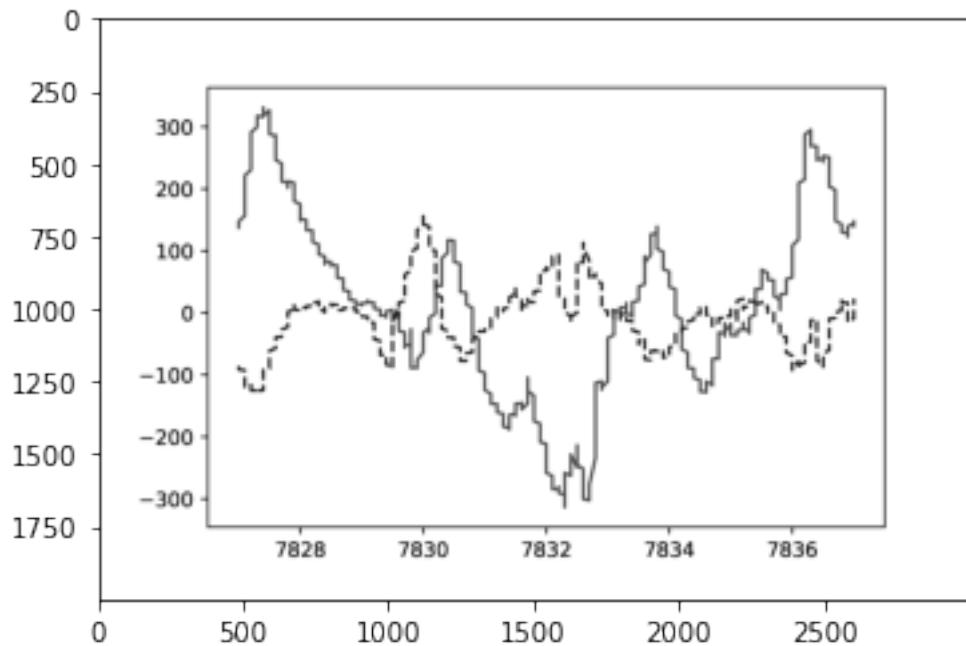
```
<class 'numpy.ndarray'> -- 88 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/15.png
15
```



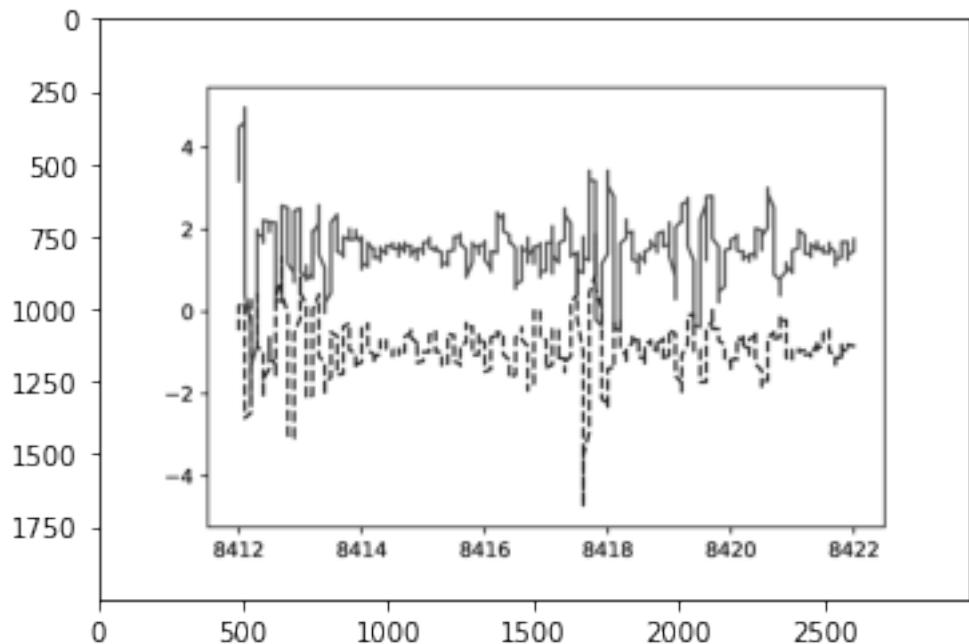
```
<class 'numpy.ndarray'> -- 89 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/54.png
54
```



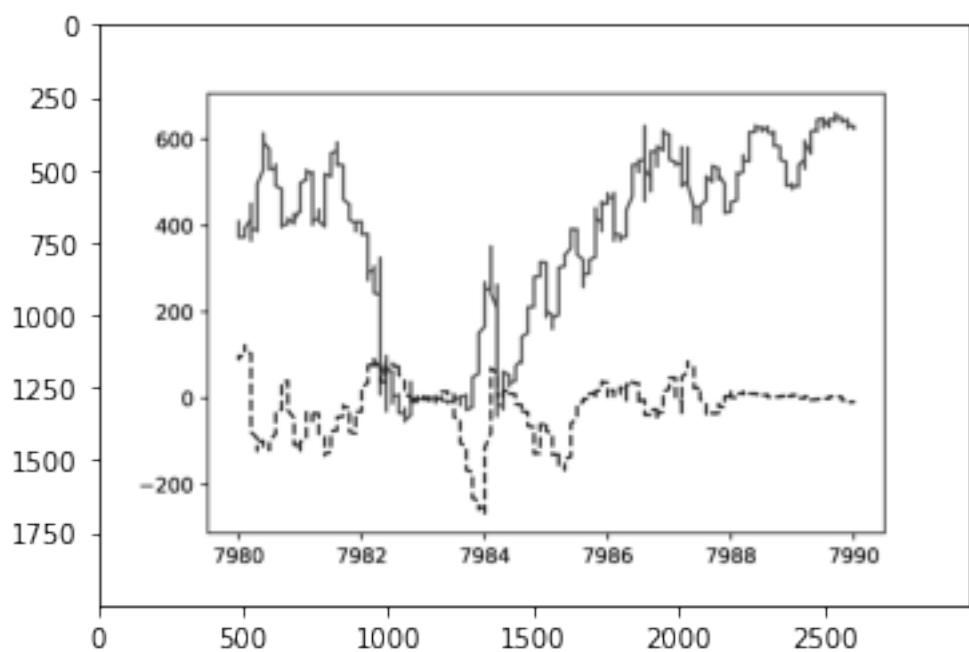
```
<class 'numpy.ndarray'>      --    90    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/18.png
18
```



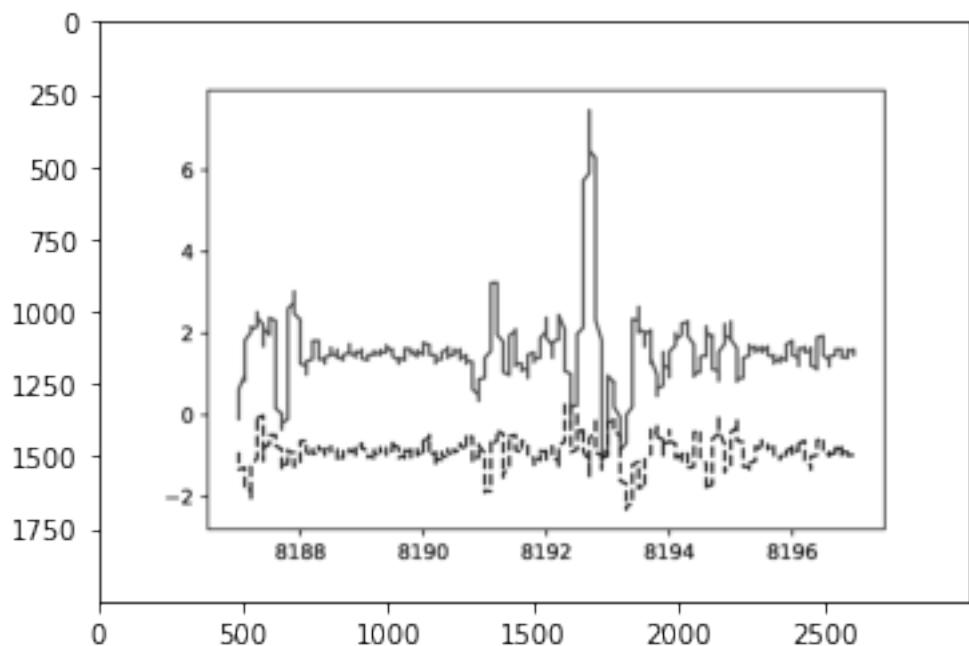
```
<class 'numpy.ndarray'>      --    91    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/83.png
83
```



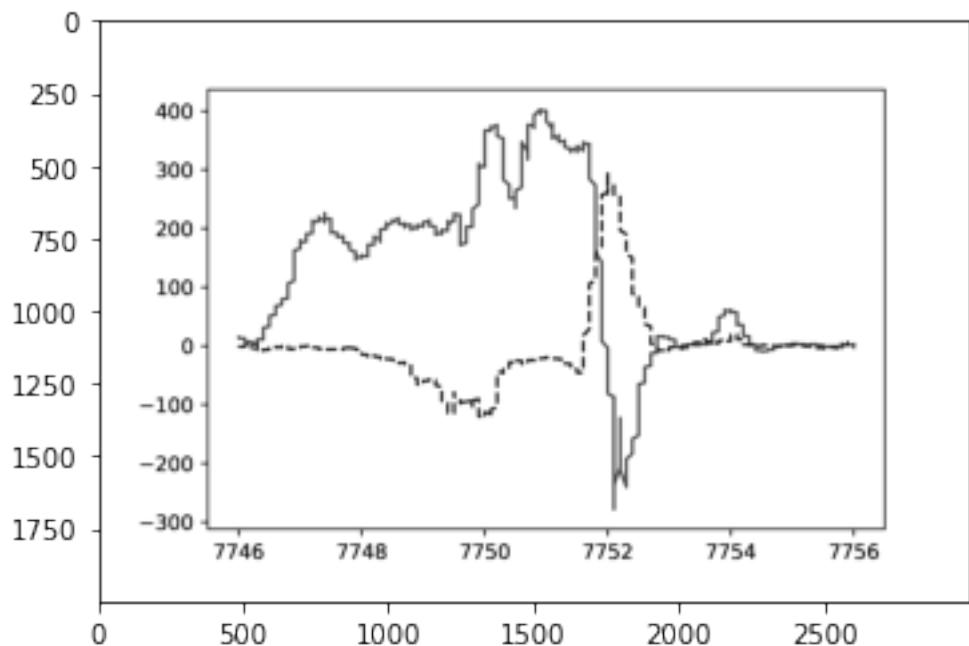
```
<class 'numpy.ndarray'>      --      92      --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/35.png
35
```



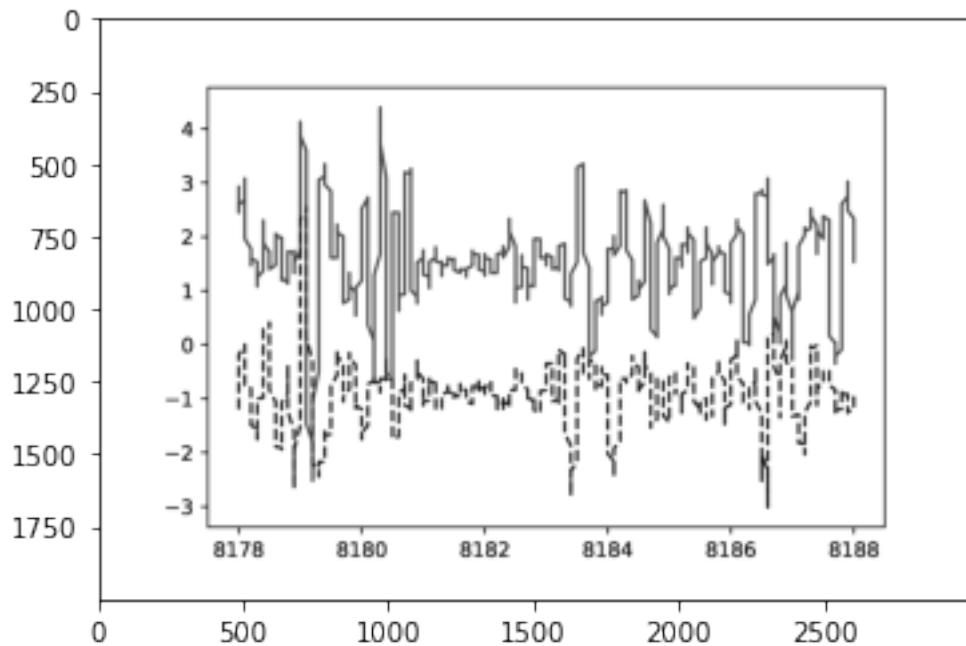
```
<class 'numpy.ndarray'> -- 93 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/58.png
58
```



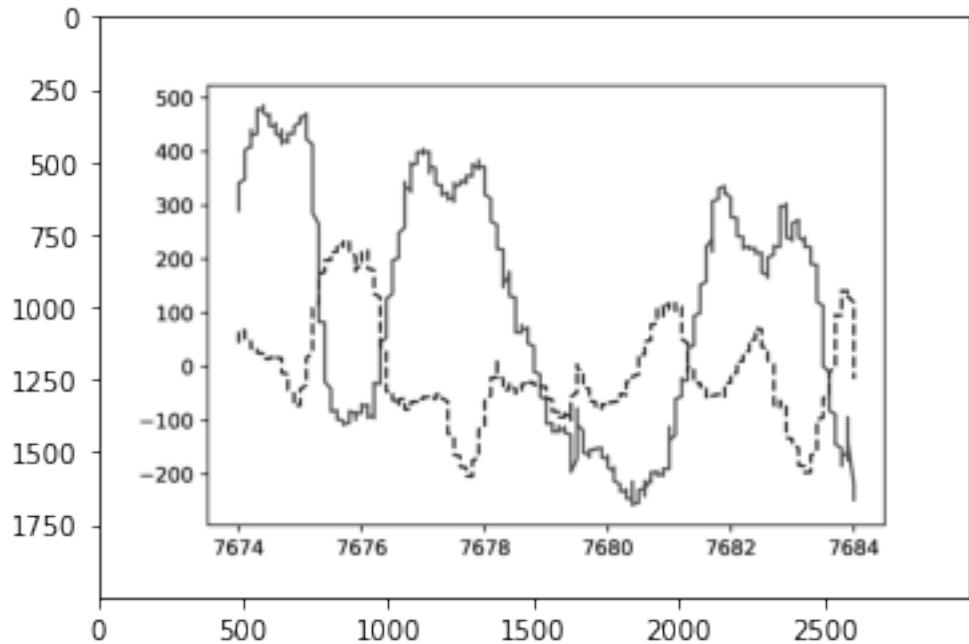
```
<class 'numpy.ndarray'> -- 94 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/9.png
9
```



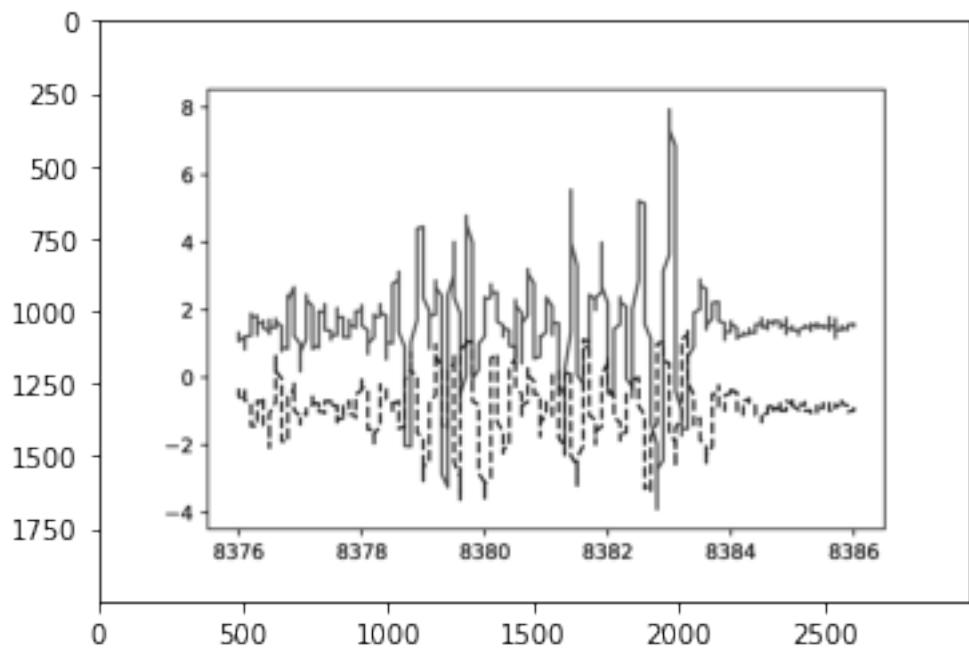
```
<class 'numpy.ndarray'>      --    95    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/57.png
57
```



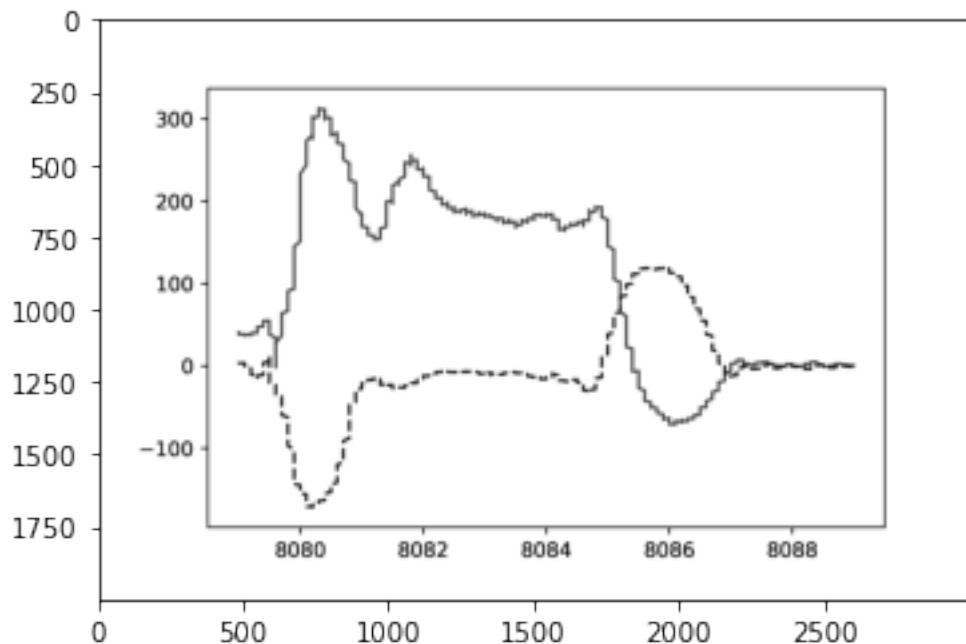
```
<class 'numpy.ndarray'>      --    96    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/1.png
1
```



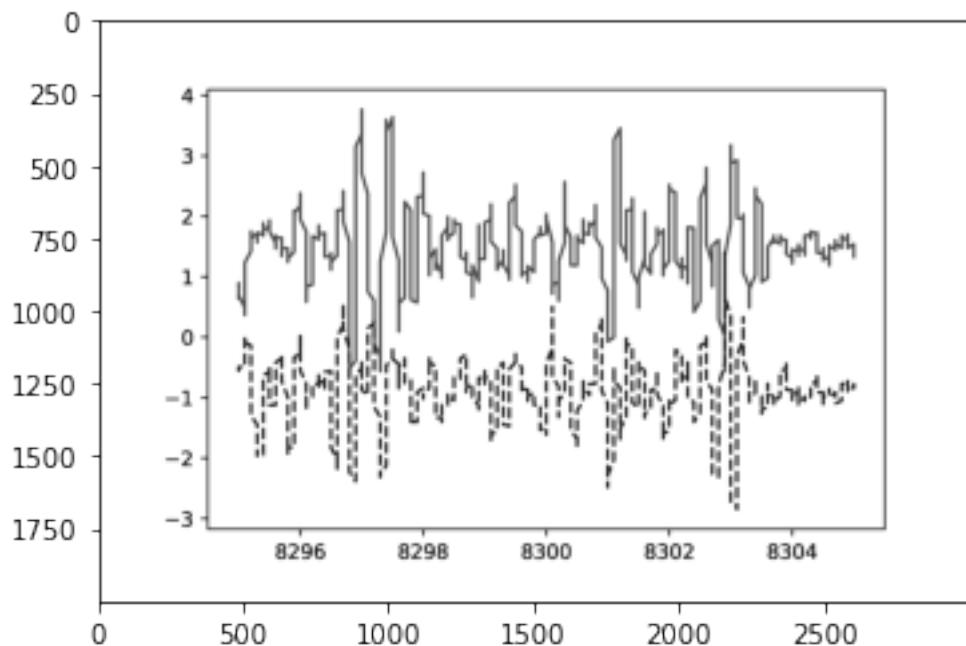
```
<class 'numpy.ndarray'>      --    97    --
/daten/wheels/notebooks/Alex/PlotImgFolder/Test/79.png
79
```



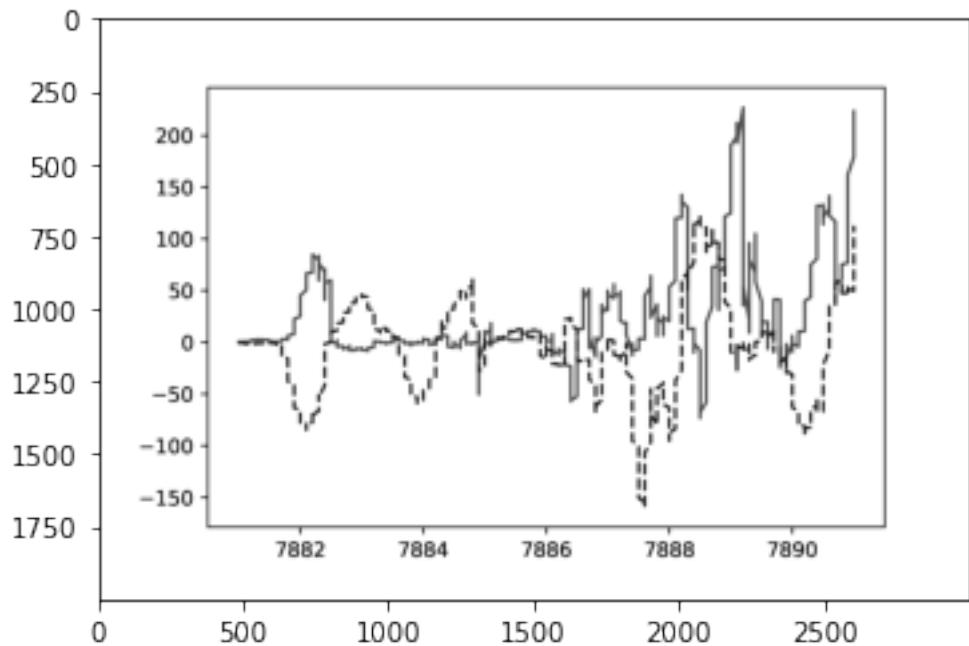
```
<class 'numpy.ndarray'> -- 98 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/46.png
46
```



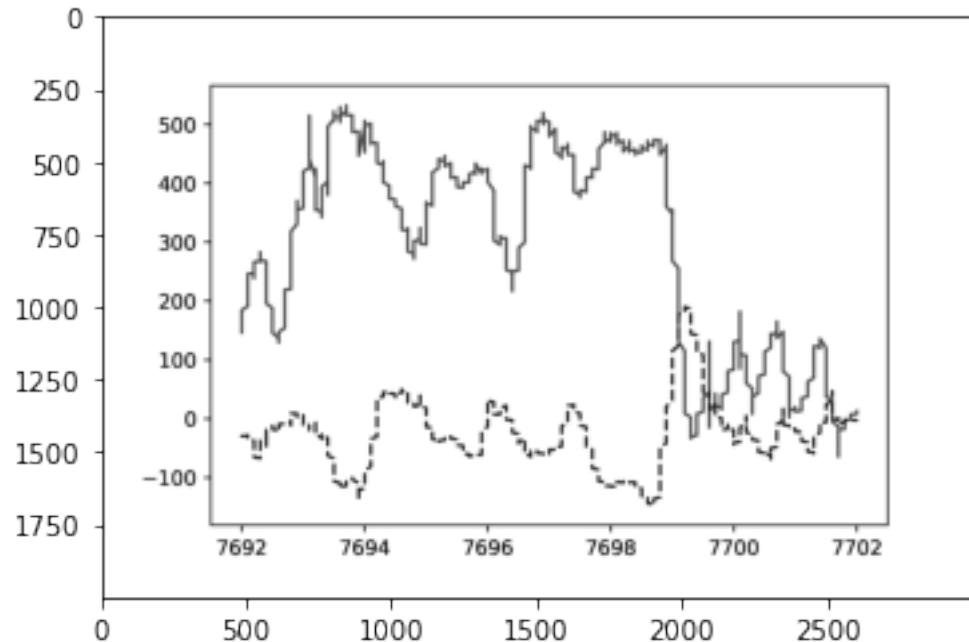
```
<class 'numpy.ndarray'> -- 99 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/70.png
70
```



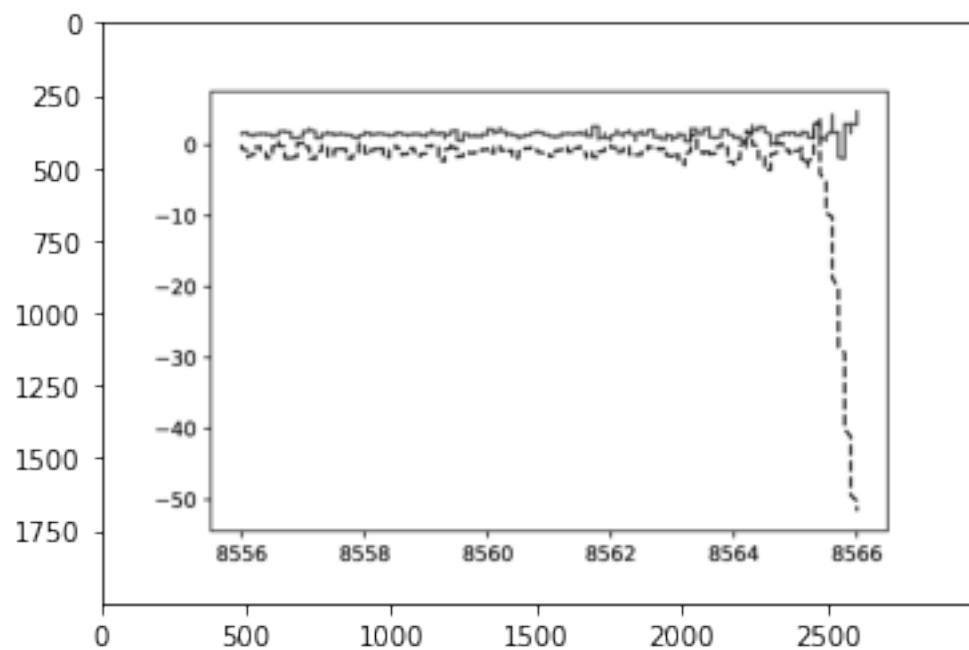
```
<class 'numpy.ndarray'>      --    100    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/24.png
24
```



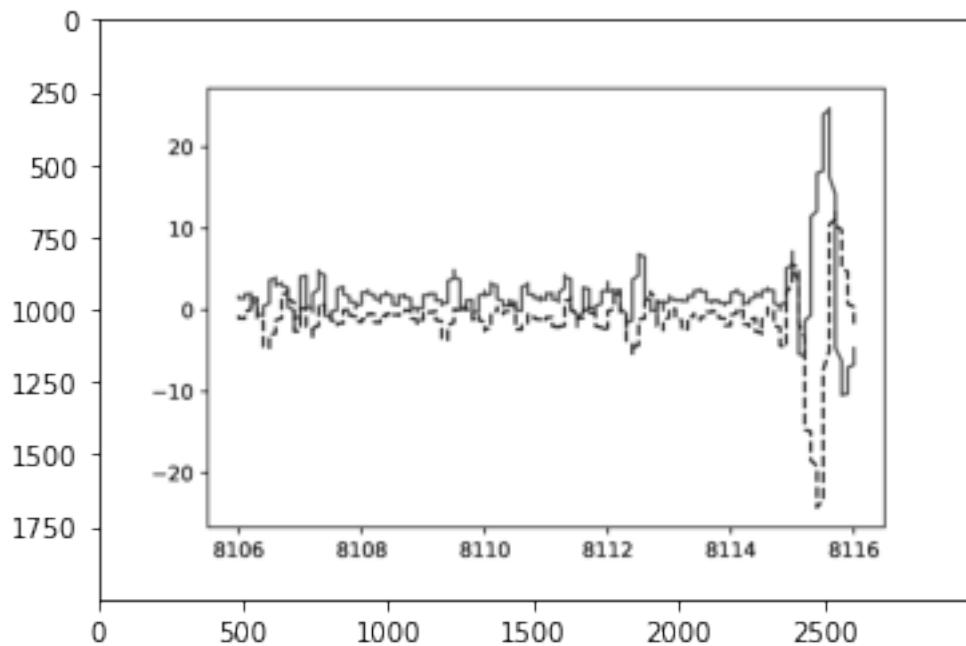
```
<class 'numpy.ndarray'>      --    101    --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/3.png
3
```



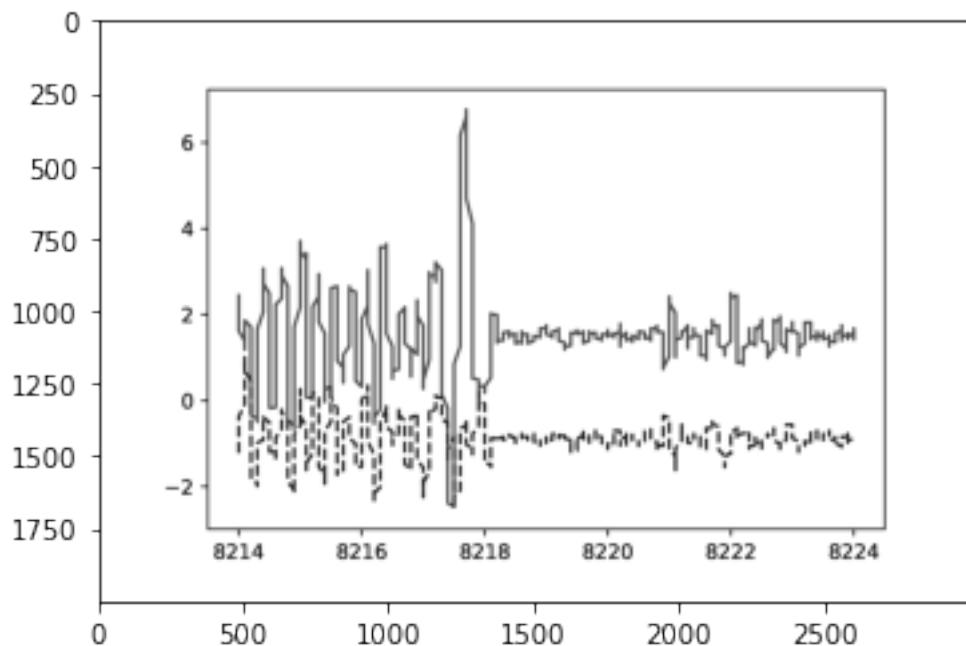
```
<class 'numpy.ndarray'>      --   102   --
/daten/wheels/notebooks/Alex/PlotImgFolder/Test/99.png
99
```



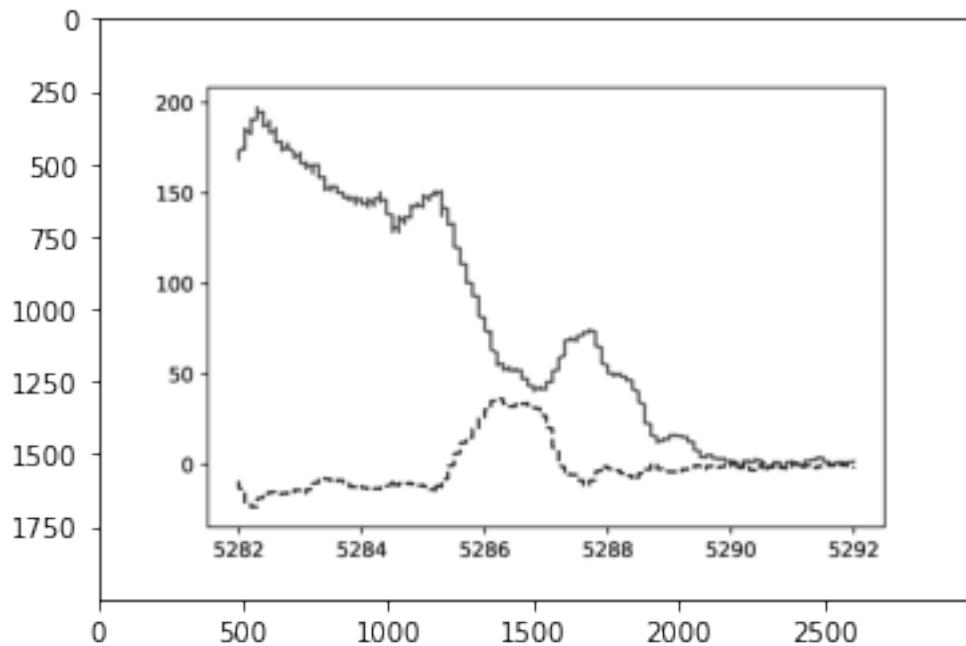
```
<class 'numpy.ndarray'> -- 103 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/49.png
49
```



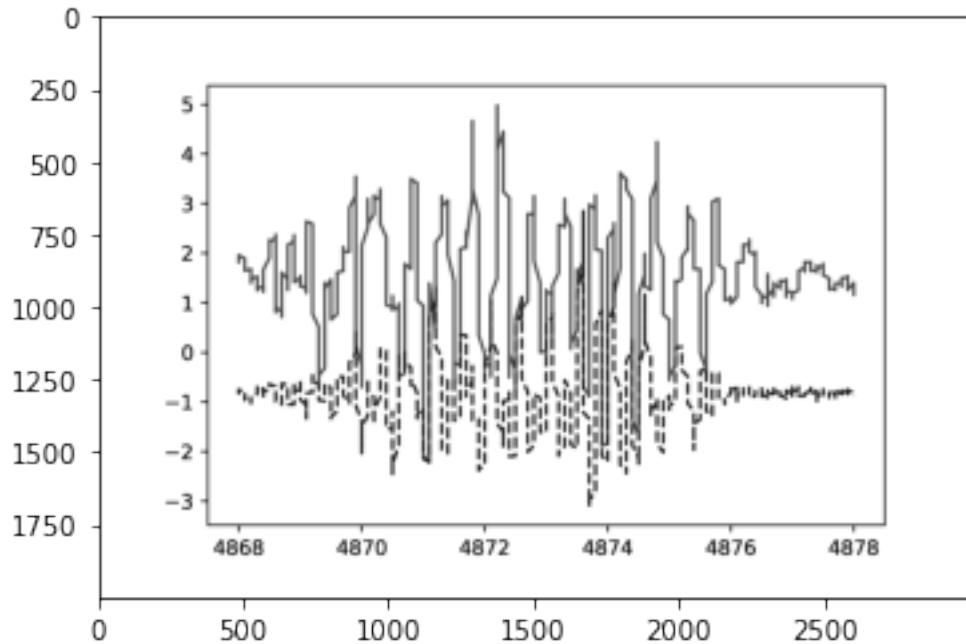
```
<class 'numpy.ndarray'> -- 104 --
/data/wheels/notebooks/Alex/PlotImgFolder/Test/61.png
61
```



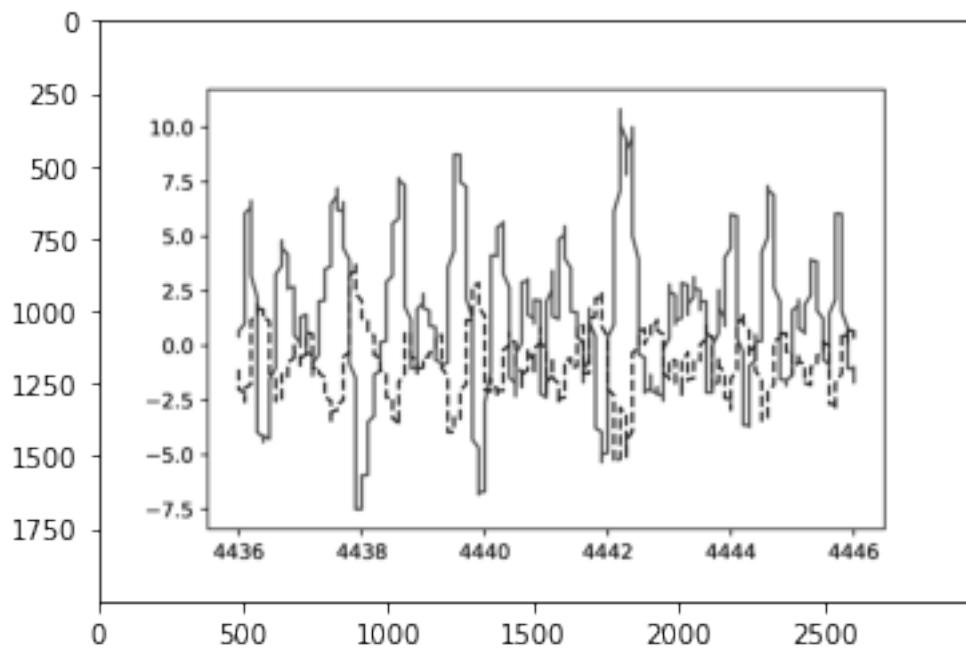
```
<class 'numpy.ndarray'>      --    105    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/189.png
189
```



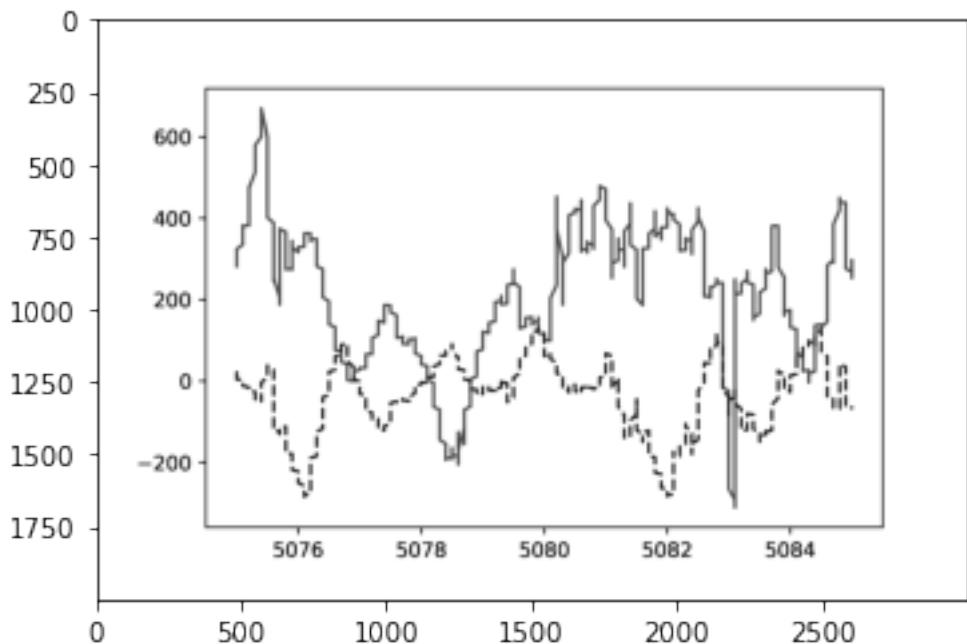
```
<class 'numpy.ndarray'>      --    106    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/143.png
143
```



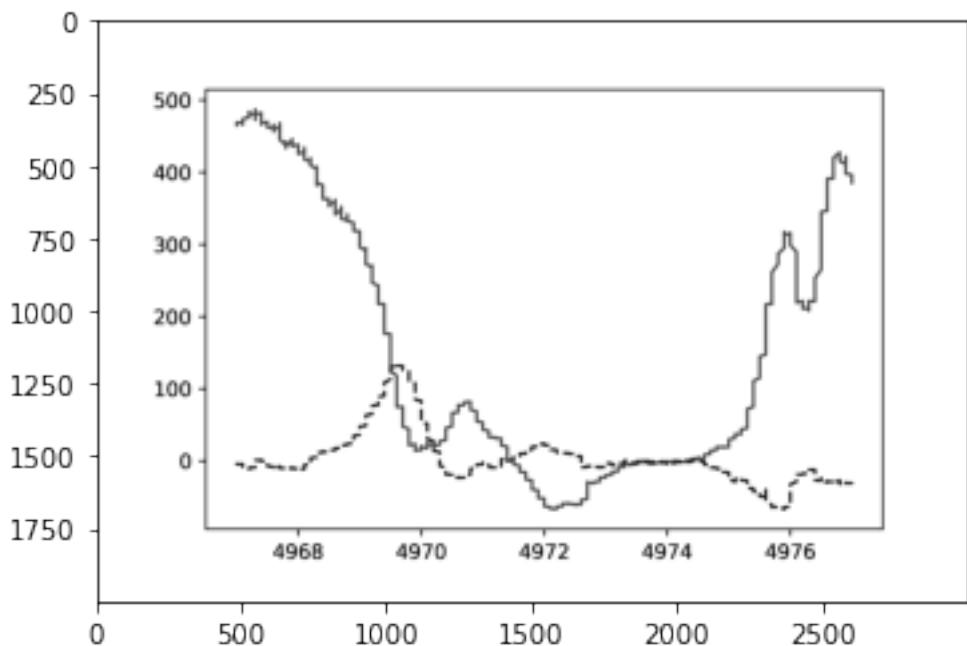
```
<class 'numpy.ndarray'>      --    107    --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/95.png
95
```



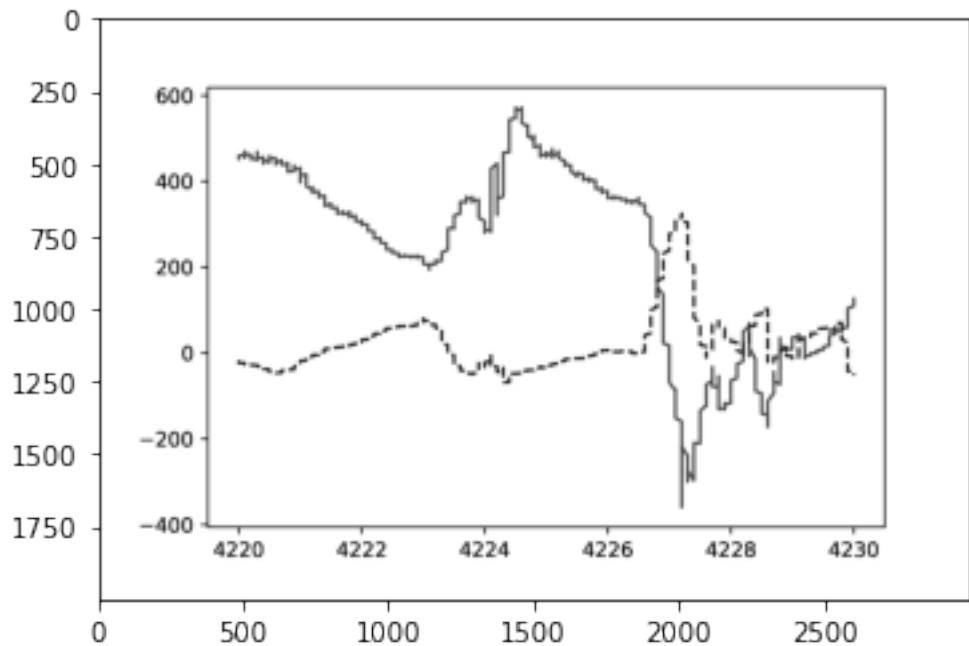
```
<class 'numpy.ndarray'> -- 108 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/166.png
166
```



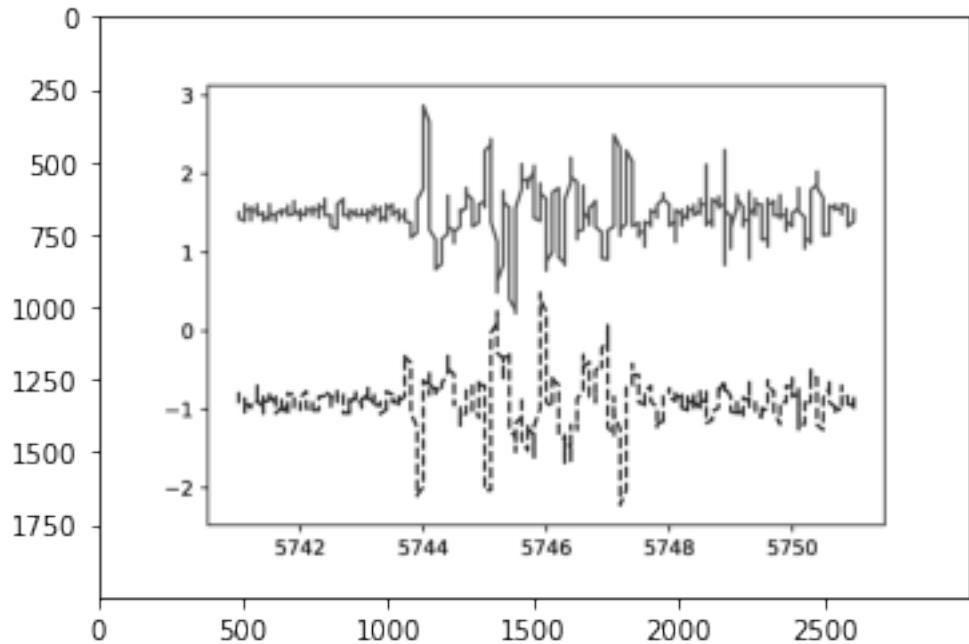
```
<class 'numpy.ndarray'> -- 109 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/154.png
154
```



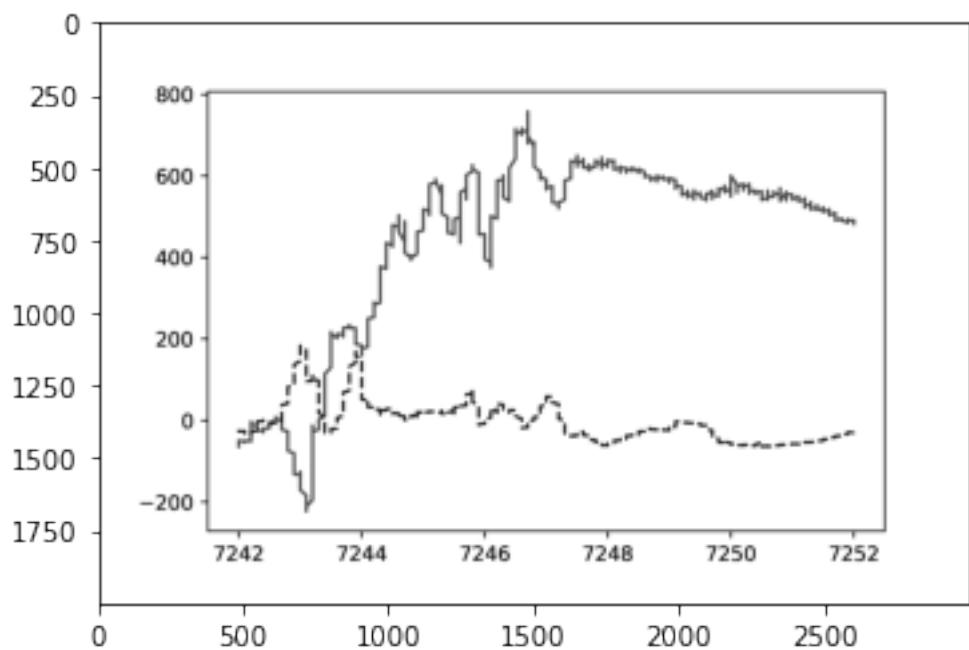
```
<class 'numpy.ndarray'>      --    110    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/71.png
71
```



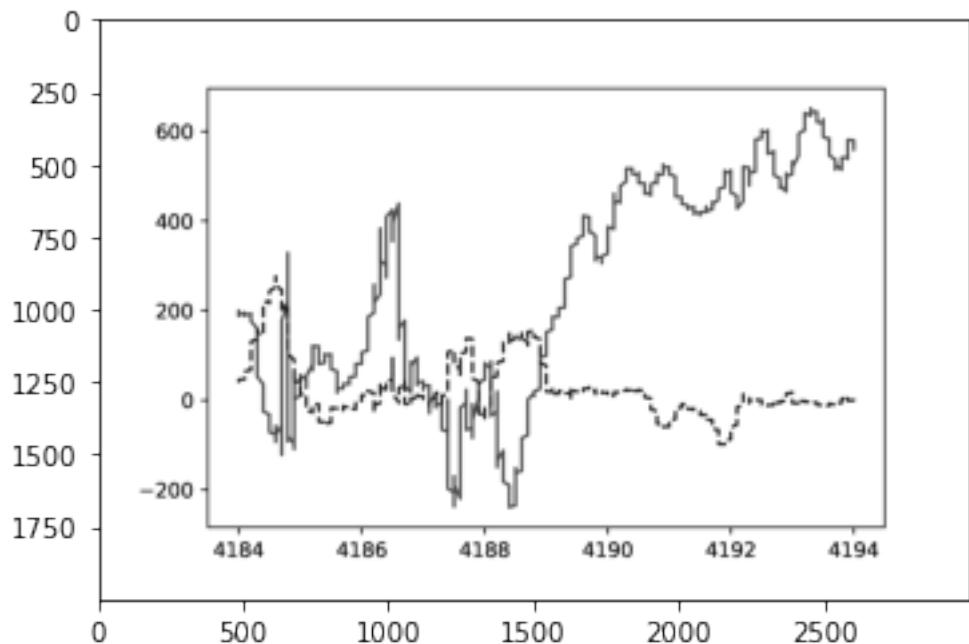
```
<class 'numpy.ndarray'>      --    111    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/240.png
240
```



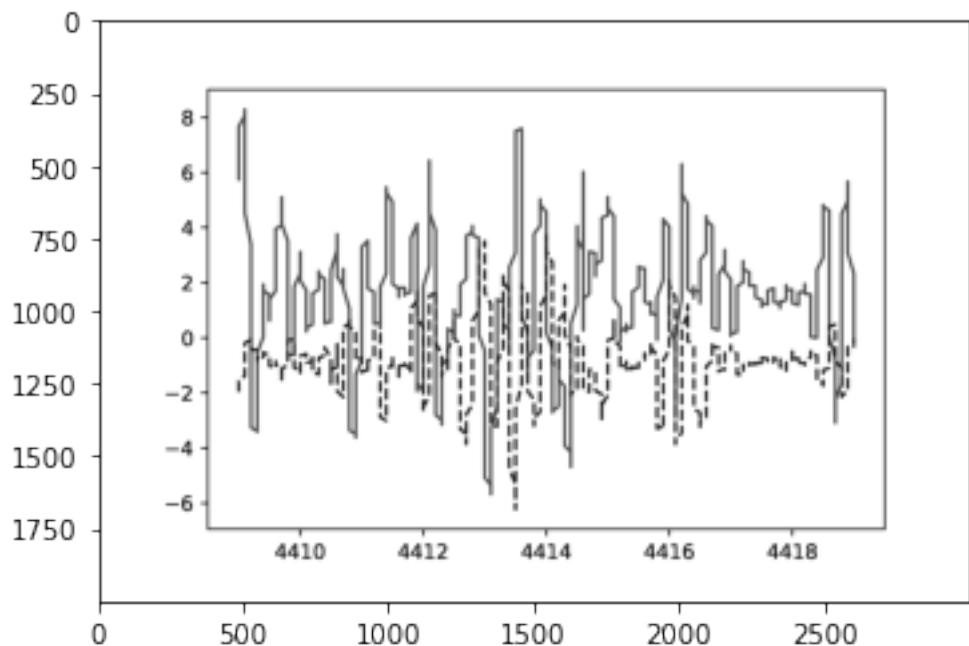
```
<class 'numpy.ndarray'>      --    112    --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/352.png
352
```



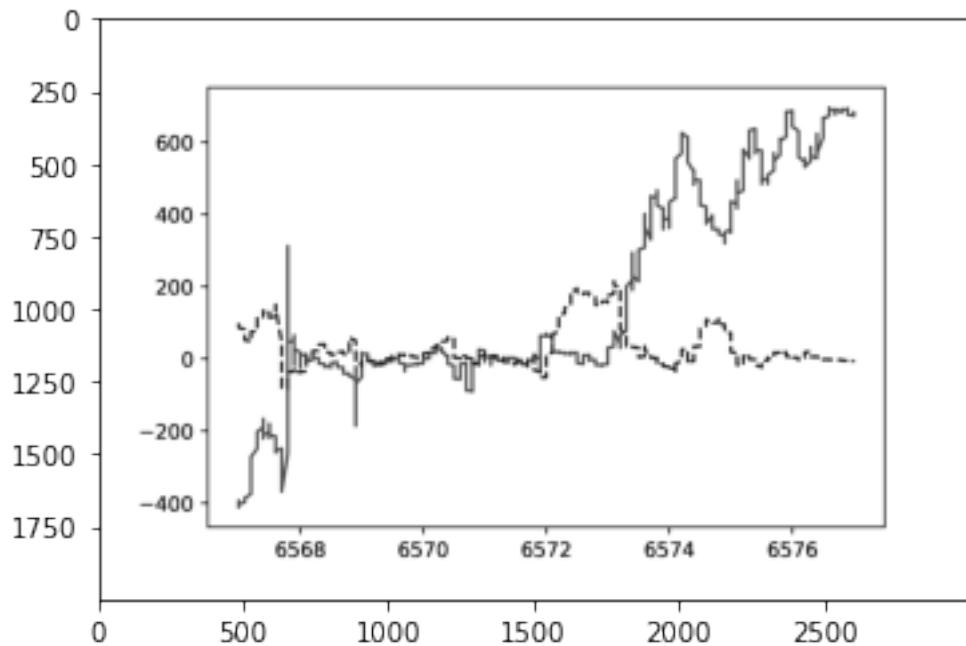
```
<class 'numpy.ndarray'> -- 113 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/67.png
67
```



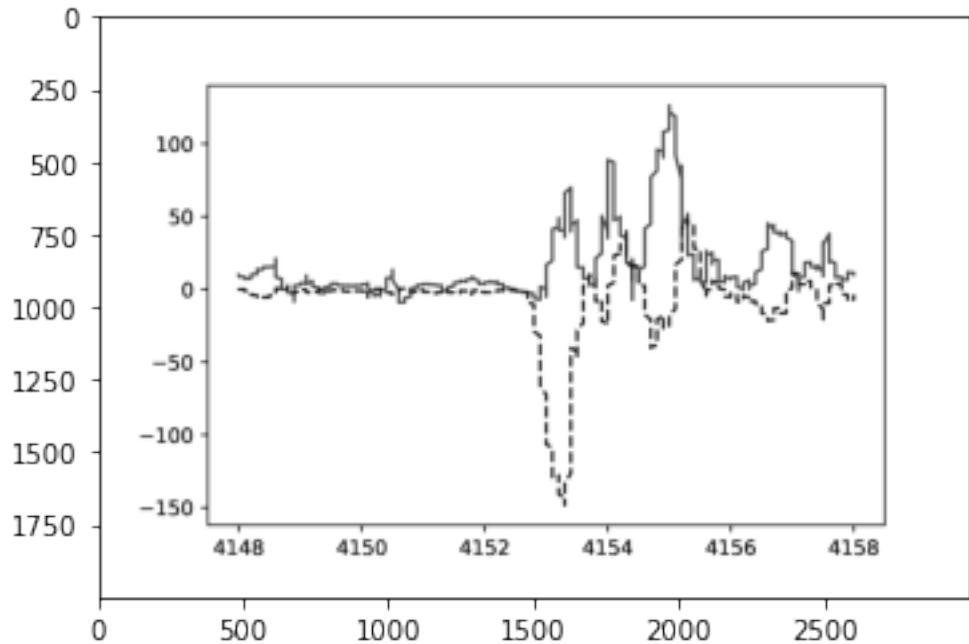
```
<class 'numpy.ndarray'> -- 114 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/92.png
92
```



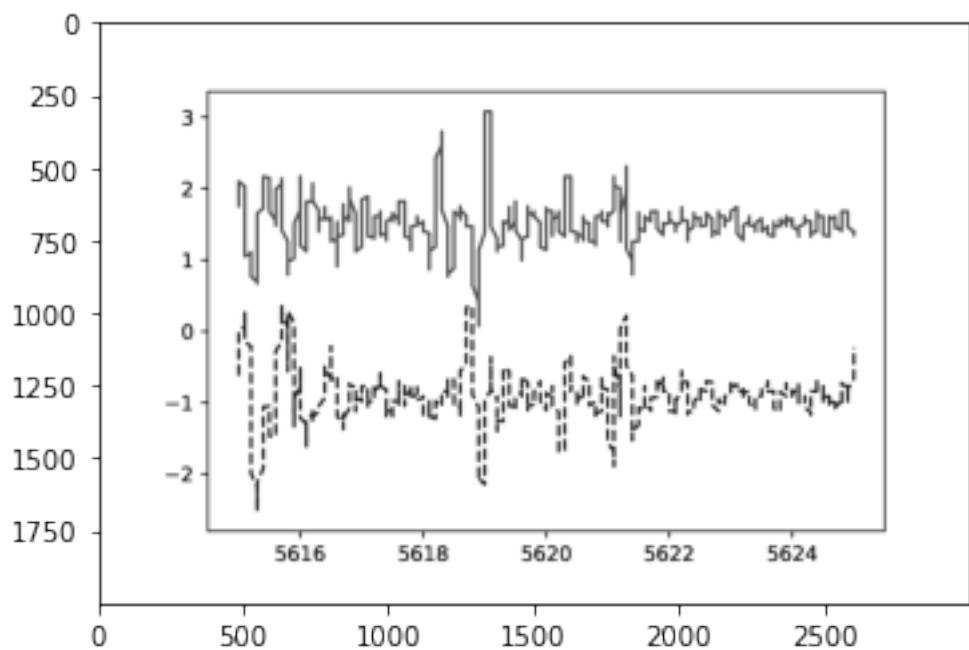
```
<class 'numpy.ndarray'>      --      115      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/277.png
277
```



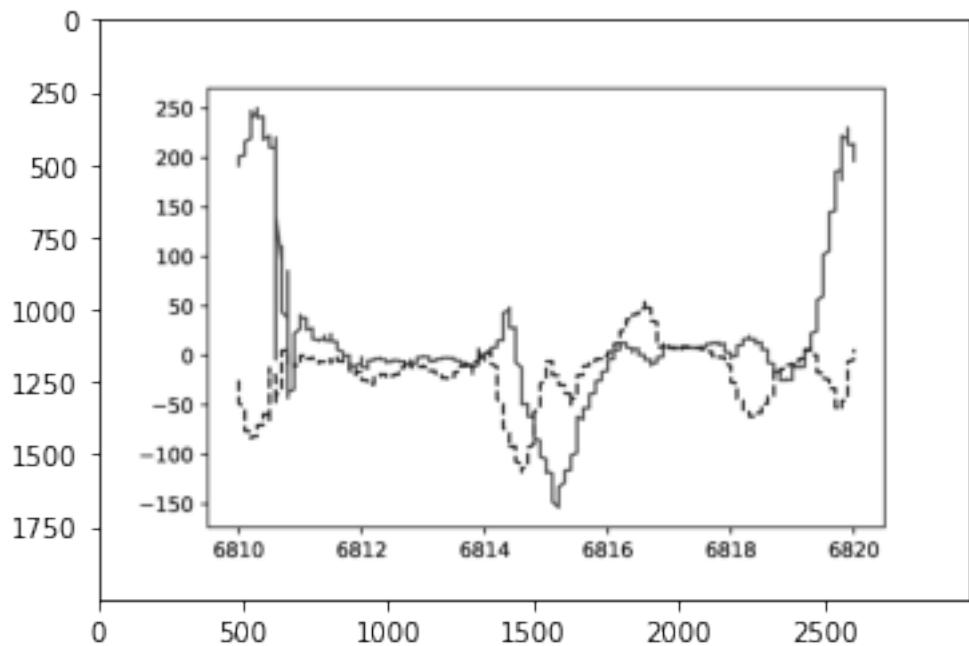
```
<class 'numpy.ndarray'>      --      116      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/63.png
63
```



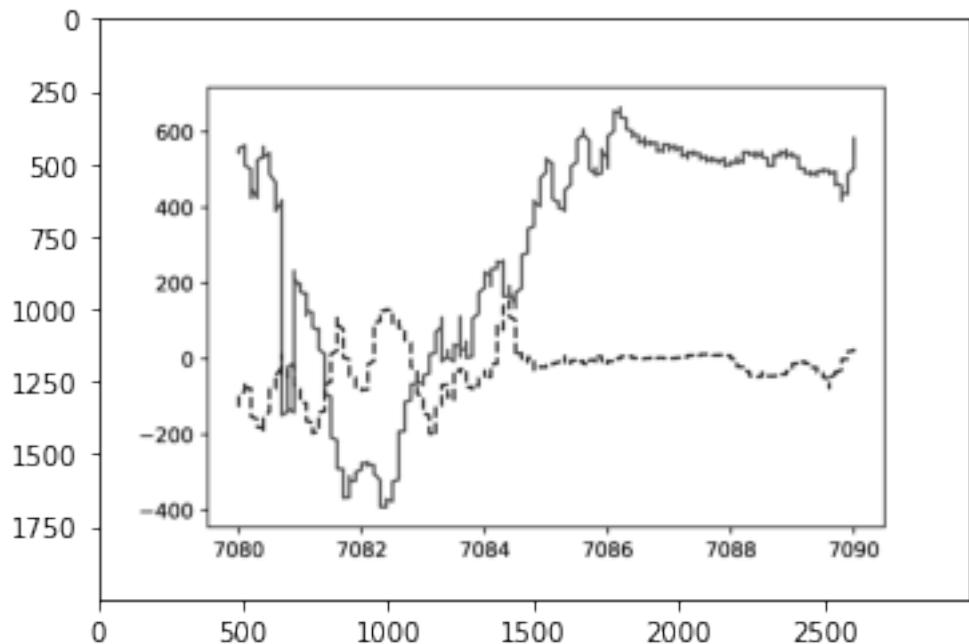
```
<class 'numpy.ndarray'>      --    117    --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/226.png
226
```



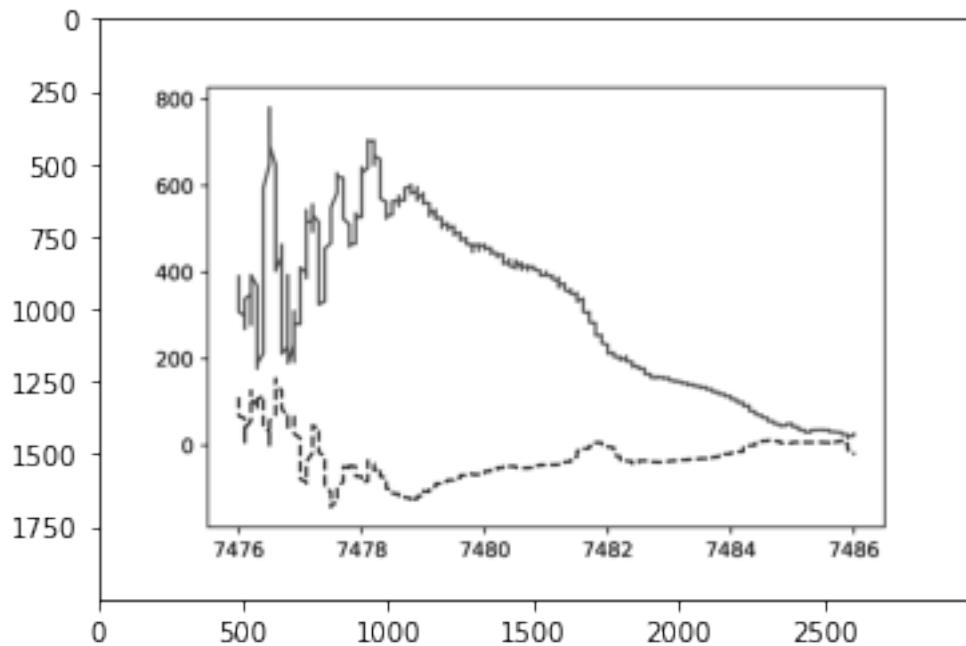
```
<class 'numpy.ndarray'> -- 118 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/304.png
304
```



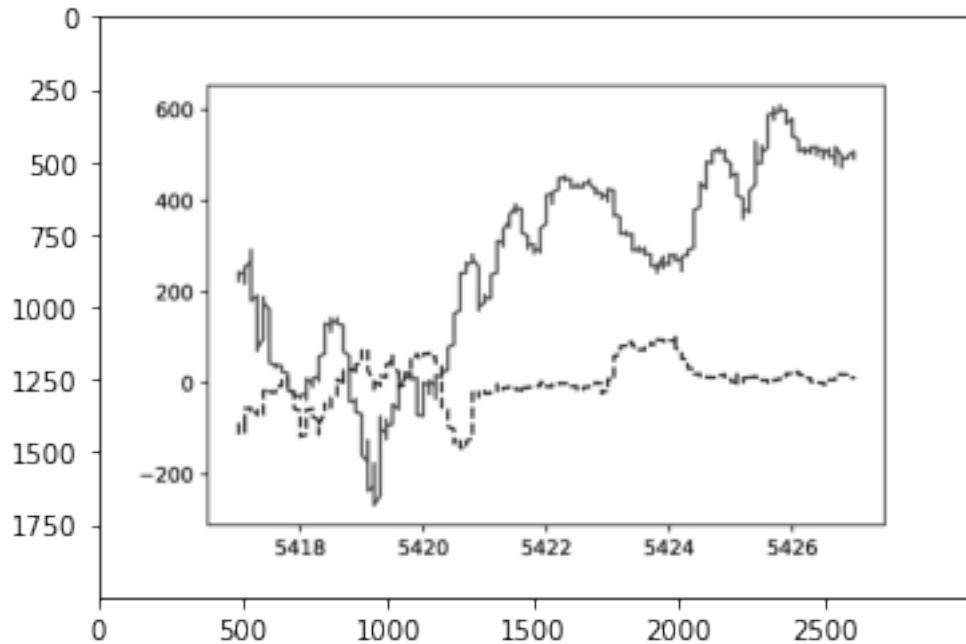
```
<class 'numpy.ndarray'> -- 119 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/334.png
334
```



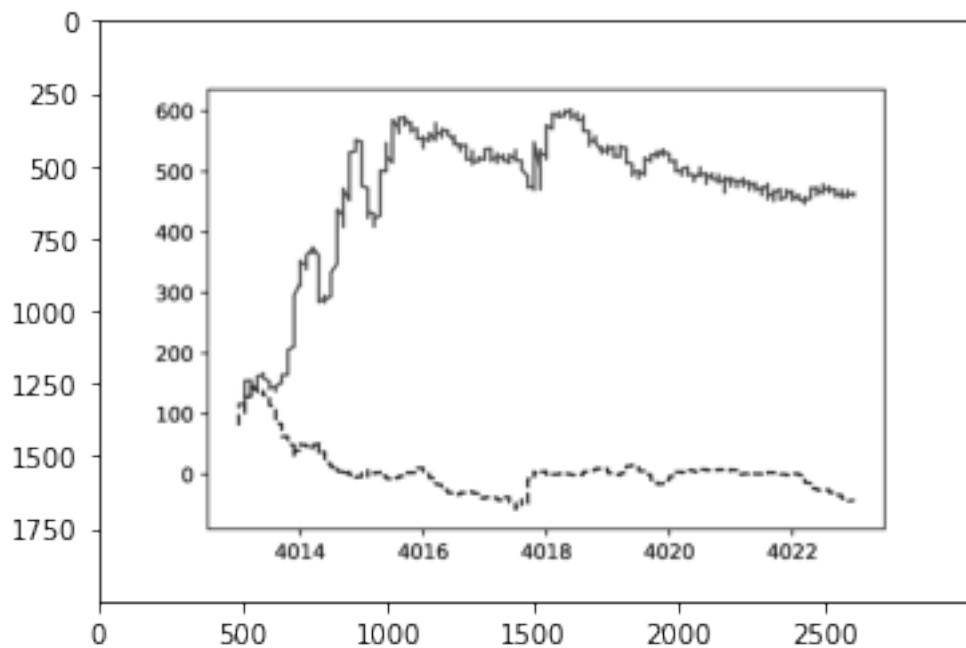
```
<class 'numpy.ndarray'>      --    120    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/378.png
378
```



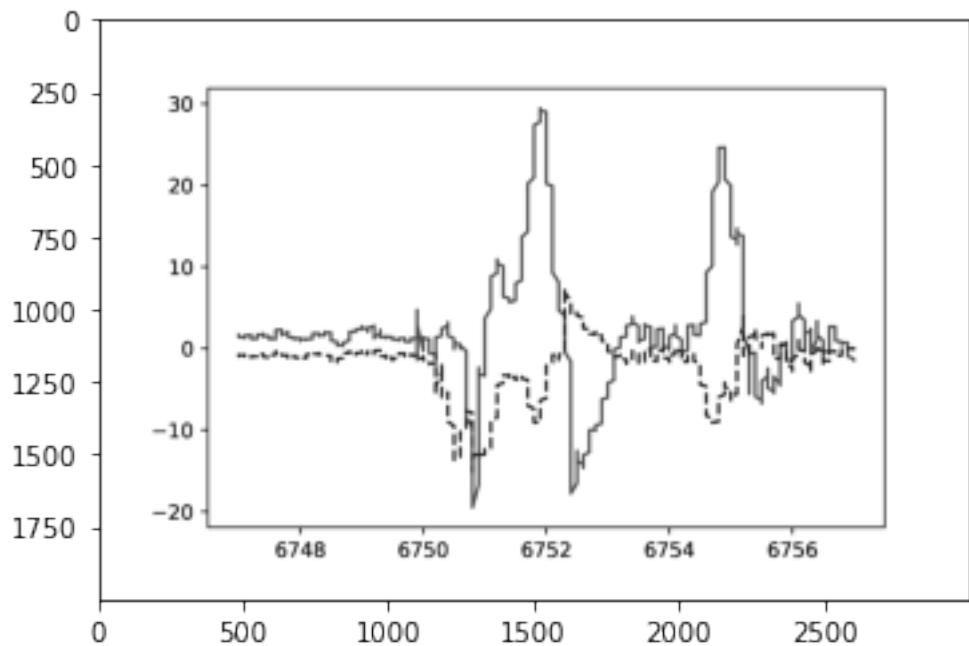
```
<class 'numpy.ndarray'>      --    121    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/204.png
204
```



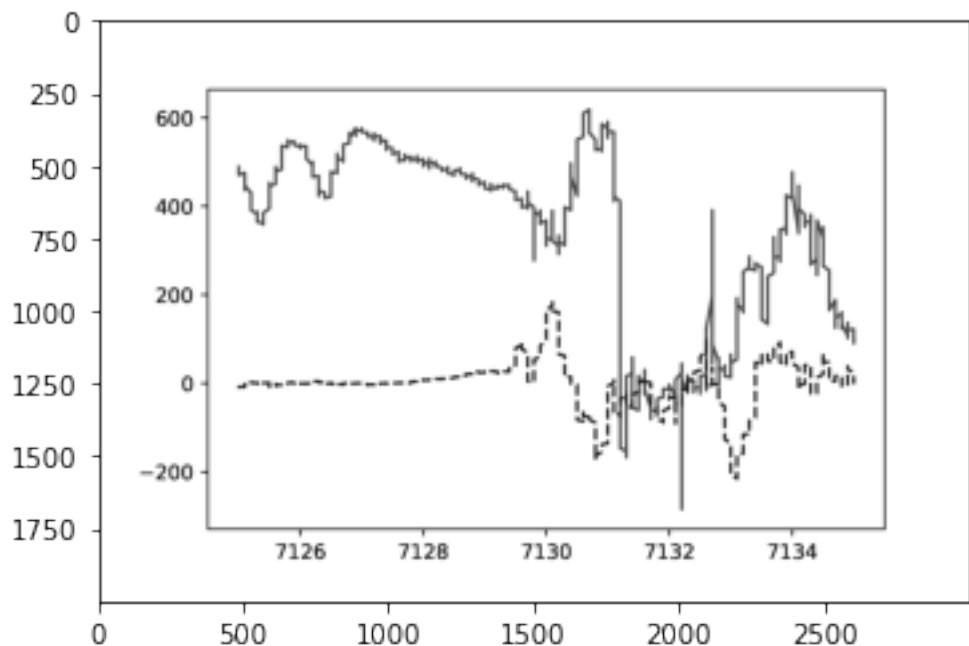
```
<class 'numpy.ndarray'>      --    122    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/48.png
48
```



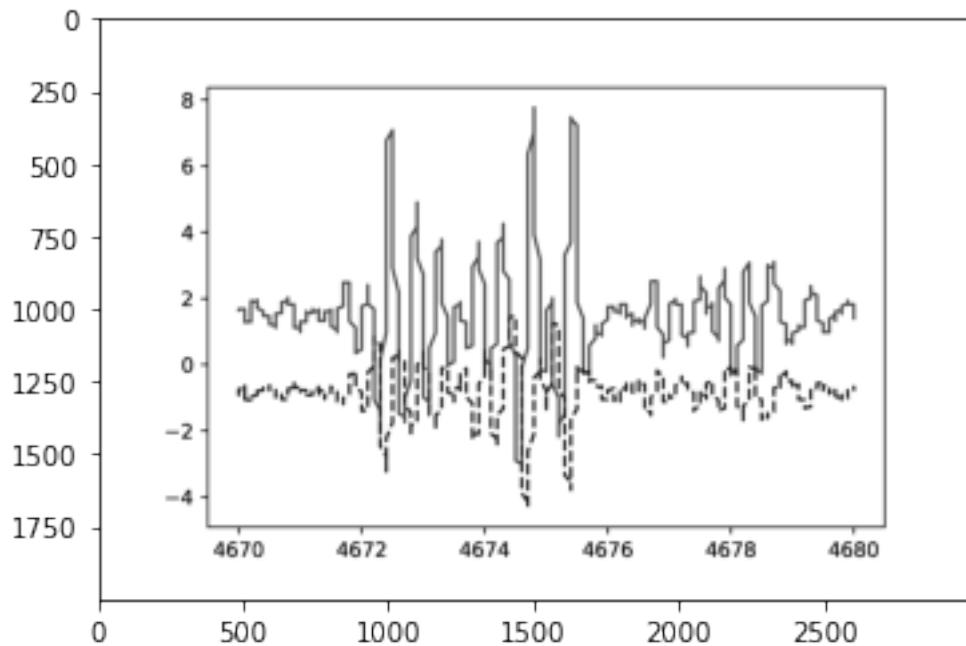
```
<class 'numpy.ndarray'> -- 123 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/297.png
297
```



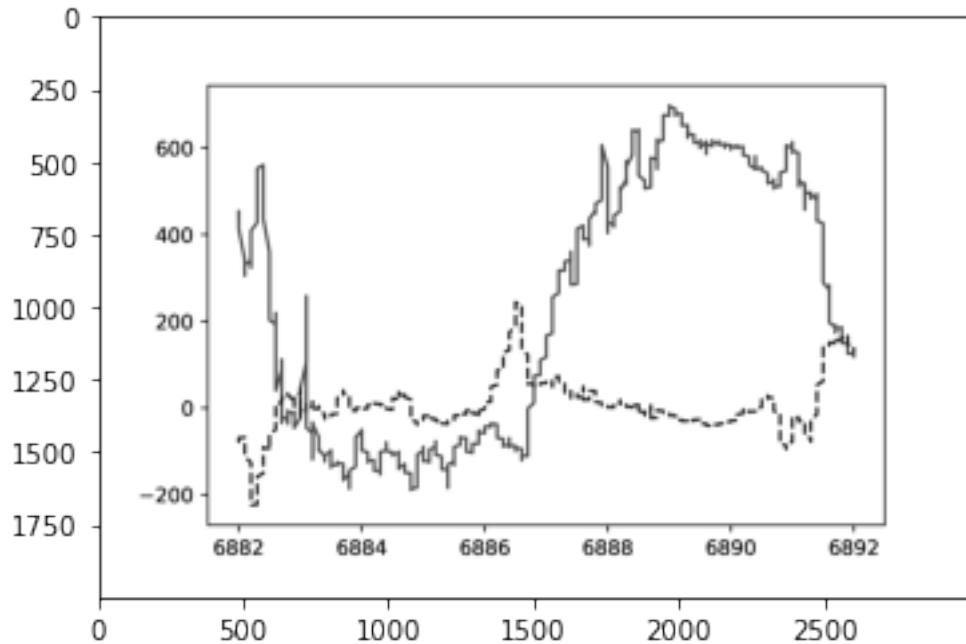
```
<class 'numpy.ndarray'> -- 124 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/339.png
339
```



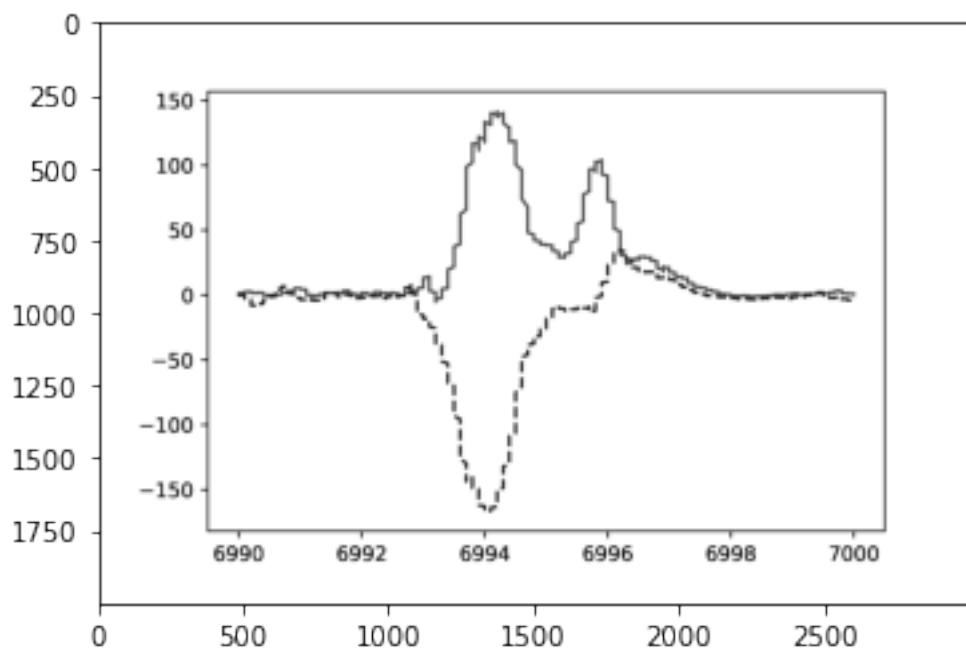
```
<class 'numpy.ndarray'>      --    125    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/121.png
121
```



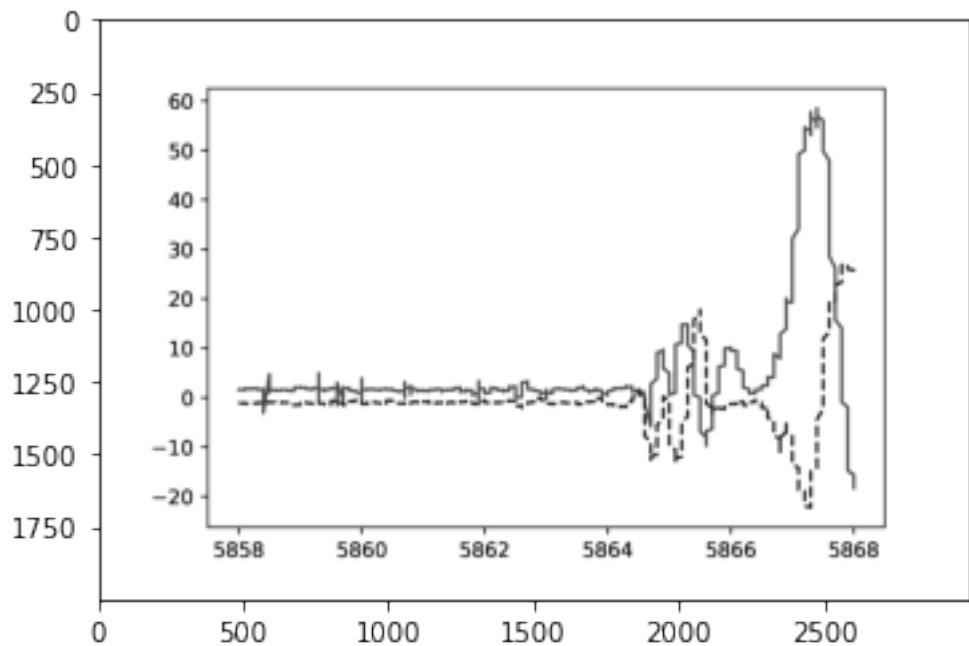
```
<class 'numpy.ndarray'>      --    126    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/312.png
312
```



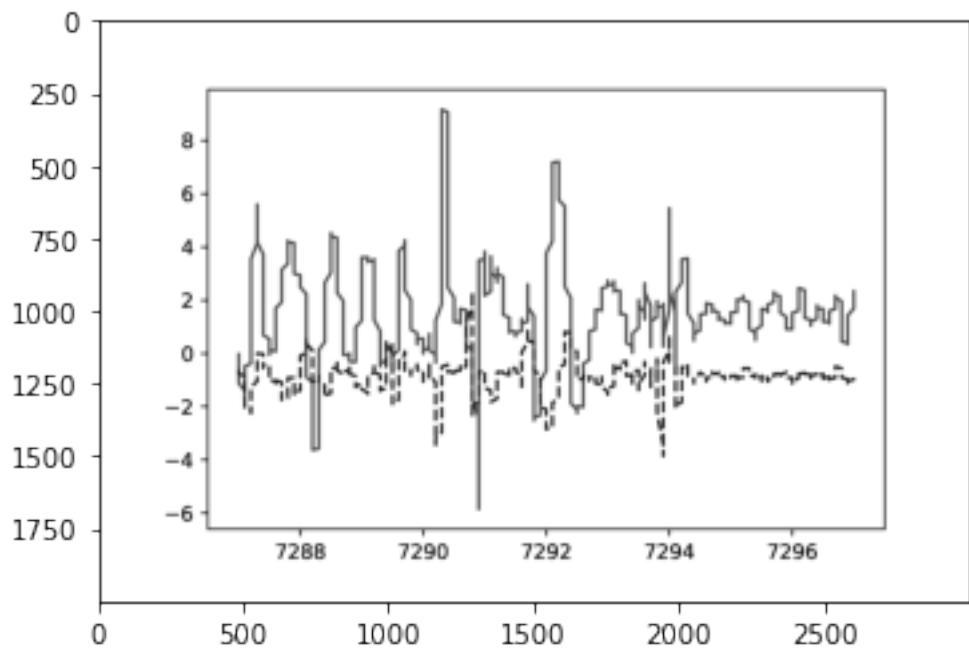
```
<class 'numpy.ndarray'>      --    127    --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/324.png
324
```



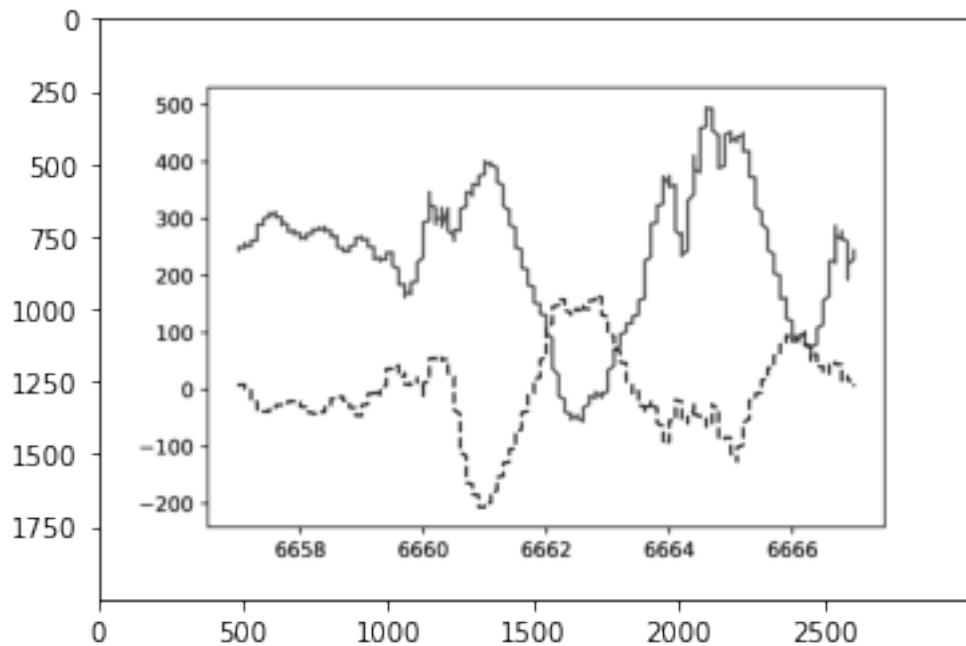
```
<class 'numpy.ndarray'> -- 128 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/253.png
253
```



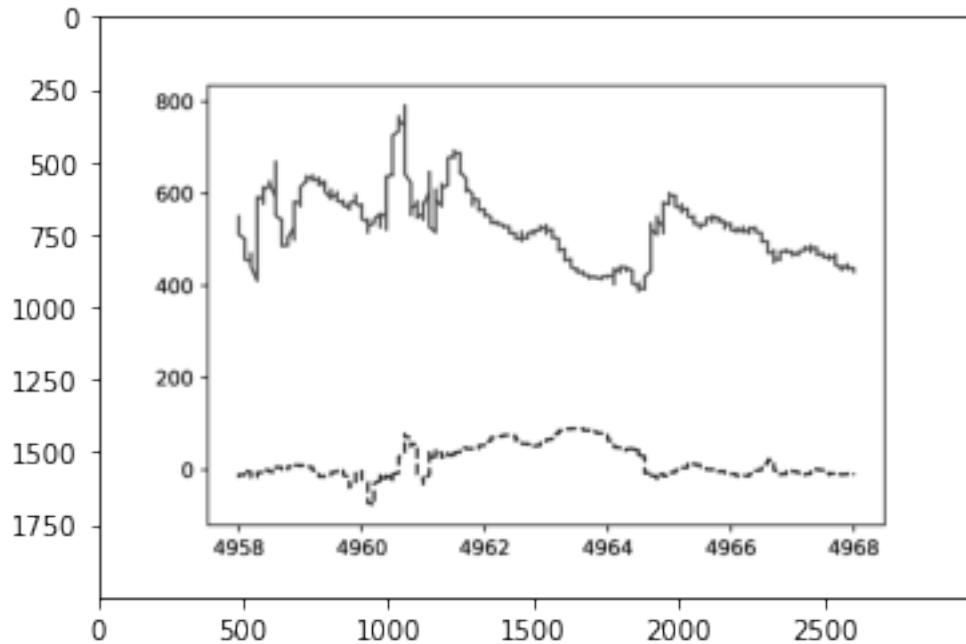
```
<class 'numpy.ndarray'> -- 129 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/357.png
357
```



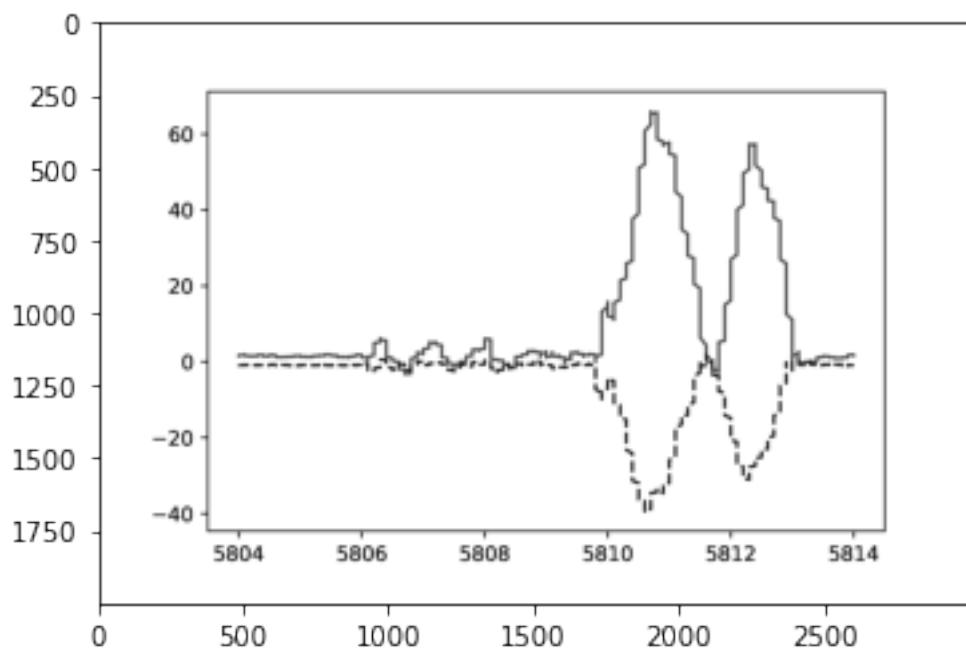
```
<class 'numpy.ndarray'>      --    130    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/287.png
287
```



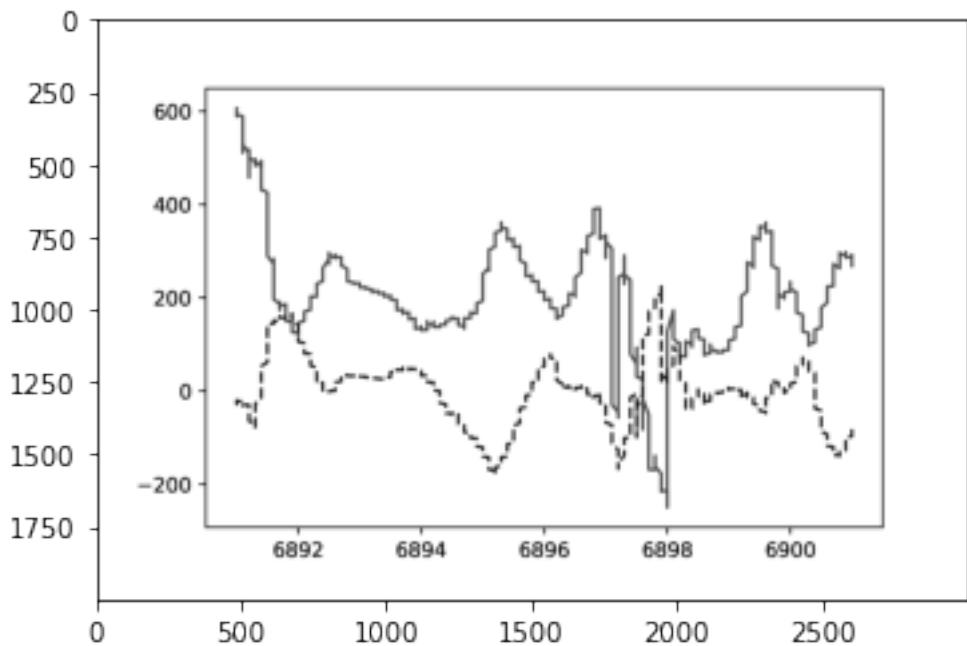
```
<class 'numpy.ndarray'>      --    131    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/153.png
153
```



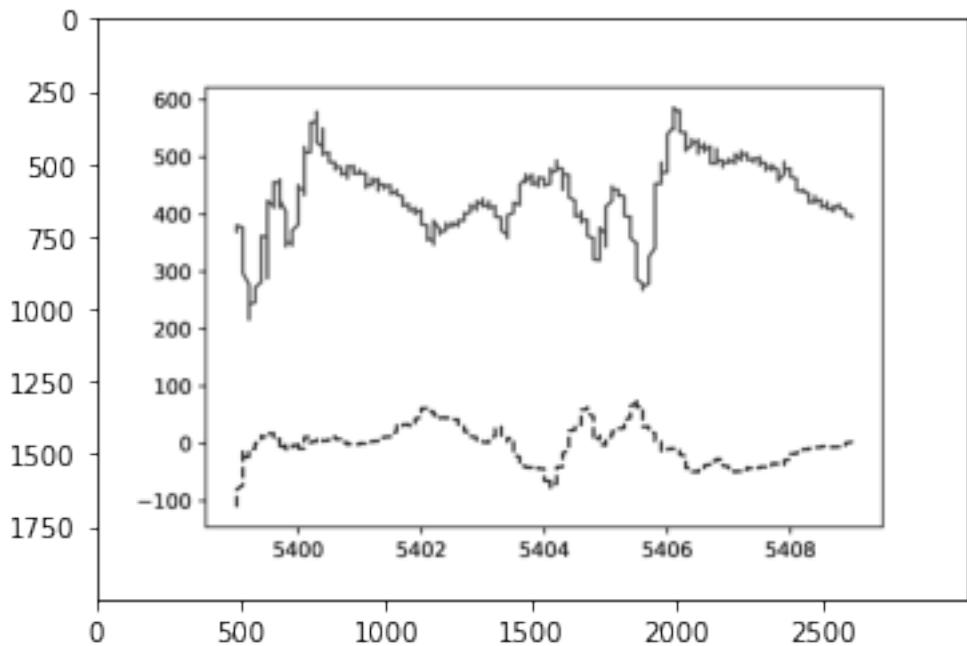
```
<class 'numpy.ndarray'>      --    132    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/247.png
247
```



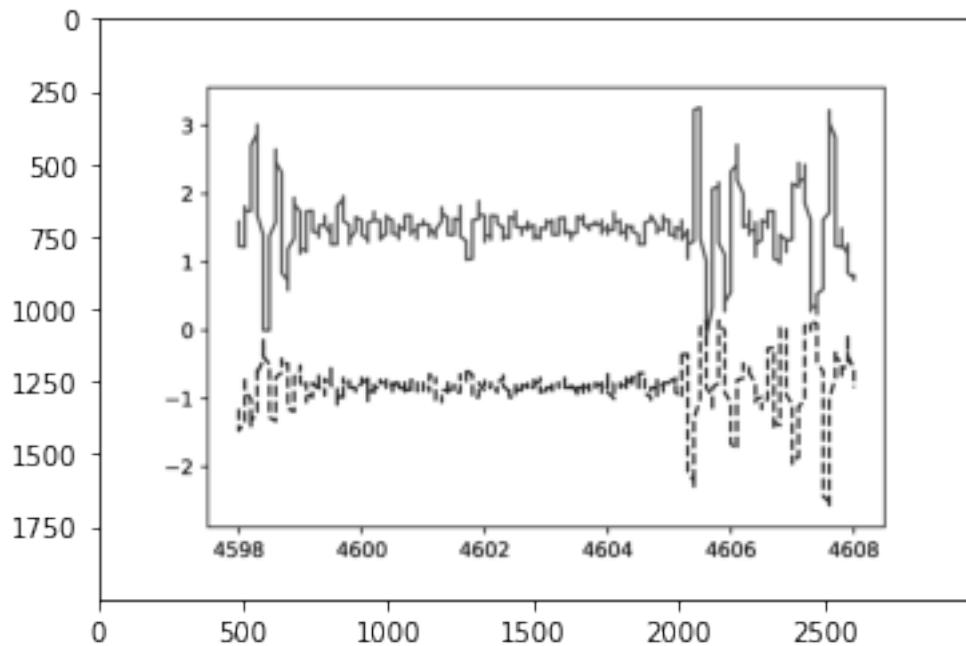
```
<class 'numpy.ndarray'> -- 133 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/313.png
313
```



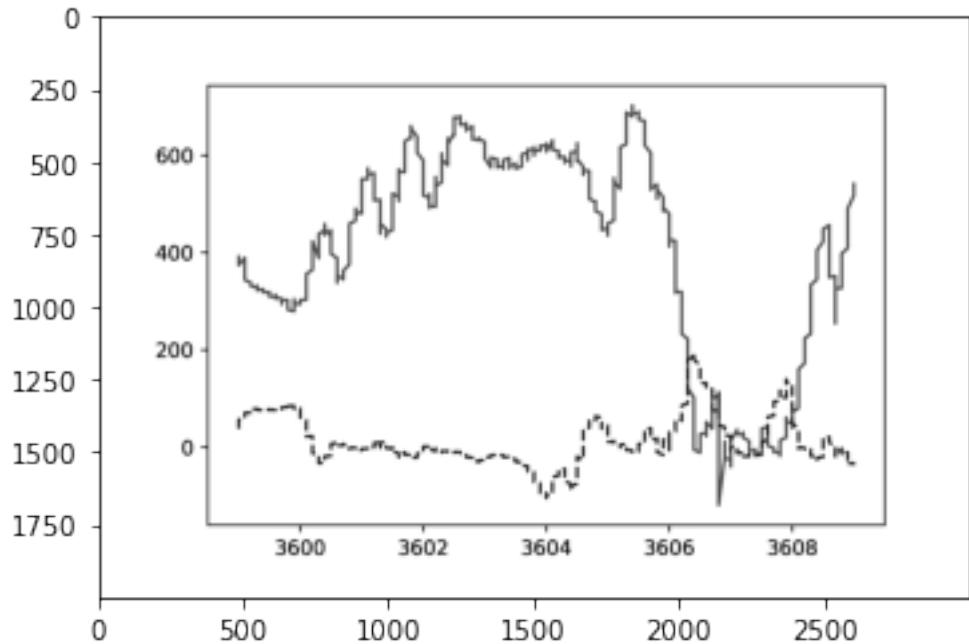
```
<class 'numpy.ndarray'> -- 134 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/202.png
202
```



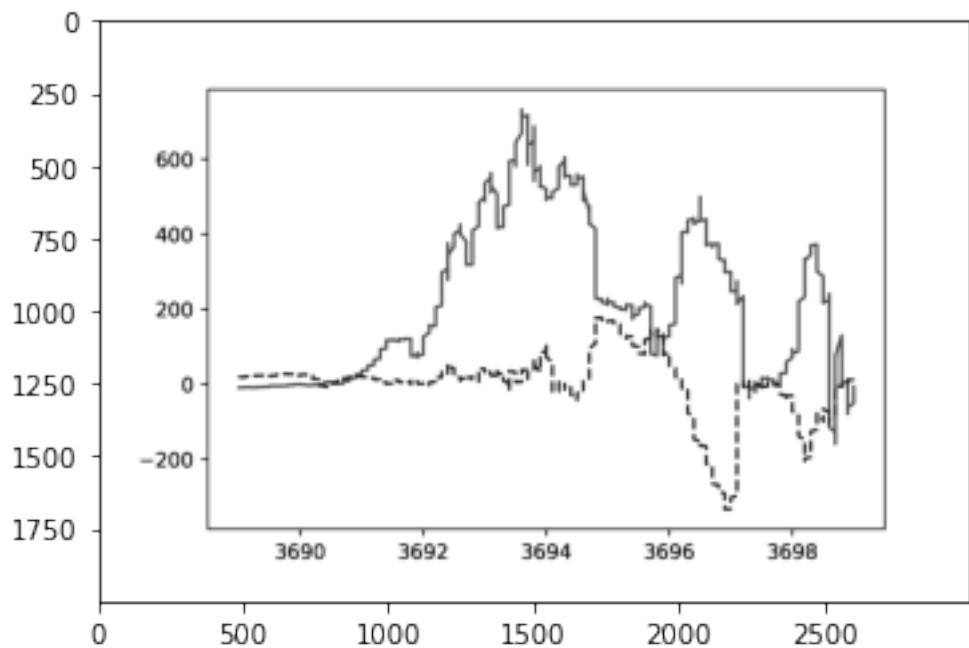
```
<class 'numpy.ndarray'>      --    135    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/113.png
113
```



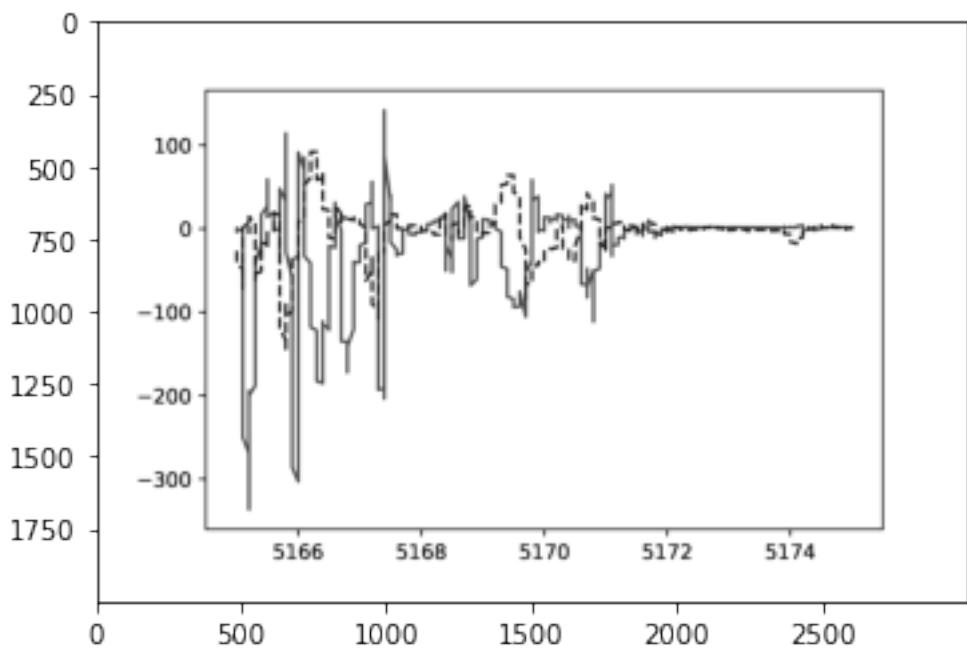
```
<class 'numpy.ndarray'>      --    136    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/2.png
2
```



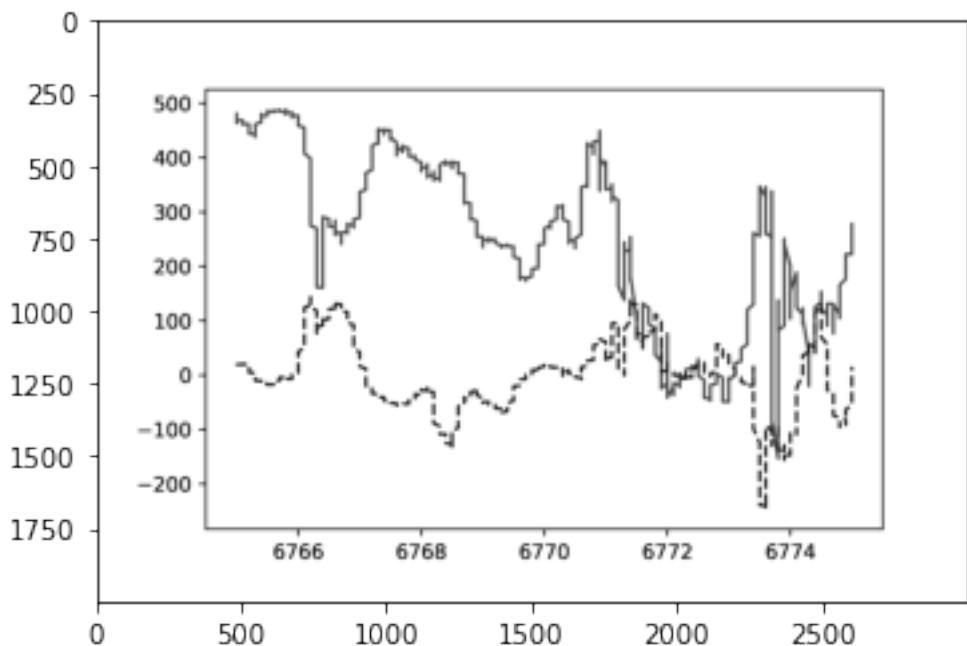
```
<class 'numpy.ndarray'>      --    137    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/12.png
12
```



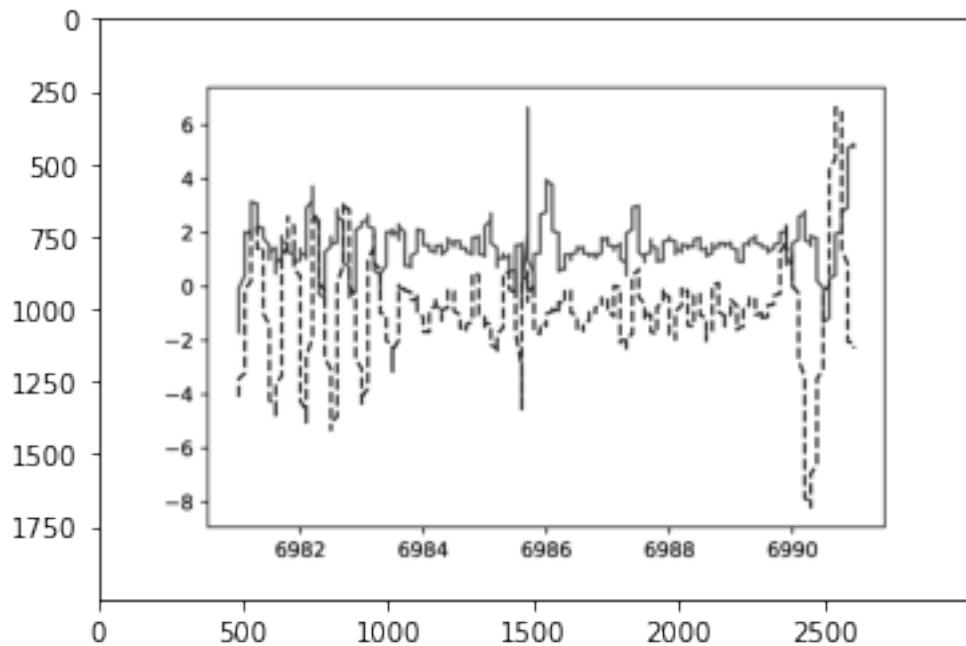
```
<class 'numpy.ndarray'> -- 138 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/176.png
176
```



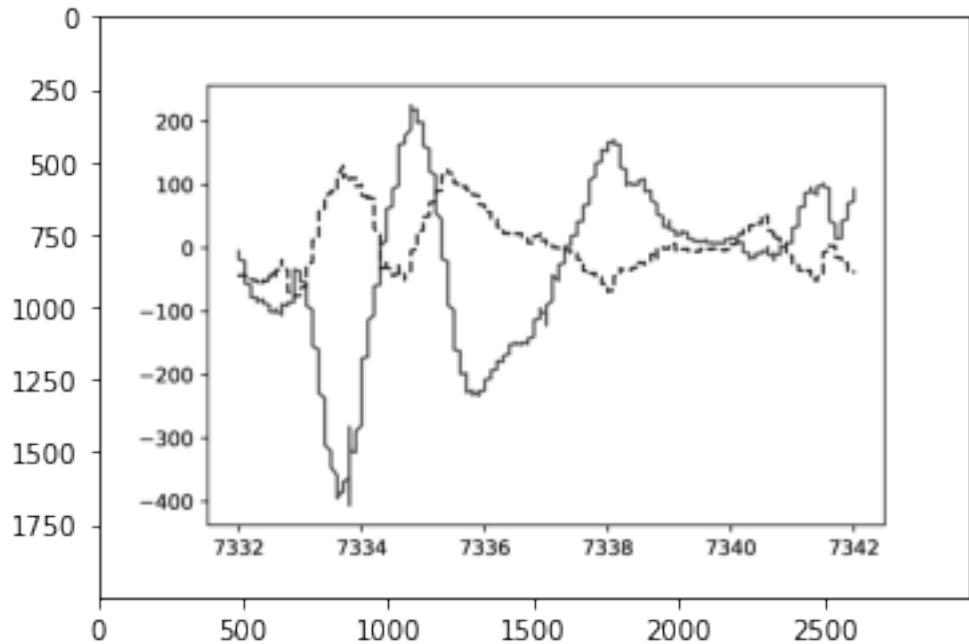
```
<class 'numpy.ndarray'> -- 139 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/299.png
299
```



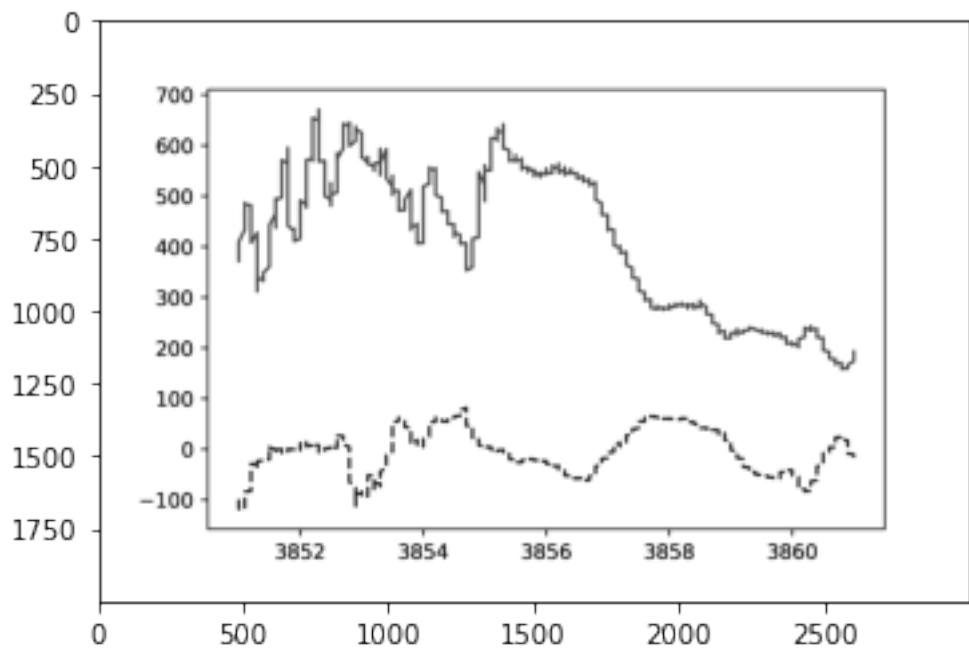
```
<class 'numpy.ndarray'>      --    140    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/323.png
323
```



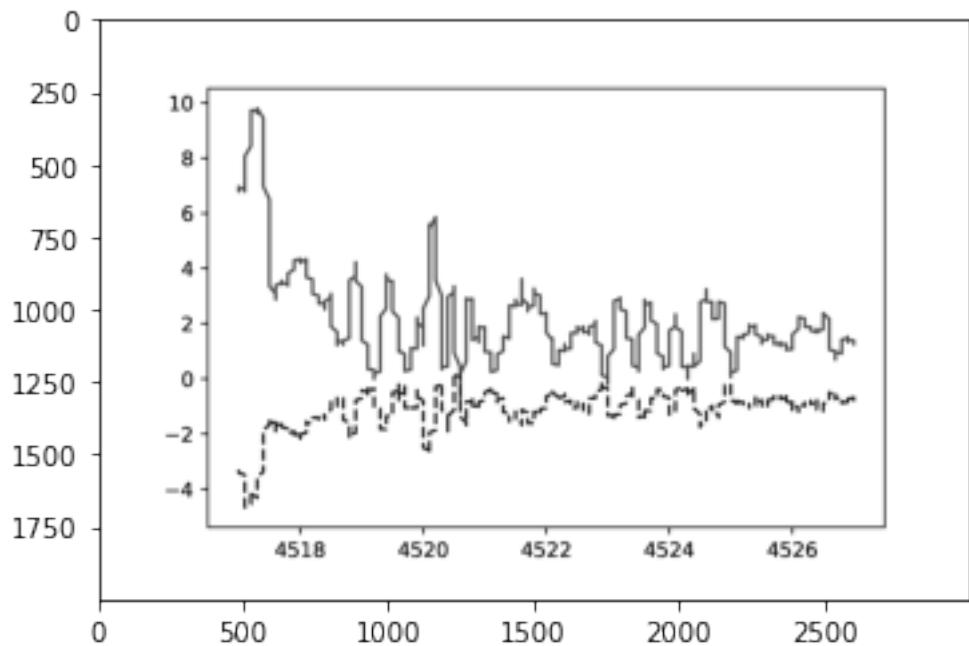
```
<class 'numpy.ndarray'>      --    141    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/362.png
362
```



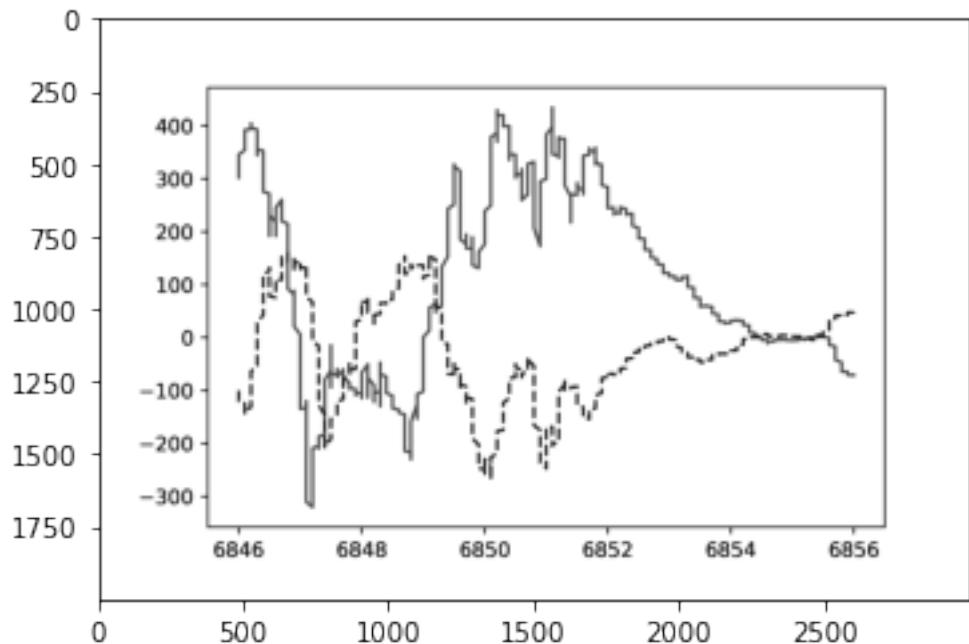
```
<class 'numpy.ndarray'>      --    142    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/30.png
30
```



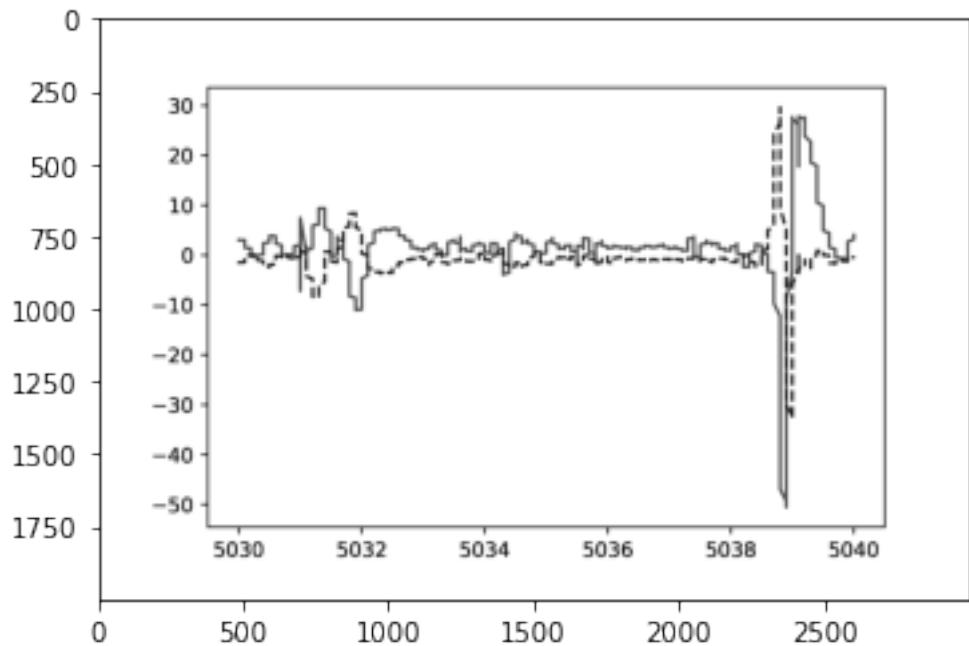
```
<class 'numpy.ndarray'> -- 143 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/104.png
104
```



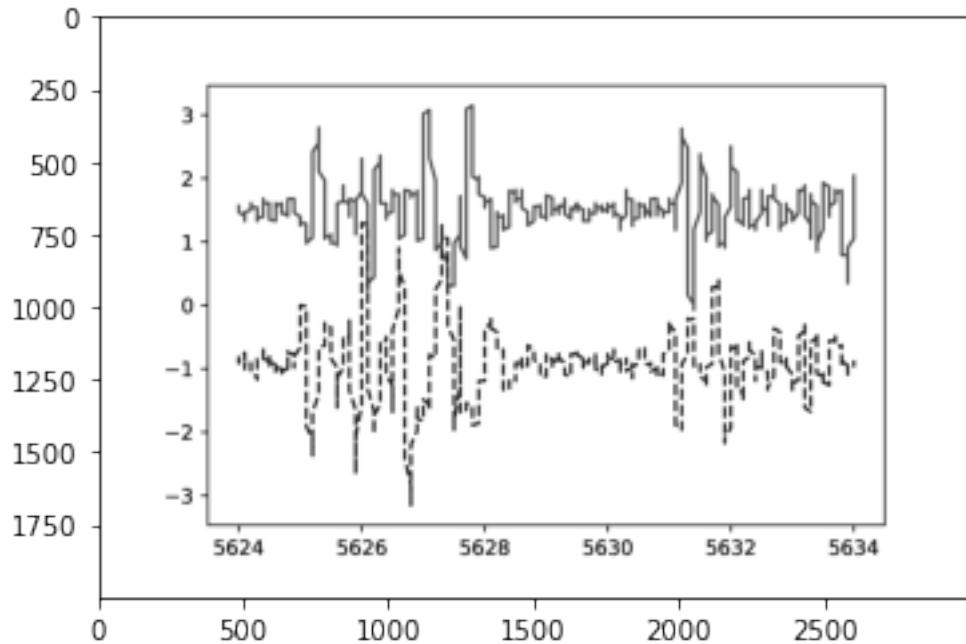
```
<class 'numpy.ndarray'> -- 144 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/308.png
308
```



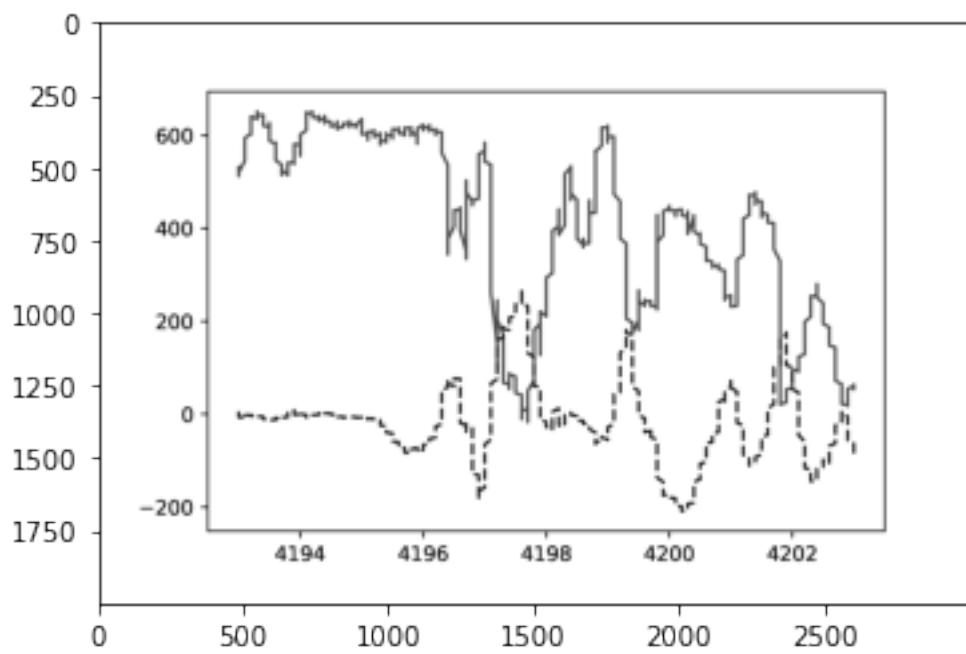
```
<class 'numpy.ndarray'>      --    145    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/161.png
161
```



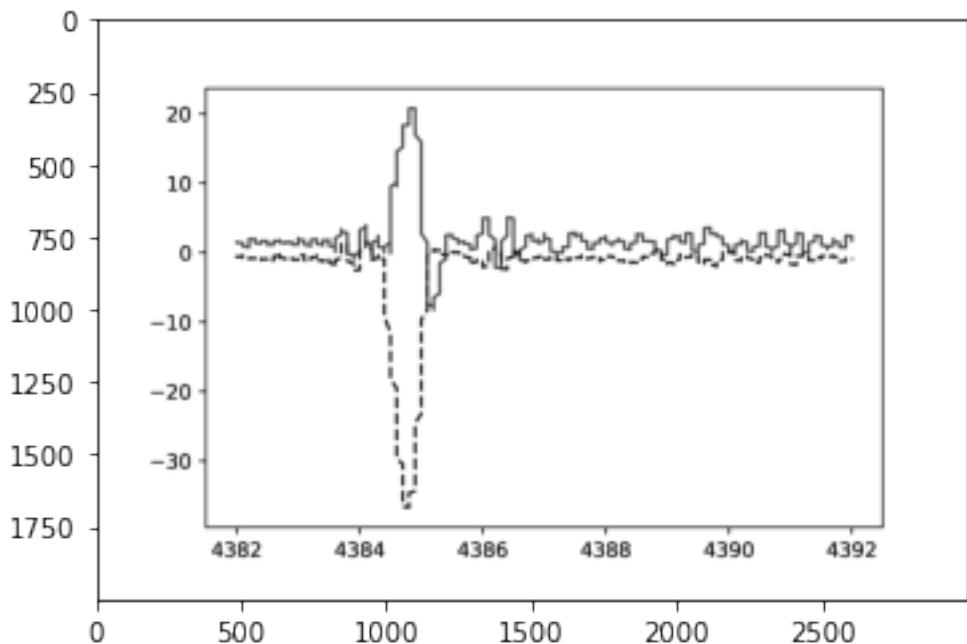
```
<class 'numpy.ndarray'>      --    146    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/227.png
227
```



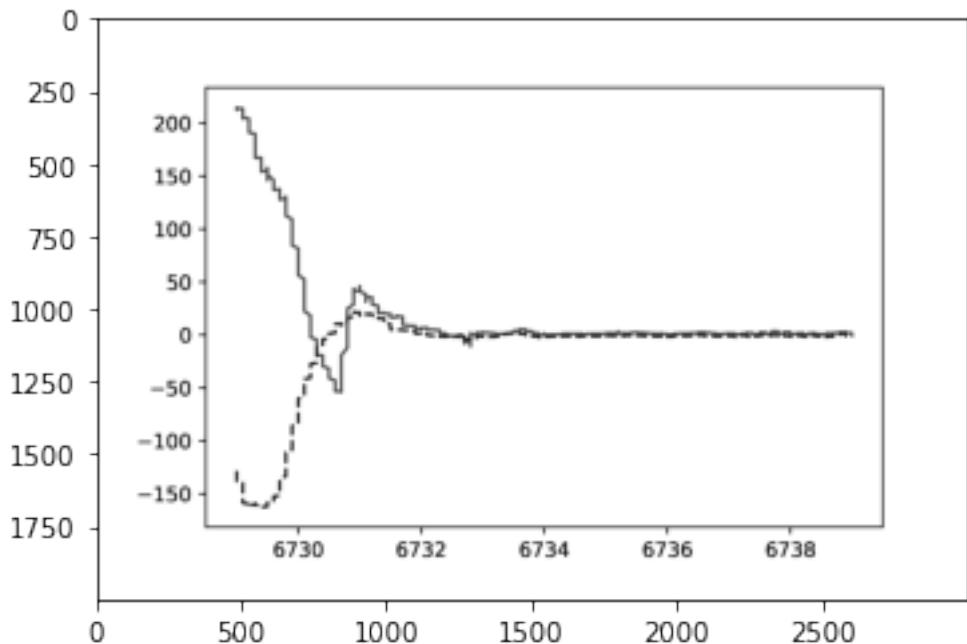
```
<class 'numpy.ndarray'>      --    147    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/68.png
68
```



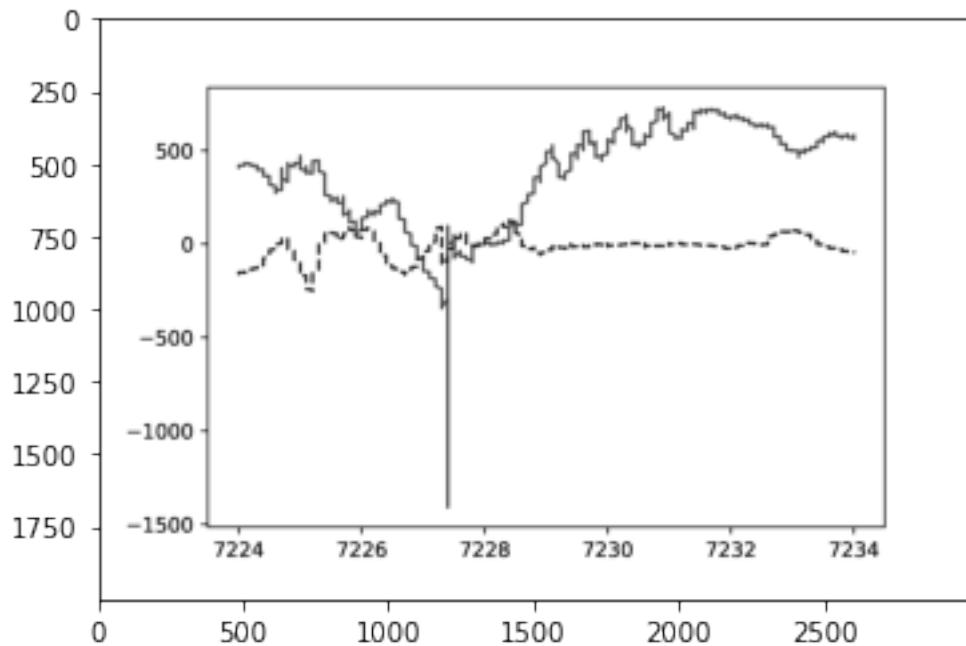
```
<class 'numpy.ndarray'> -- 148 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/89.png
89
```



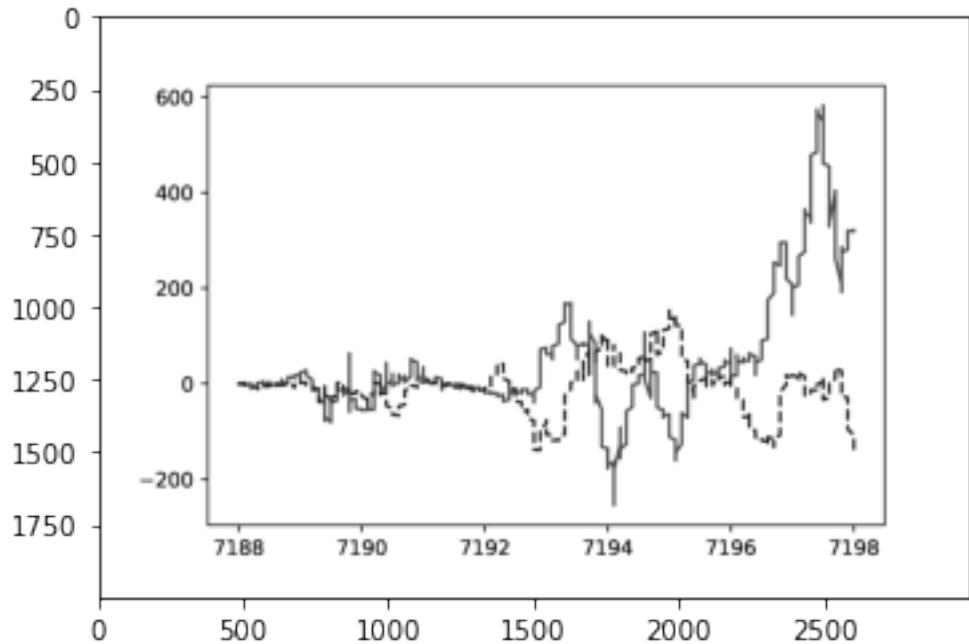
```
<class 'numpy.ndarray'> -- 149 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/295.png
295
```



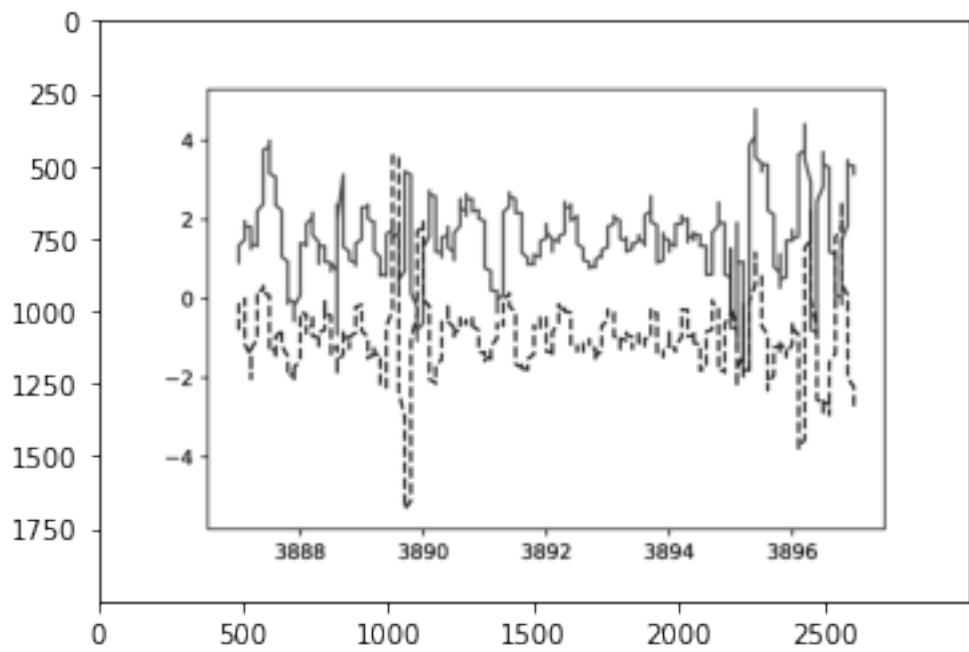
```
<class 'numpy.ndarray'>      --    150    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/350.png
350
```



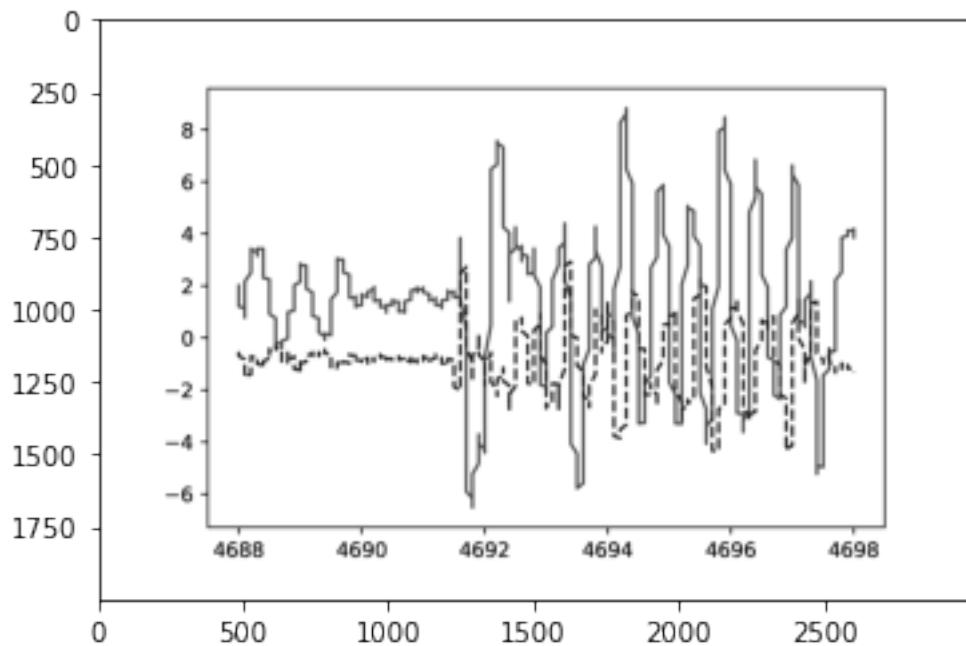
```
<class 'numpy.ndarray'>      --    151    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/346.png
346
```



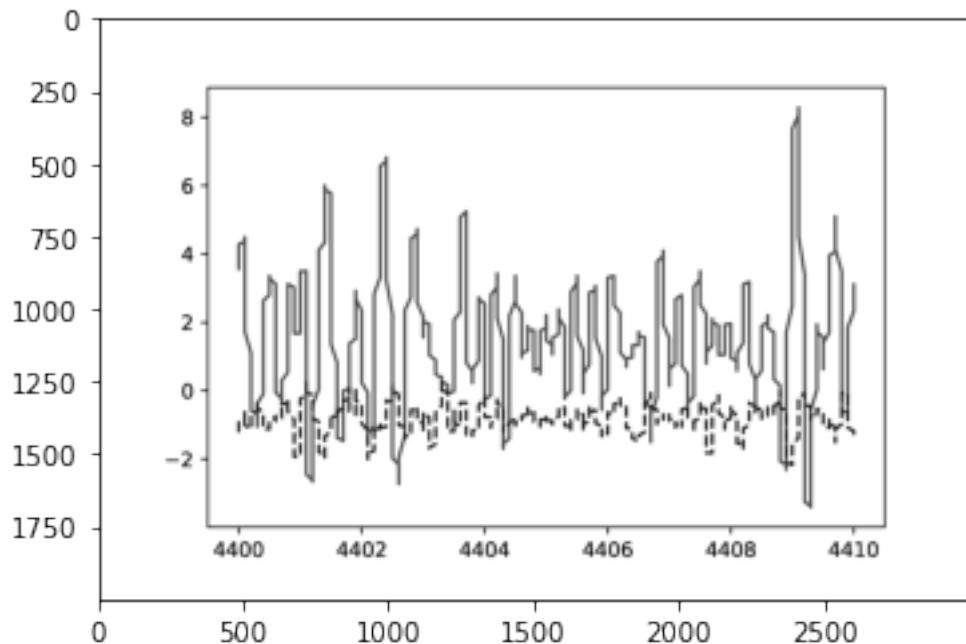
```
<class 'numpy.ndarray'>      -- 152  --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/34.png
34
```



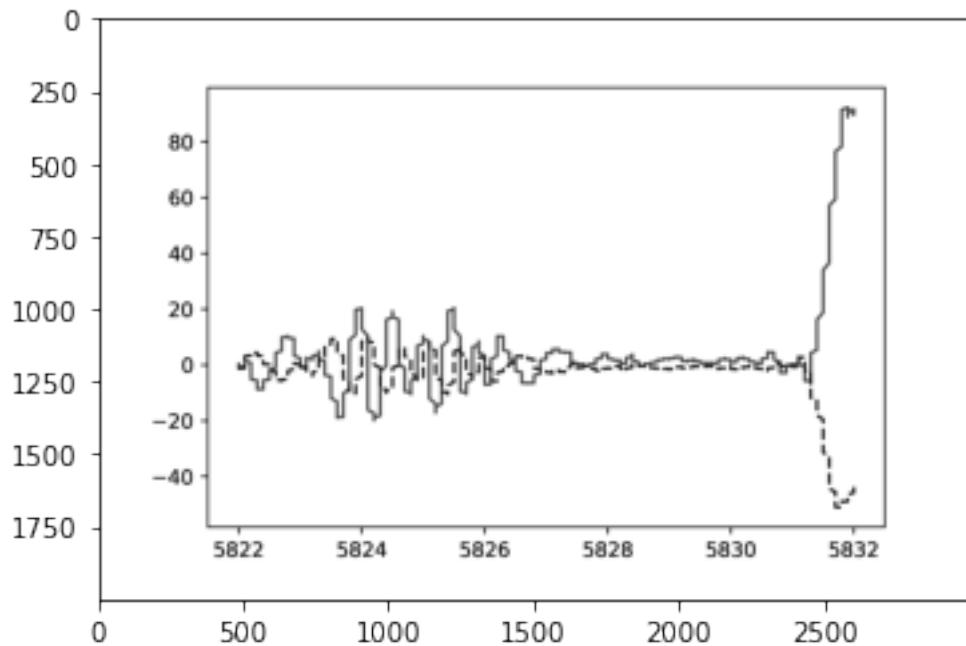
```
<class 'numpy.ndarray'> -- 153 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/123.png
123
```



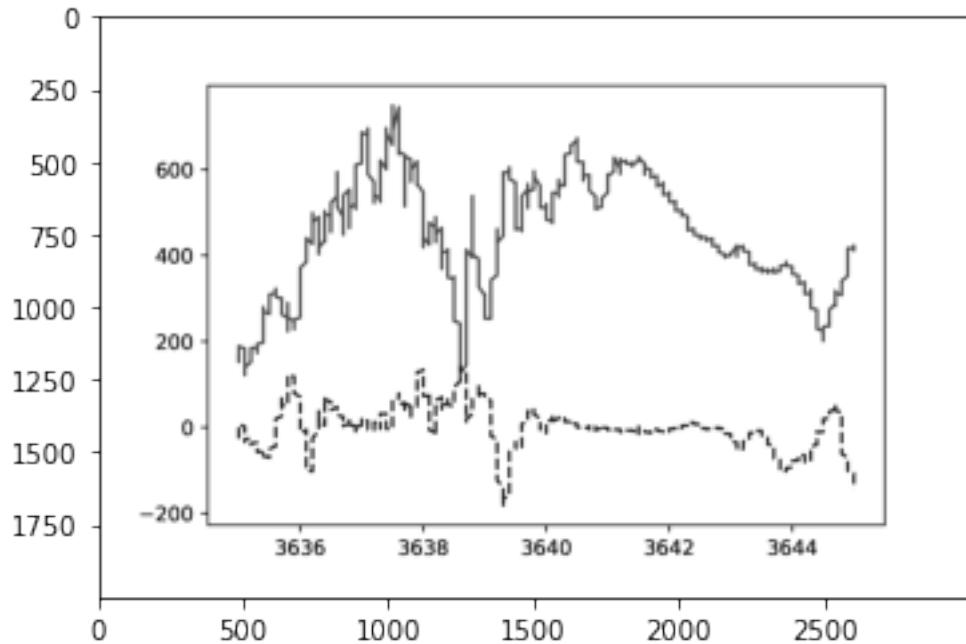
```
<class 'numpy.ndarray'> -- 154 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/91.png
91
```



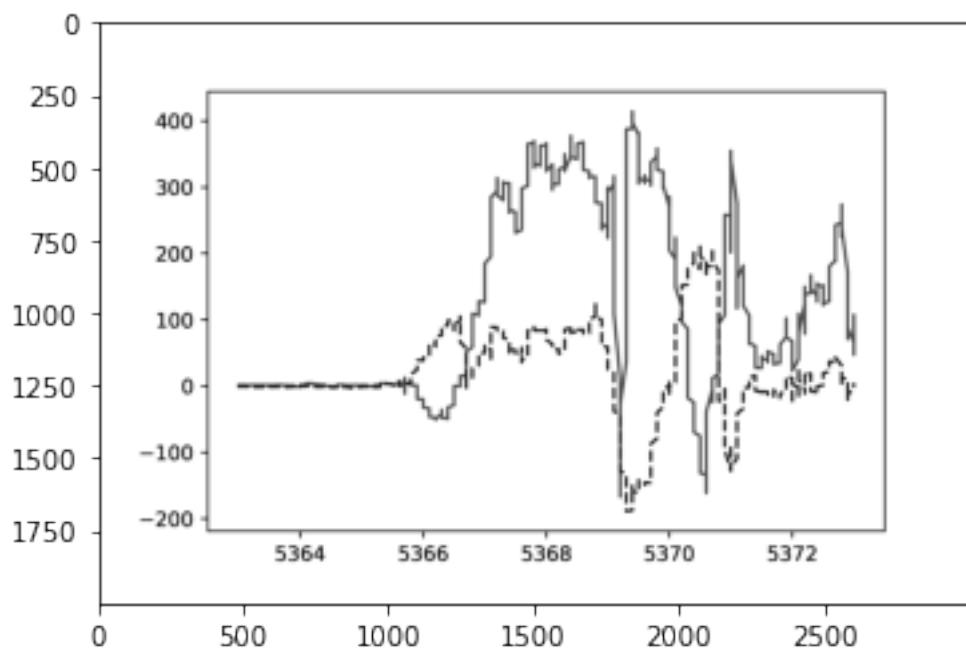
```
<class 'numpy.ndarray'>      --      155      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/249.png
249
```



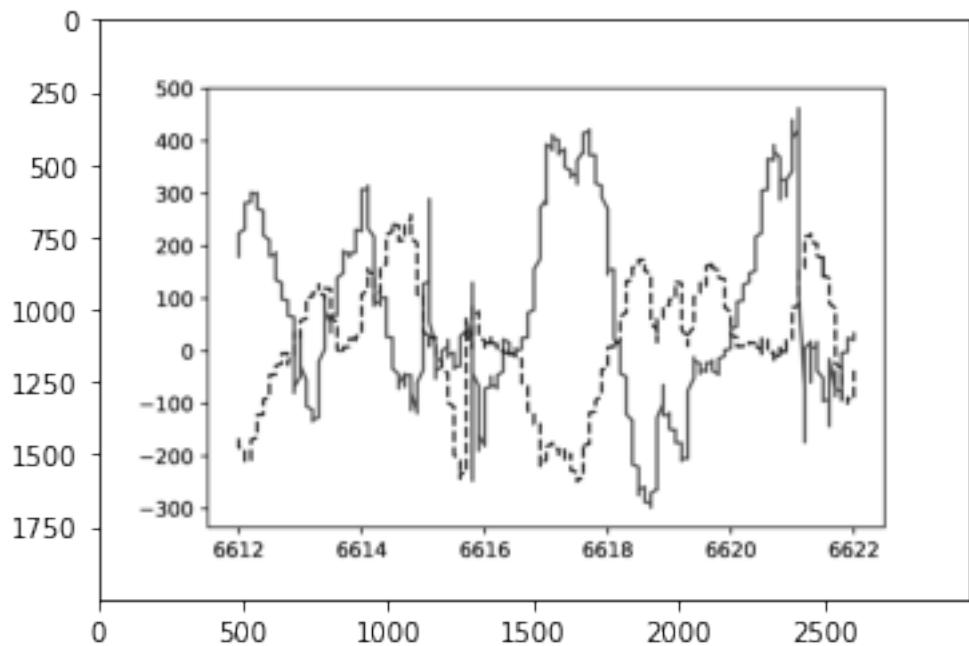
```
<class 'numpy.ndarray'>      --      156      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/6.png
6
```



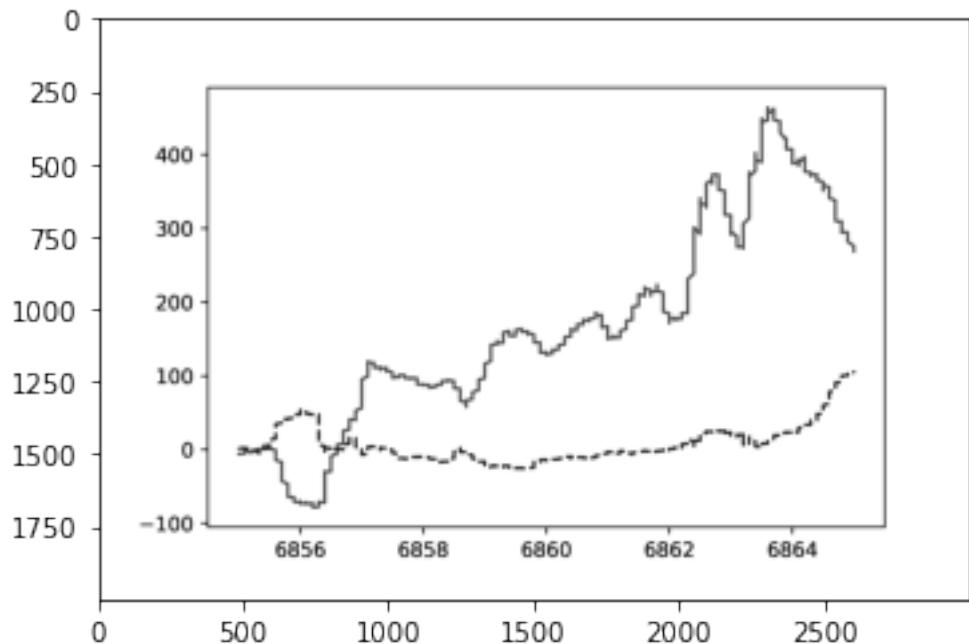
```
<class 'numpy.ndarray'>      --    157    --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/198.png
198
```



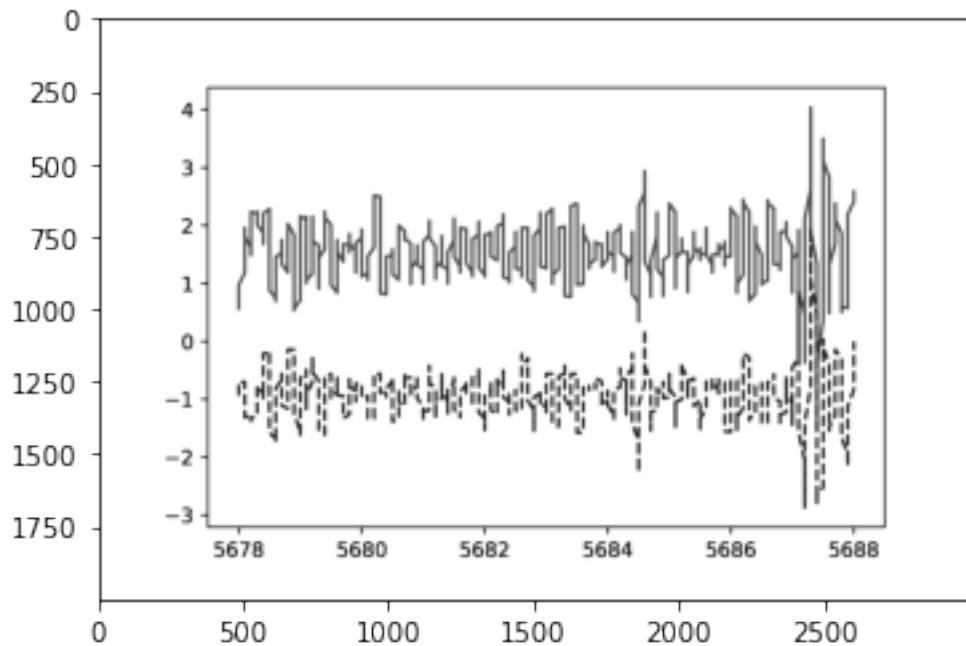
```
<class 'numpy.ndarray'> -- 158 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/282.png
282
```



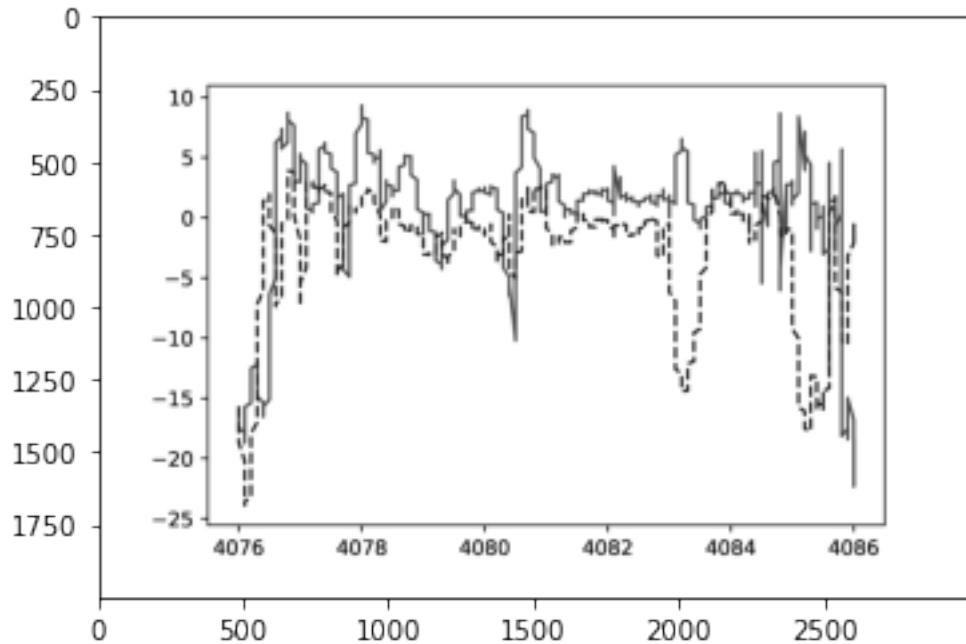
```
<class 'numpy.ndarray'> -- 159 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/309.png
309
```



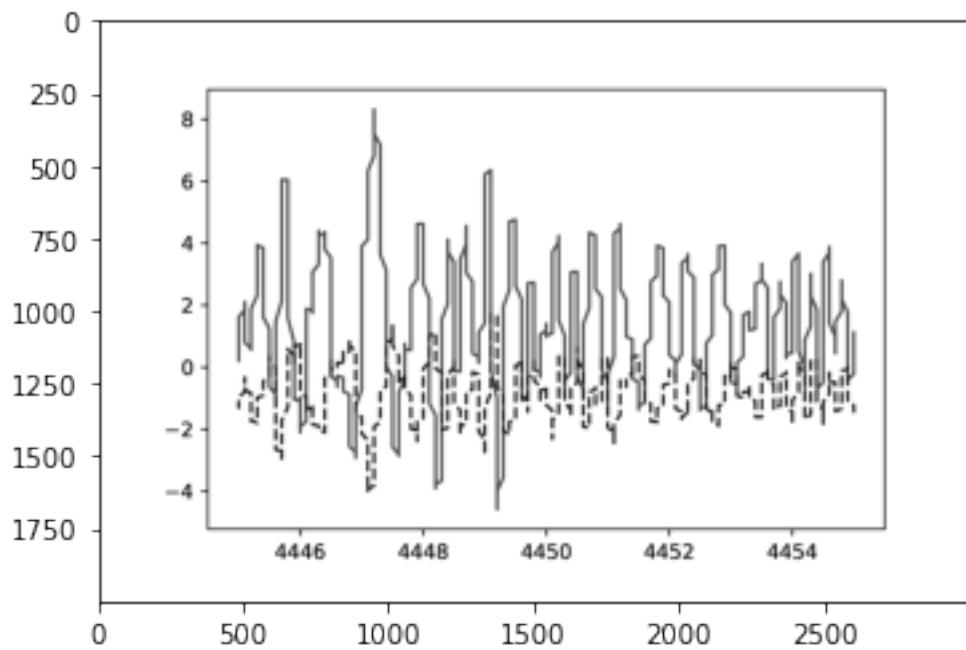
```
<class 'numpy.ndarray'>      --    160    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/233.png
233
```



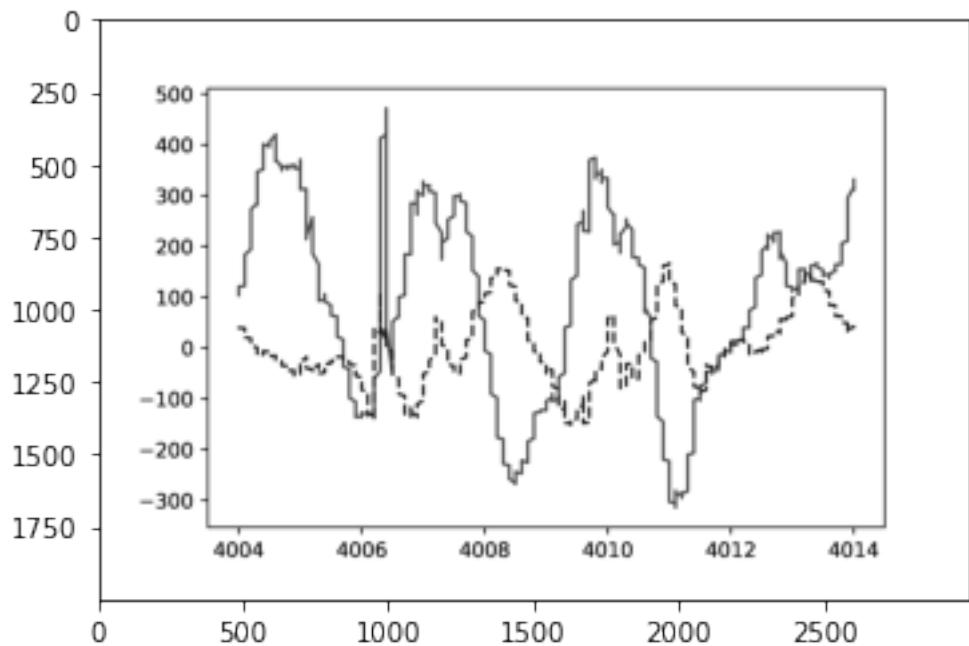
```
<class 'numpy.ndarray'>      --    161    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/55.png
55
```



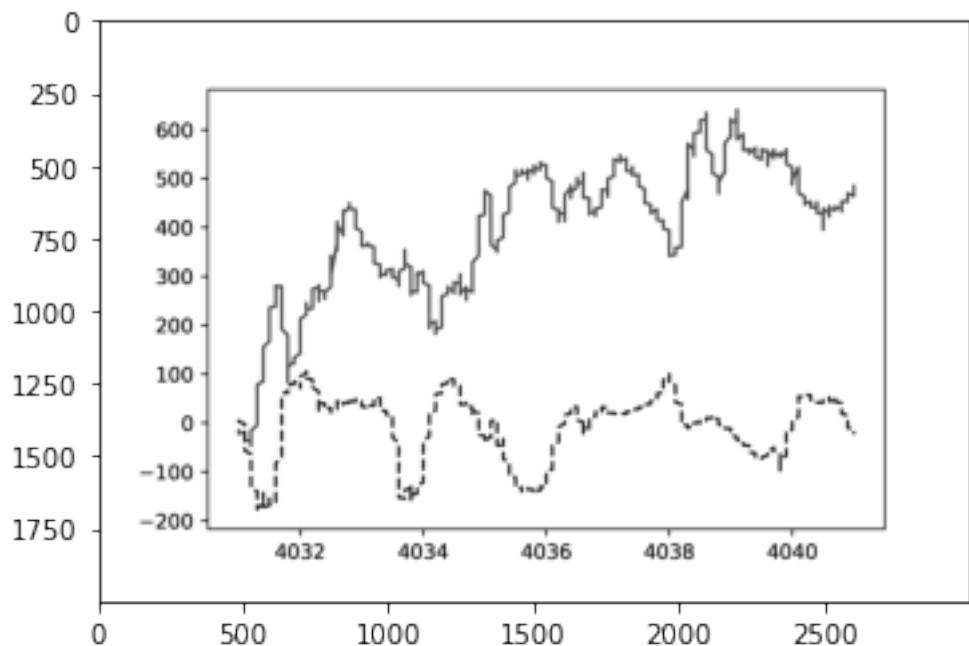
```
<class 'numpy.ndarray'>      --    162    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/96.png
96
```



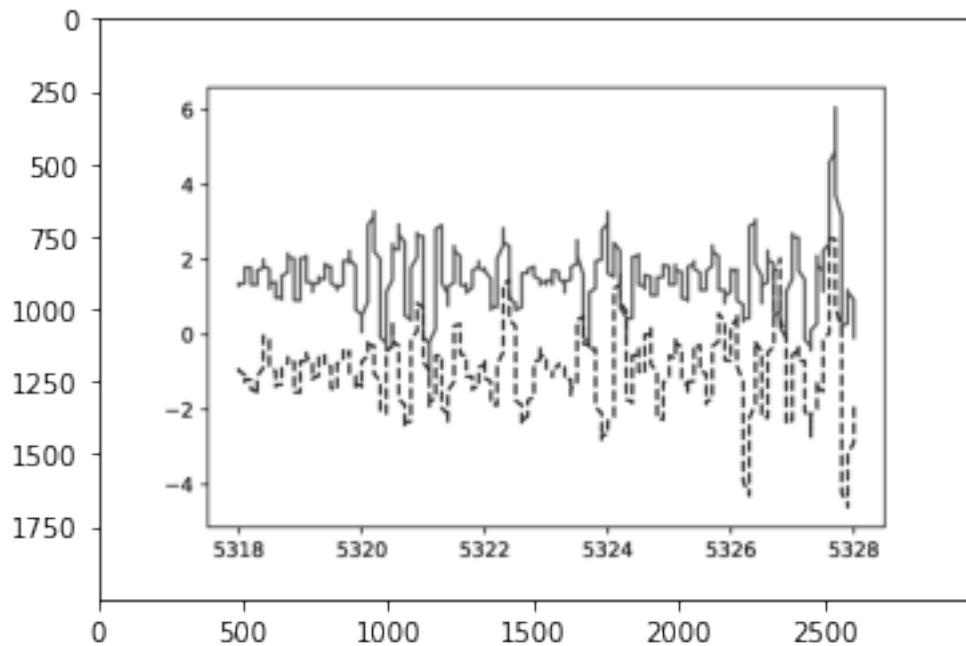
```
<class 'numpy.ndarray'>      --    163    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/47.png
47
```



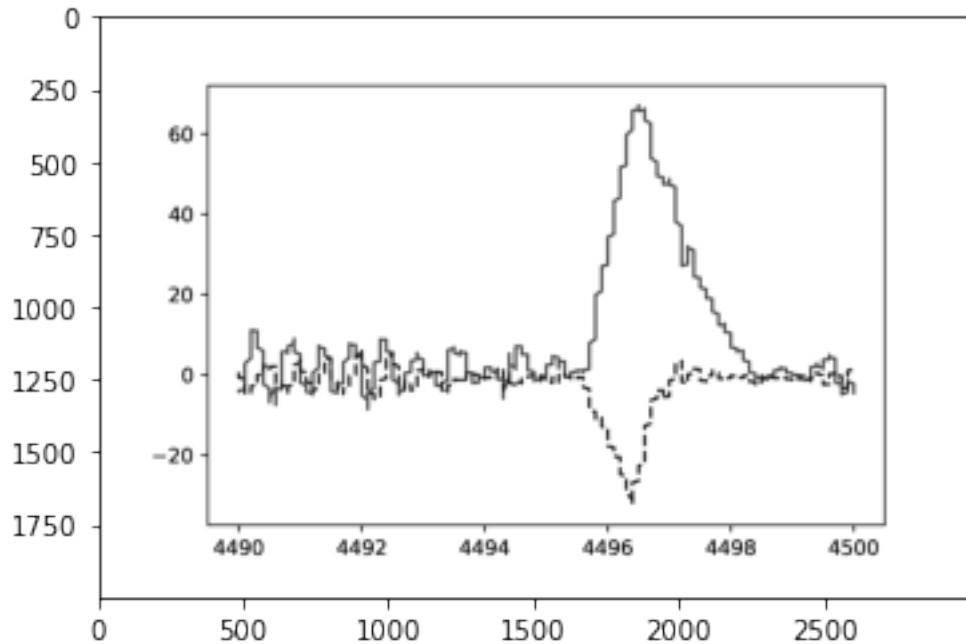
```
<class 'numpy.ndarray'>      --    164    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/50.png
50
```



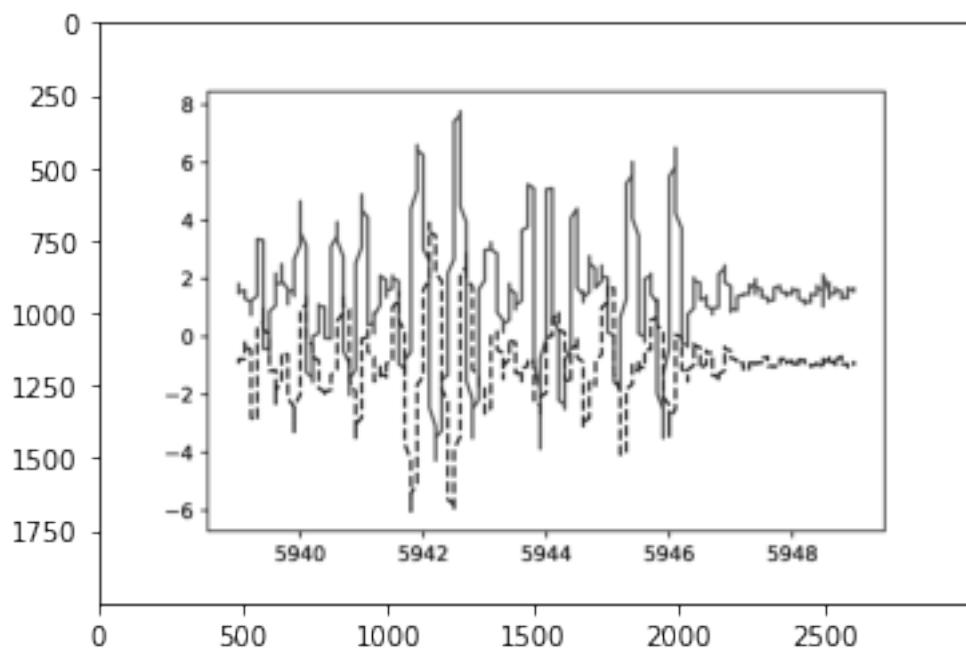
```
<class 'numpy.ndarray'>      --    165    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/193.png
193
```



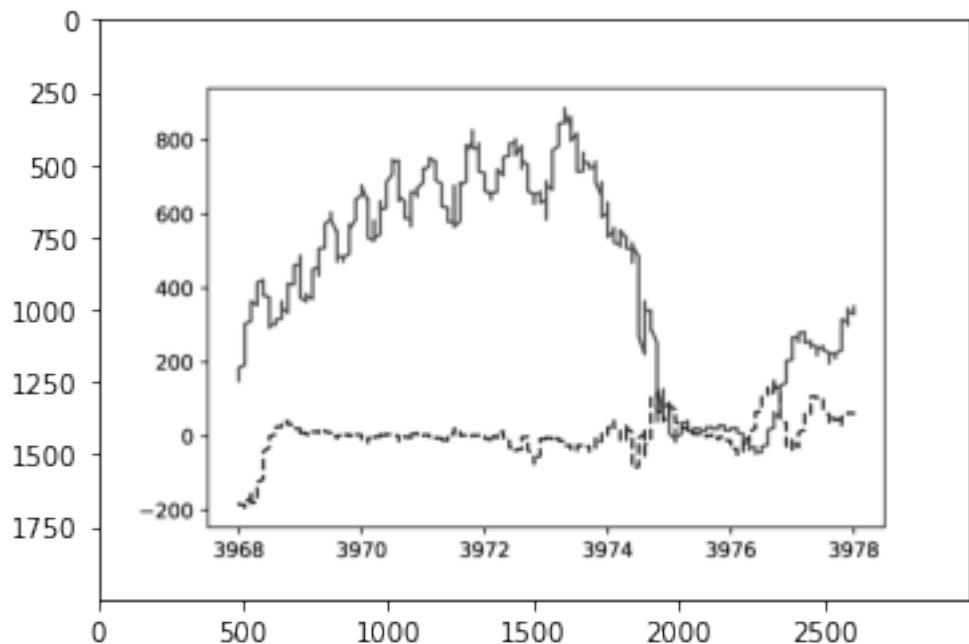
```
<class 'numpy.ndarray'>      --    166    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/101.png
101
```



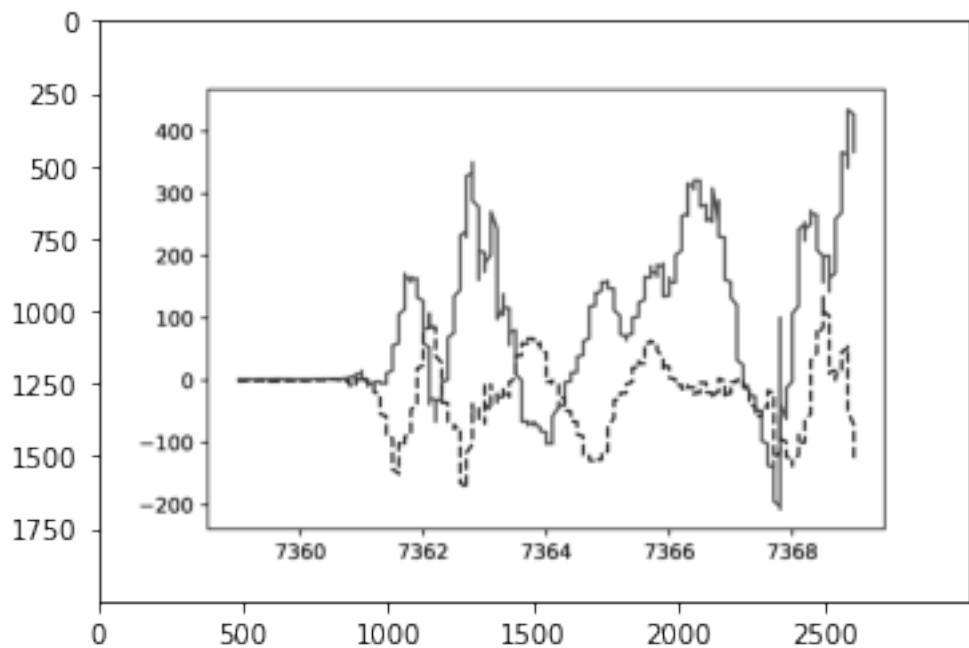
```
<class 'numpy.ndarray'>      --    167    --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/262.png
262
```



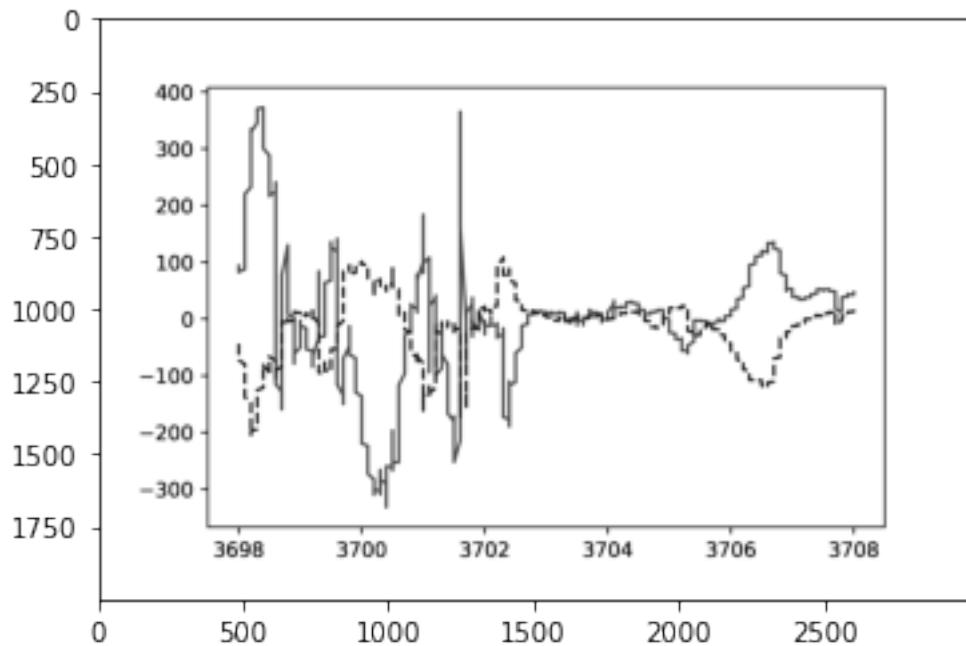
```
<class 'numpy.ndarray'> -- 168 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/43.png
43
```



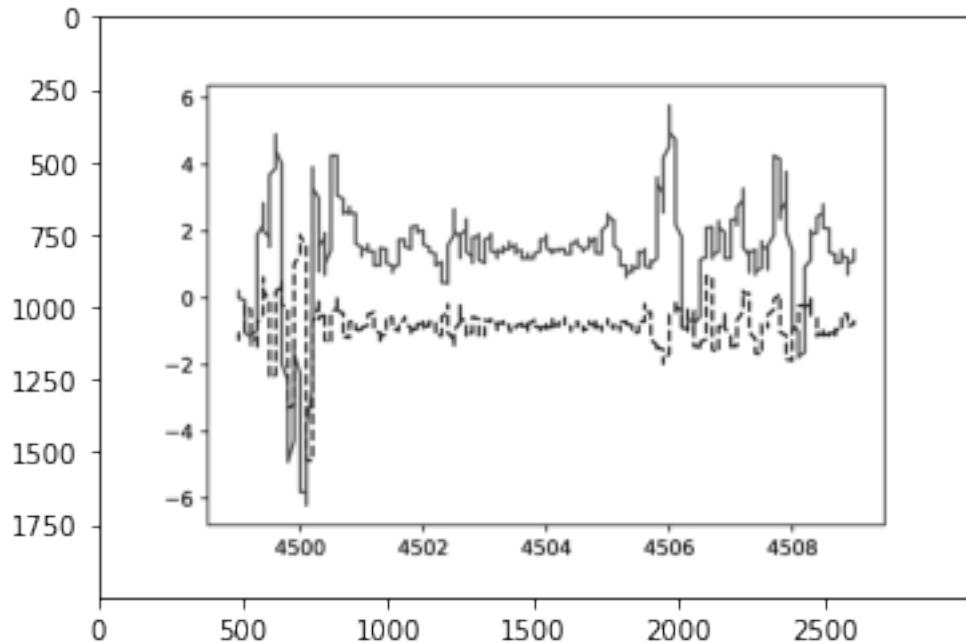
```
<class 'numpy.ndarray'> -- 169 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/365.png
365
```



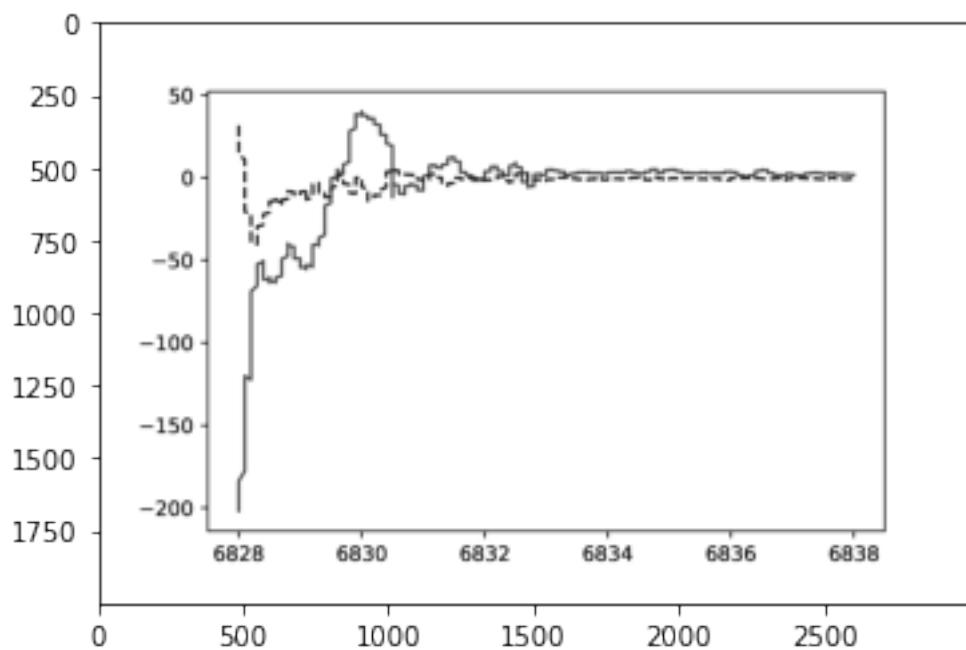
```
<class 'numpy.ndarray'>      --    170    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/13.png
13
```



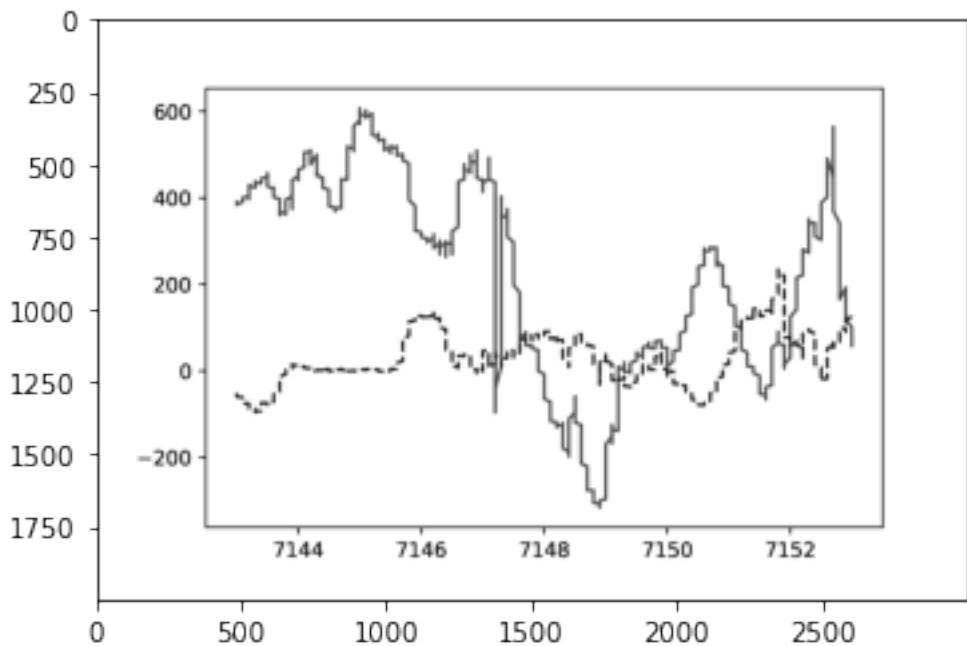
```
<class 'numpy.ndarray'>      --    171    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/102.png
102
```



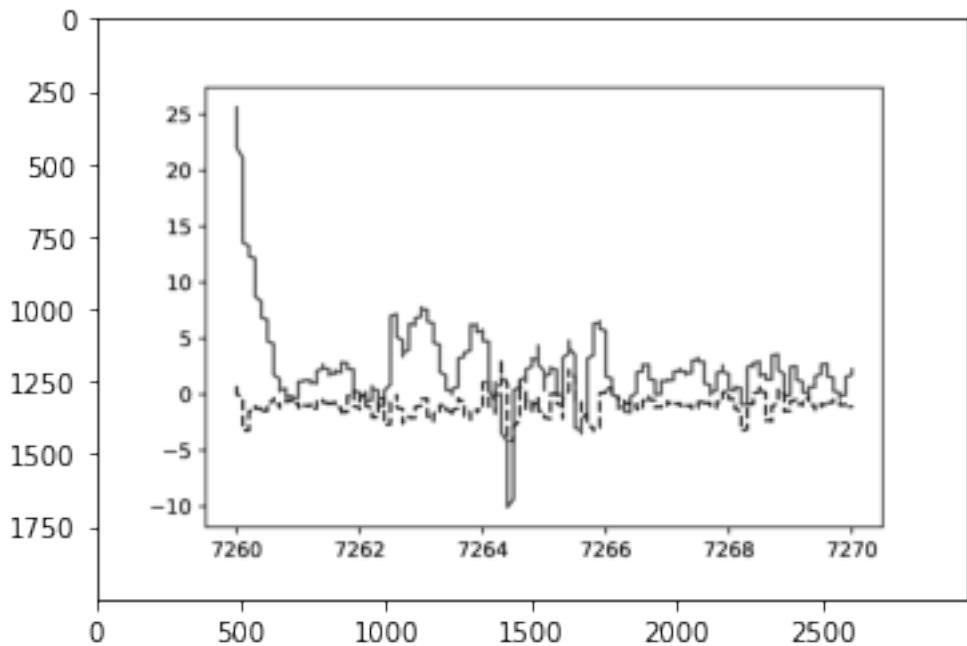
```
<class 'numpy.ndarray'>      --    172    --
/datasets/wheels/notebooks/Alex/PlotImgFolder/Train/306.png
306
```



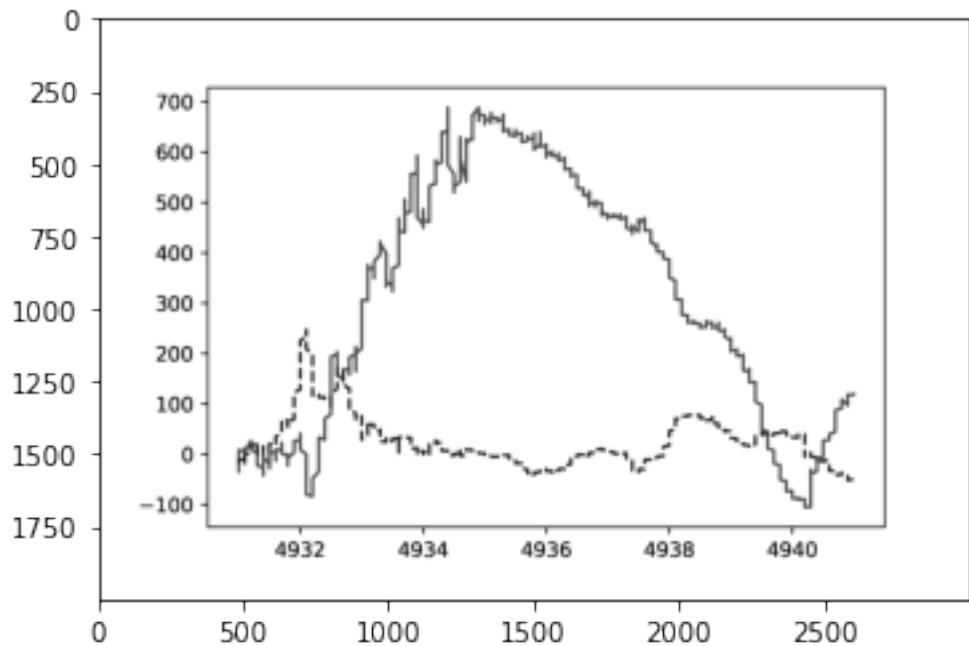
```
<class 'numpy.ndarray'> -- 173 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/341.png
341
```



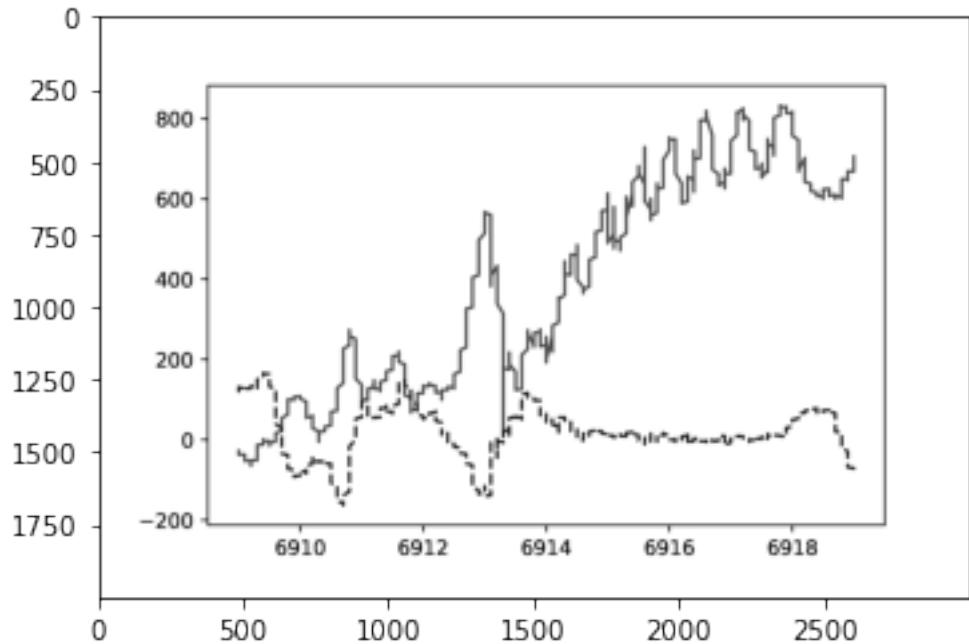
```
<class 'numpy.ndarray'> -- 174 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/354.png
354
```



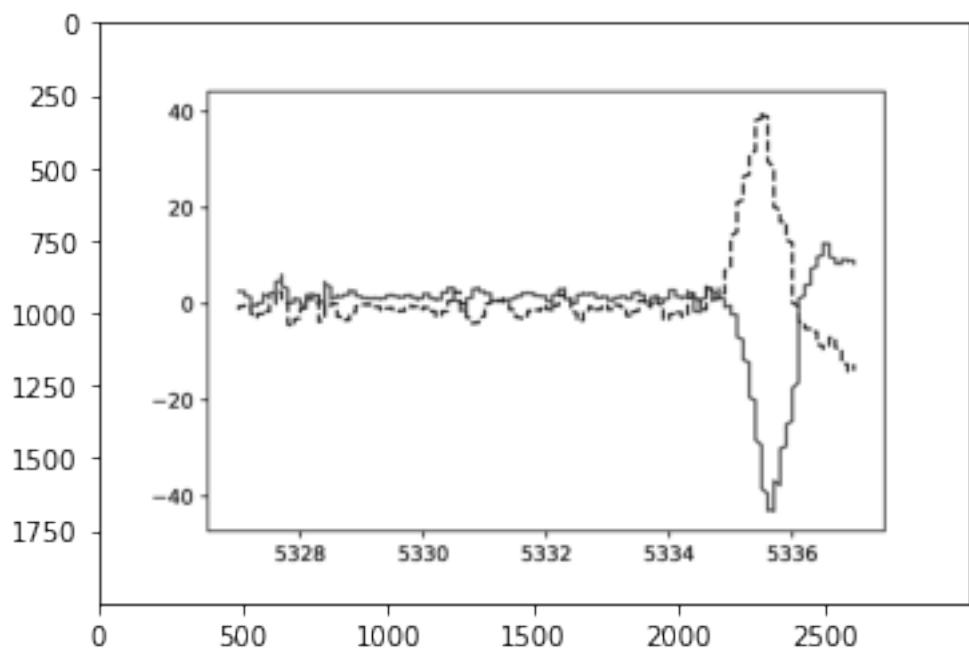
```
<class 'numpy.ndarray'>      --    175    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/150.png
150
```



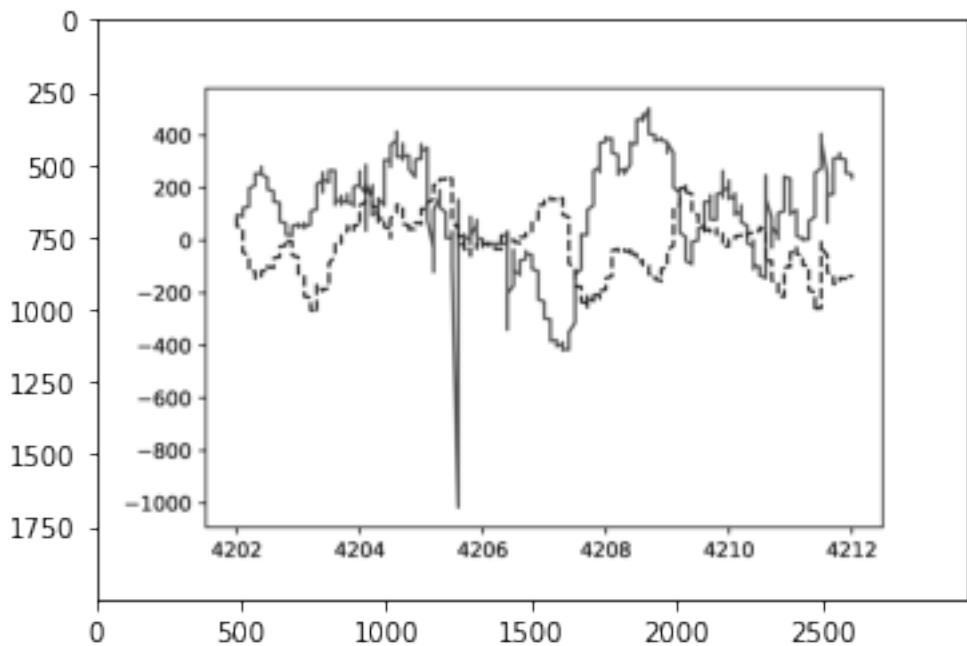
```
<class 'numpy.ndarray'>      --    176    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/315.png
315
```



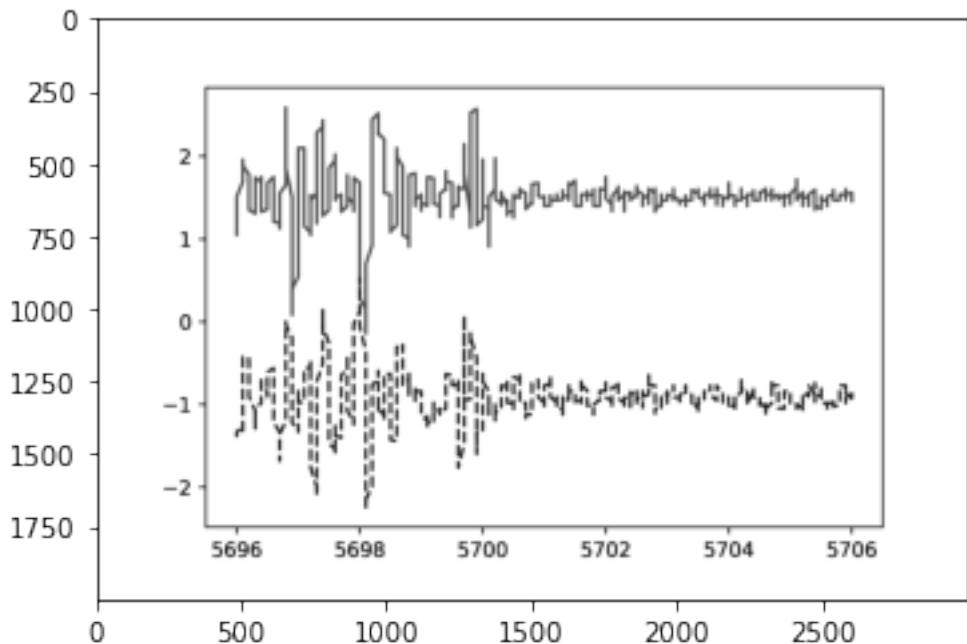
```
<class 'numpy.ndarray'>      --    177    --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/194.png
194
```



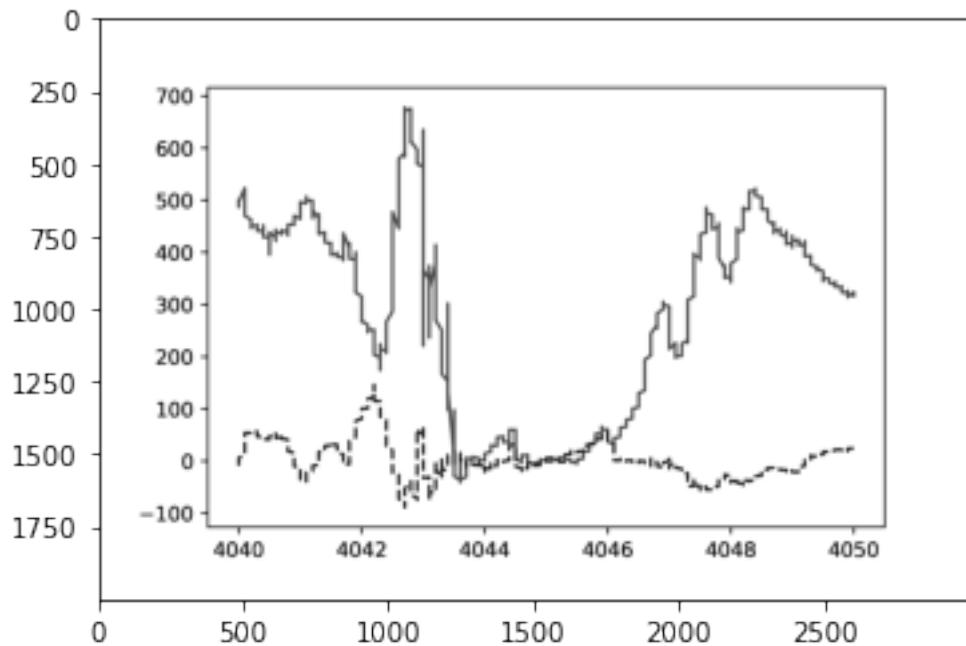
```
<class 'numpy.ndarray'> -- 178 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/69.png
69
```



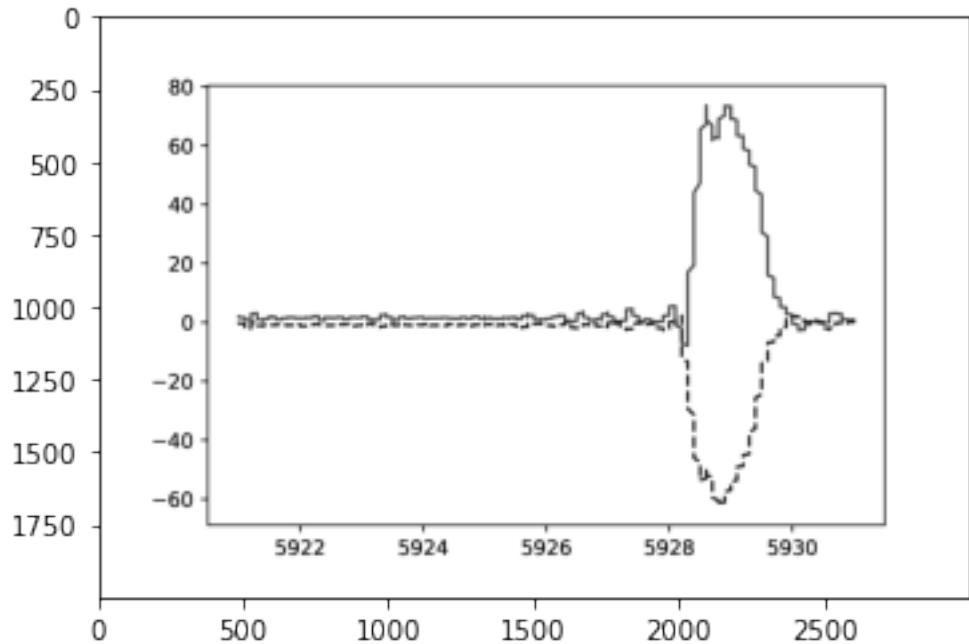
```
<class 'numpy.ndarray'> -- 179 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/235.png
235
```



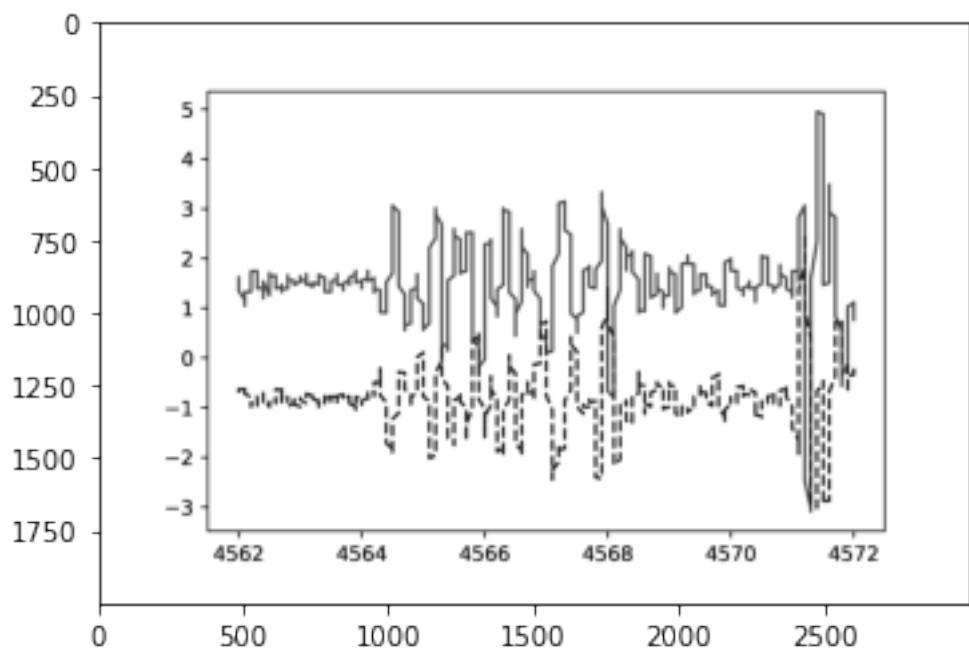
```
<class 'numpy.ndarray'>      --    180    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/51.png
51
```



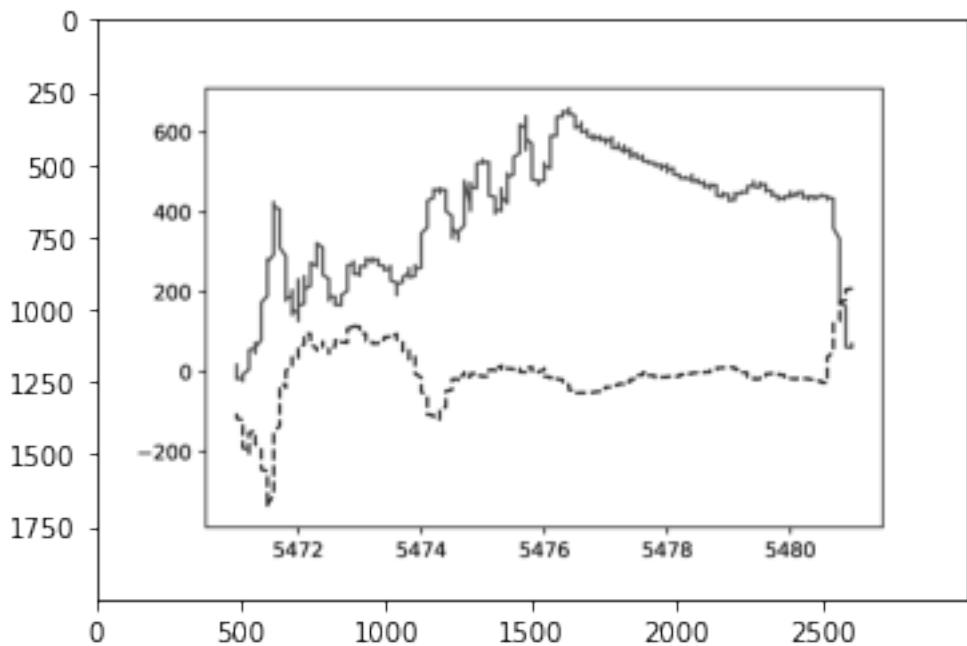
```
<class 'numpy.ndarray'>      --    181    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/260.png
260
```



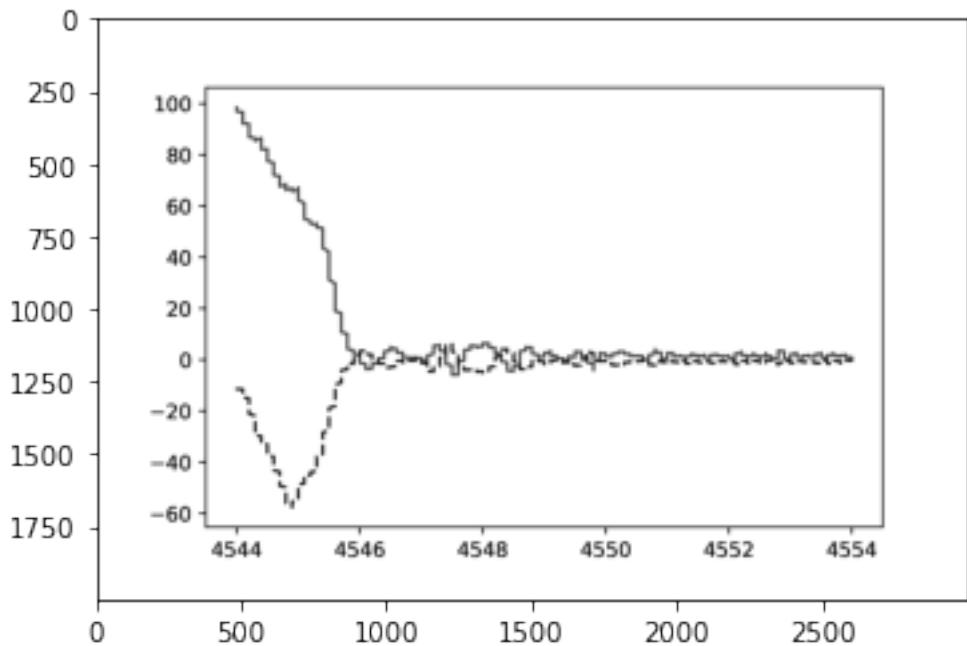
```
<class 'numpy.ndarray'>      --    182    --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/109.png
109
```



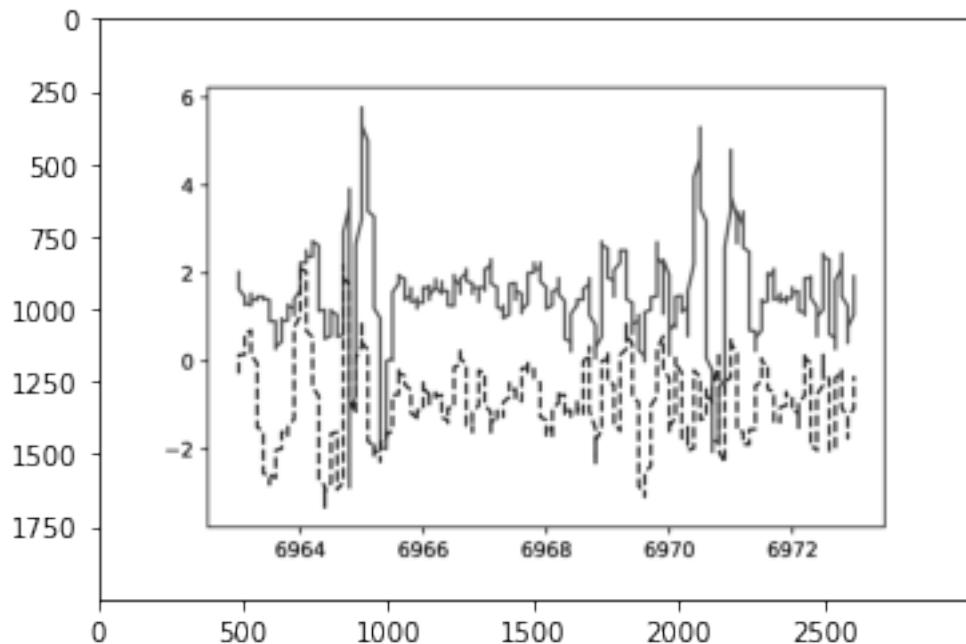
```
<class 'numpy.ndarray'> -- 183 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/210.png
210
```



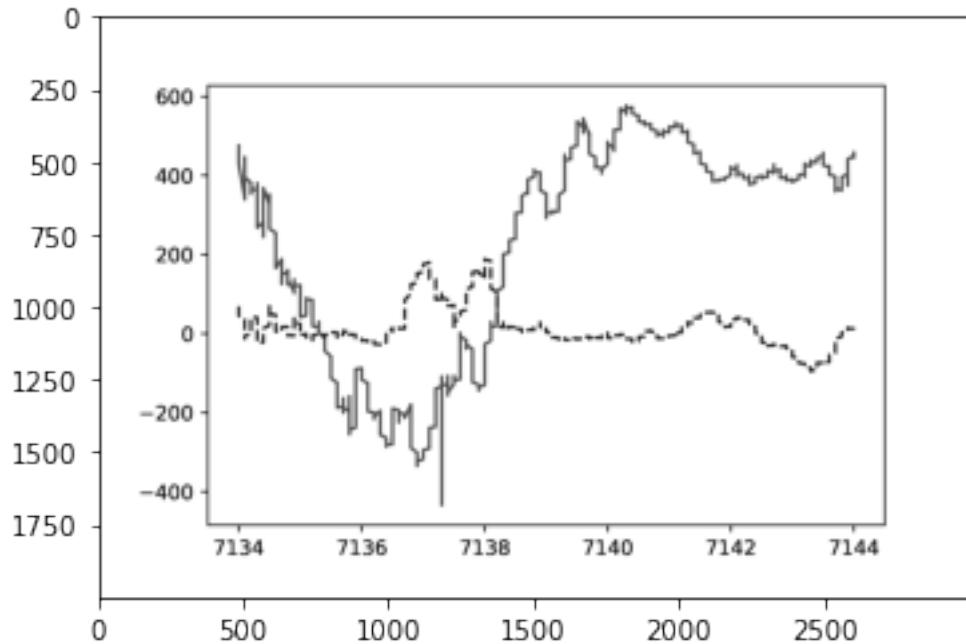
```
<class 'numpy.ndarray'> -- 184 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/107.png
107
```



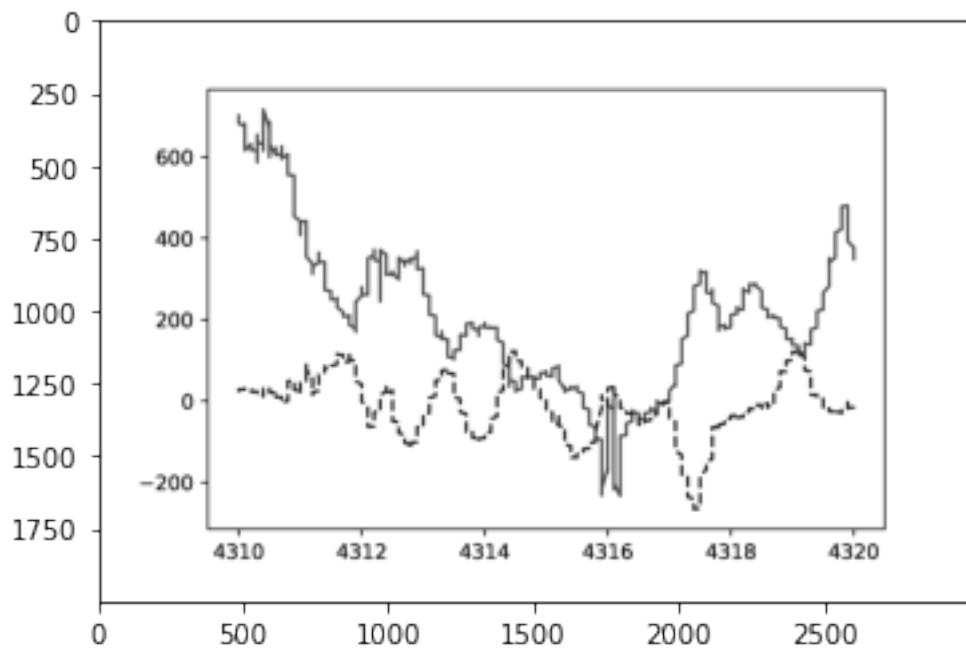
```
<class 'numpy.ndarray'>      --    185    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/321.png
321
```



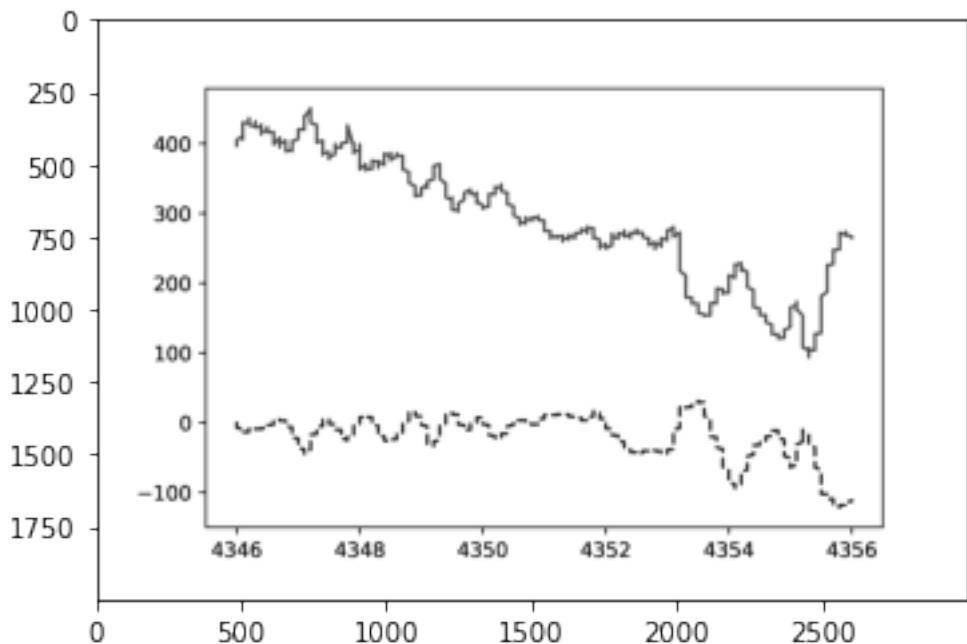
```
<class 'numpy.ndarray'>      --    186    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/340.png
340
```



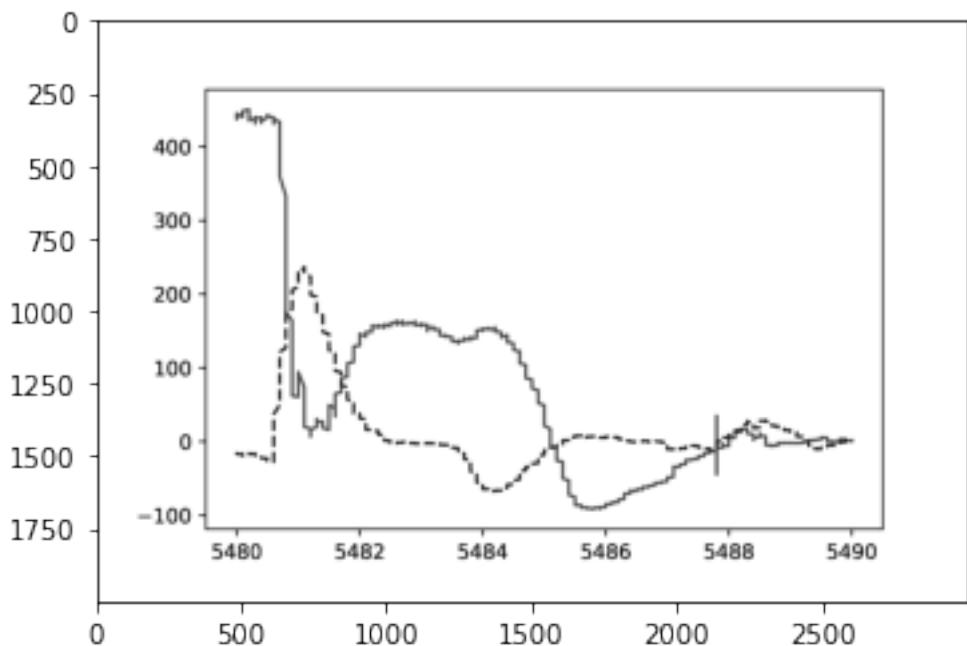
```
<class 'numpy.ndarray'>      --    187    --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/81.png
81
```



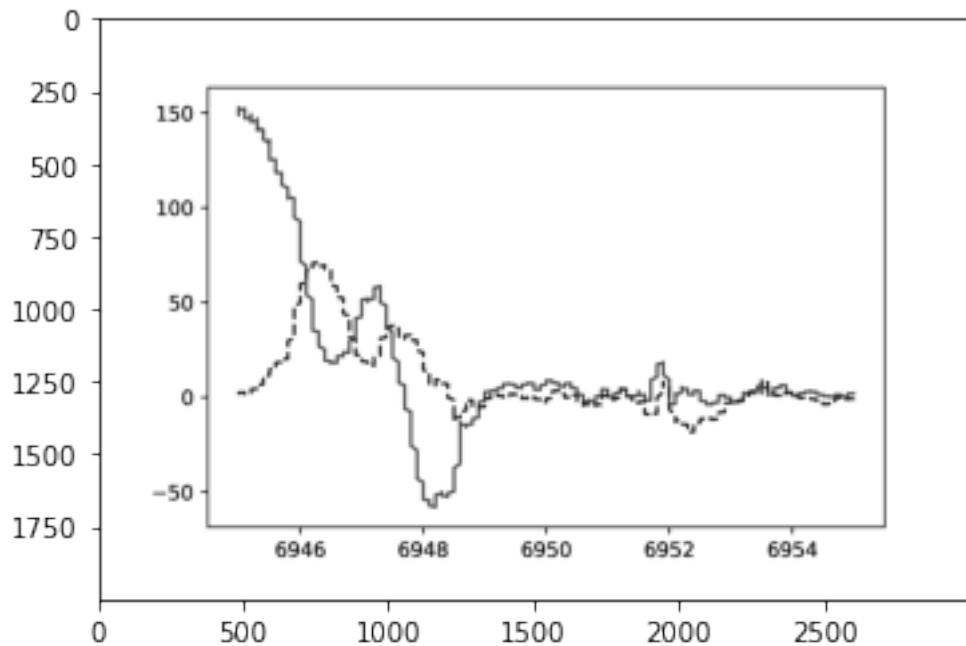
```
<class 'numpy.ndarray'> -- 188 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/85.png
85
```



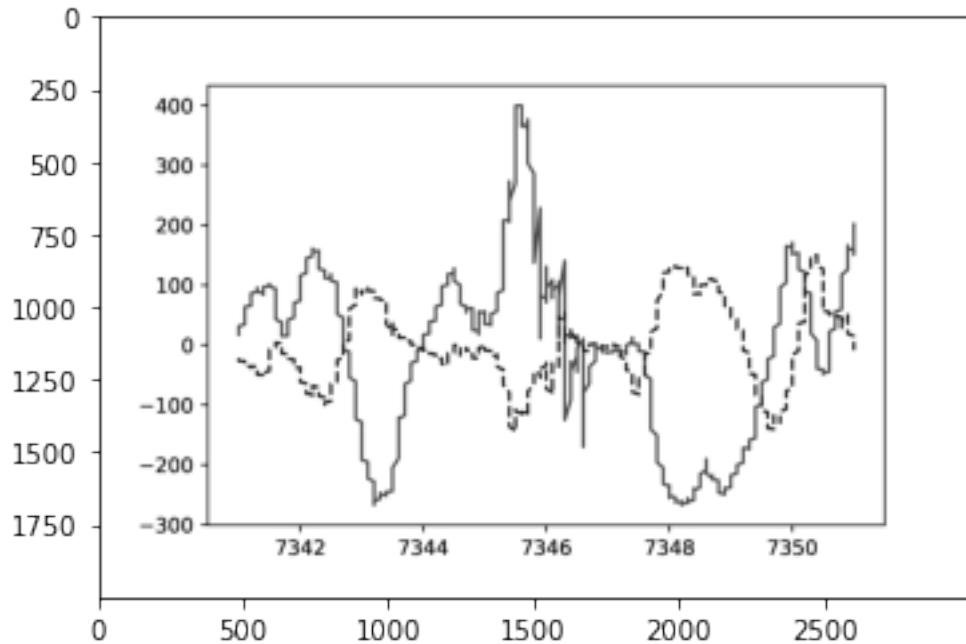
```
<class 'numpy.ndarray'> -- 189 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/211.png
211
```



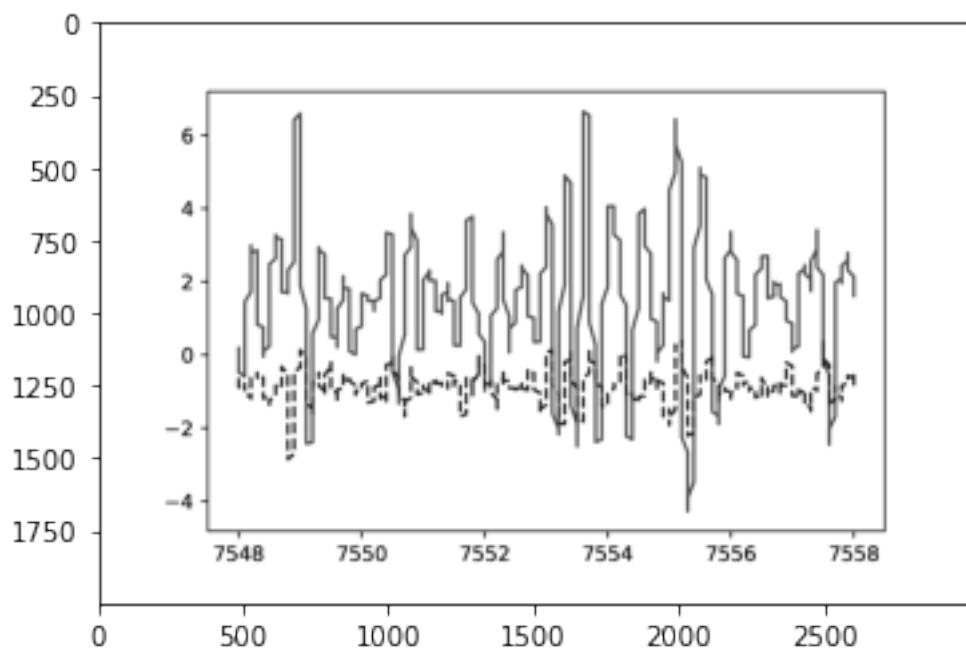
```
<class 'numpy.ndarray'>      --    190    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/319.png
319
```



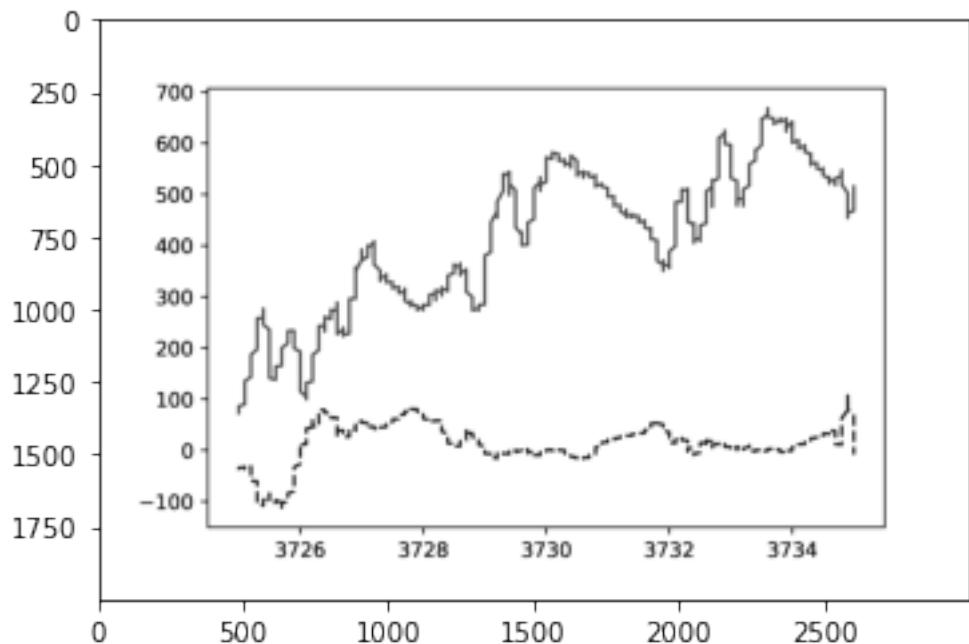
```
<class 'numpy.ndarray'>      --    191    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/363.png
363
```



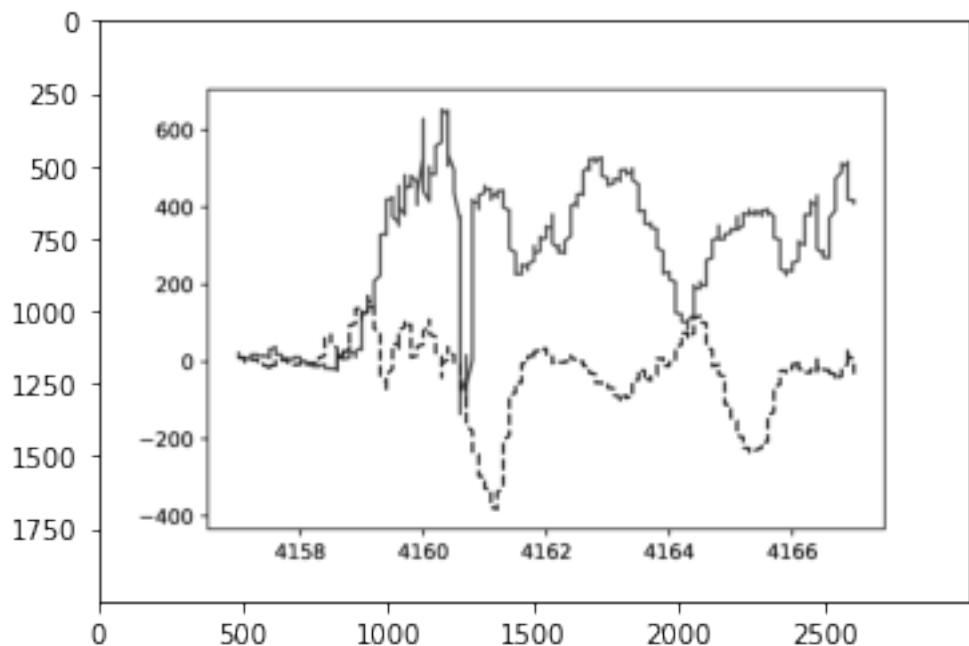
```
<class 'numpy.ndarray'>      --   192   --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/386.png
386
```



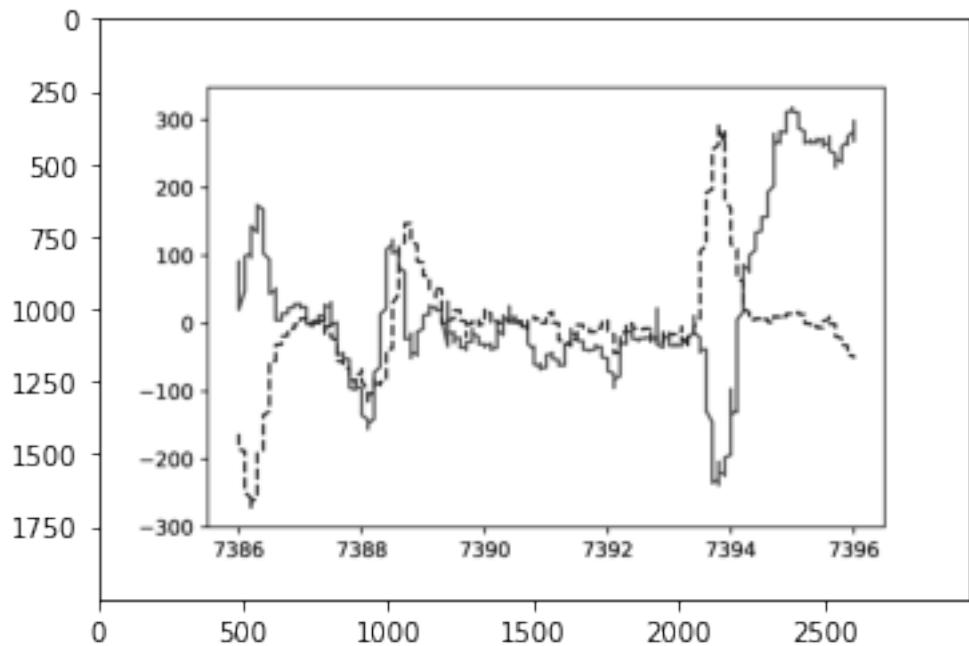
```
<class 'numpy.ndarray'> -- 193 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/16.png
16
```



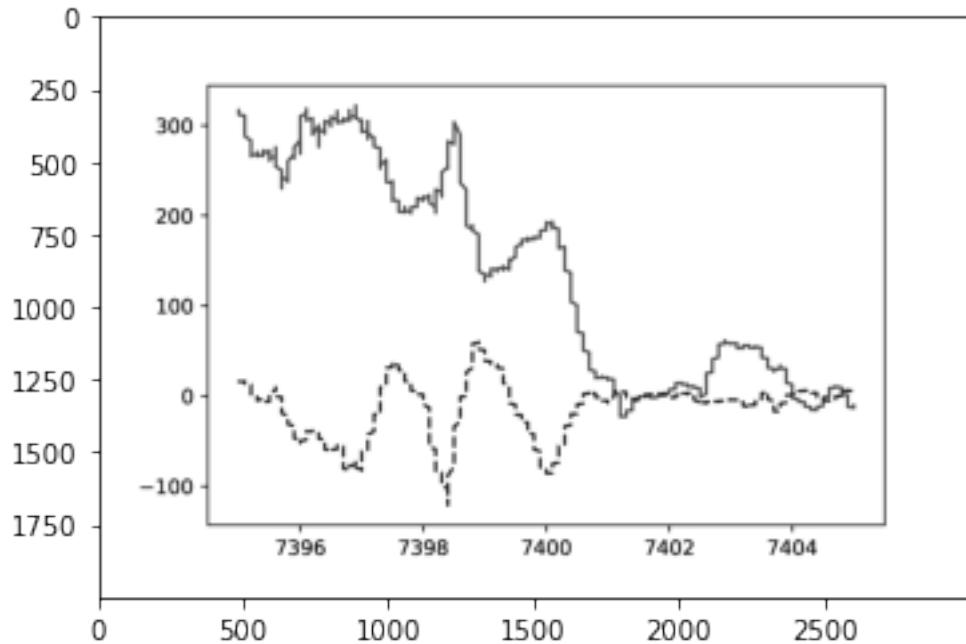
```
<class 'numpy.ndarray'> -- 194 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/64.png
64
```



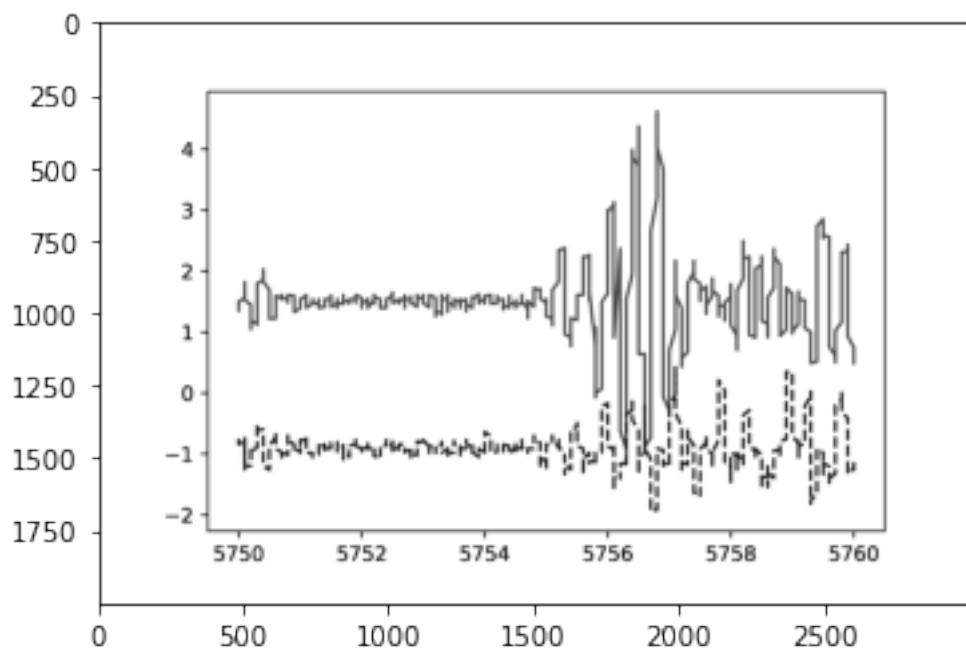
```
<class 'numpy.ndarray'>      --    195    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/368.png
368
```



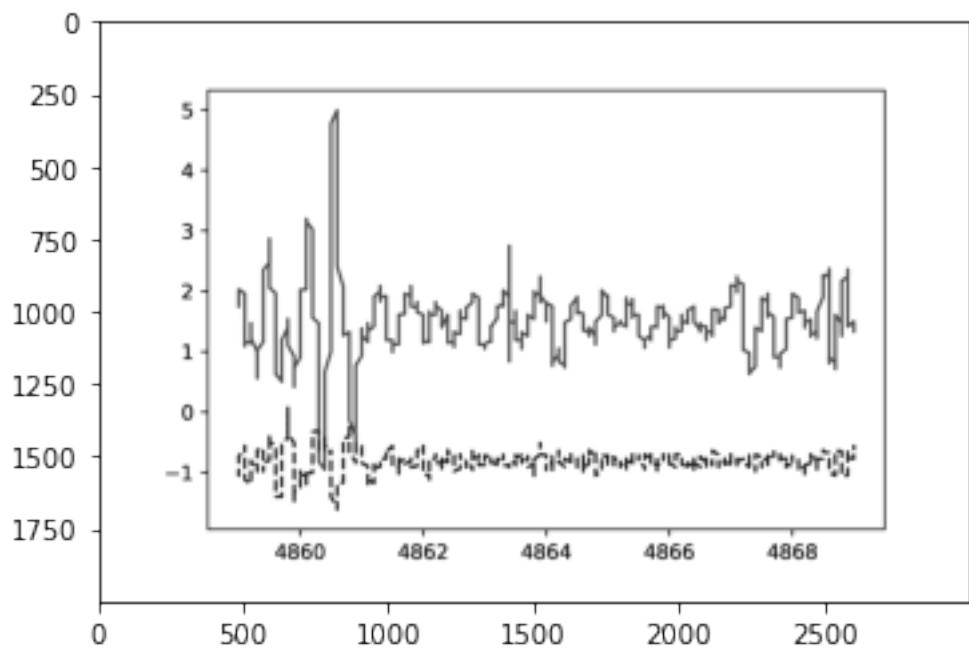
```
<class 'numpy.ndarray'>      --    196    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/369.png
369
```



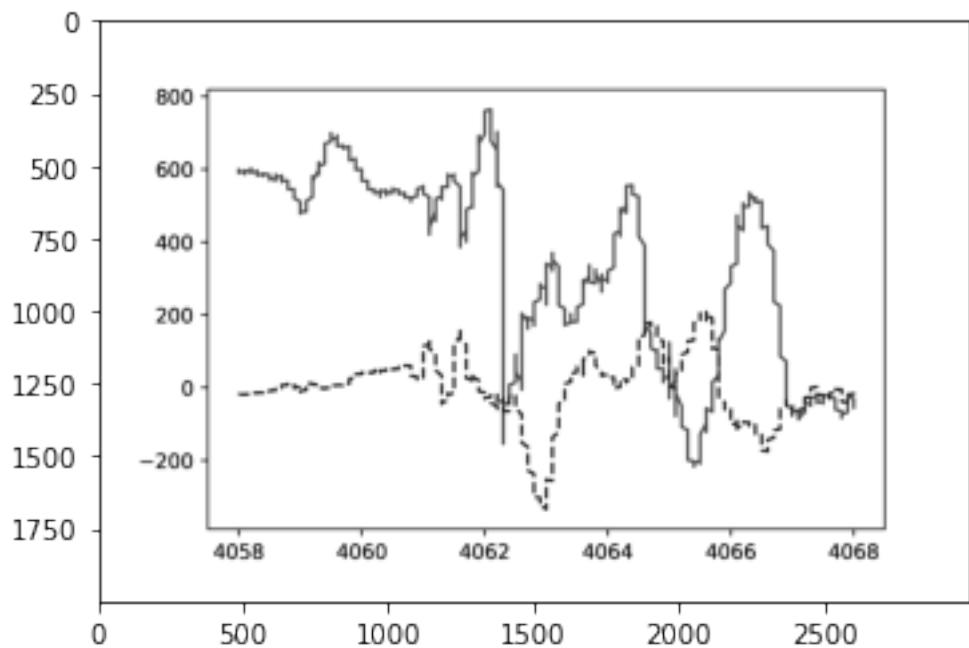
```
<class 'numpy.ndarray'>      --    197    --
/dtata/wheels/notebooks/Alex/PlotImgFolder/Train/241.png
241
```



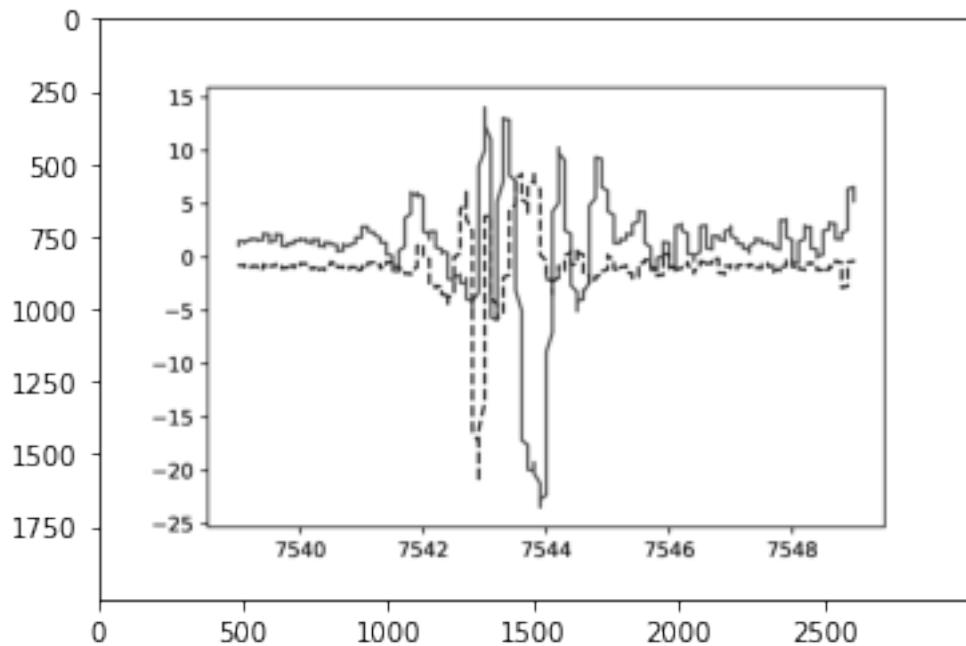
```
<class 'numpy.ndarray'> -- 198 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/142.png
142
```



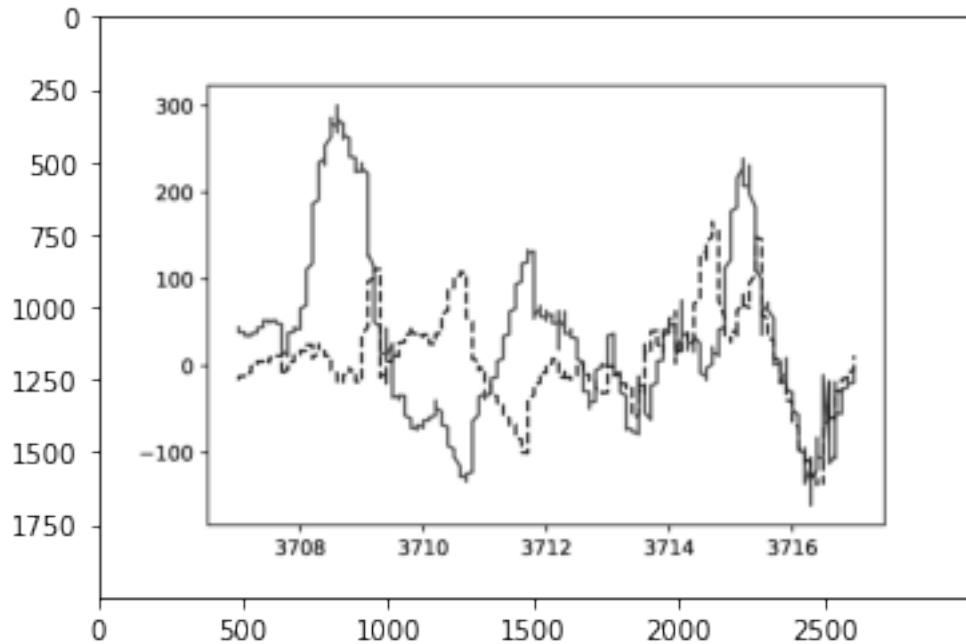
```
<class 'numpy.ndarray'> -- 199 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/53.png
53
```



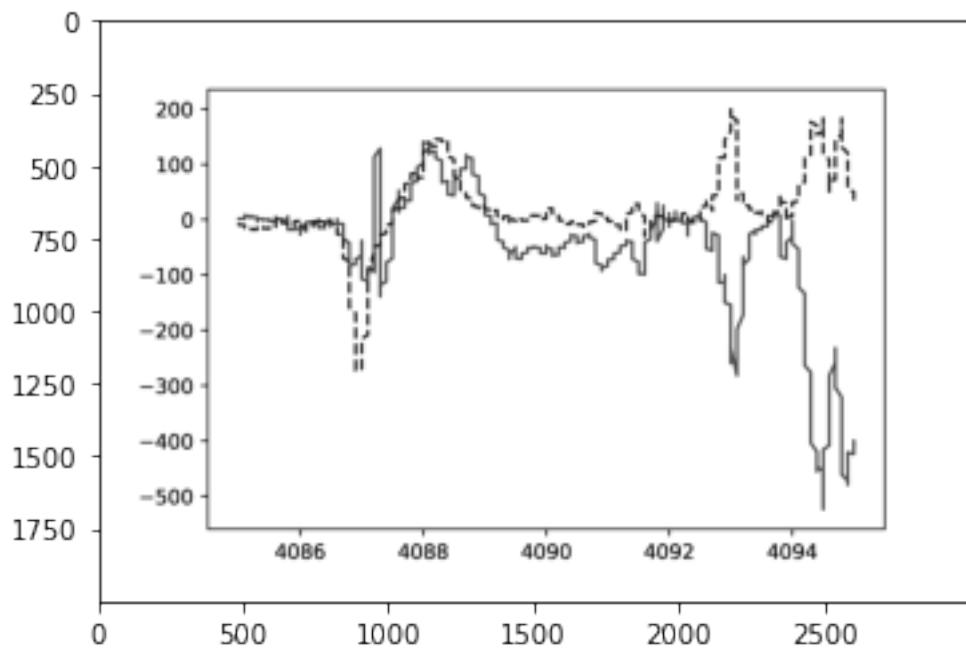
```
<class 'numpy.ndarray'>      --    200    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/385.png
385
```



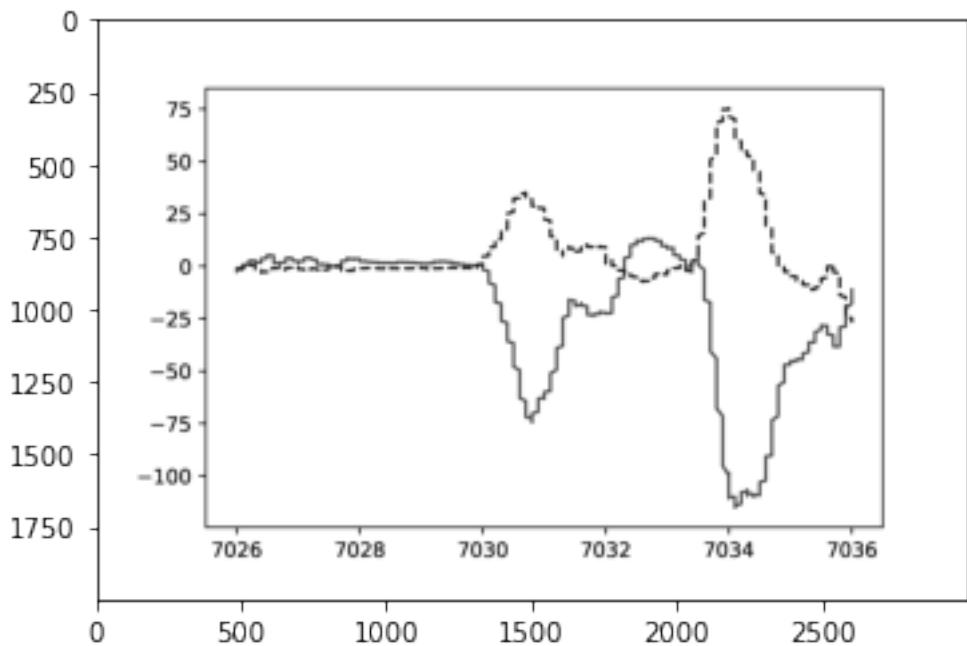
```
<class 'numpy.ndarray'>      --    201    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/14.png
14
```



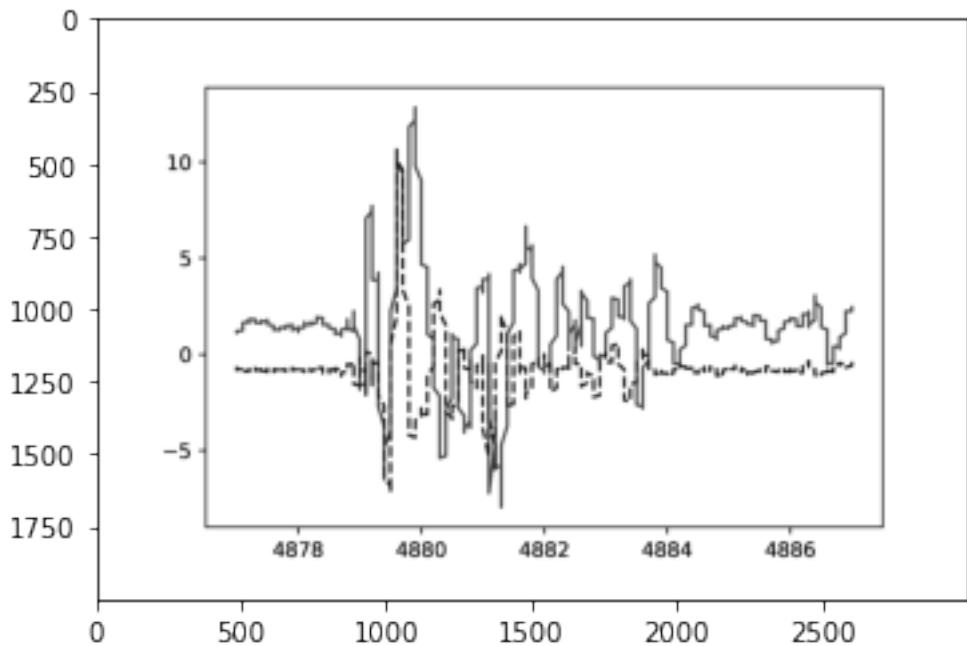
```
<class 'numpy.ndarray'>      -- 202  --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/56.png
56
```



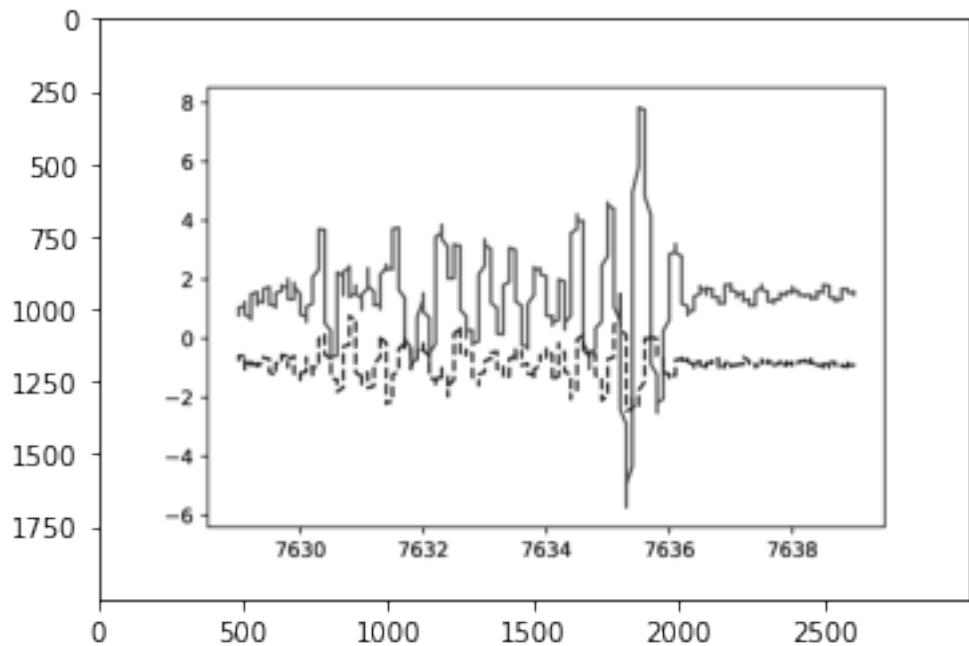
```
<class 'numpy.ndarray'> -- 203 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/328.png
328
```



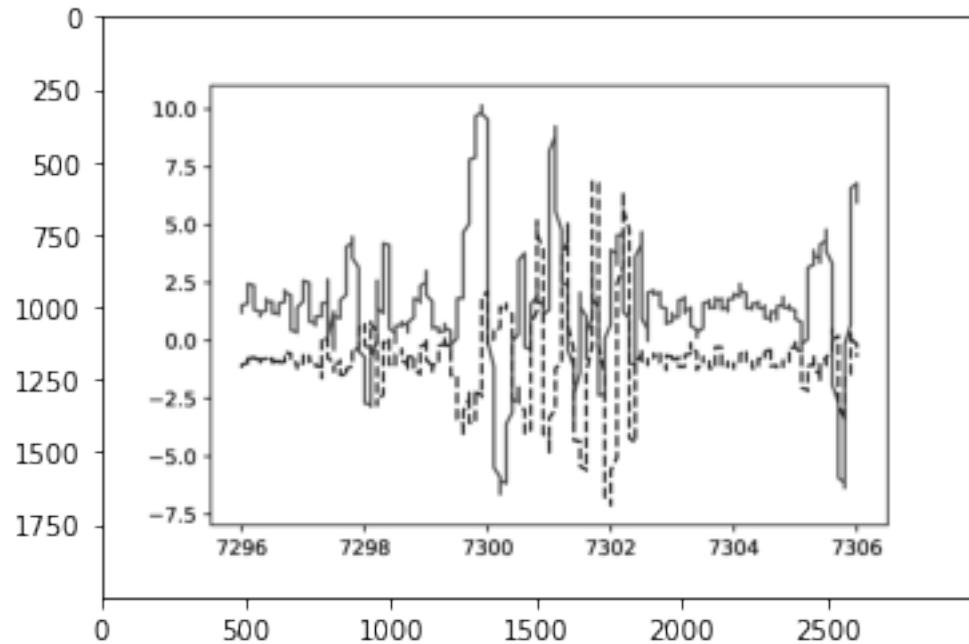
```
<class 'numpy.ndarray'> -- 204 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/144.png
144
```



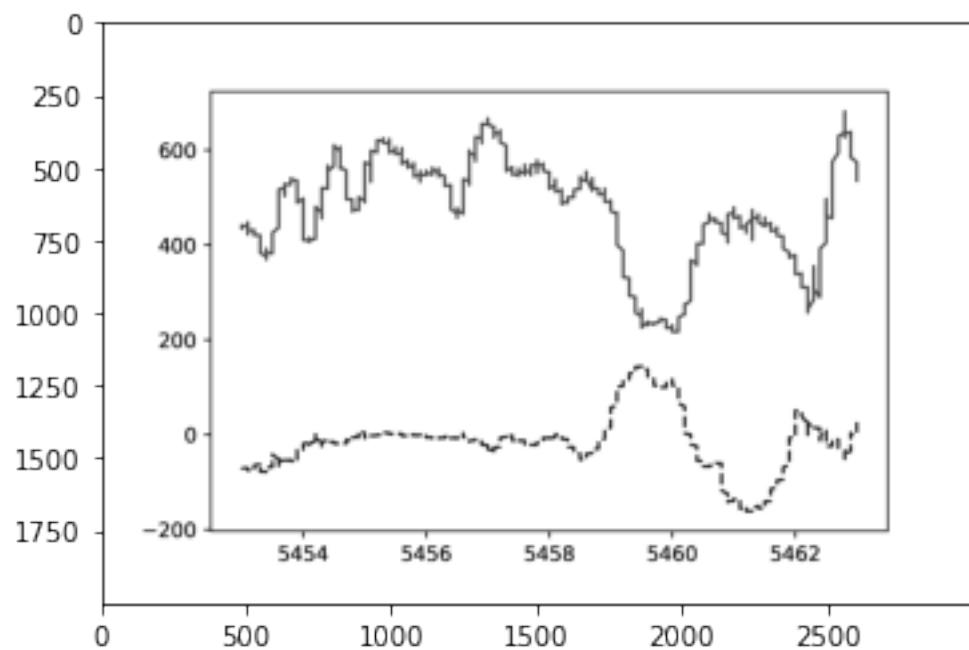
```
<class 'numpy.ndarray'>      --    205    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/395.png
395
```



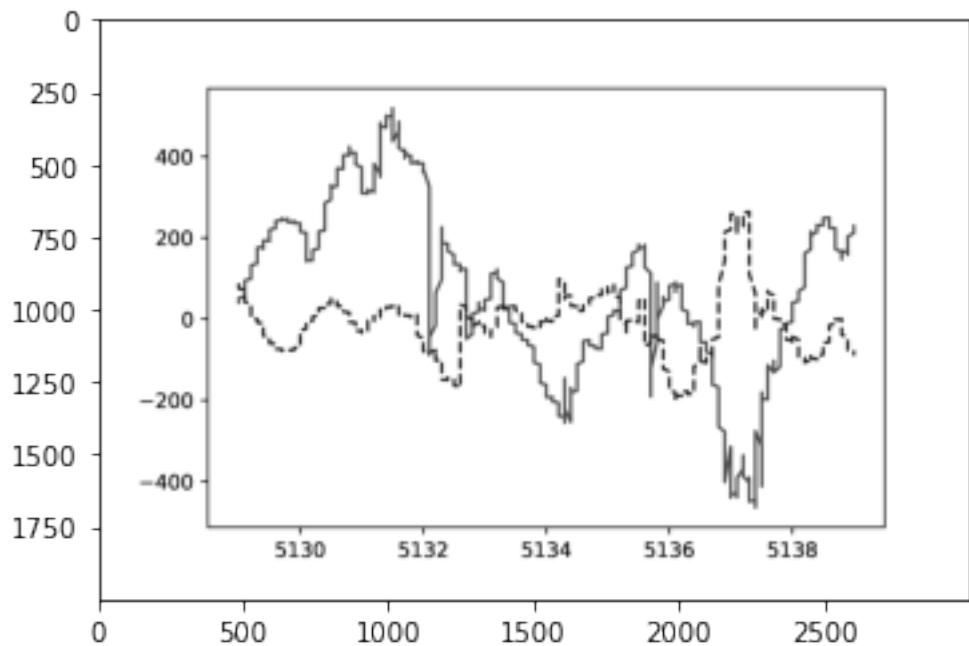
```
<class 'numpy.ndarray'>      --    206    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/358.png
358
```



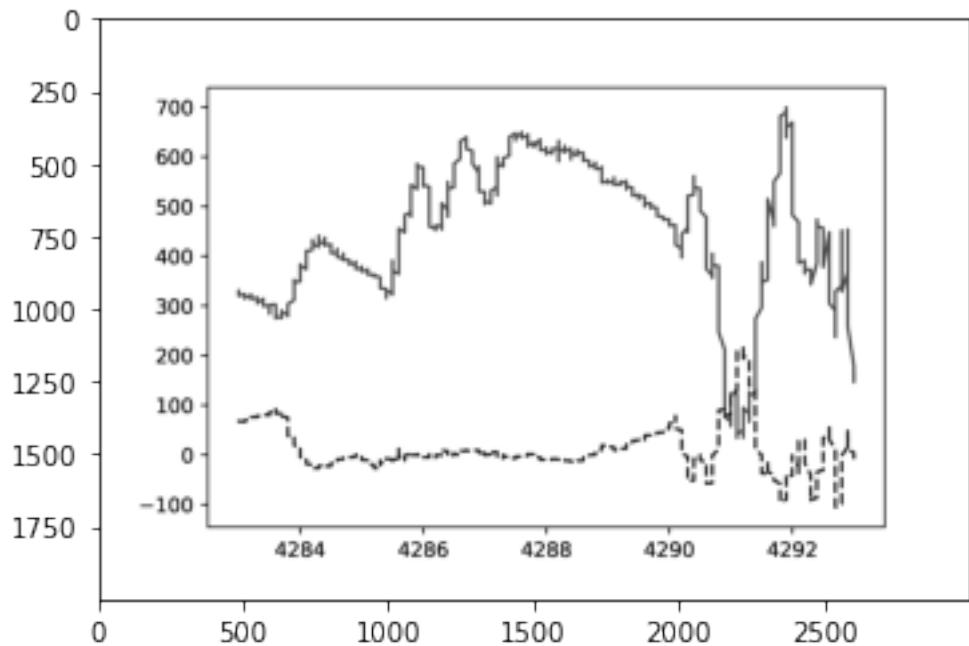
```
<class 'numpy.ndarray'>      -- 207  --
/datasets/wheels/notebooks/Alex/PlotImgFolder/Train/208.png
208
```



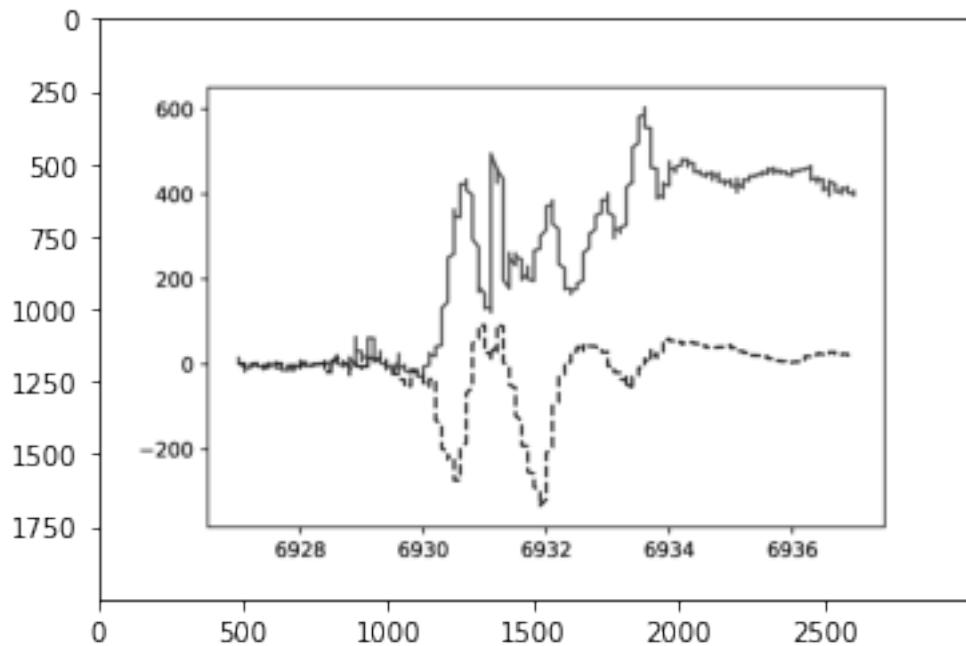
```
<class 'numpy.ndarray'> -- 208 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/172.png
172
```



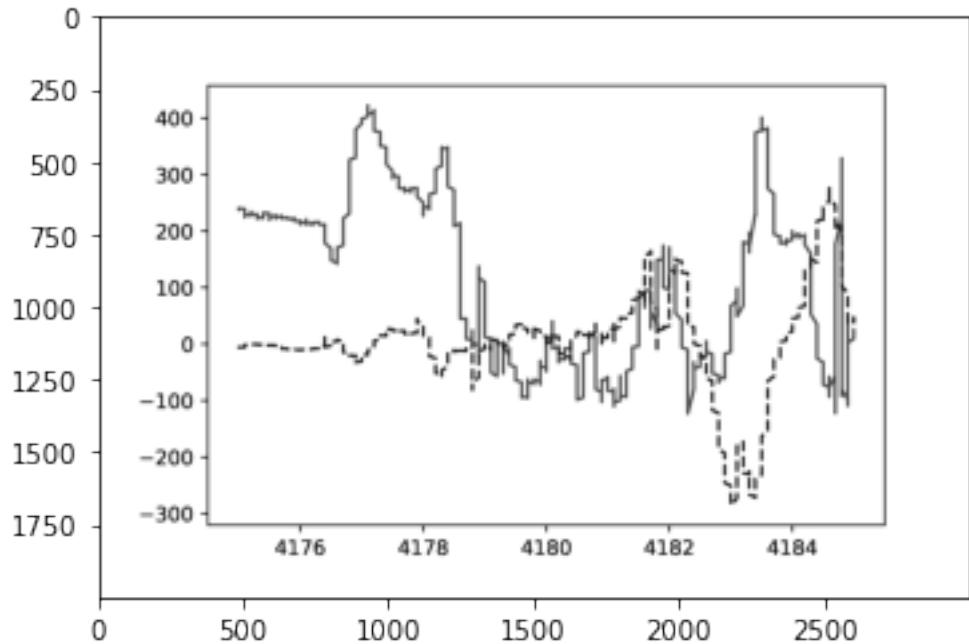
```
<class 'numpy.ndarray'> -- 209 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/78.png
78
```



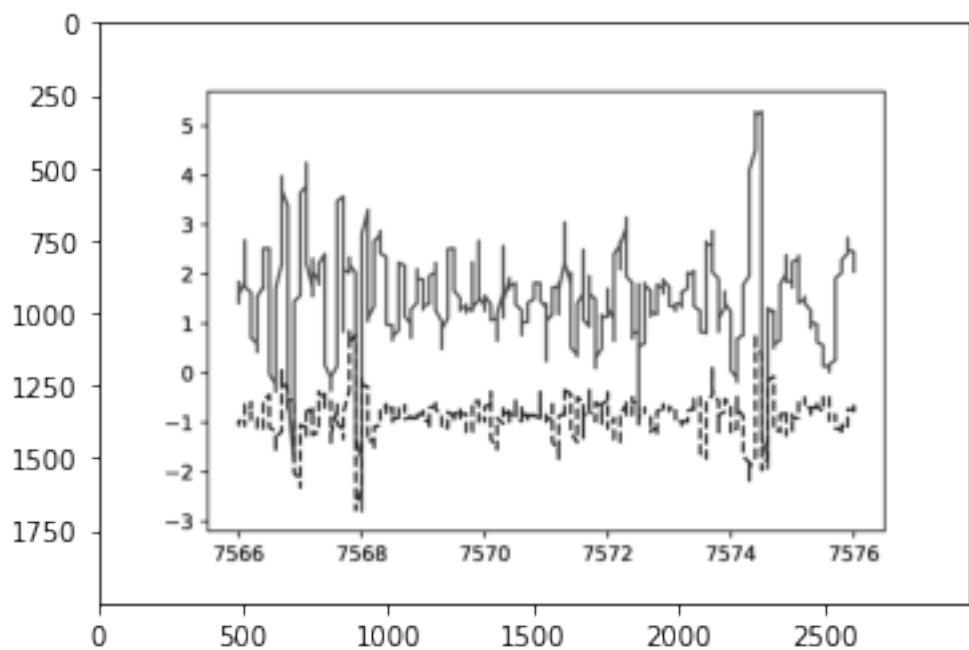
```
<class 'numpy.ndarray'>      --    210    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/317.png
317
```



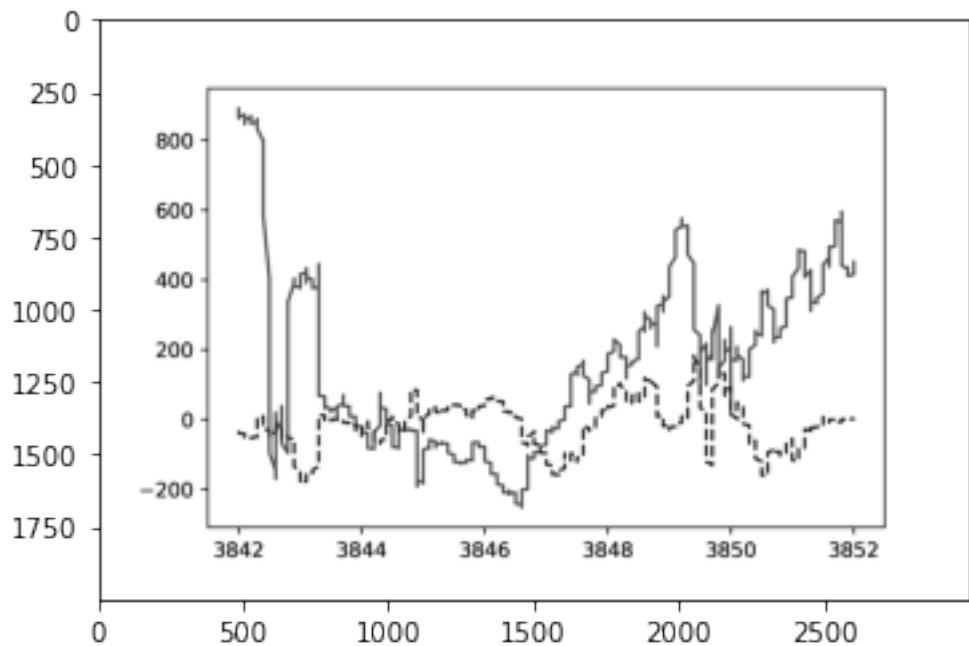
```
<class 'numpy.ndarray'>      --    211    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/66.png
66
```



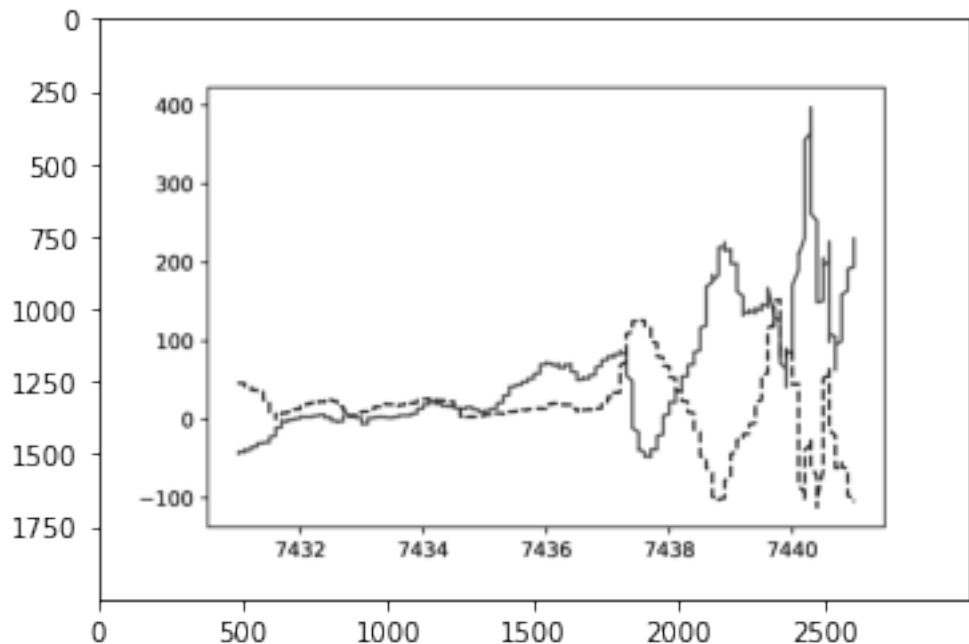
```
<class 'numpy.ndarray'>      -- 212  --
/dtata/wheels/notebooks/Alex/PlotImgFolder/Train/388.png
388
```



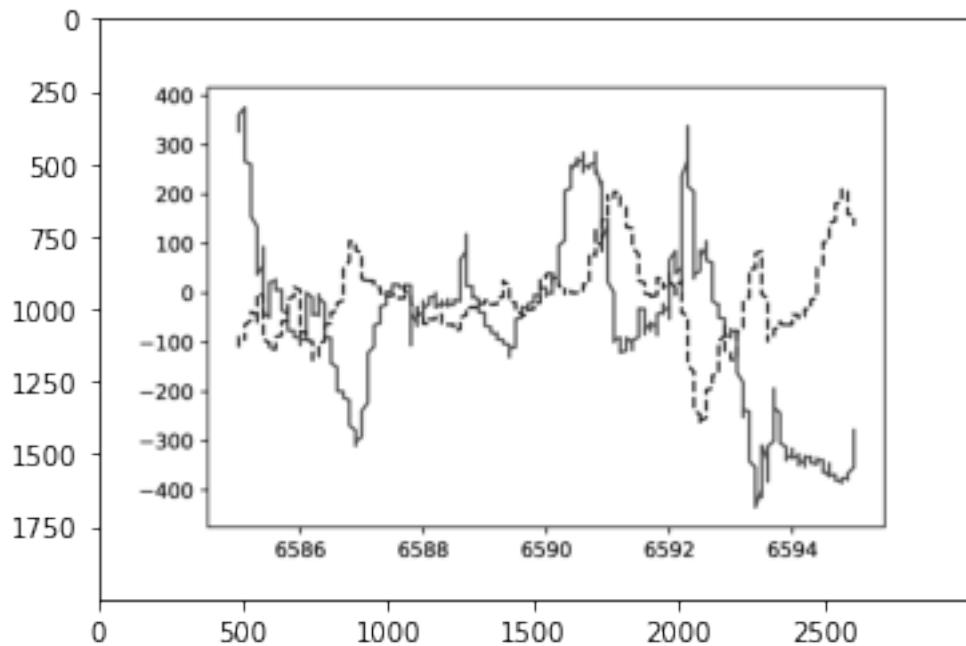
```
<class 'numpy.ndarray'> -- 213 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/29.png
29
```



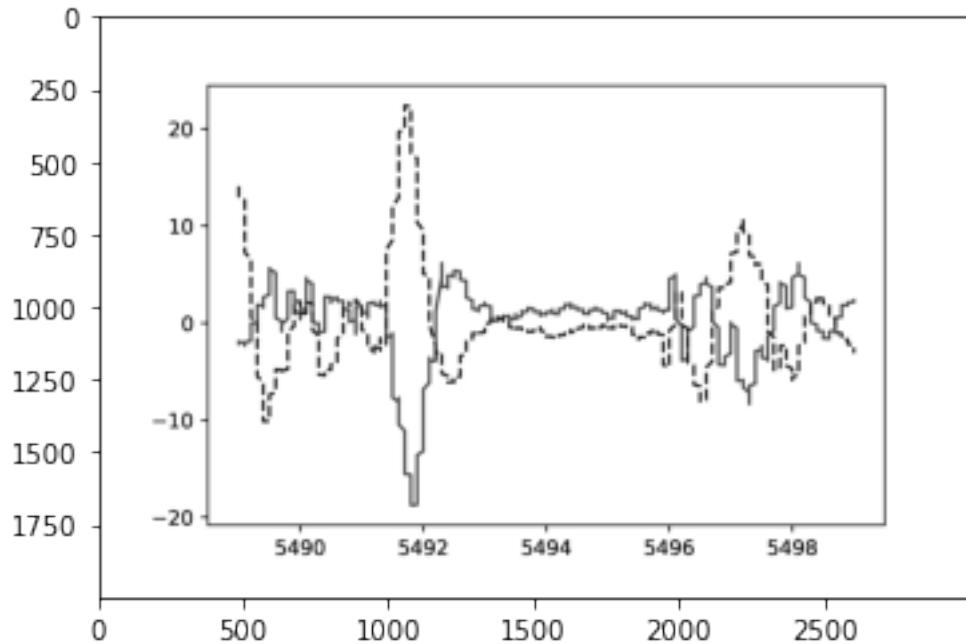
```
<class 'numpy.ndarray'> -- 214 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/373.png
373
```



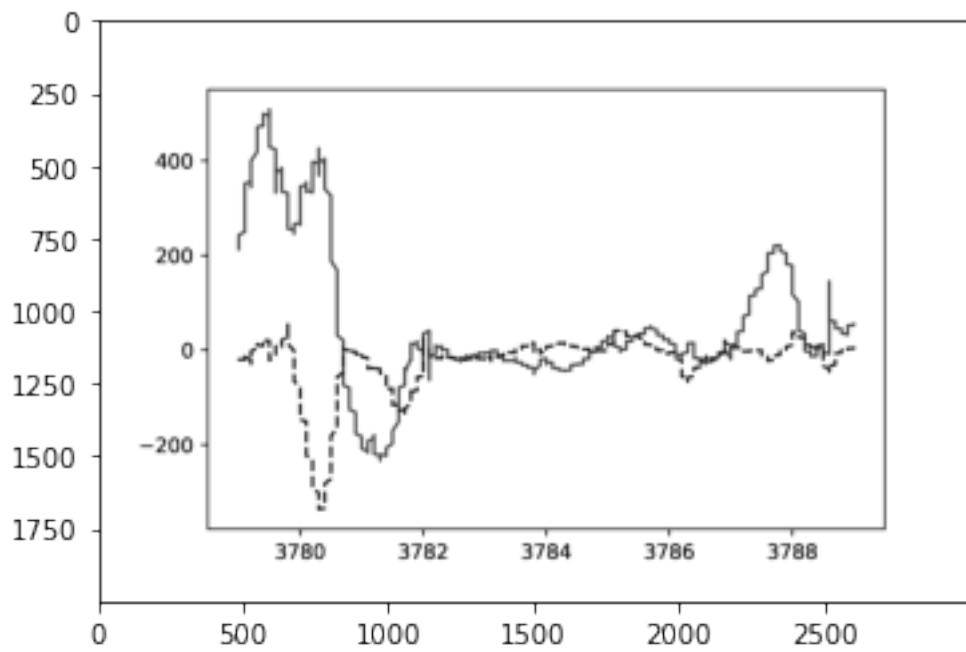
```
<class 'numpy.ndarray'>      --    215    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/279.png
279
```



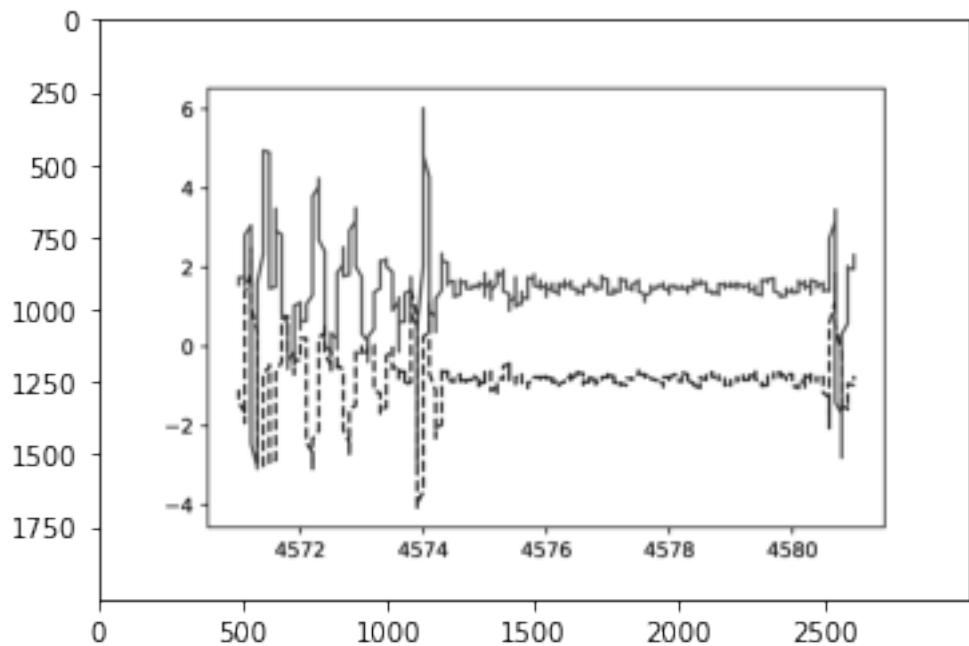
```
<class 'numpy.ndarray'>      --    216    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/212.png
212
```



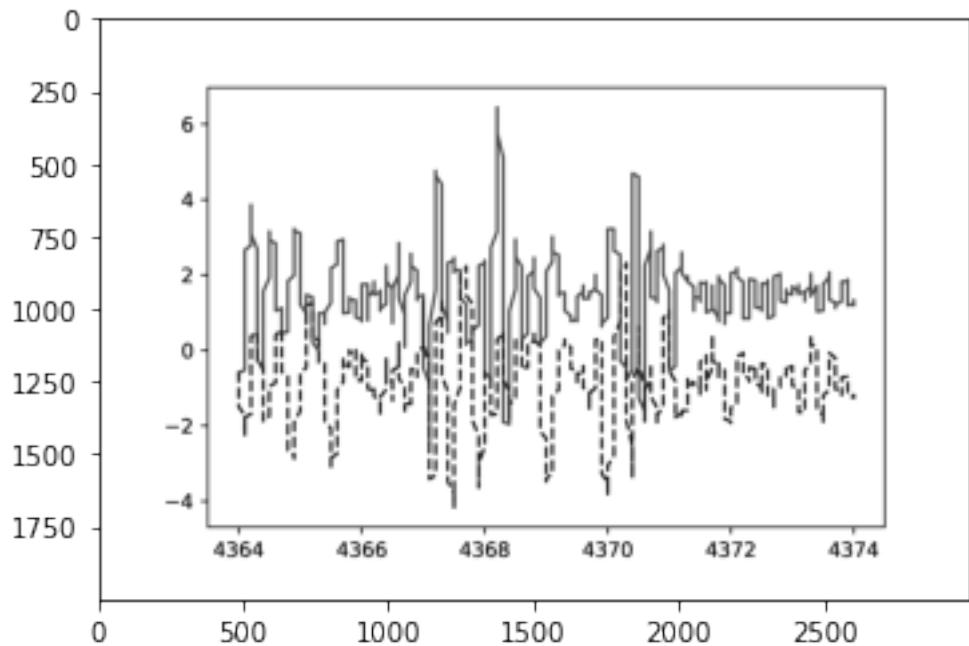
```
<class 'numpy.ndarray'>      --  217   --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/22.png
22
```



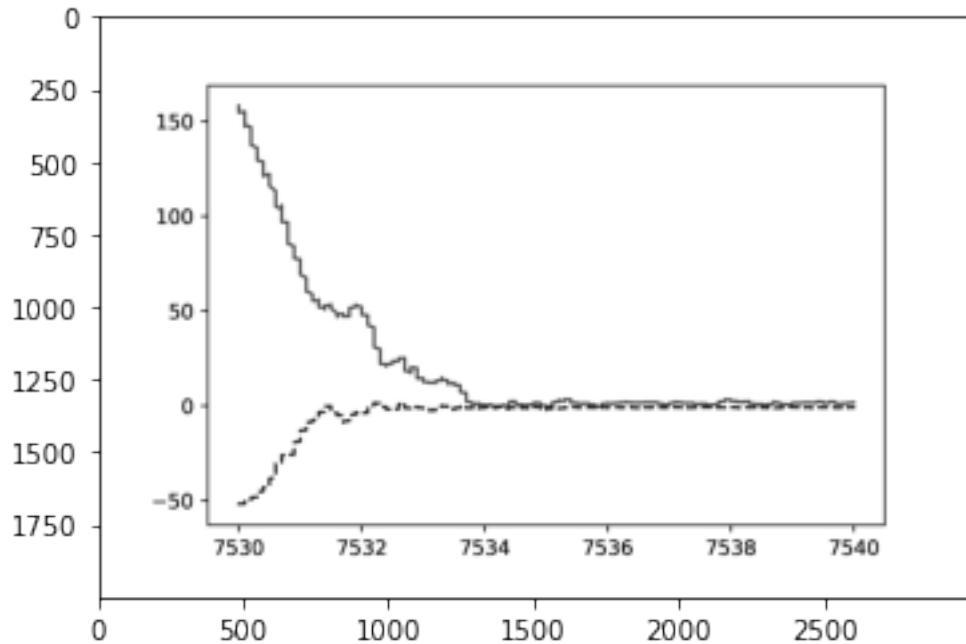
```
<class 'numpy.ndarray'> -- 218 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/110.png
110
```



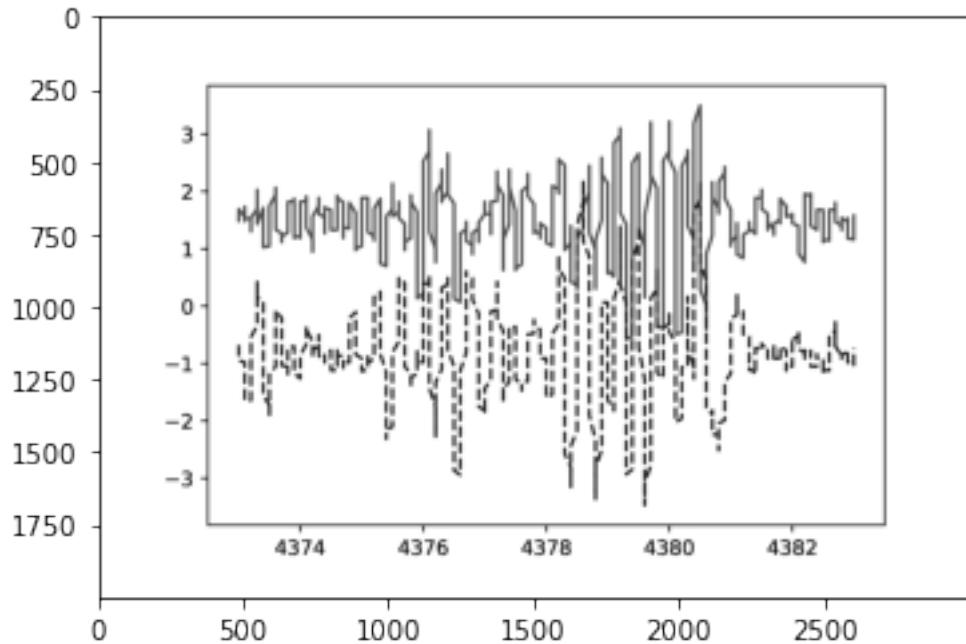
```
<class 'numpy.ndarray'> -- 219 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/87.png
87
```



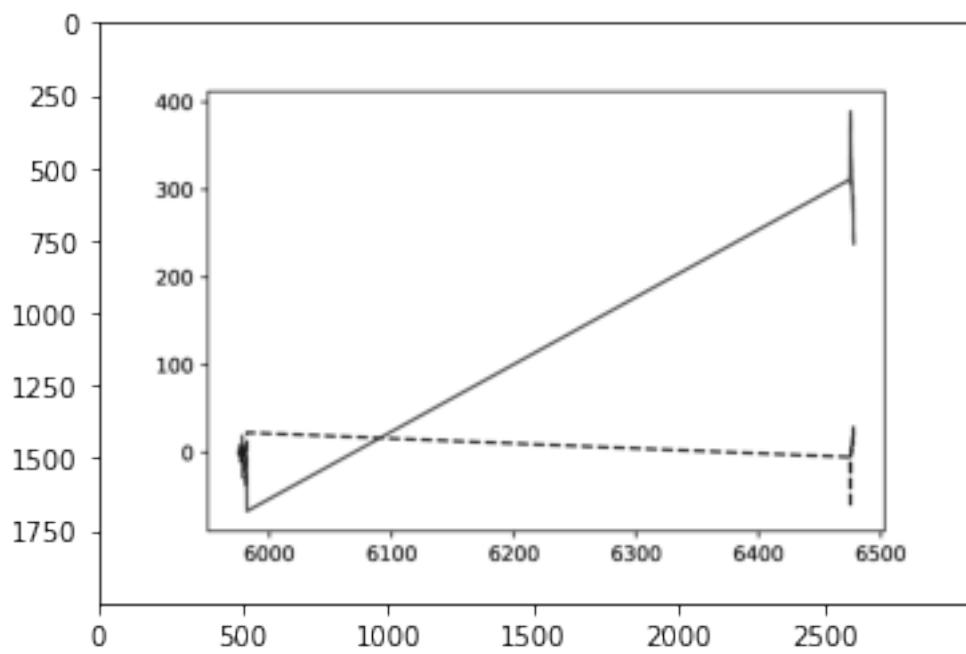
```
<class 'numpy.ndarray'>      --    220    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/384.png
384
```



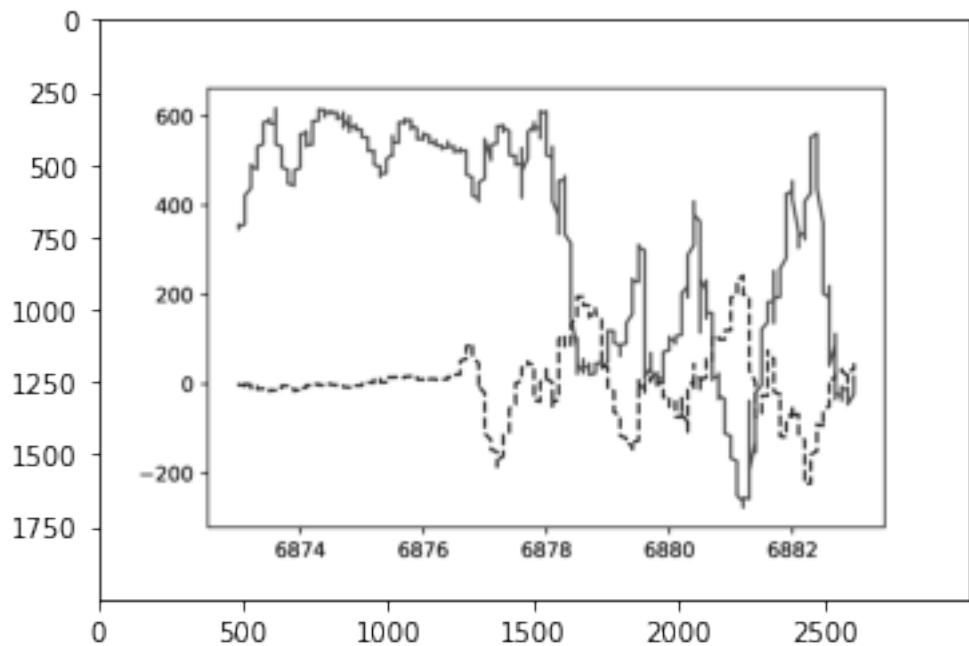
```
<class 'numpy.ndarray'>      --    221    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/88.png
88
```



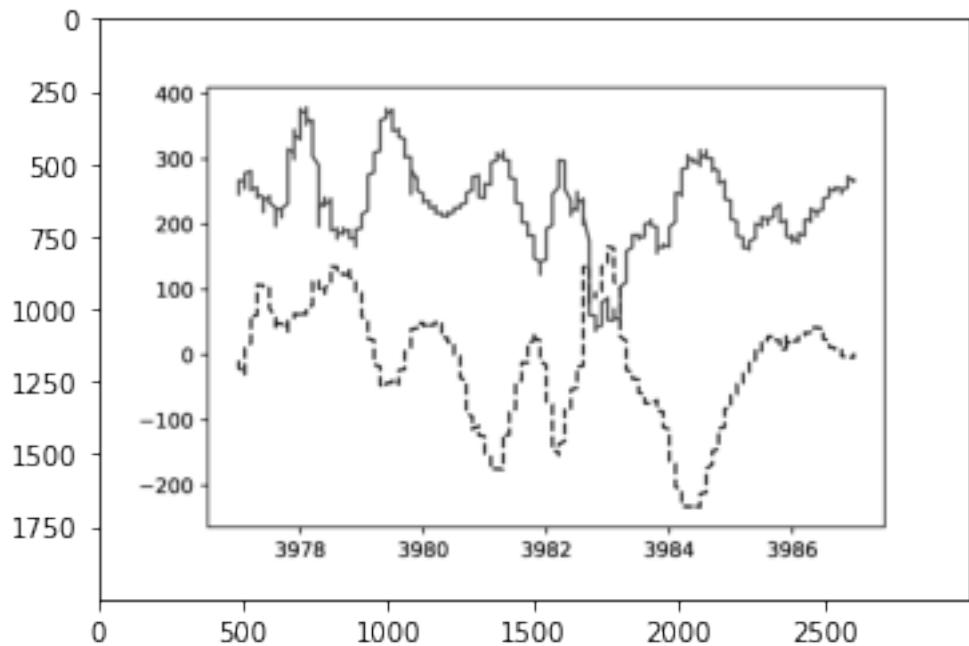
```
<class 'numpy.ndarray'>      -- 222  --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/266.png
266
```



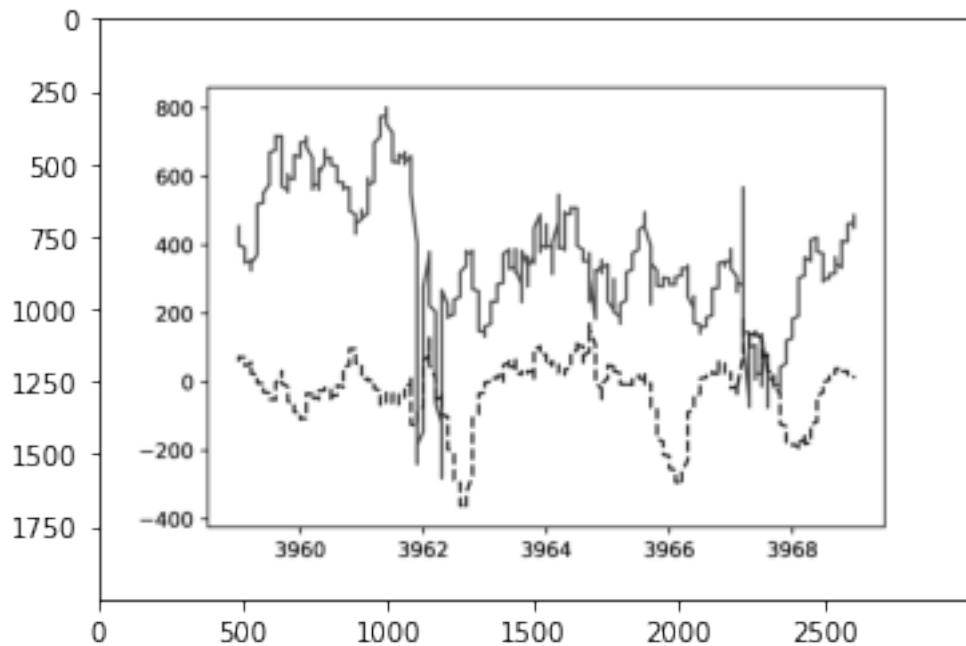
```
<class 'numpy.ndarray'> -- 223 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/311.png
311
```



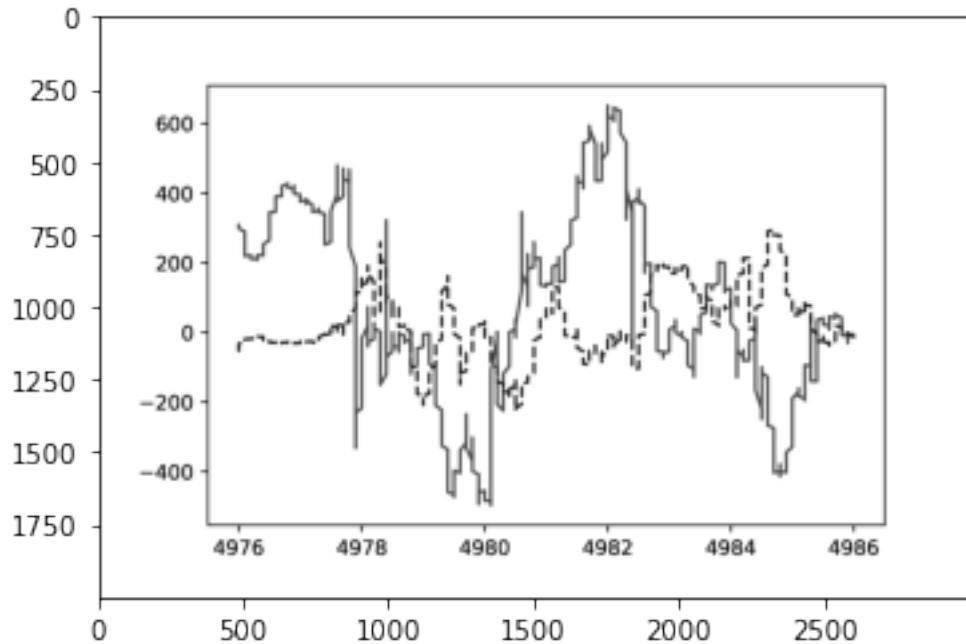
```
<class 'numpy.ndarray'> -- 224 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/44.png
44
```



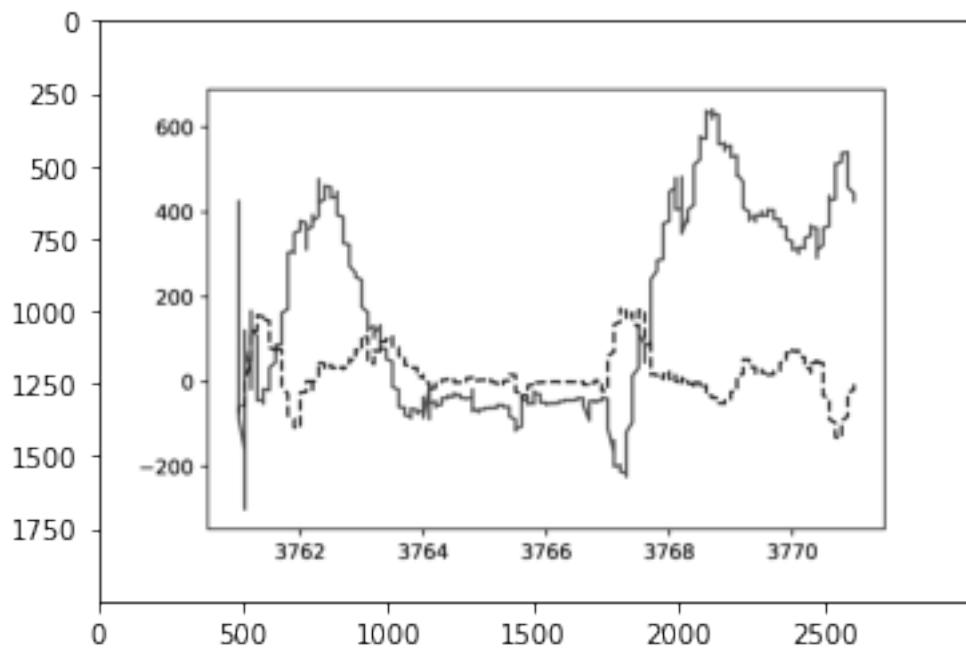
```
<class 'numpy.ndarray'>      --    225    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/42.png
42
```



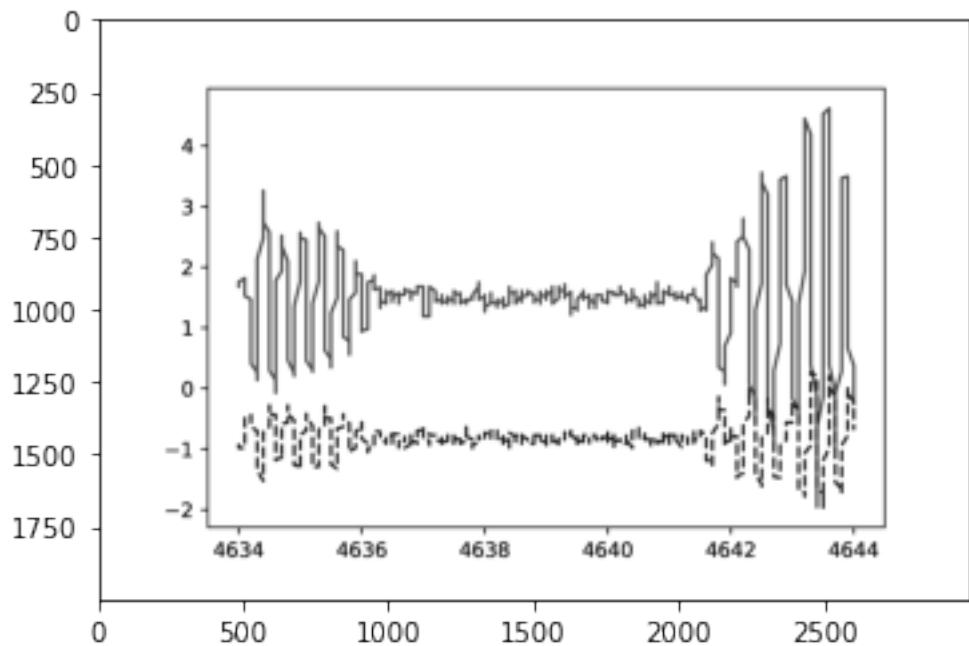
```
<class 'numpy.ndarray'>      --    226    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/155.png
155
```



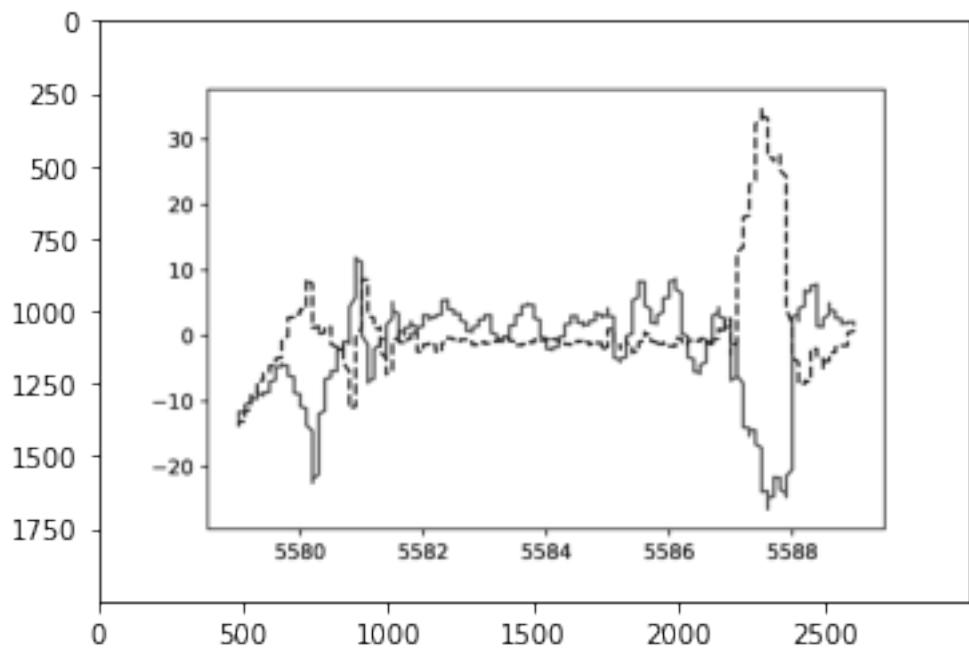
```
<class 'numpy.ndarray'>      -- 227  --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/20.png
20
```



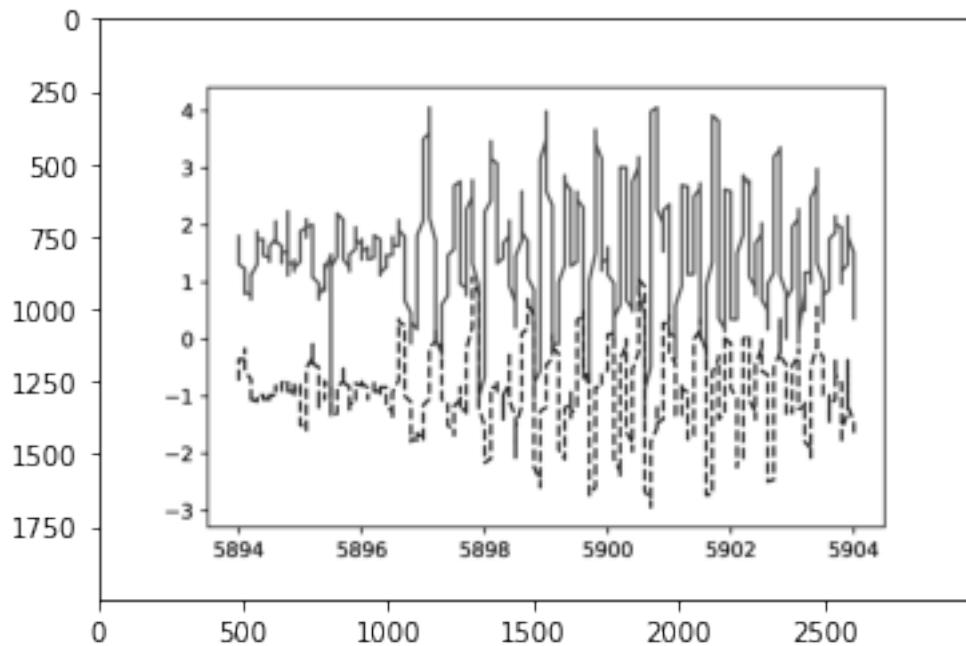
```
<class 'numpy.ndarray'> -- 228 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/117.png
117
```



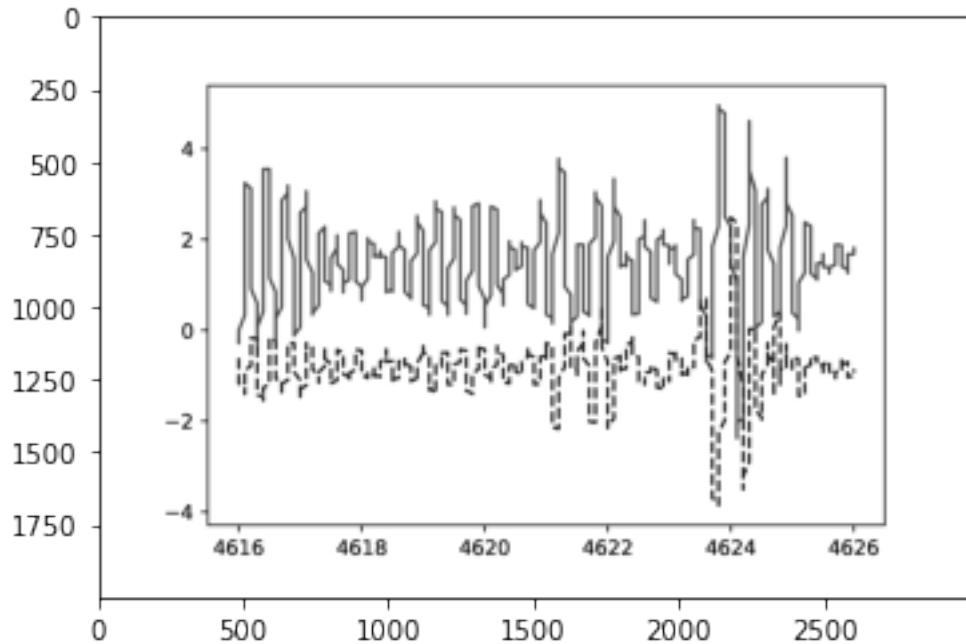
```
<class 'numpy.ndarray'> -- 229 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/222.png
222
```



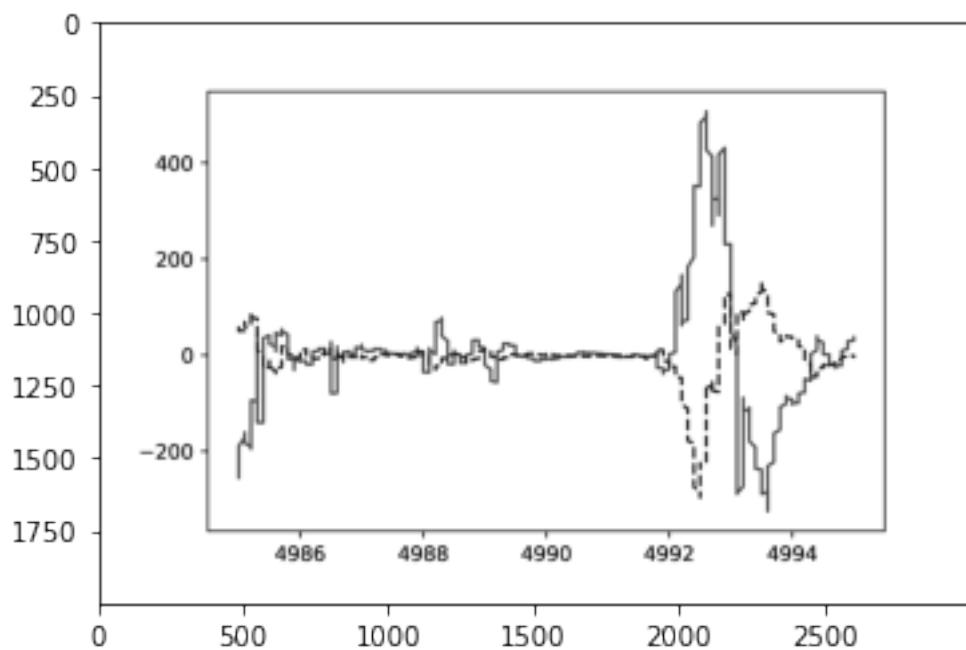
```
<class 'numpy.ndarray'>      --    230    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/257.png
257
```



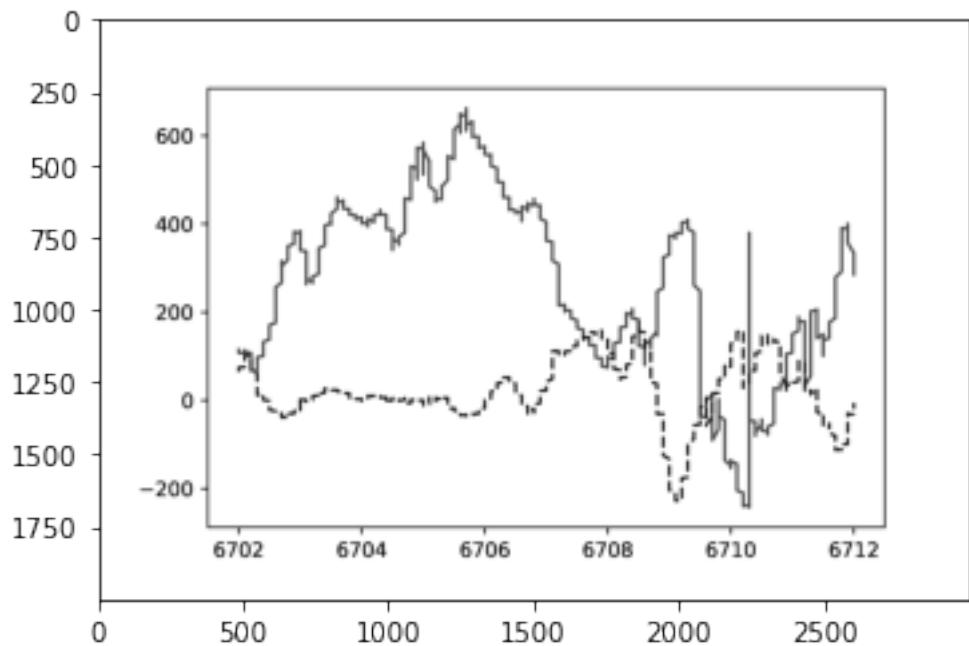
```
<class 'numpy.ndarray'>      --    231    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/115.png
115
```



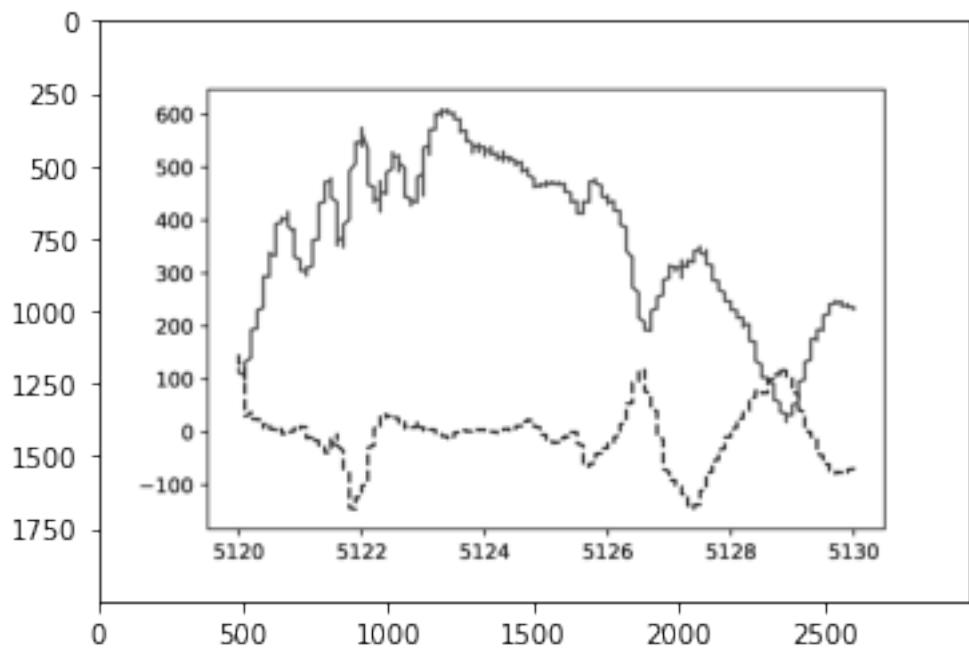
```
<class 'numpy.ndarray'>      -- 232  --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/156.png
156
```



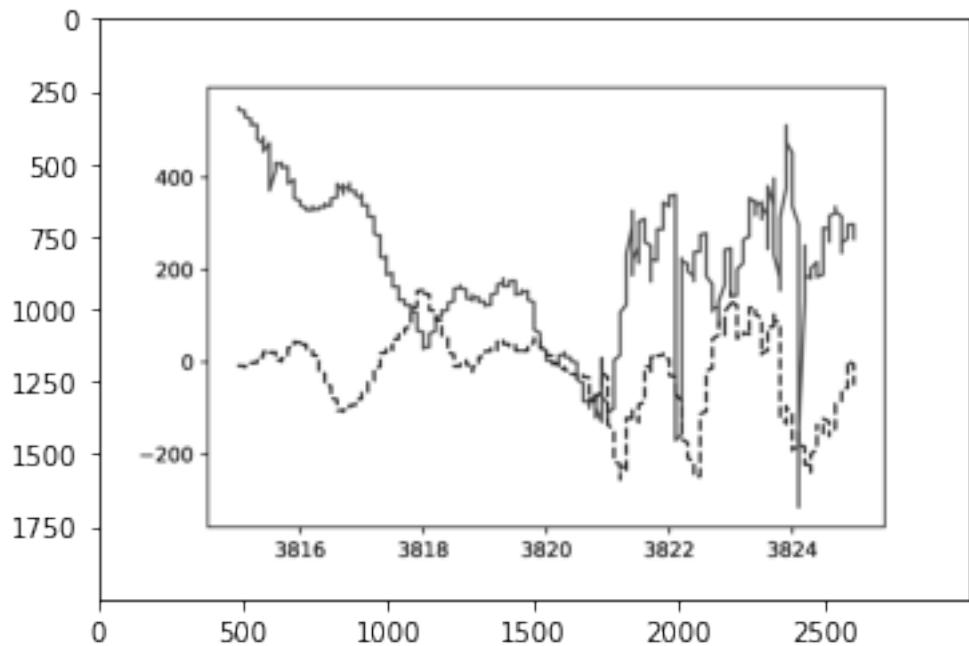
```
<class 'numpy.ndarray'> -- 233 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/292.png
292
```



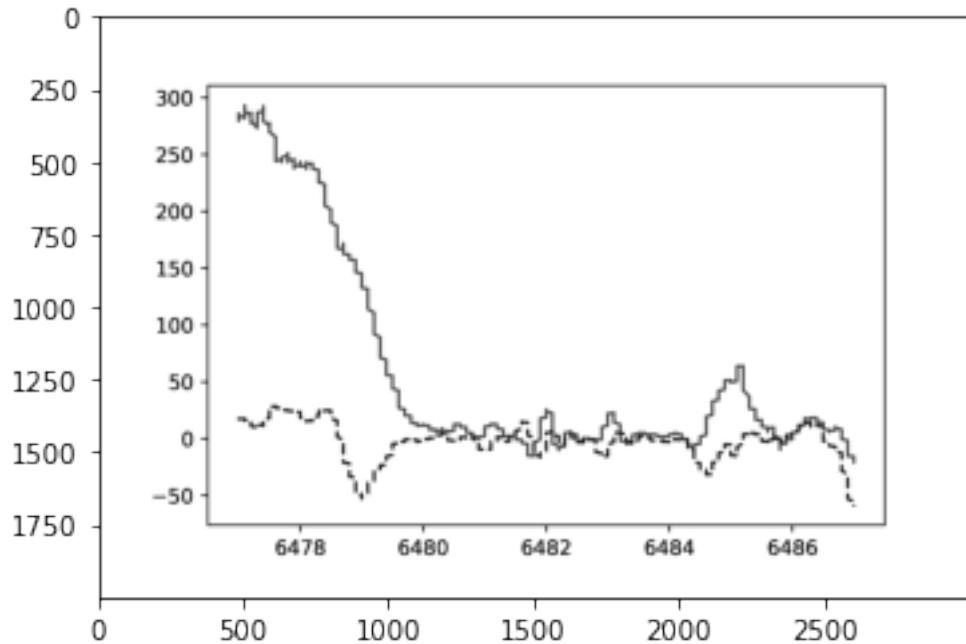
```
<class 'numpy.ndarray'> -- 234 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/171.png
171
```



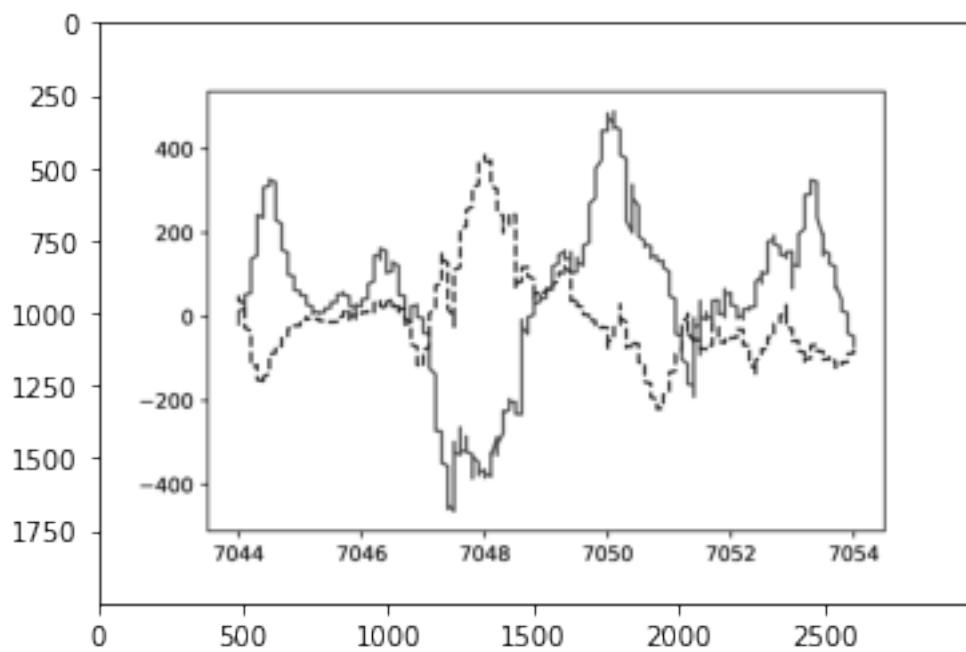
```
<class 'numpy.ndarray'>      --    235    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/26.png
26
```



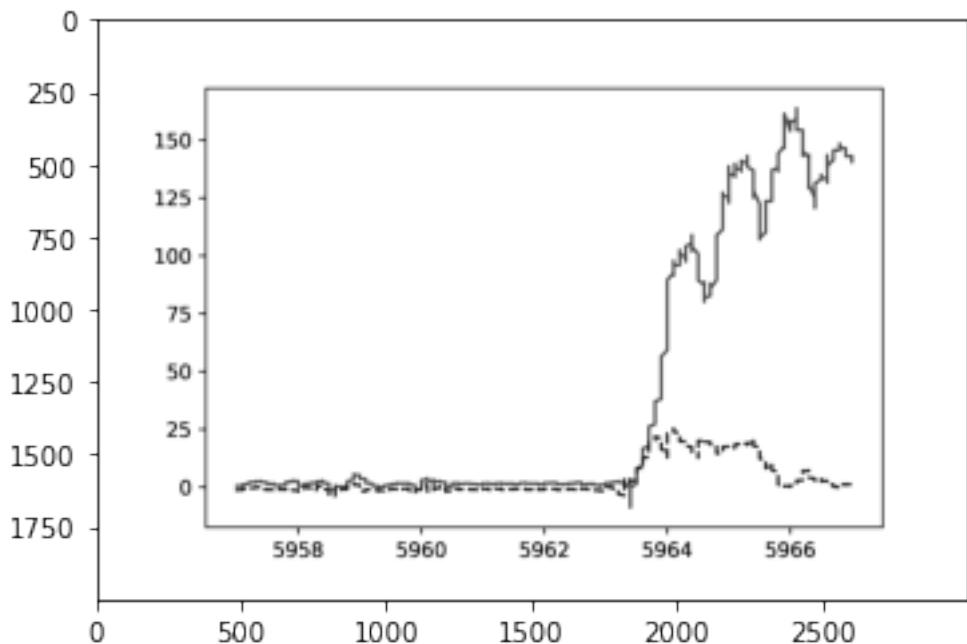
```
<class 'numpy.ndarray'>      --    236    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/267.png
267
```



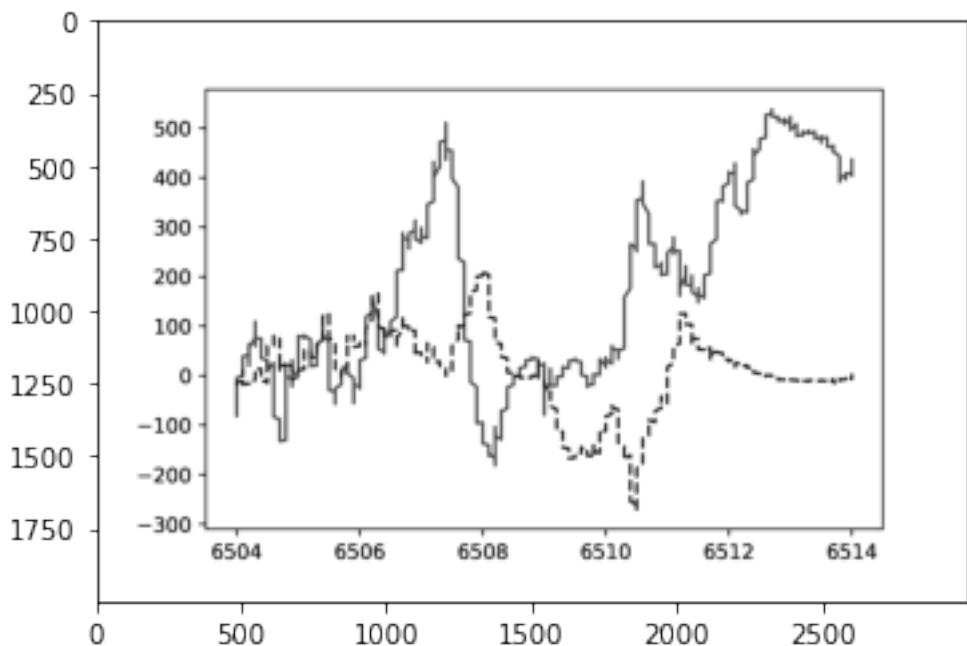
```
<class 'numpy.ndarray'>      -- 237  --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/330.png
330
```



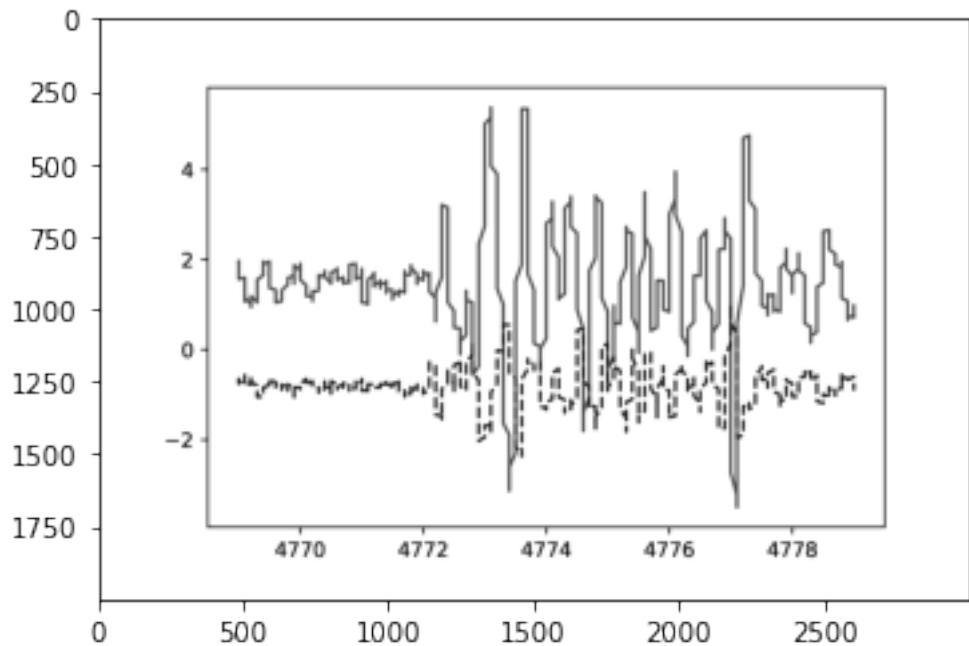
```
<class 'numpy.ndarray'> -- 238 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/264.png
264
```



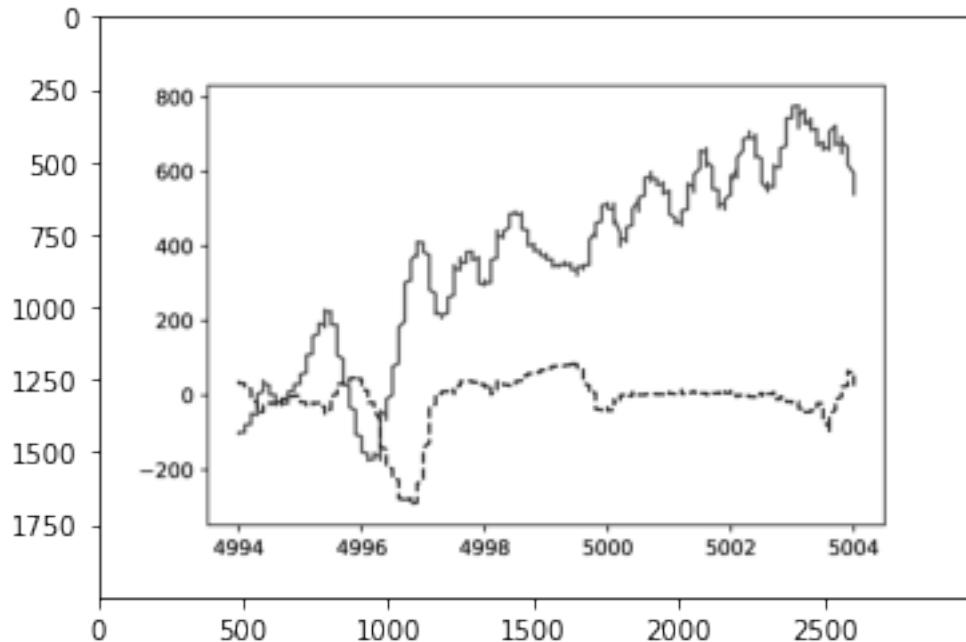
```
<class 'numpy.ndarray'> -- 239 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/270.png
270
```



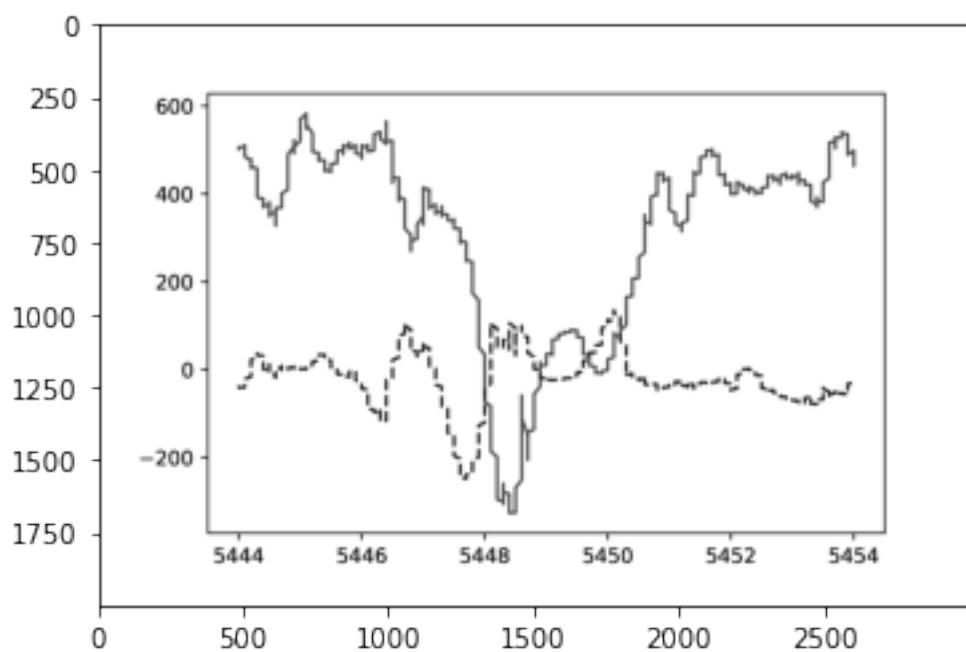
```
<class 'numpy.ndarray'>      --  240   --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/132.png
132
```



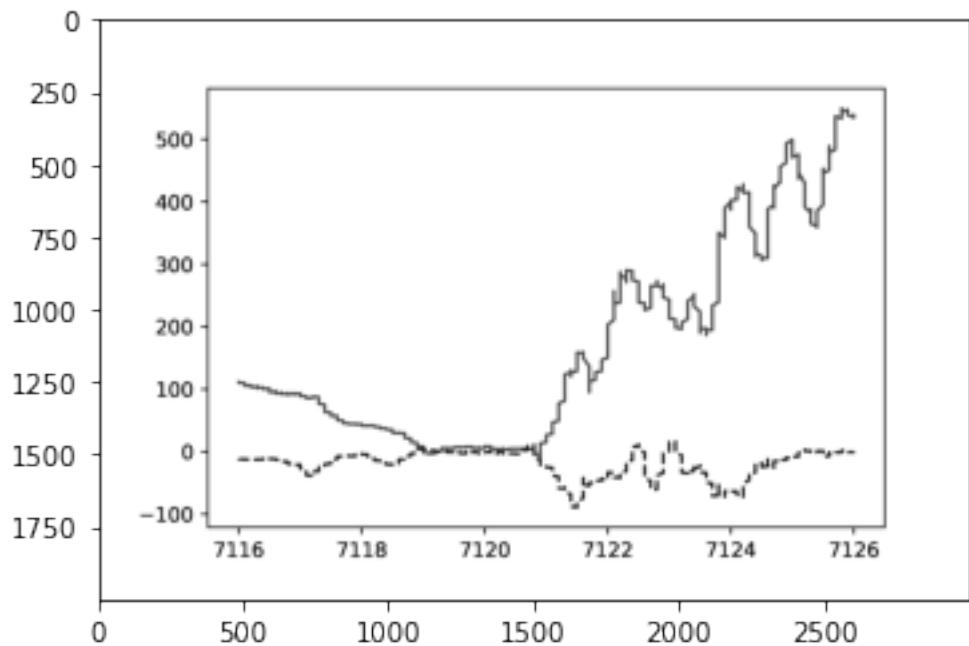
```
<class 'numpy.ndarray'>      --  241   --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/157.png
157
```



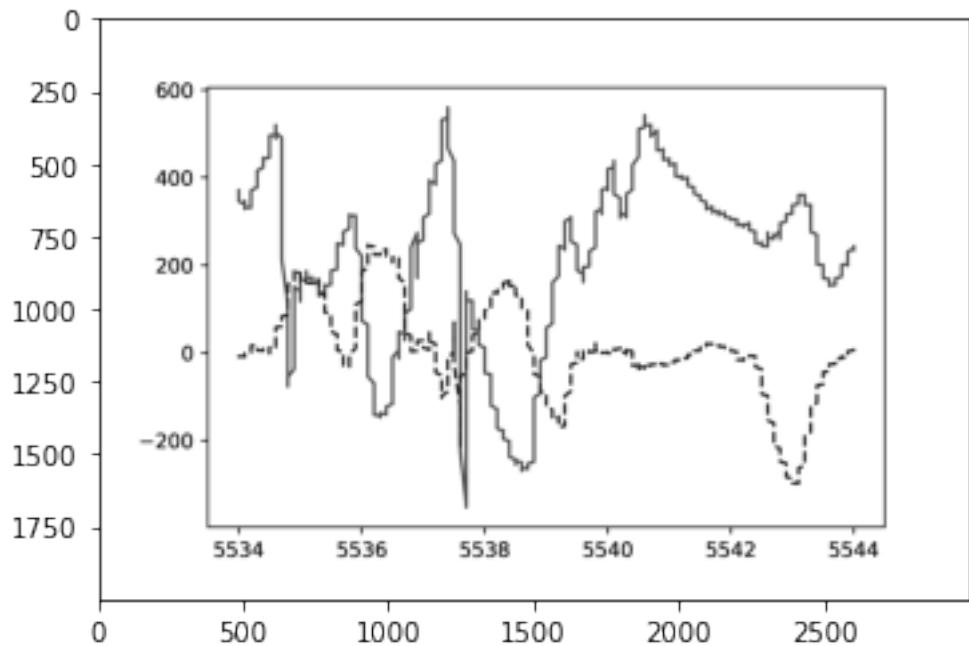
```
<class 'numpy.ndarray'>      -- 242  --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/207.png
207
```



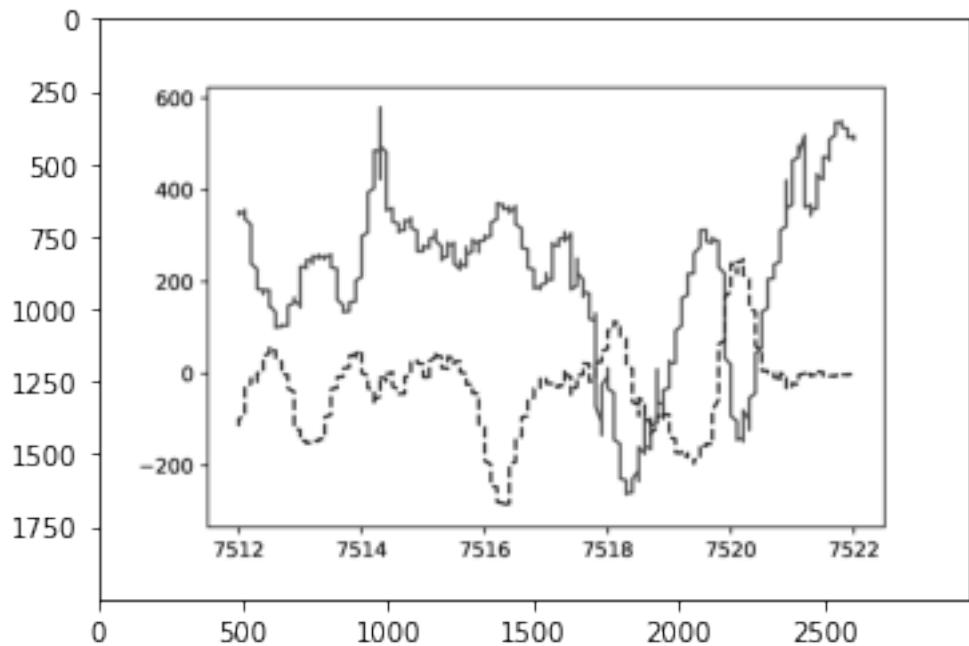
```
<class 'numpy.ndarray'> -- 243 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/338.png
338
```



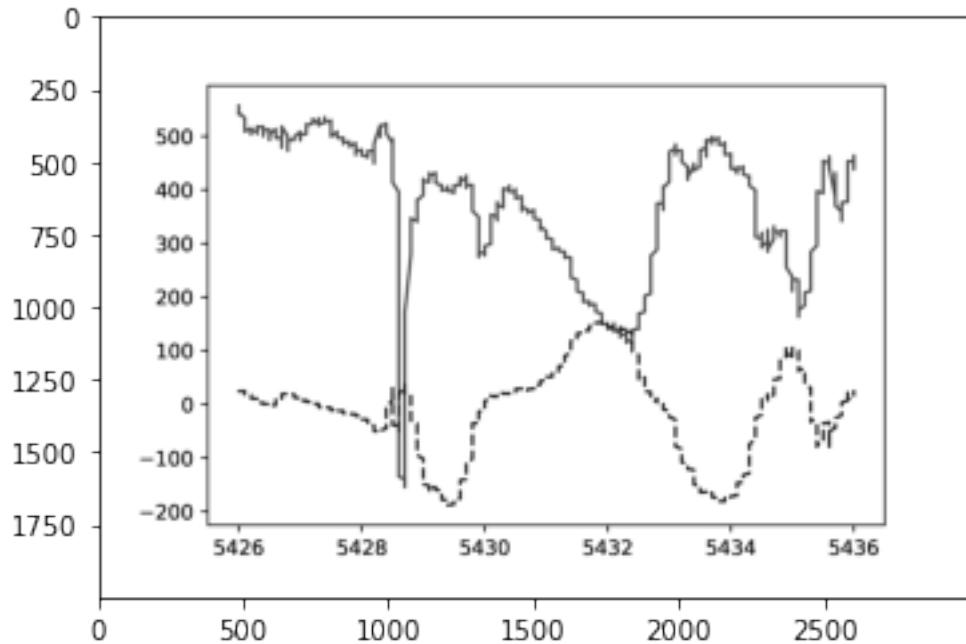
```
<class 'numpy.ndarray'> -- 244 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/217.png
217
```



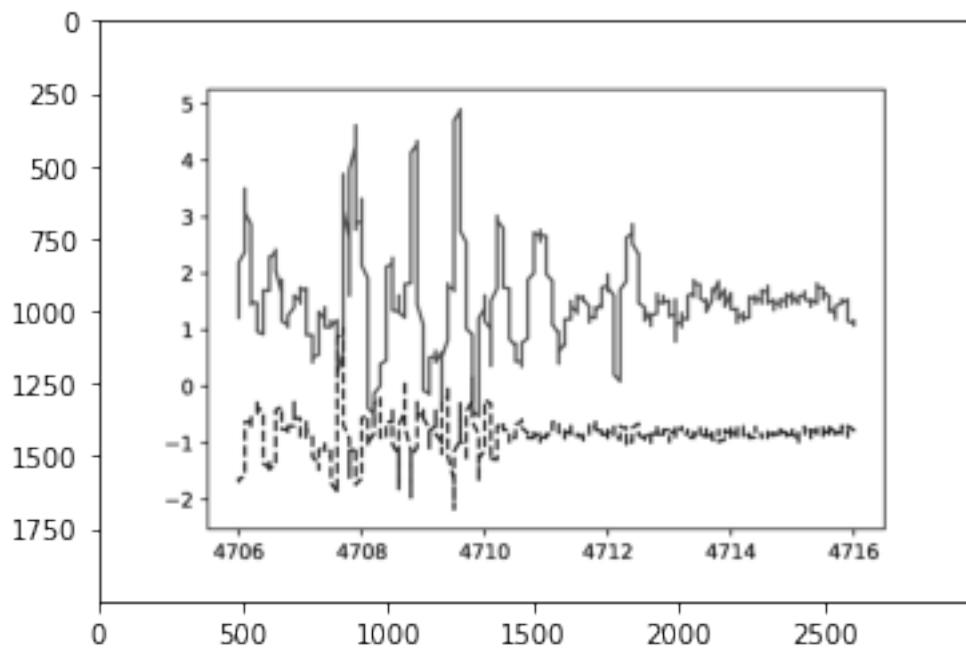
```
<class 'numpy.ndarray'>      --    245    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/382.png
382
```



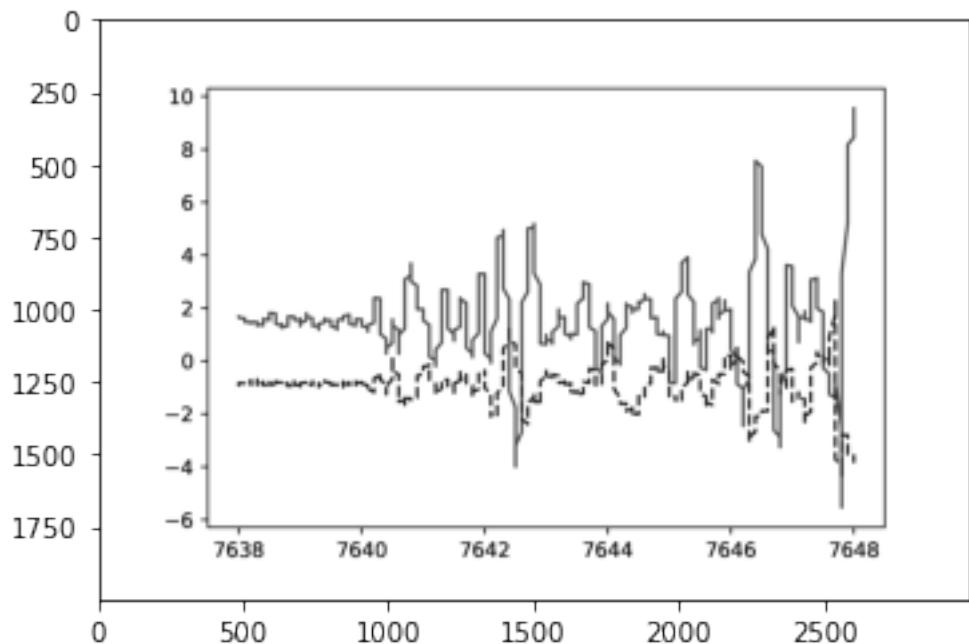
```
<class 'numpy.ndarray'>      --    246    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/205.png
205
```



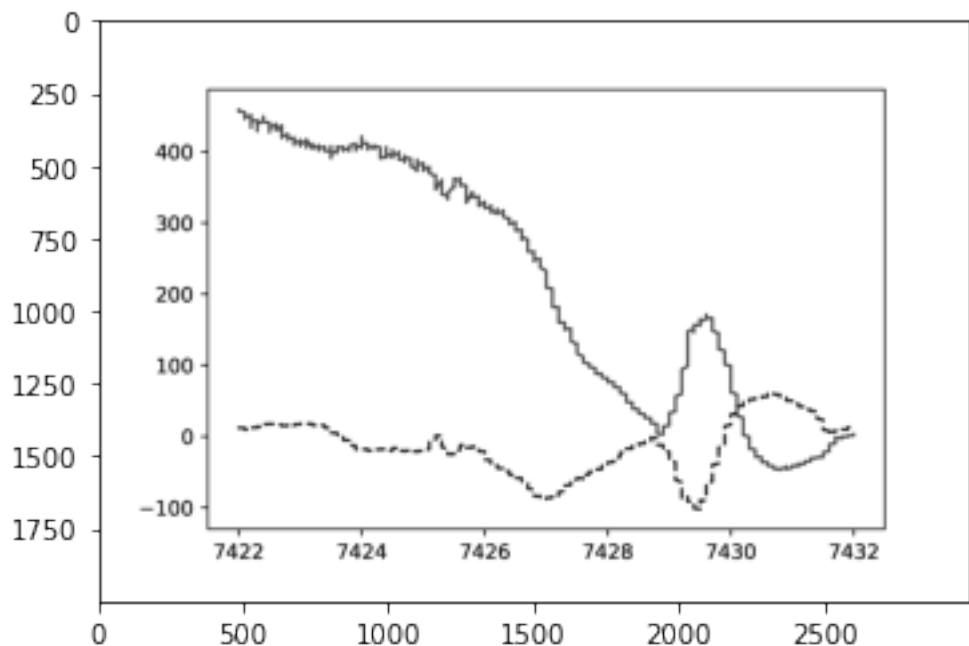
```
<class 'numpy.ndarray'>      --  247   --
/dtata/wheels/notebooks/Alex/PlotImgFolder/Train/125.png
125
```



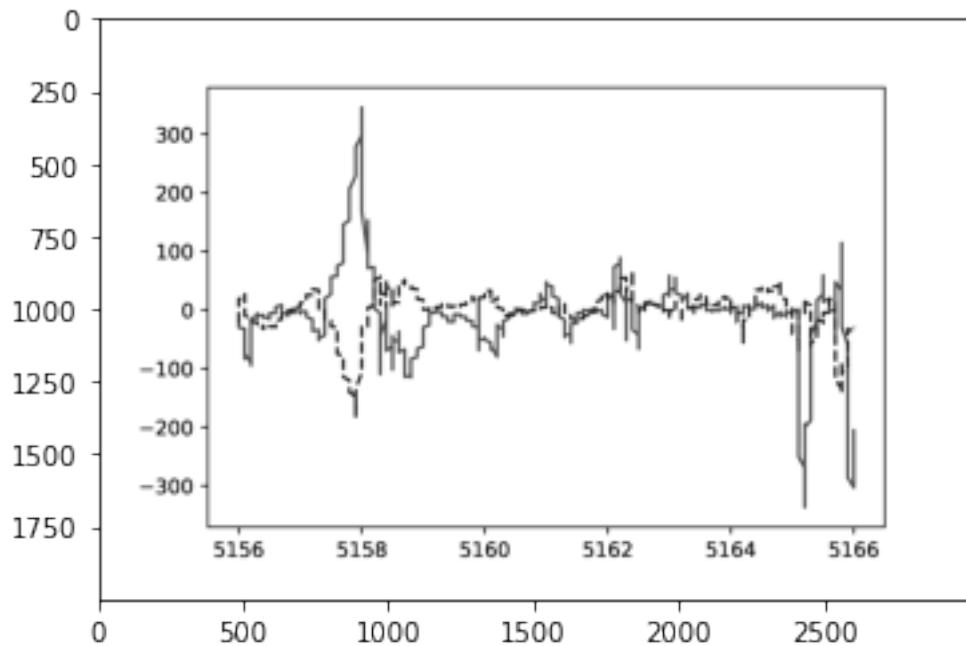
```
<class 'numpy.ndarray'> -- 248 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/396.png
396
```



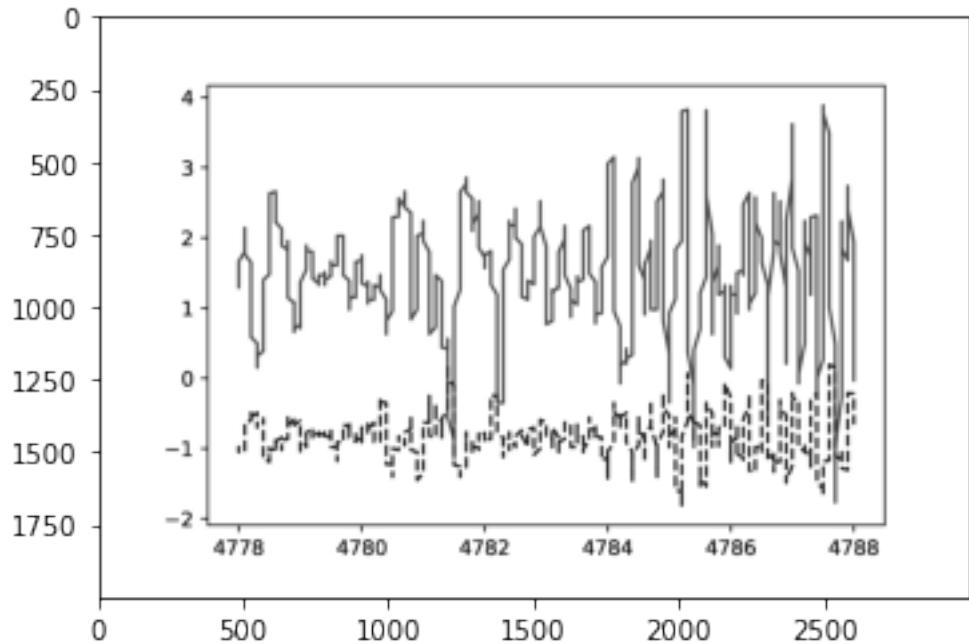
```
<class 'numpy.ndarray'> -- 249 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/372.png
372
```



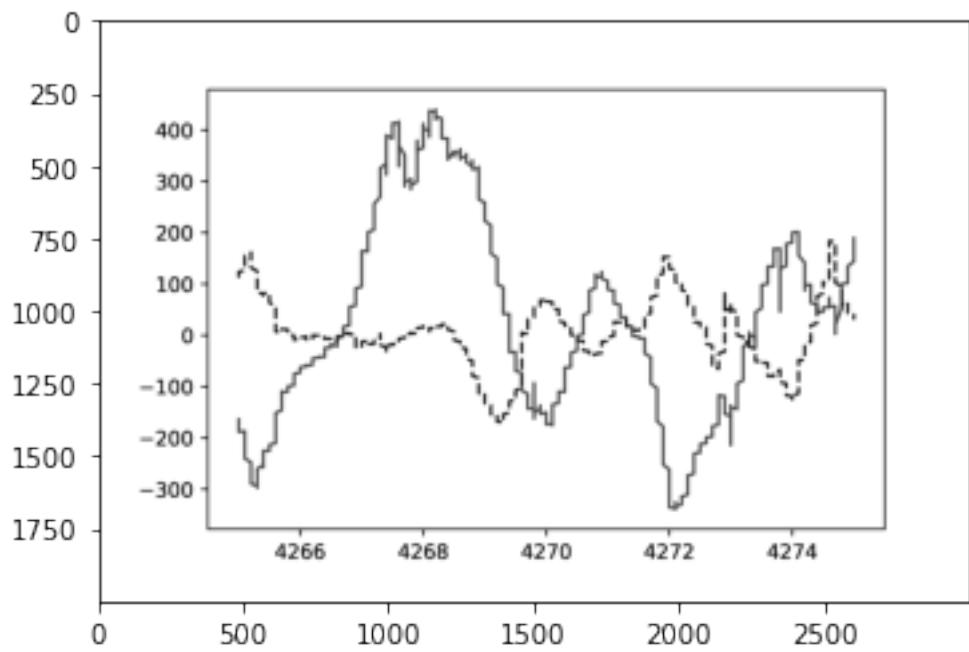
```
<class 'numpy.ndarray'>      --    250    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/175.png
175
```



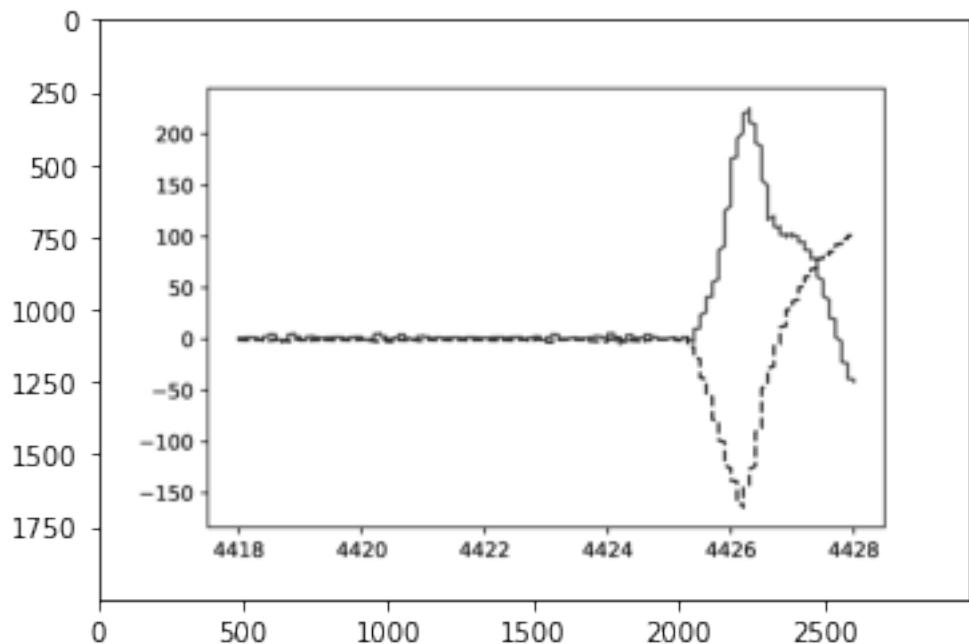
```
<class 'numpy.ndarray'>      --    251    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/133.png
133
```



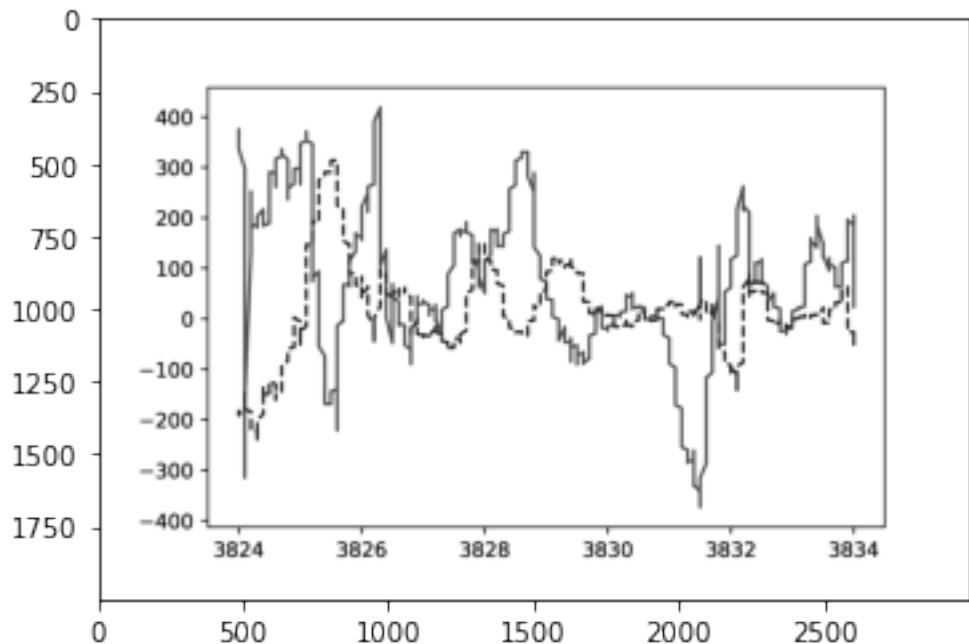
```
<class 'numpy.ndarray'>      -- 252  --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/76.png
76
```



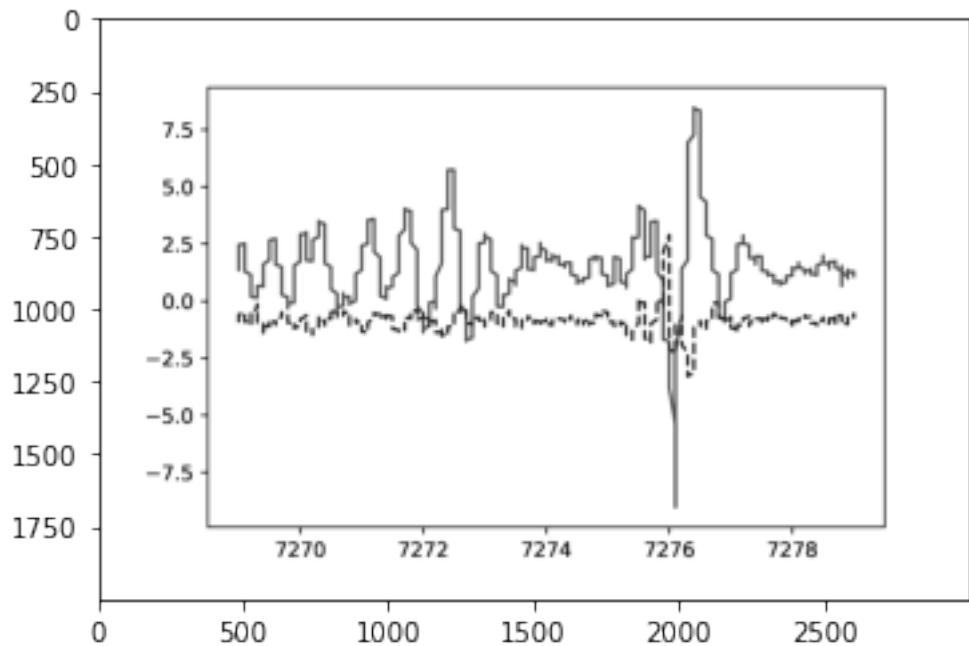
```
<class 'numpy.ndarray'> -- 253 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/93.png
93
```



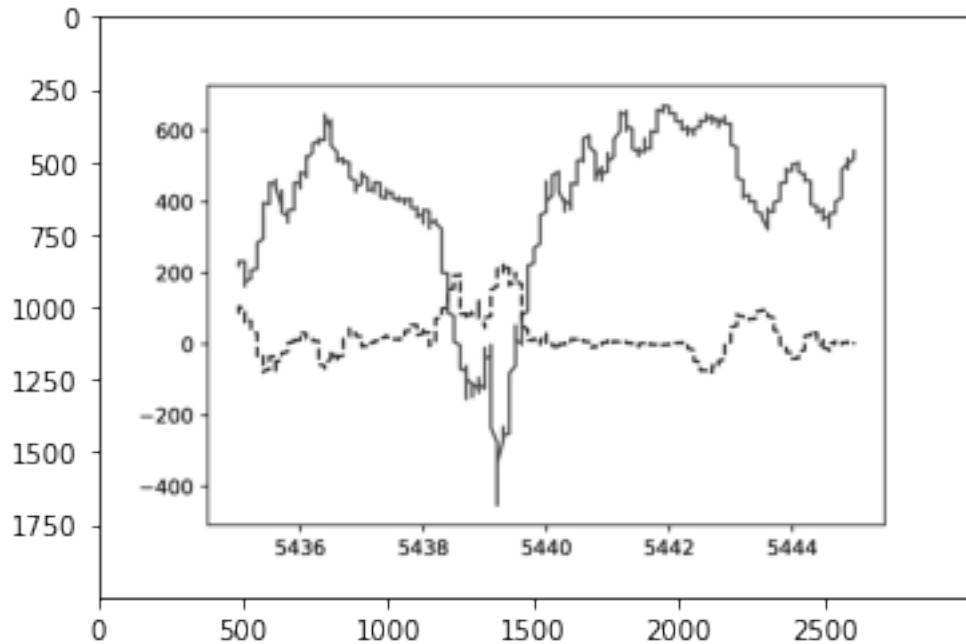
```
<class 'numpy.ndarray'> -- 254 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/27.png
27
```



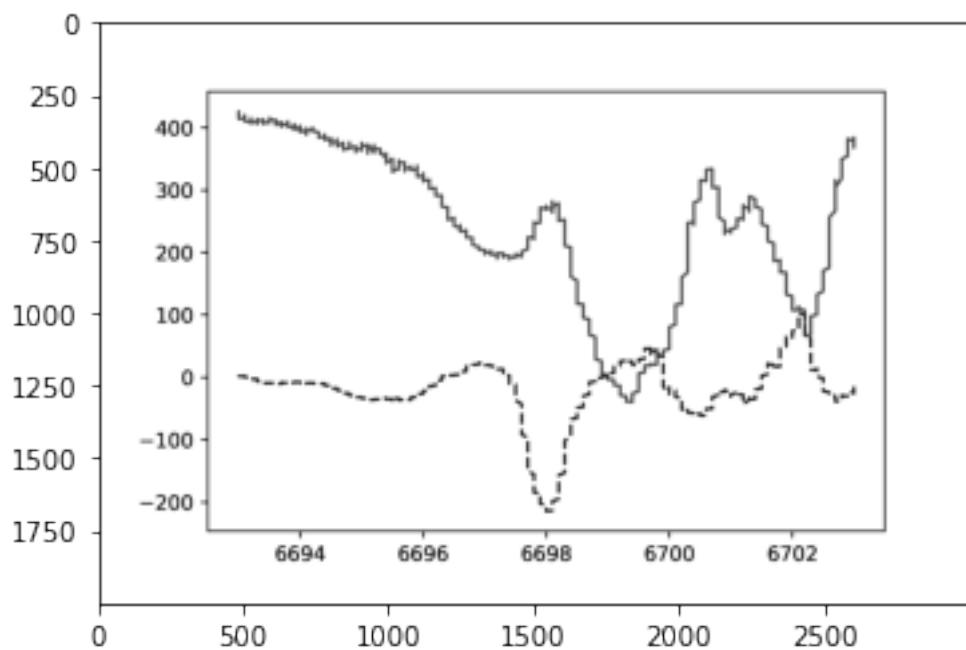
```
<class 'numpy.ndarray'>      --      255      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/355.png
355
```



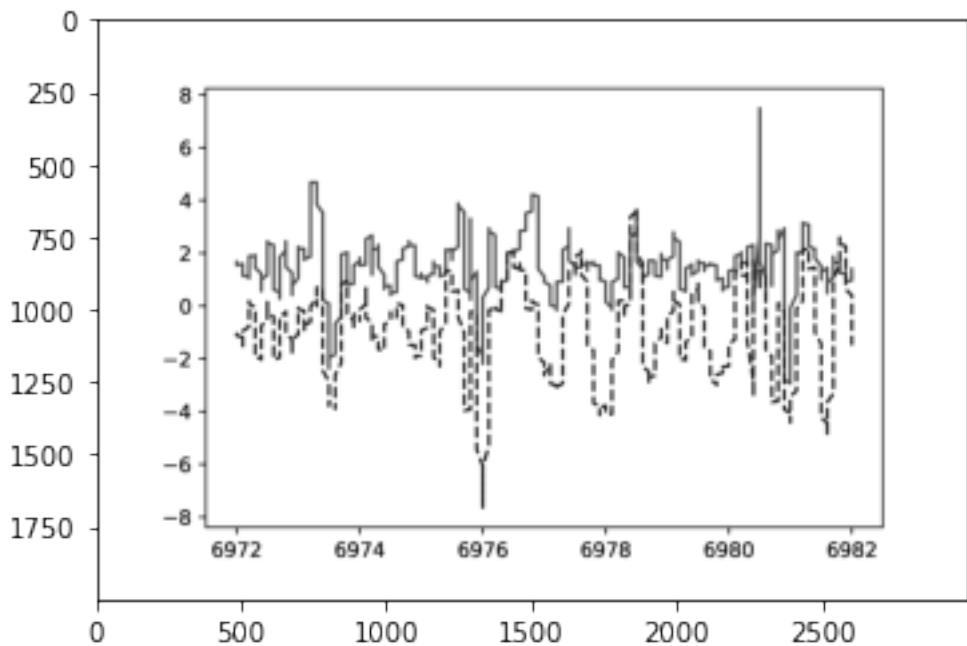
```
<class 'numpy.ndarray'>      --      256      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/206.png
206
```



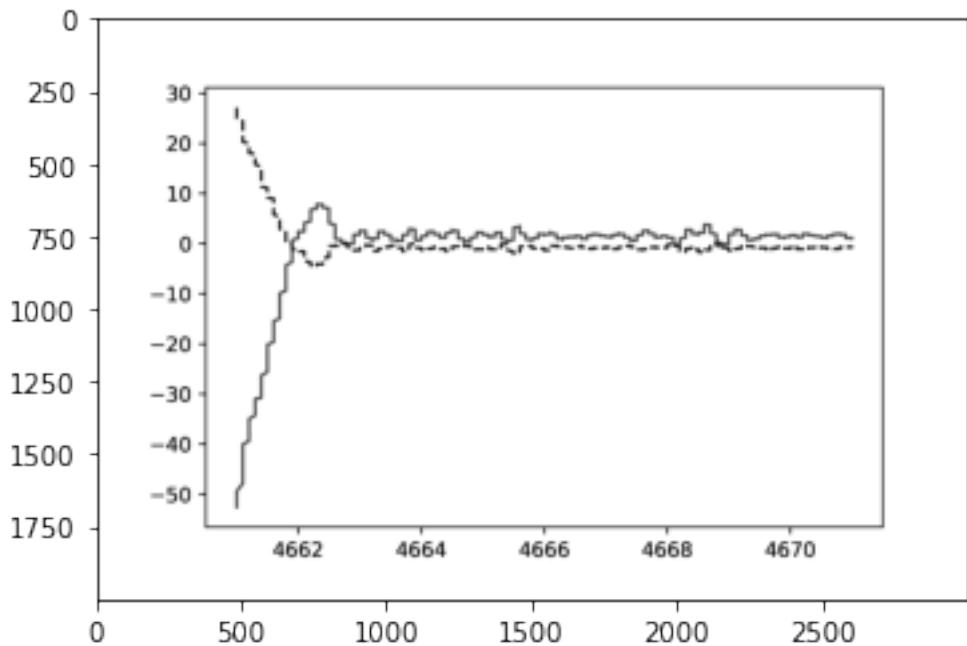
```
<class 'numpy.ndarray'>      -- 257  --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/291.png
291
```



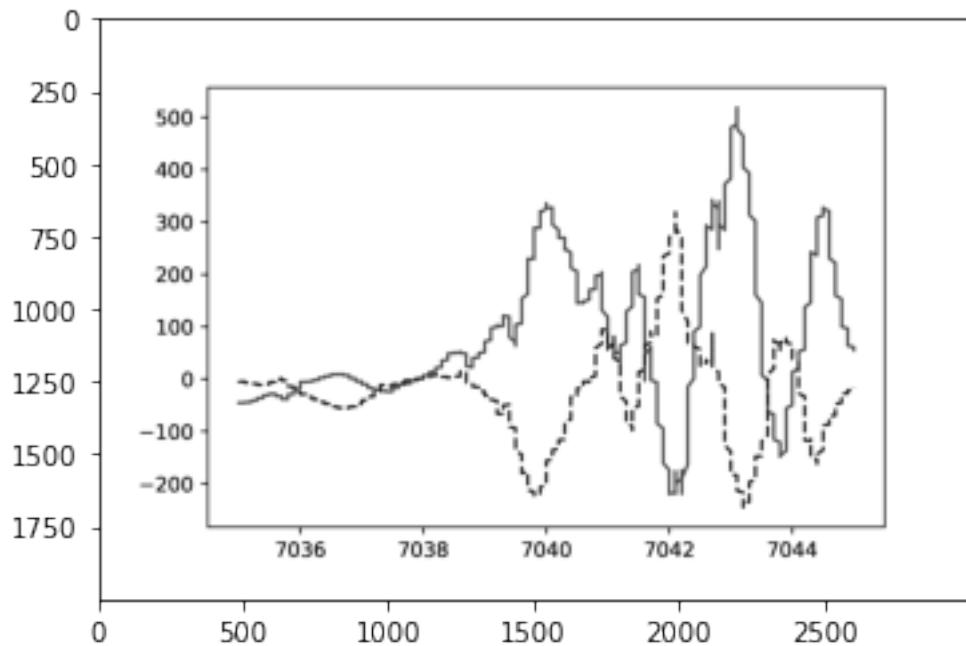
```
<class 'numpy.ndarray'>      --    258    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/322.png
322
```



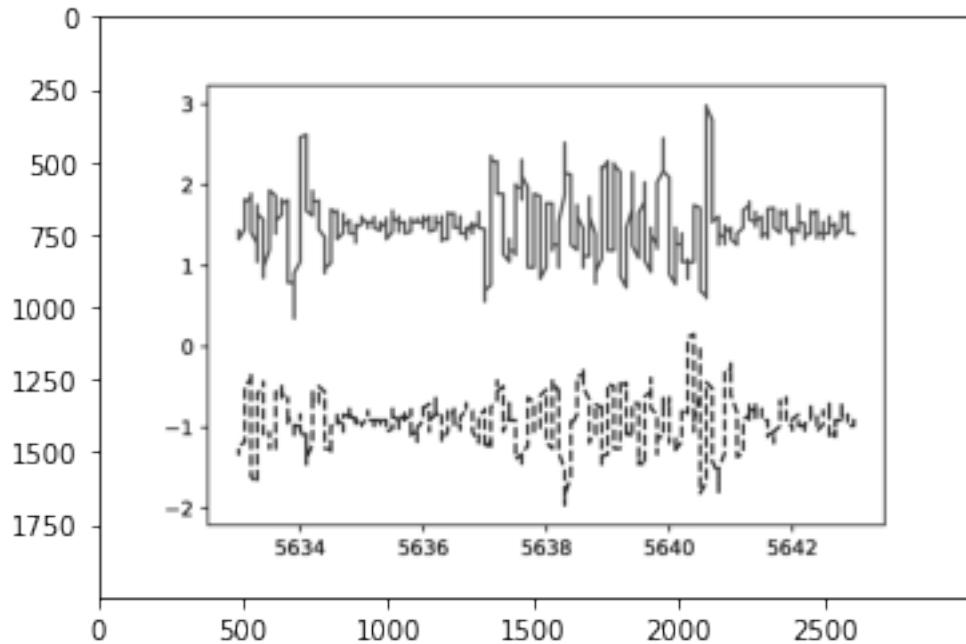
```
<class 'numpy.ndarray'>      --    259    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/120.png
120
```



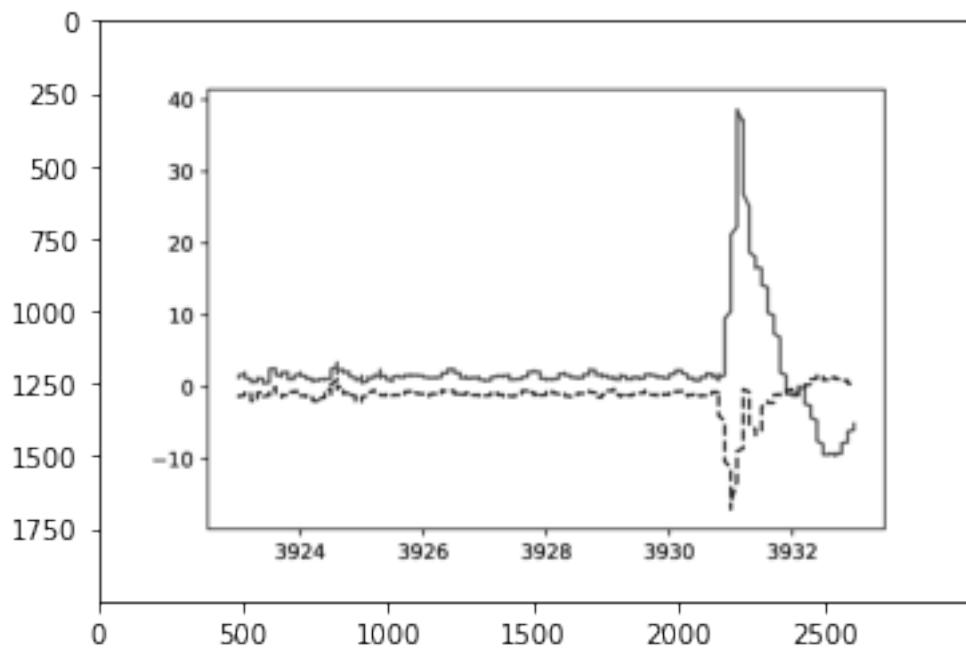
```
<class 'numpy.ndarray'>      --    260    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/329.png
329
```



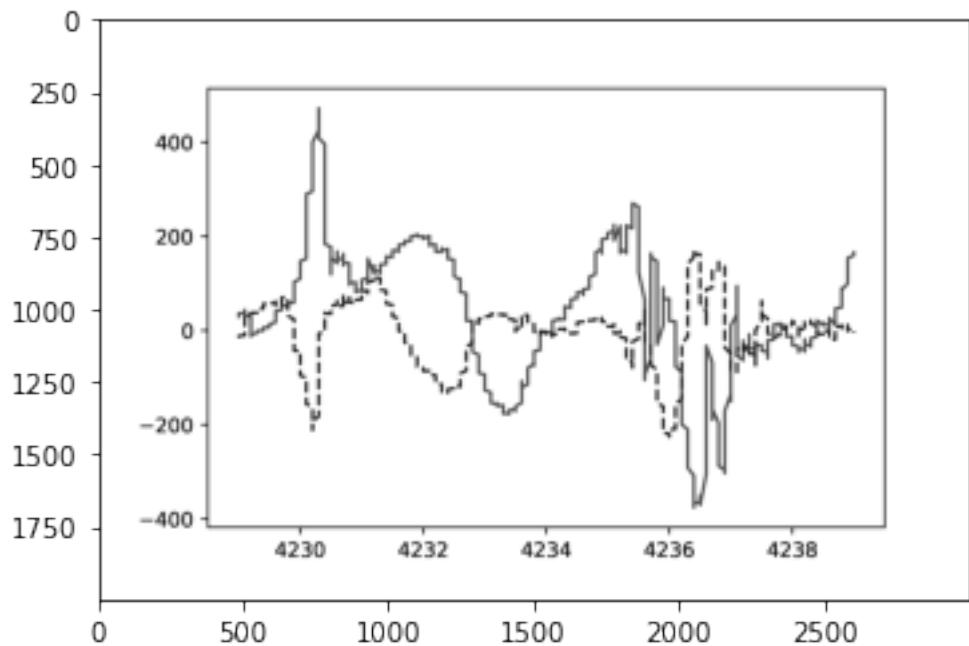
```
<class 'numpy.ndarray'>      --    261    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/228.png
228
```



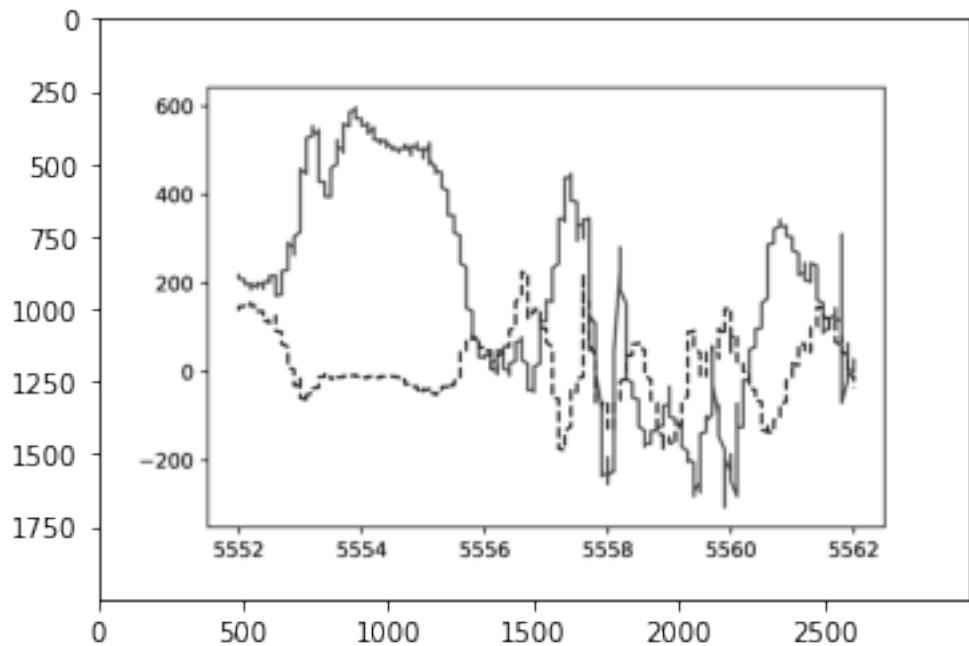
```
<class 'numpy.ndarray'>      --  262   --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/38.png
38
```



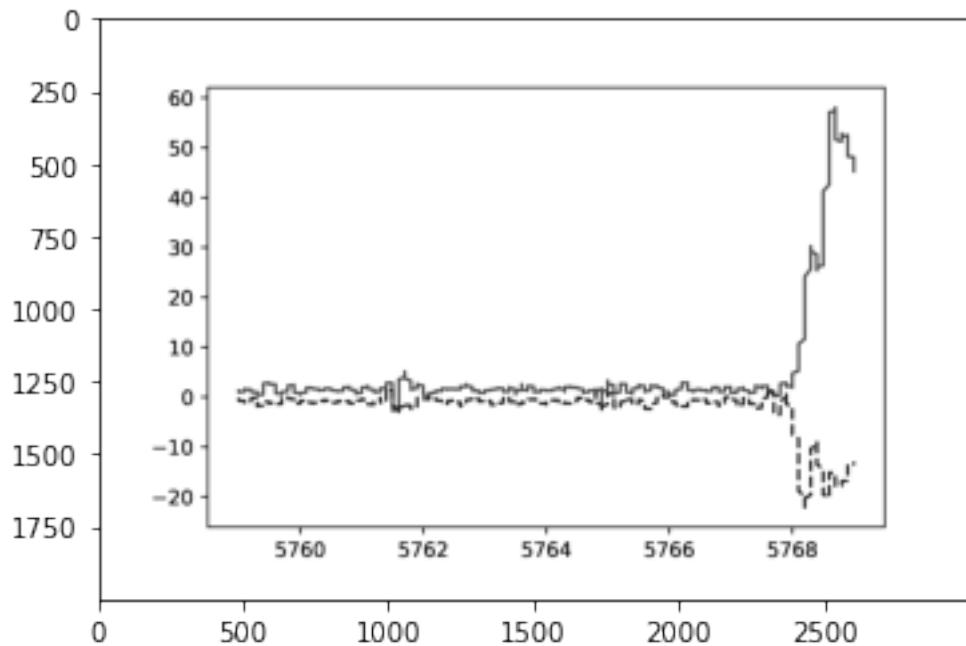
```
<class 'numpy.ndarray'> -- 263 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/72.png
72
```



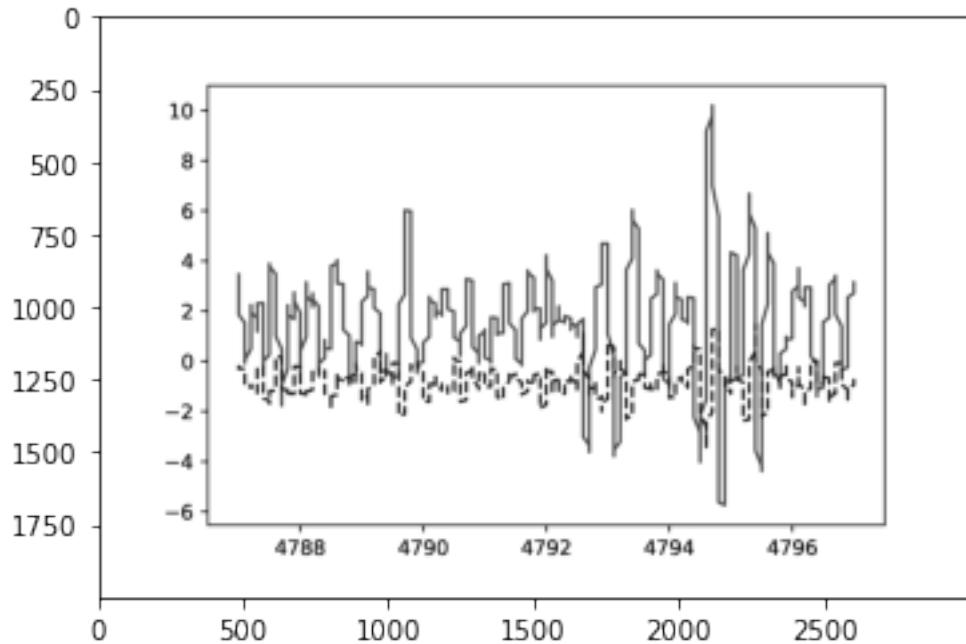
```
<class 'numpy.ndarray'> -- 264 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/219.png
219
```



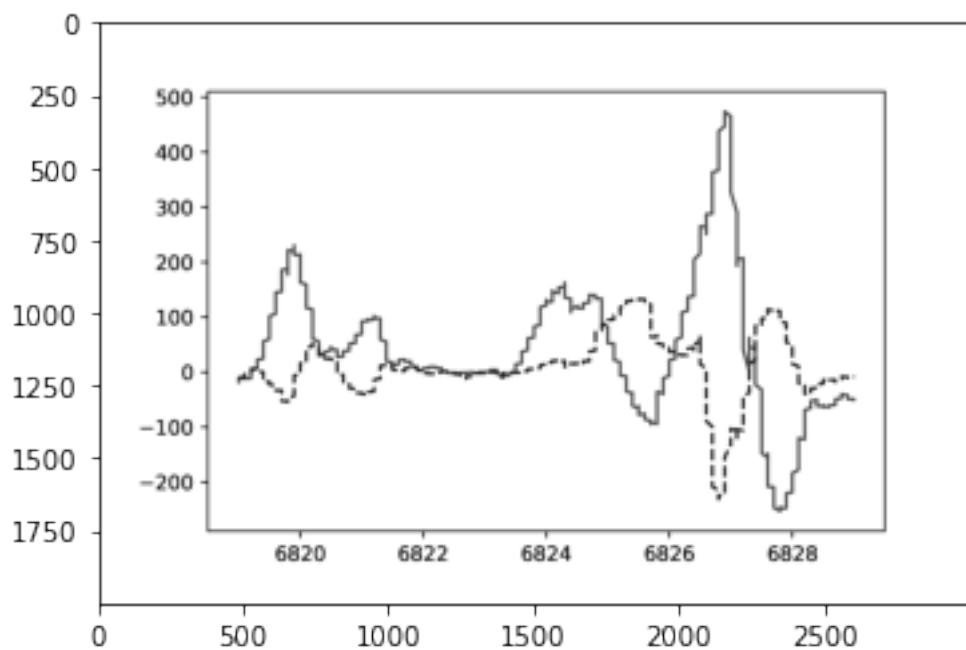
```
<class 'numpy.ndarray'>      --    265    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/242.png
242
```



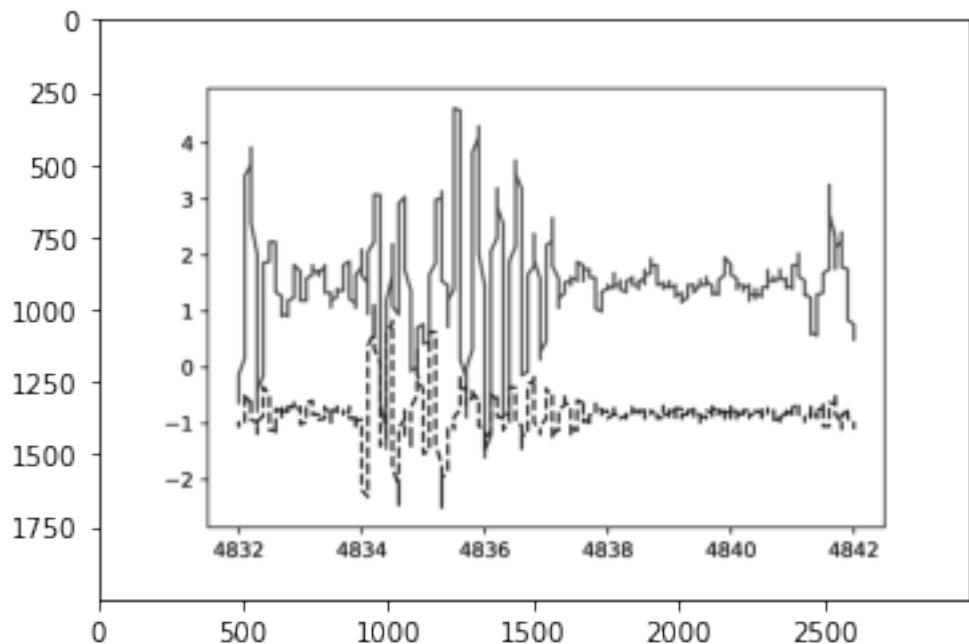
```
<class 'numpy.ndarray'>      --    266    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/134.png
134
```



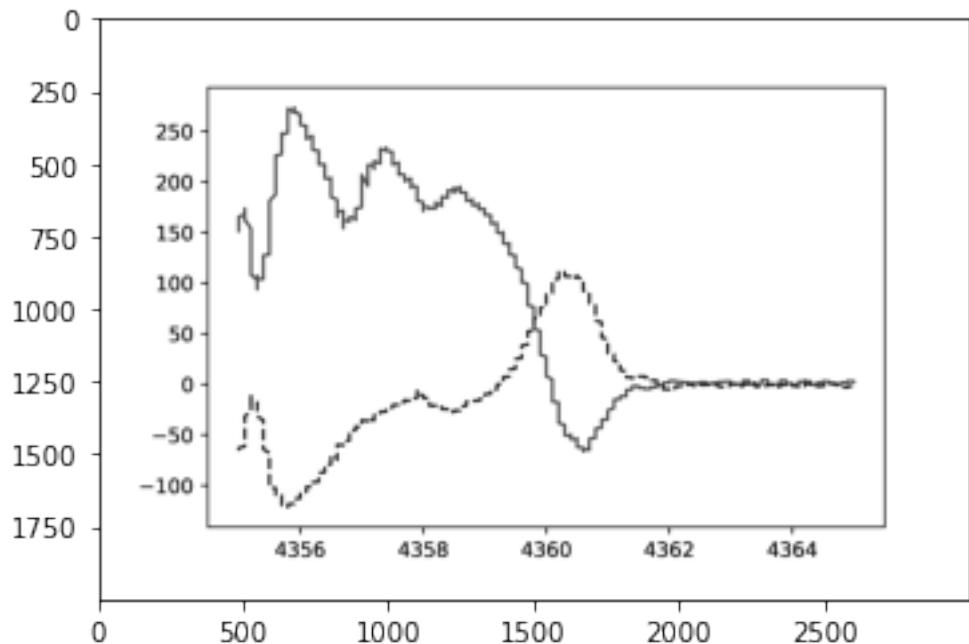
```
<class 'numpy.ndarray'>      --  267   --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/305.png
305
```



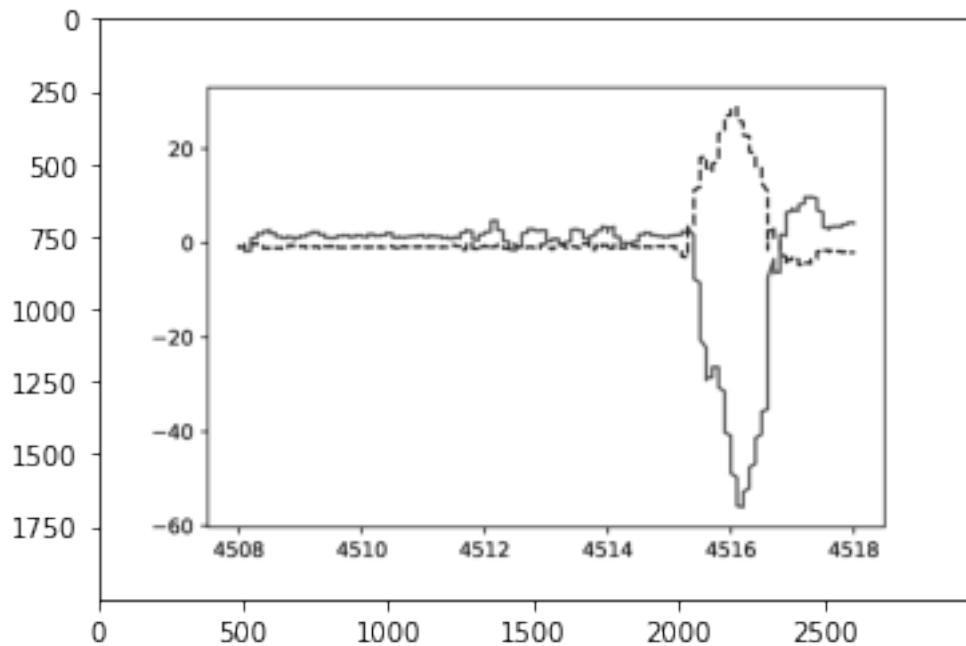
```
<class 'numpy.ndarray'> -- 268 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/139.png
139
```



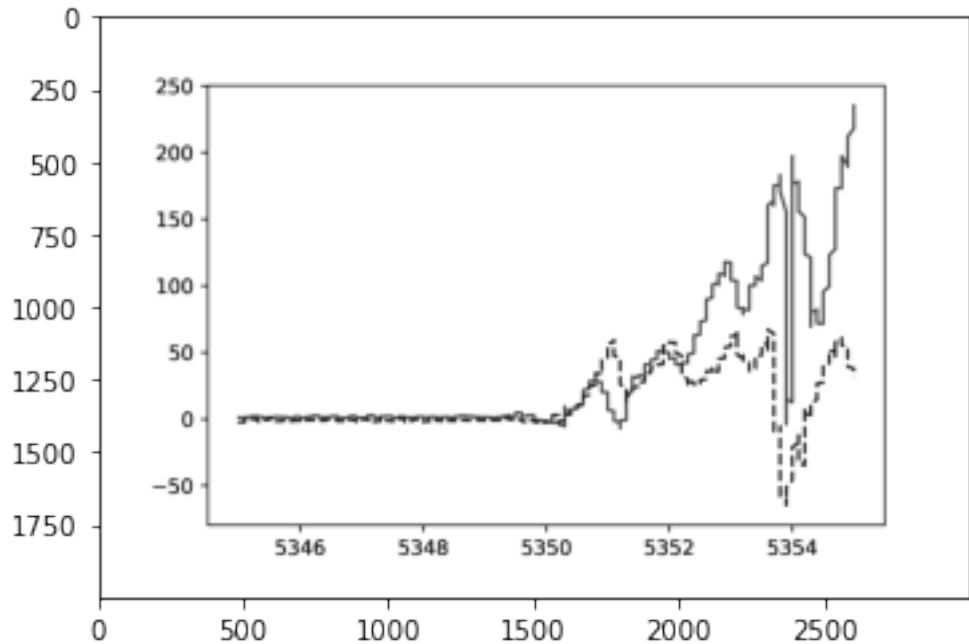
```
<class 'numpy.ndarray'> -- 269 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/86.png
86
```



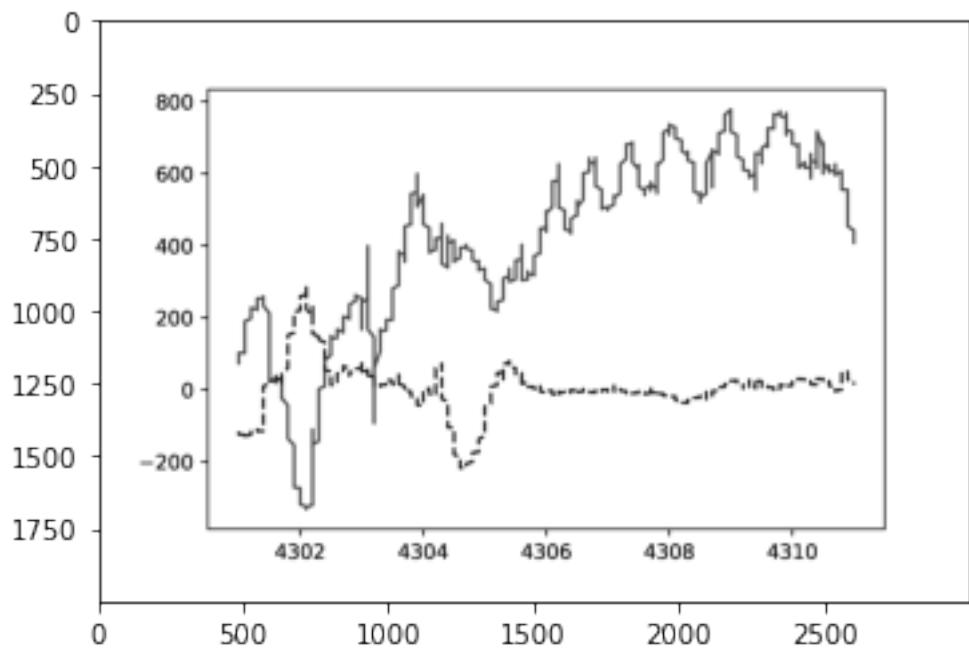
```
<class 'numpy.ndarray'>      --    270    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/103.png
103
```



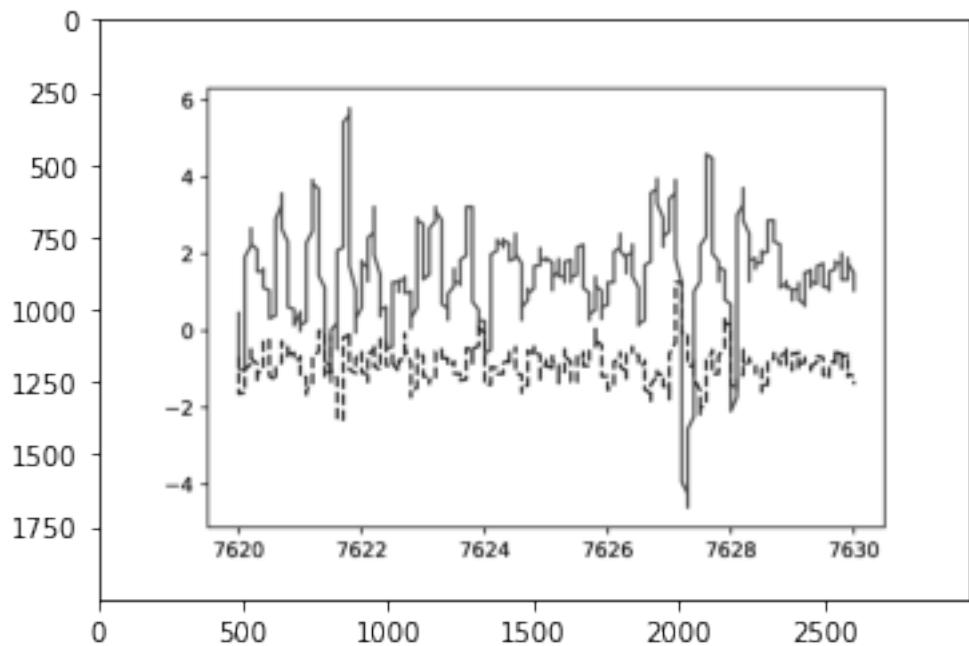
```
<class 'numpy.ndarray'>      --    271    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/196.png
196
```



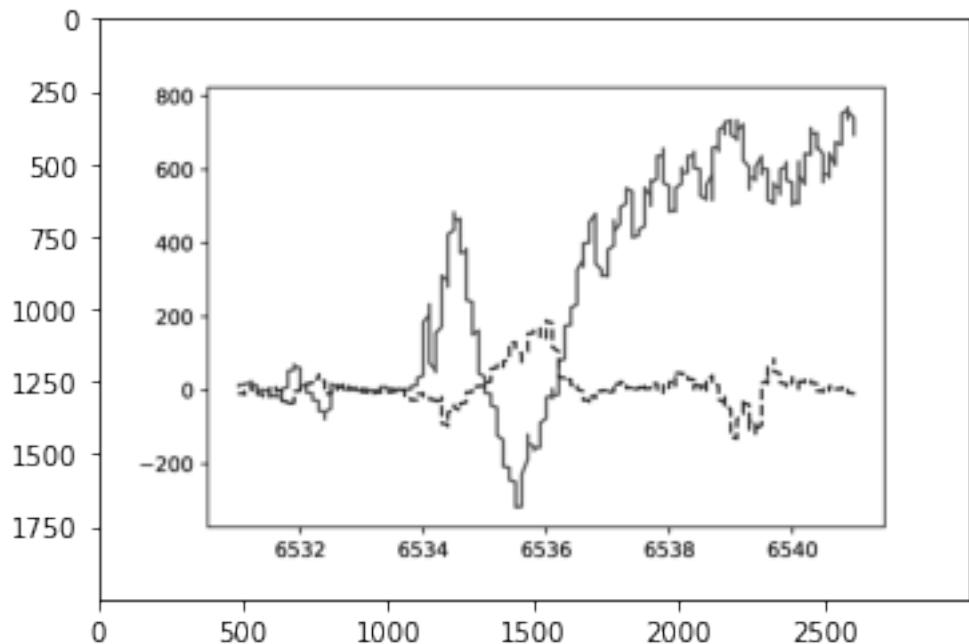
```
<class 'numpy.ndarray'>      --    272    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/80.png
80
```



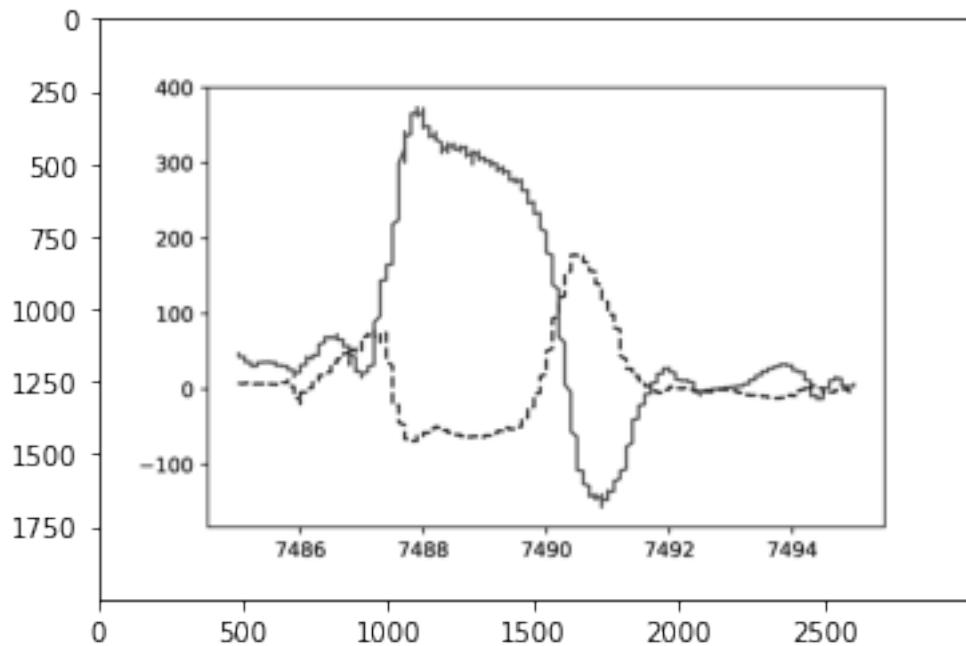
```
<class 'numpy.ndarray'> -- 273 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/394.png
394
```



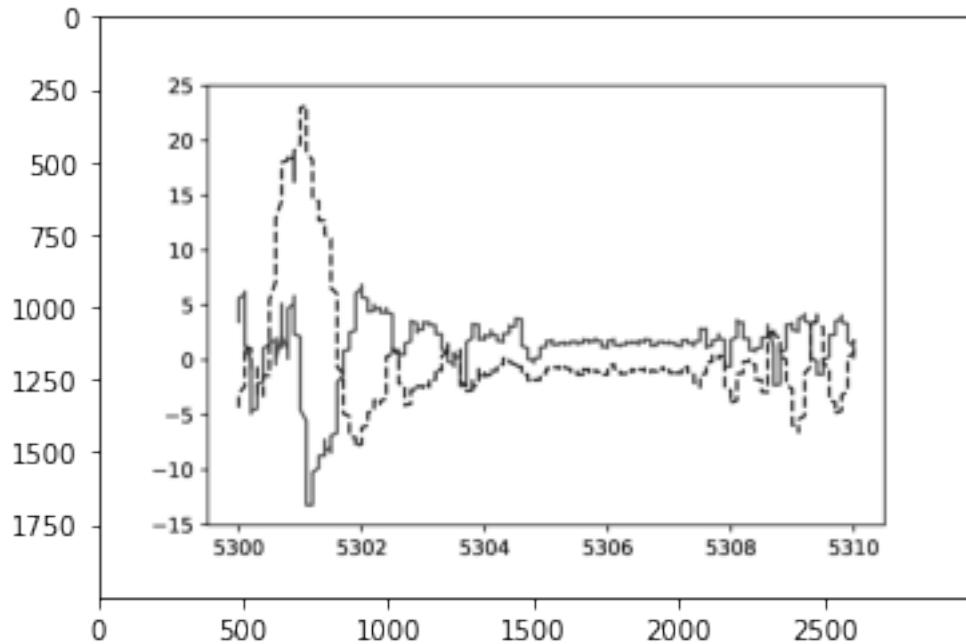
```
<class 'numpy.ndarray'> -- 274 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/273.png
273
```



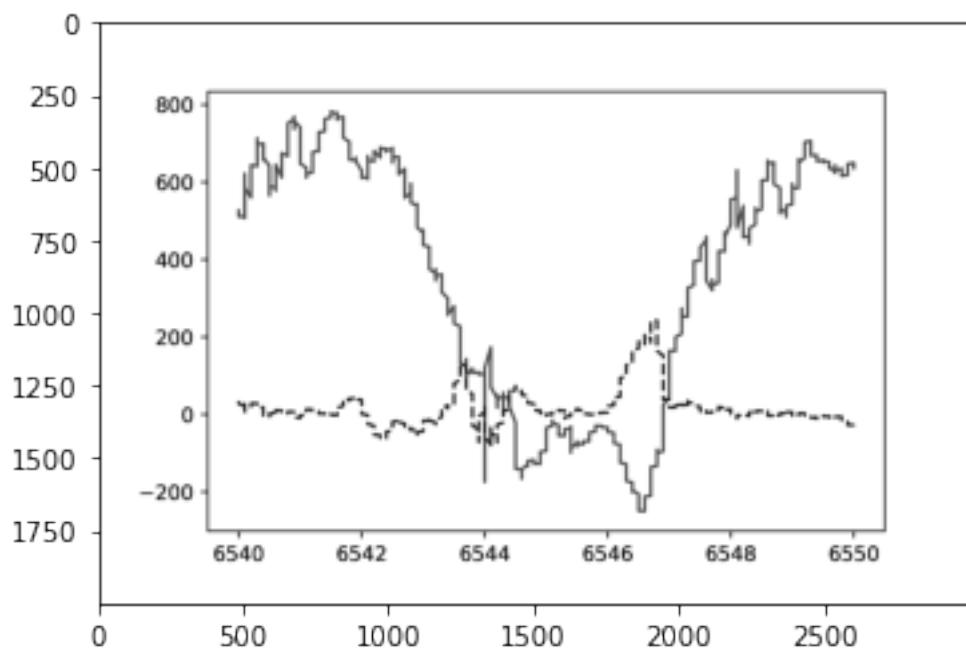
```
<class 'numpy.ndarray'>      --    275    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/379.png
379
```



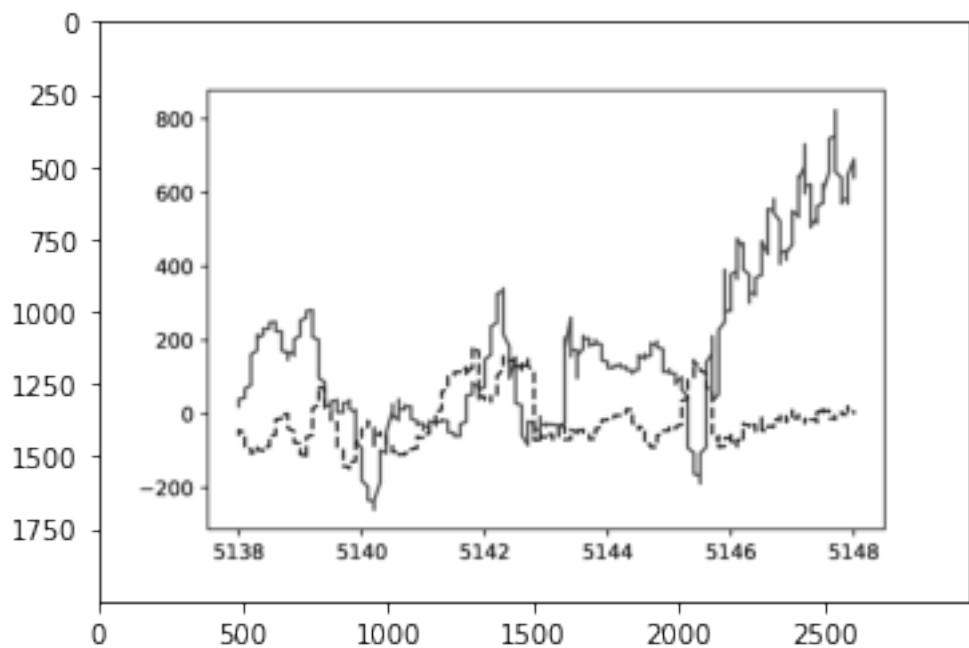
```
<class 'numpy.ndarray'>      --    276    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/191.png
191
```



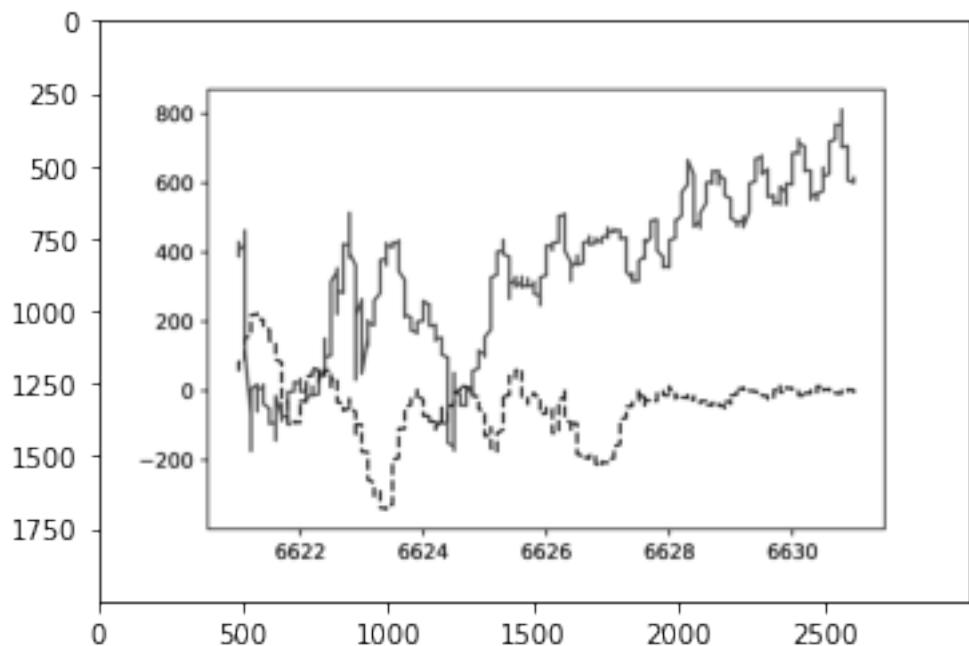
```
<class 'numpy.ndarray'>      -- 277  --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/274.png
274
```



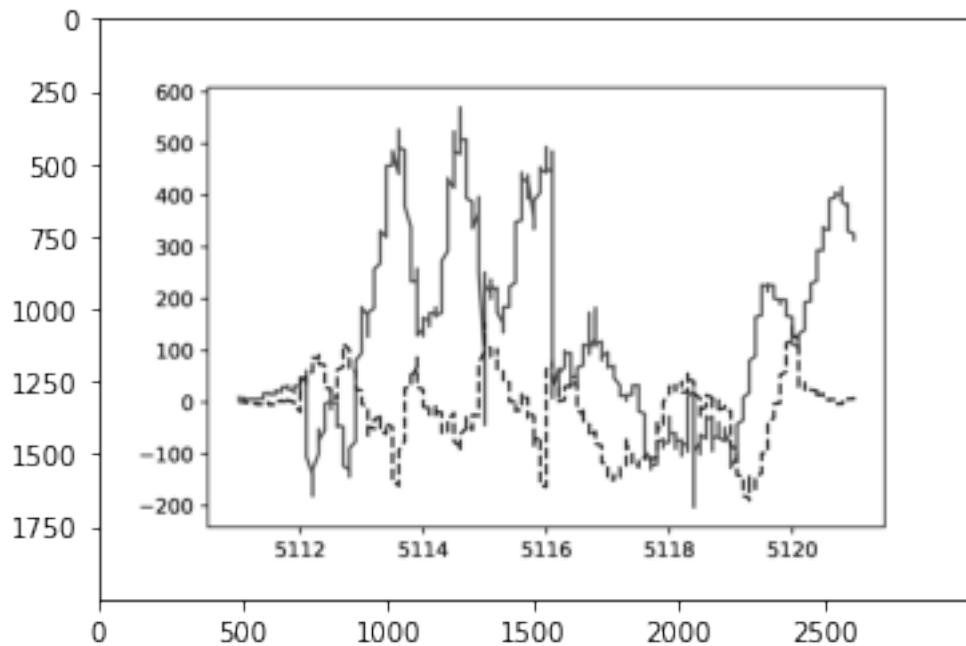
```
<class 'numpy.ndarray'> -- 278 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/173.png
173
```



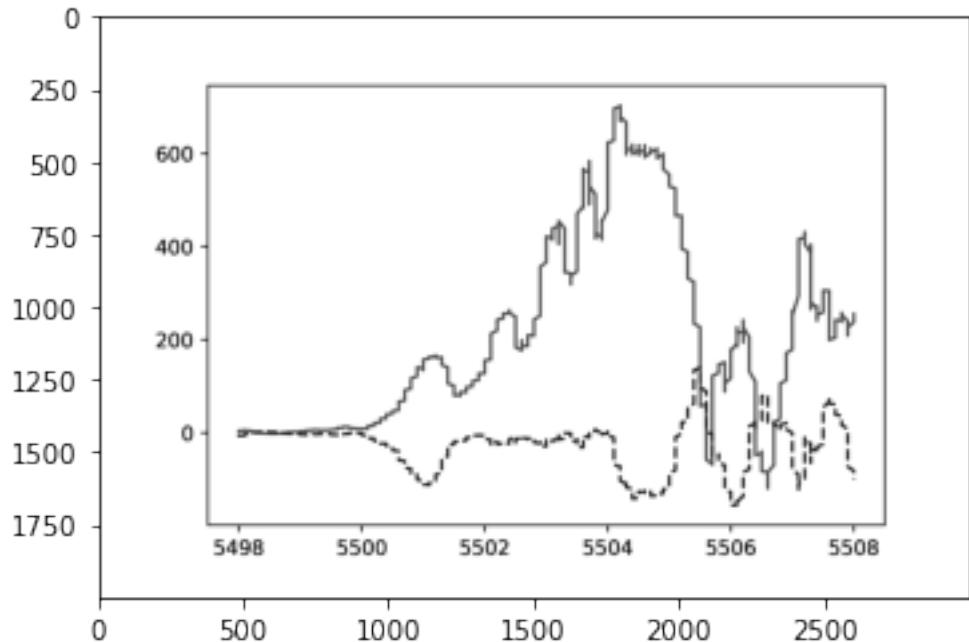
```
<class 'numpy.ndarray'> -- 279 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/283.png
283
```



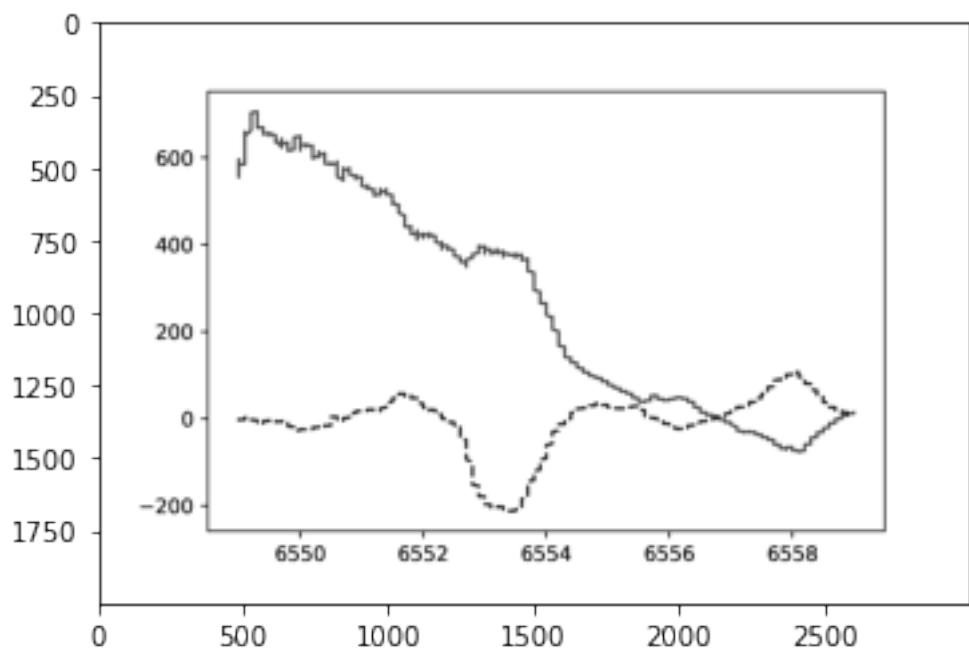
```
<class 'numpy.ndarray'>      --    280    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/170.png
170
```



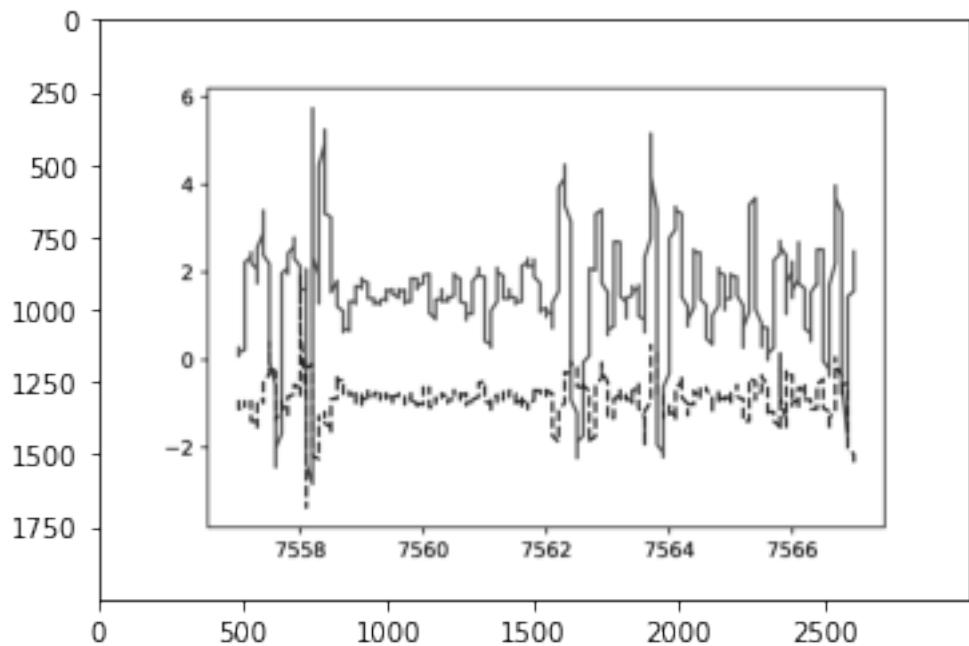
```
<class 'numpy.ndarray'>      --    281    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/213.png
213
```



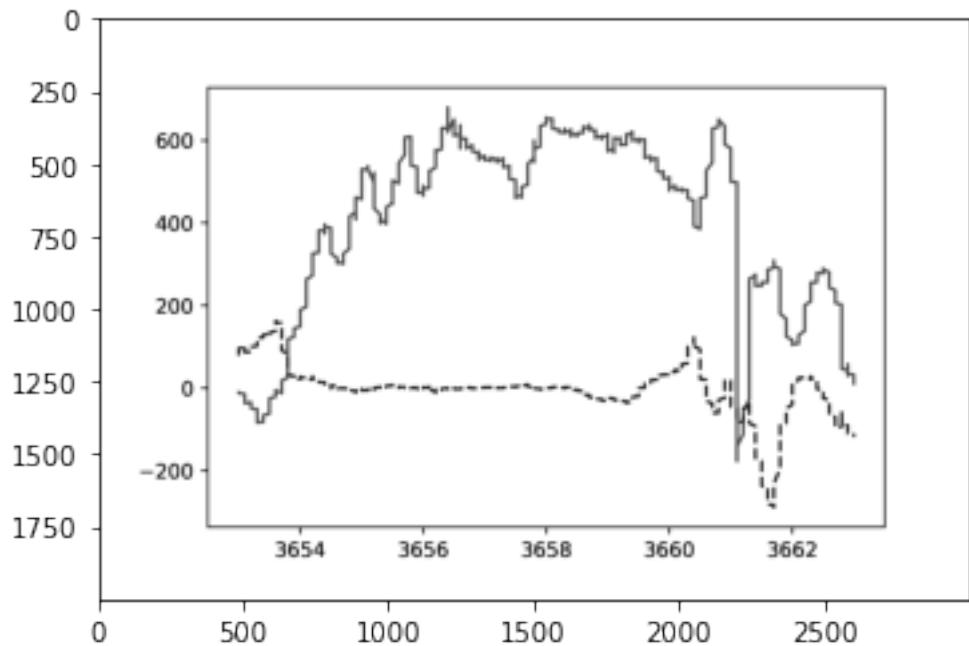
```
<class 'numpy.ndarray'>      --    282    --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/275.png
275
```



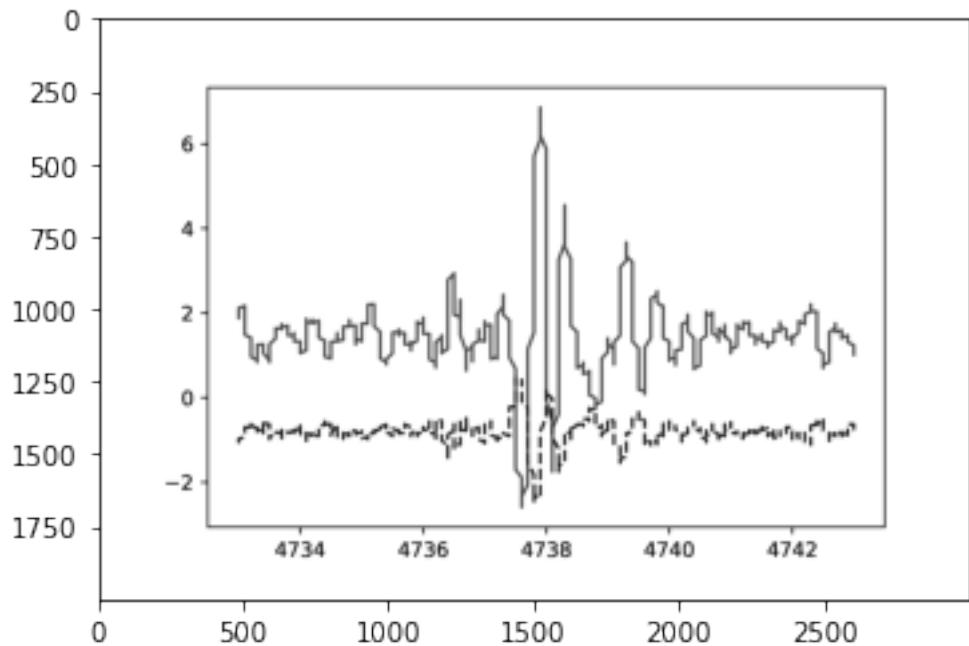
```
<class 'numpy.ndarray'> -- 283 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/387.png
387
```



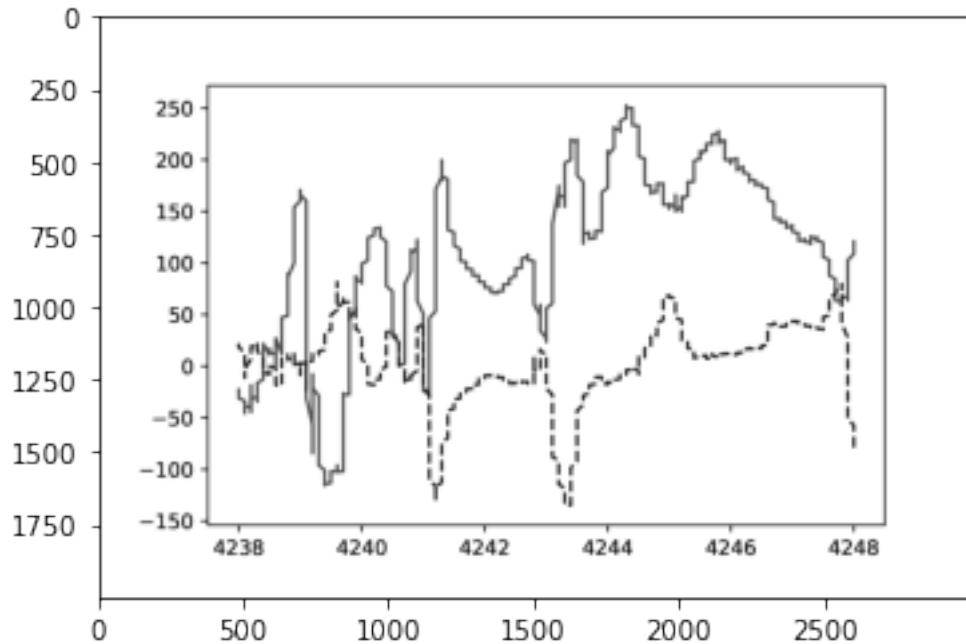
```
<class 'numpy.ndarray'> -- 284 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/8.png
8
```



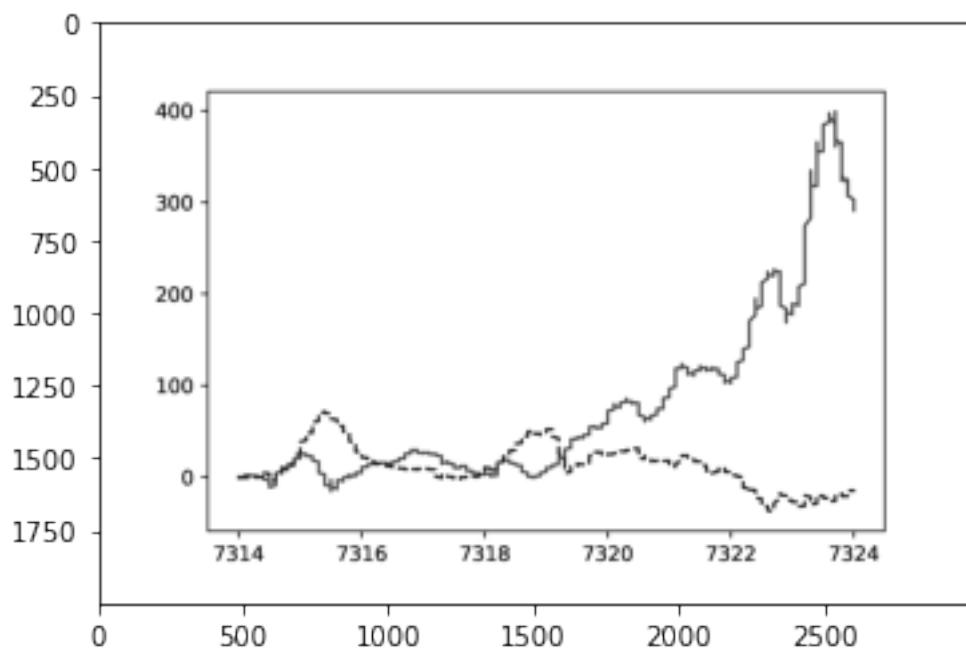
```
<class 'numpy.ndarray'>      --    285    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/128.png
128
```



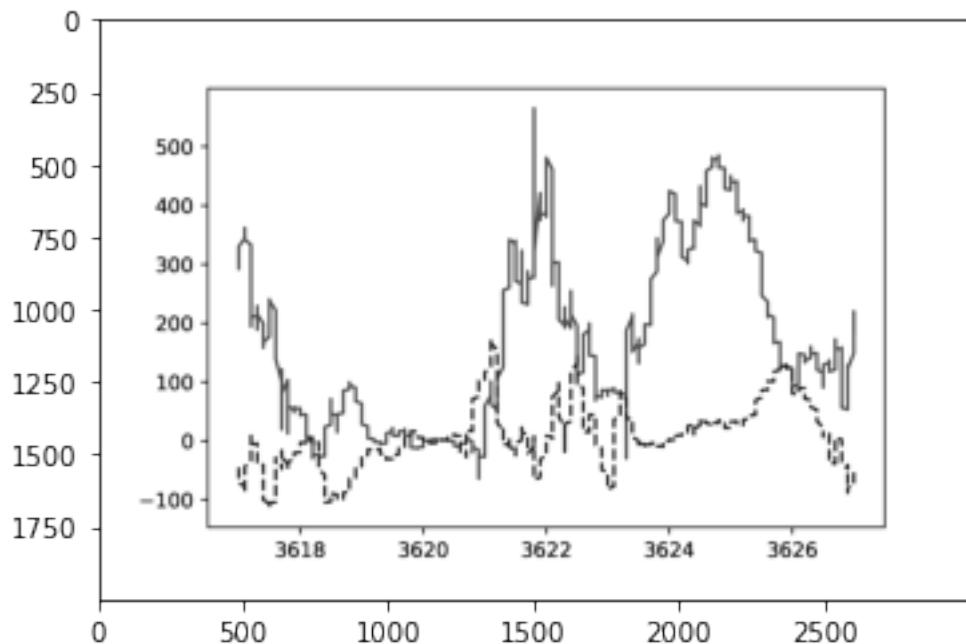
```
<class 'numpy.ndarray'>      --    286    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/73.png
73
```



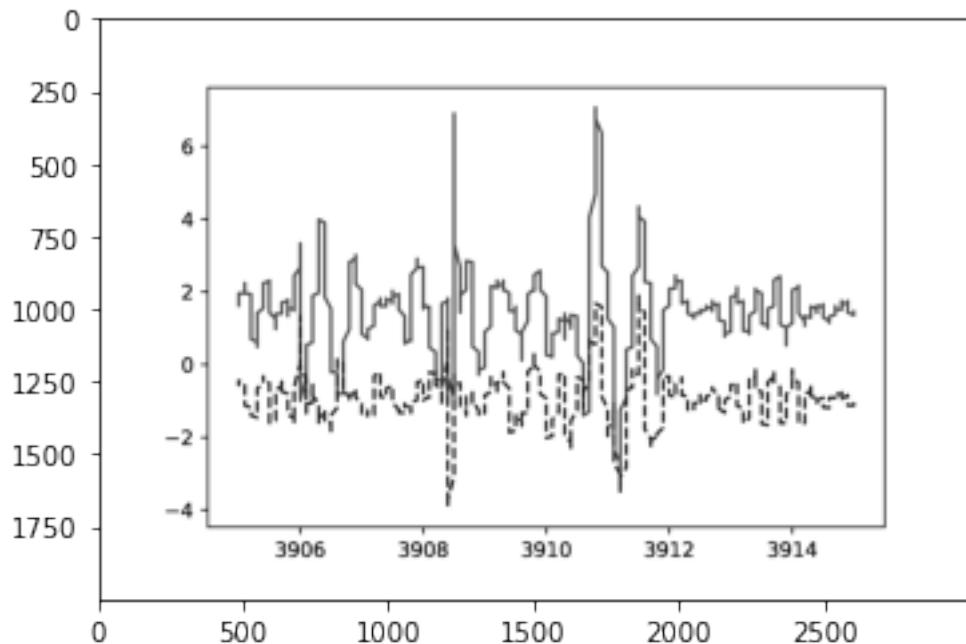
```
<class 'numpy.ndarray'>      --    287    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/360.png
360
```



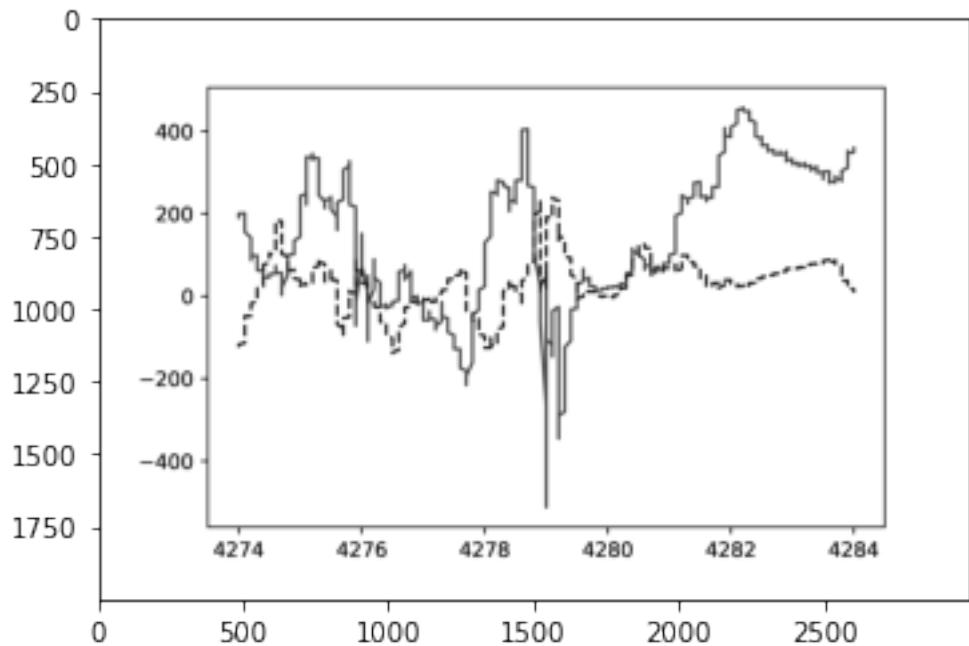
```
<class 'numpy.ndarray'>      -- 288  --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/4.png
4
```



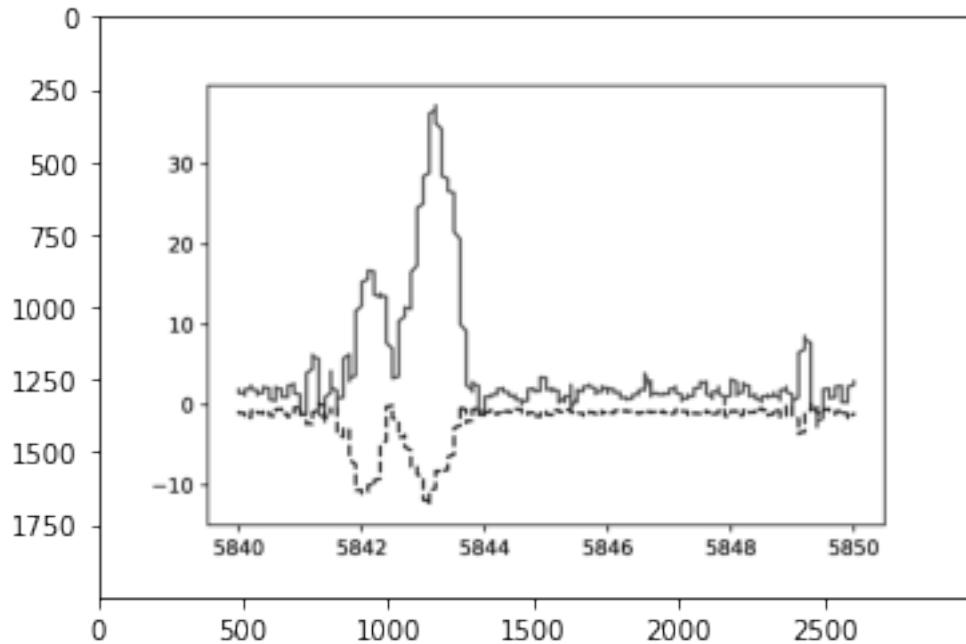
```
<class 'numpy.ndarray'>      -- 289  --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/36.png
36
```



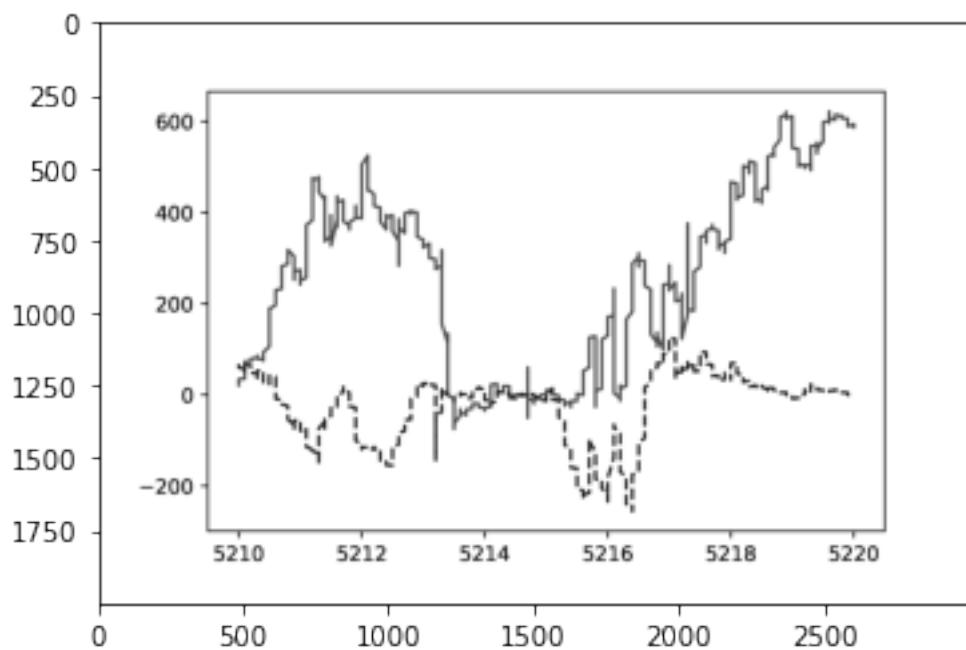
```
<class 'numpy.ndarray'>      --    290    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/77.png
77
```



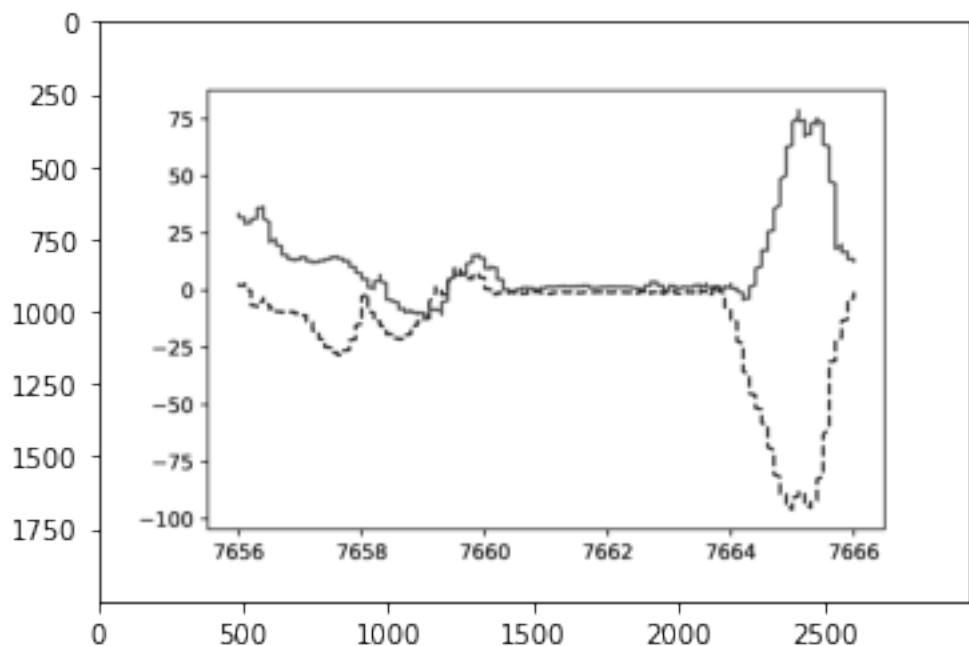
```
<class 'numpy.ndarray'>      --    291    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/251.png
251
```



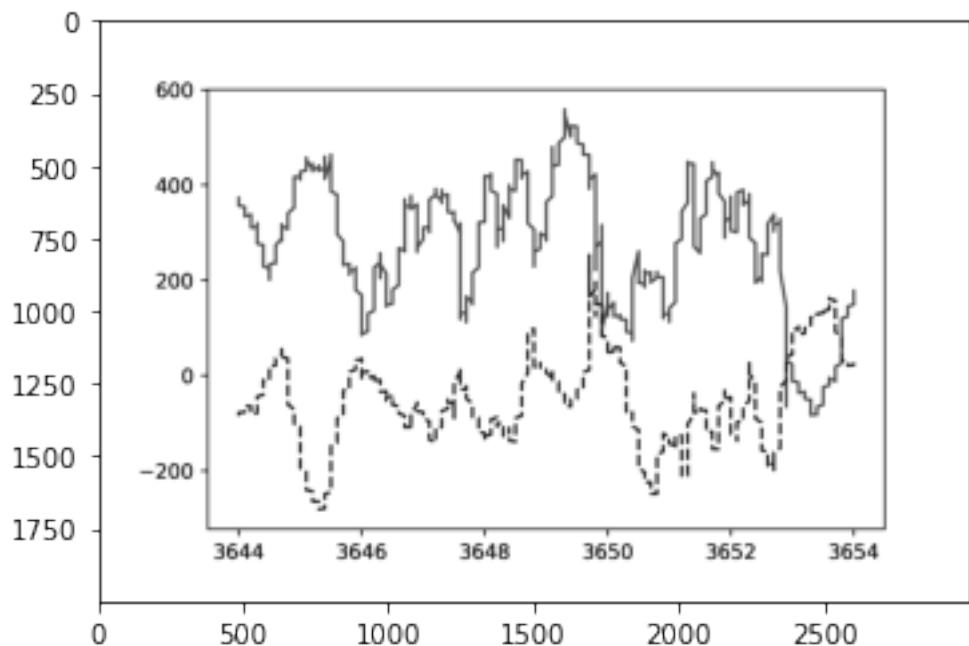
```
<class 'numpy.ndarray'>      -- 292  --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/181.png
181
```



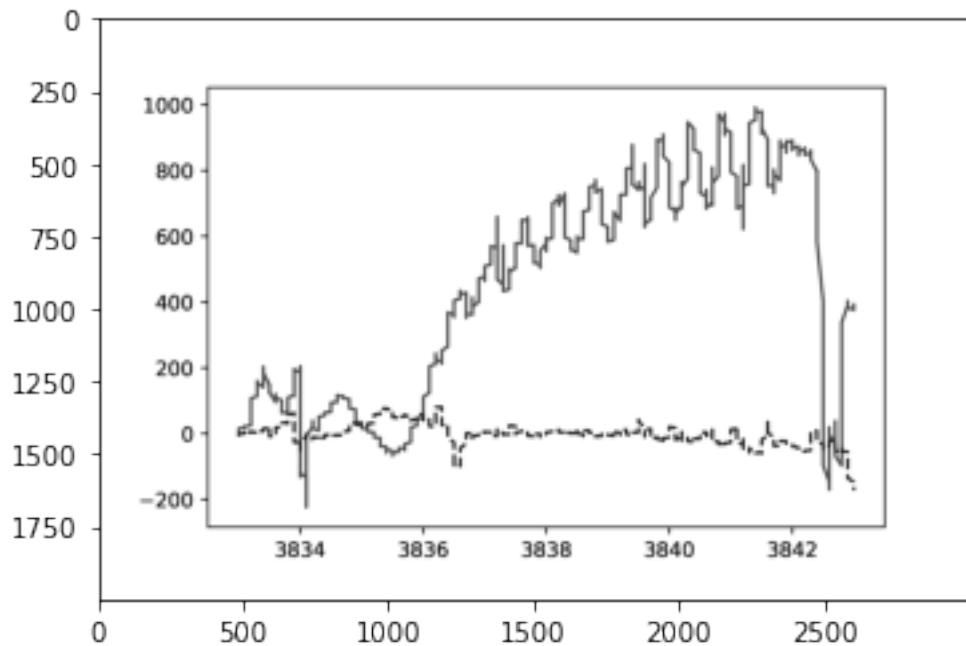
```
<class 'numpy.ndarray'> -- 293 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/398.png
398
```



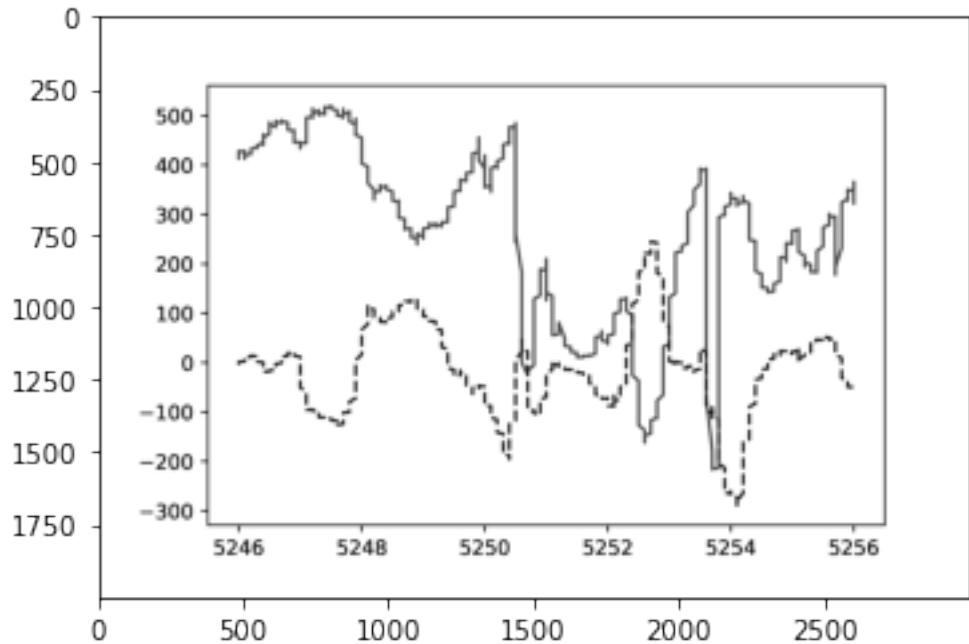
```
<class 'numpy.ndarray'> -- 294 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/7.png
7
```



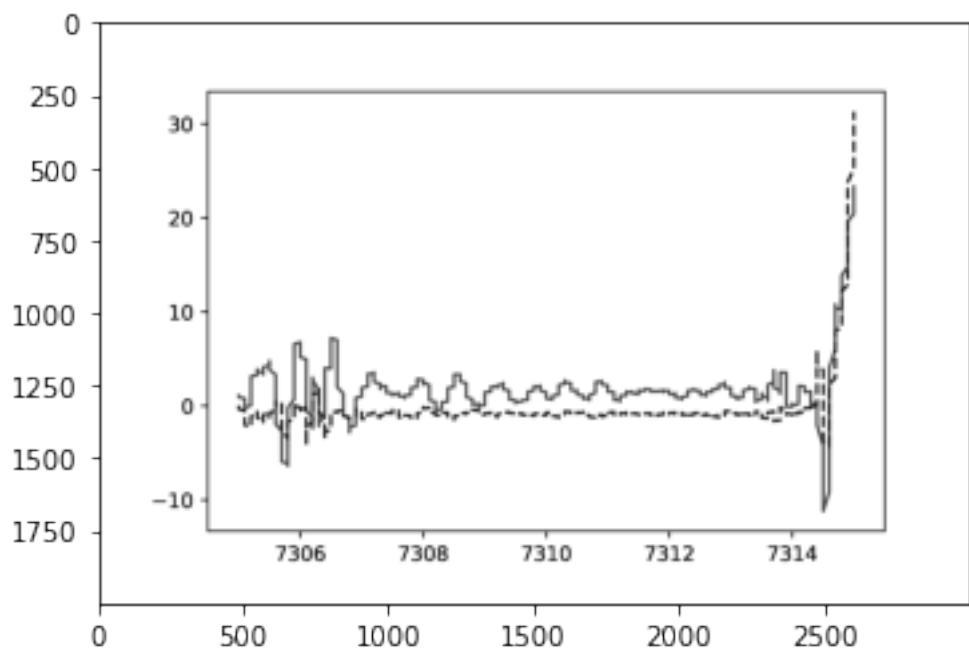
```
<class 'numpy.ndarray'>      --    295    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/28.png
28
```



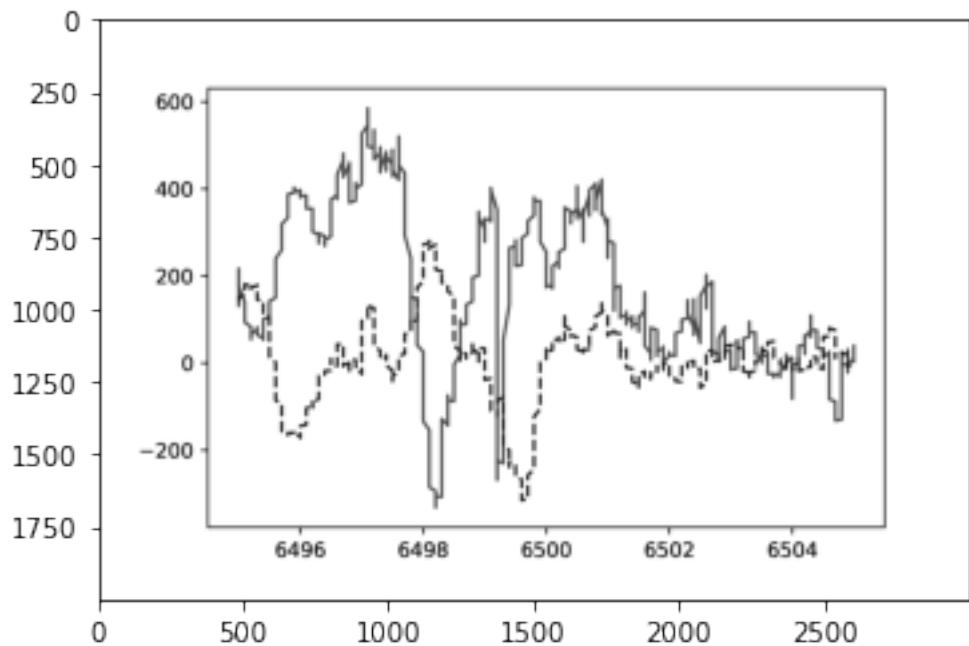
```
<class 'numpy.ndarray'>      --    296    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/185.png
185
```



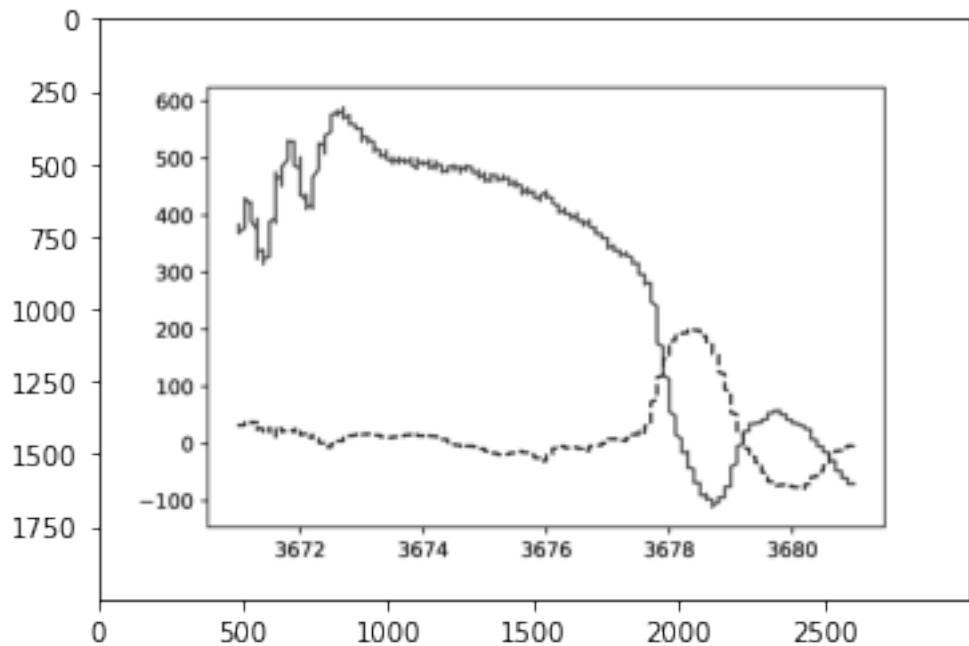
```
<class 'numpy.ndarray'>      --    297    --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/359.png
359
```



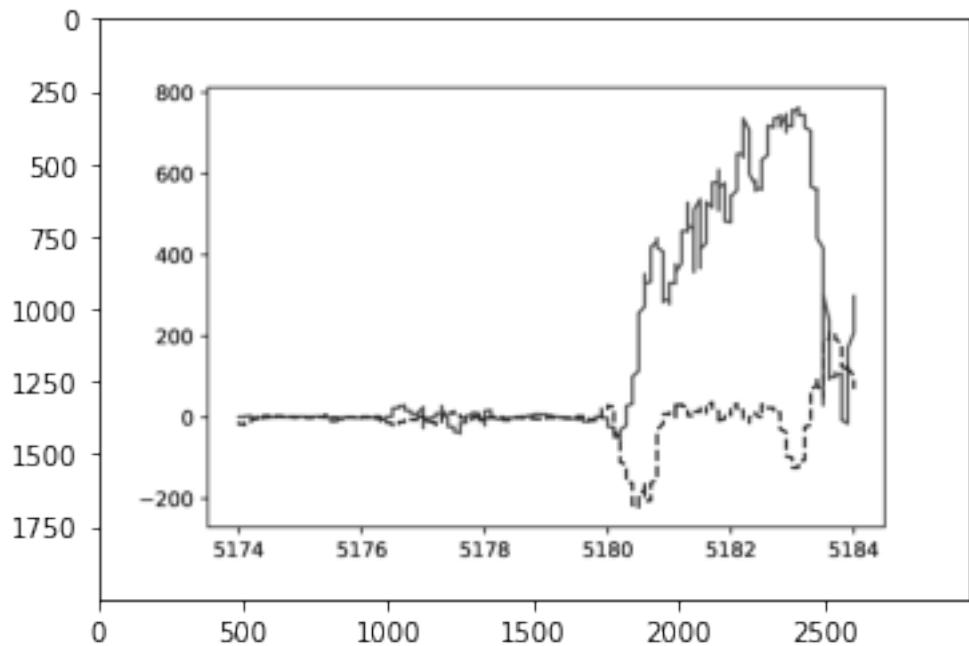
```
<class 'numpy.ndarray'> -- 298 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/269.png
269
```



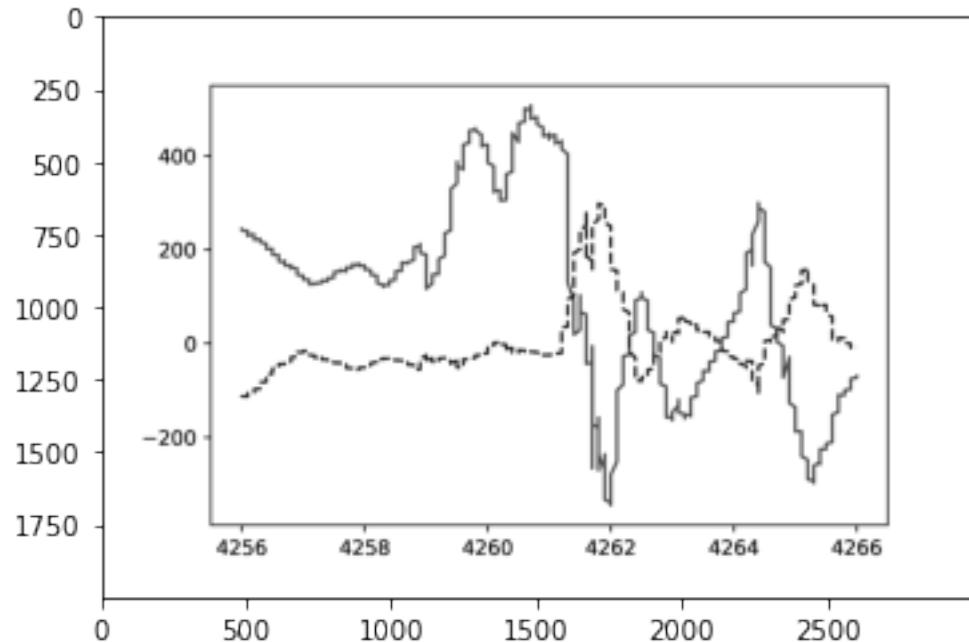
```
<class 'numpy.ndarray'> -- 299 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/10.png
10
```



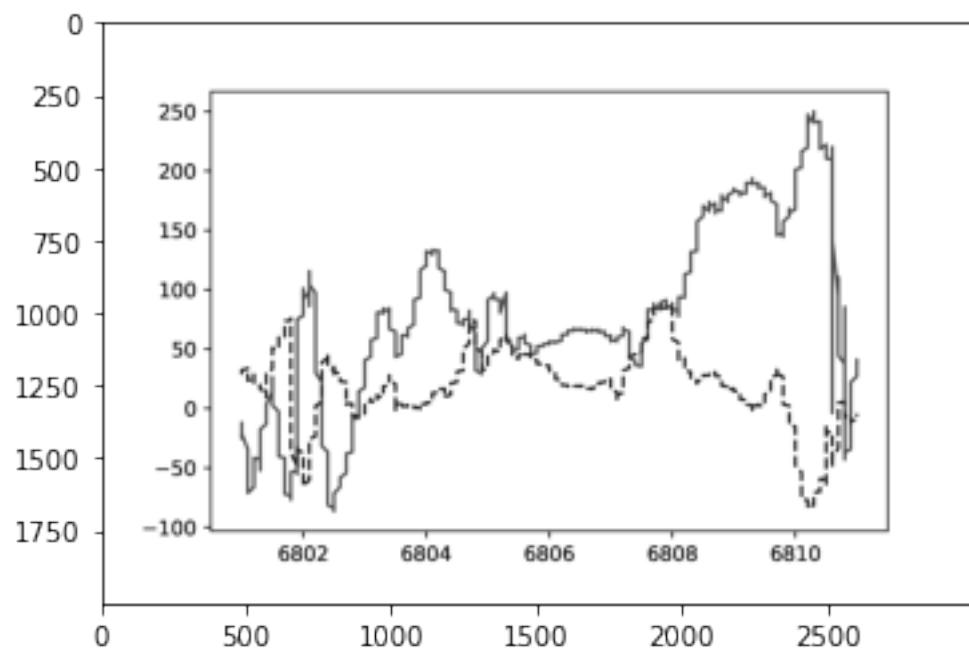
```
<class 'numpy.ndarray'>      --    300    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/177.png
177
```



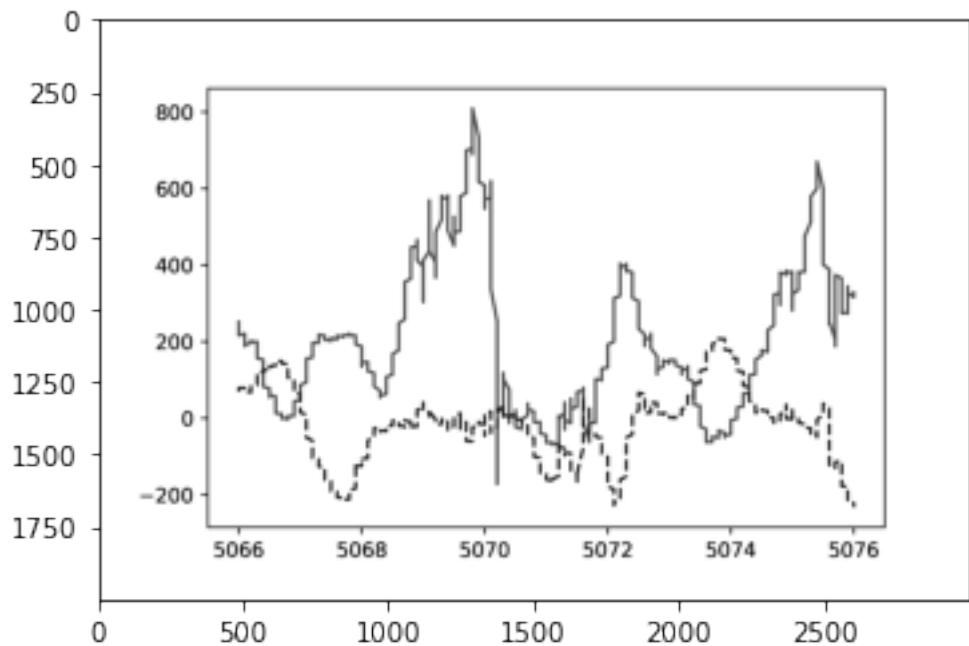
```
<class 'numpy.ndarray'>      --    301    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/75.png
75
```



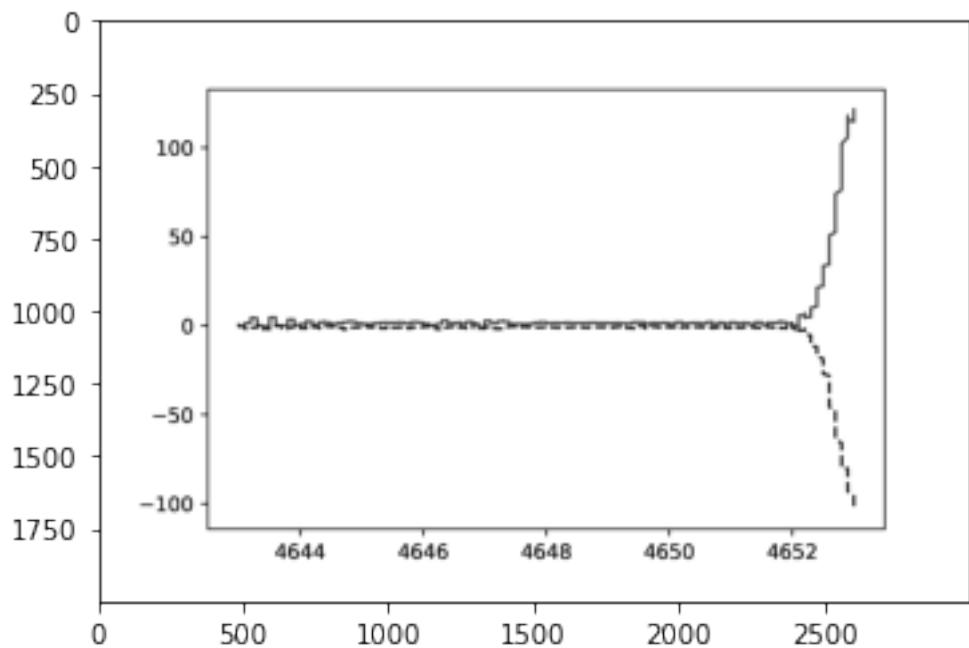
```
<class 'numpy.ndarray'>      -- 302  --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/303.png
303
```



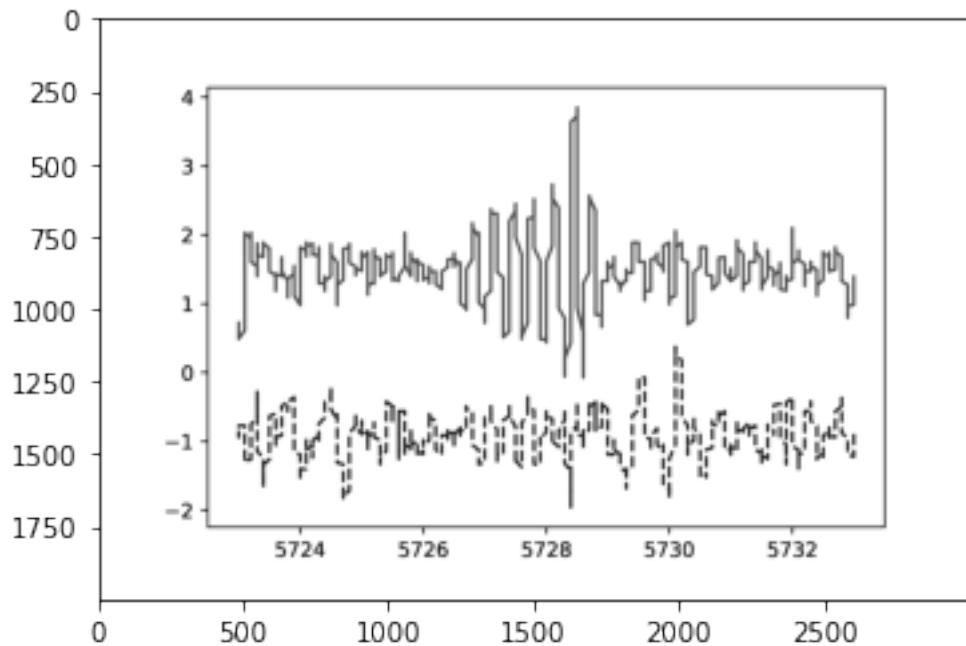
```
<class 'numpy.ndarray'> -- 303 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/165.png
165
```



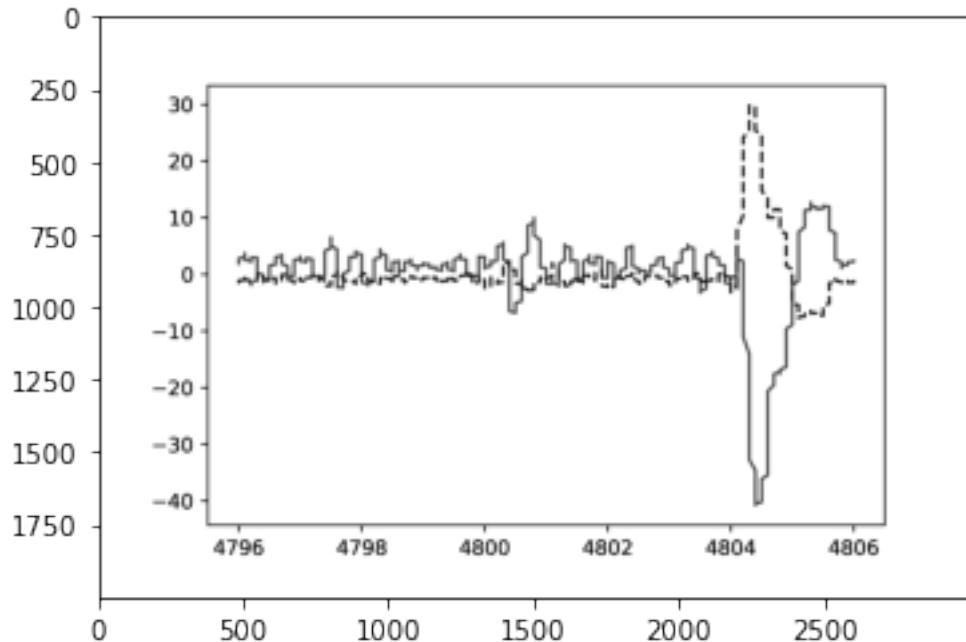
```
<class 'numpy.ndarray'> -- 304 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/118.png
118
```



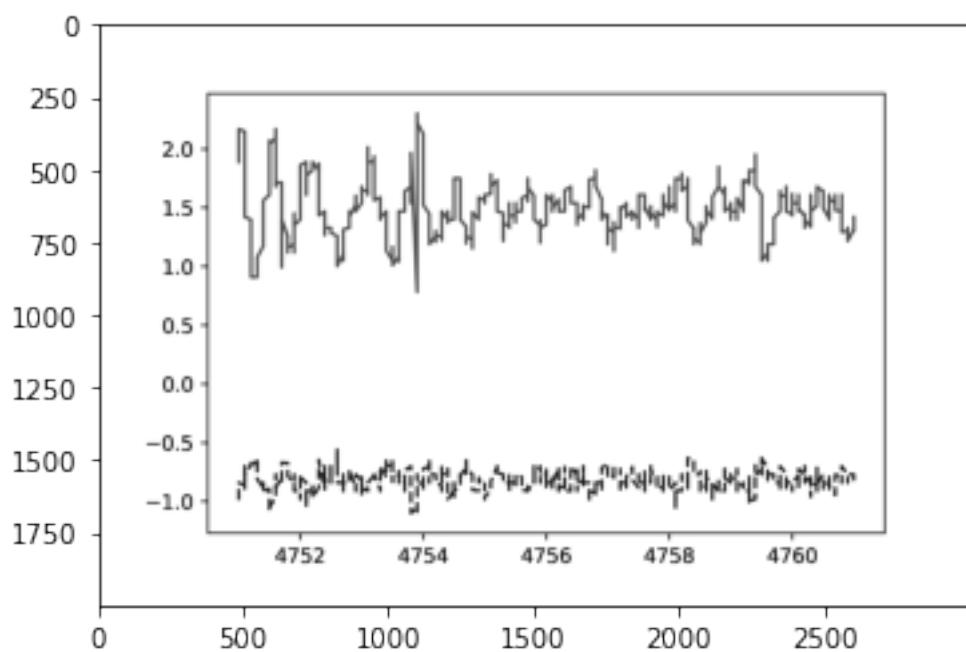
```
<class 'numpy.ndarray'>      --      305      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/238.png
238
```



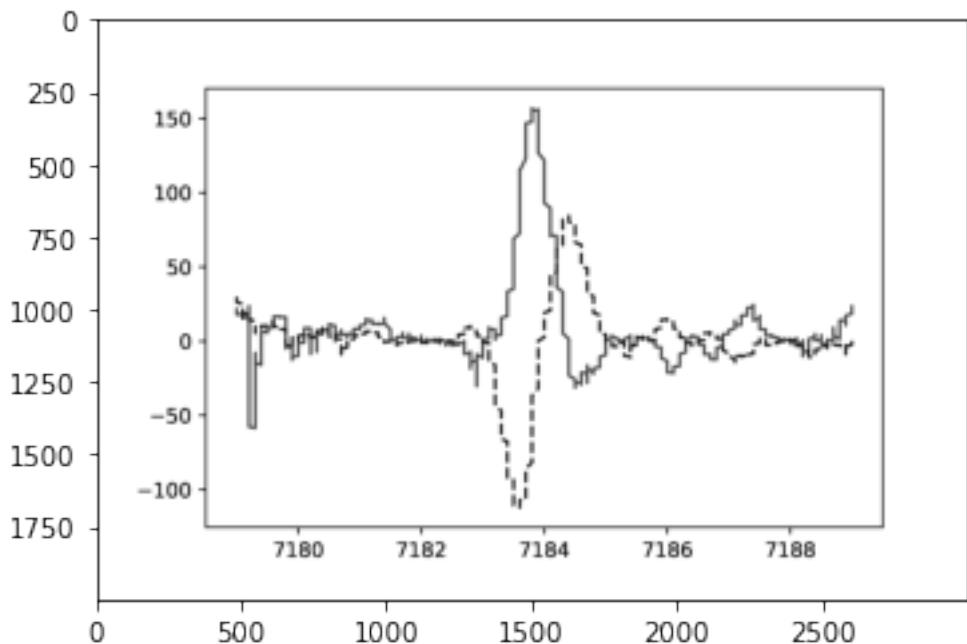
```
<class 'numpy.ndarray'>      --      306      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/135.png
135
```



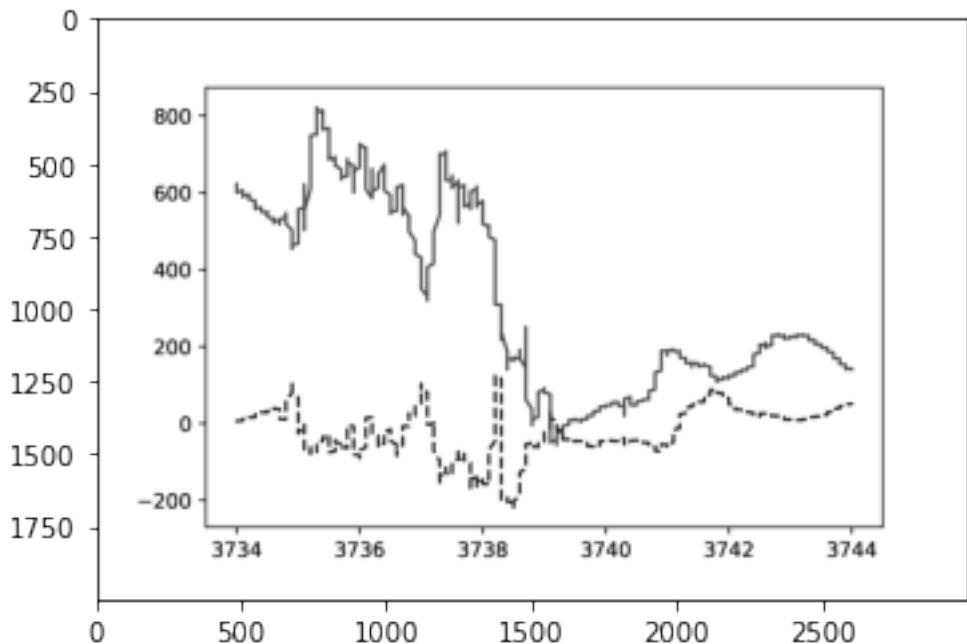
```
<class 'numpy.ndarray'>      --    307    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/130.png
130
```



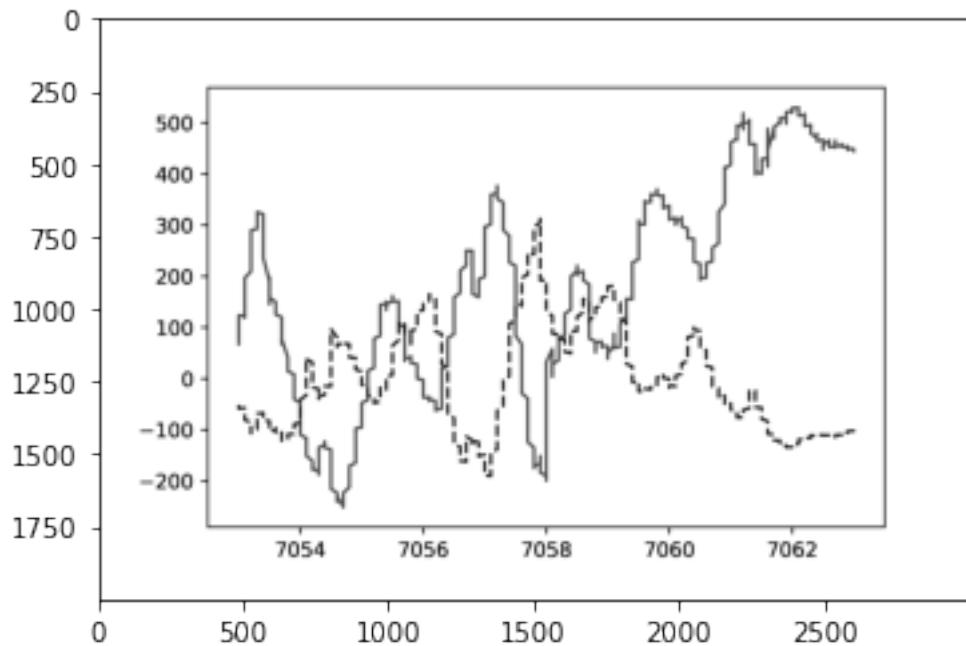
```
<class 'numpy.ndarray'> -- 308 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/345.png
345
```



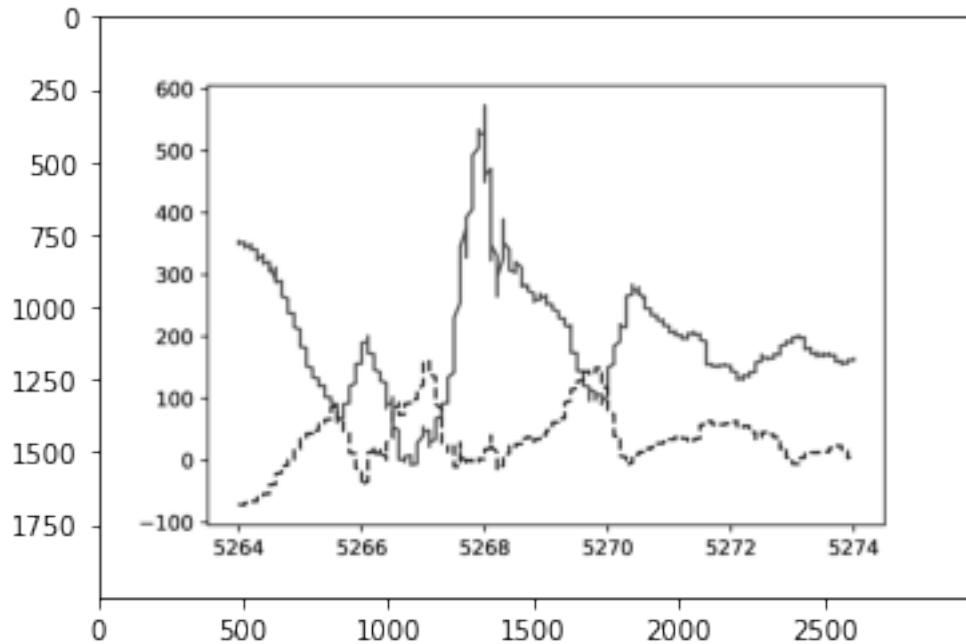
```
<class 'numpy.ndarray'> -- 309 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/17.png
17
```



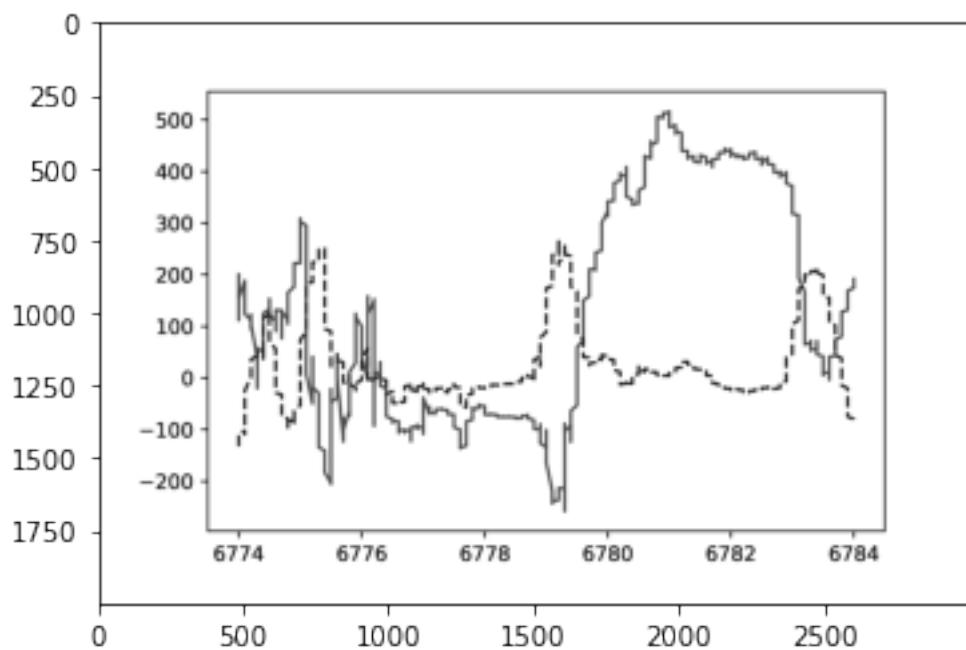
```
<class 'numpy.ndarray'>      --      310      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/331.png
331
```



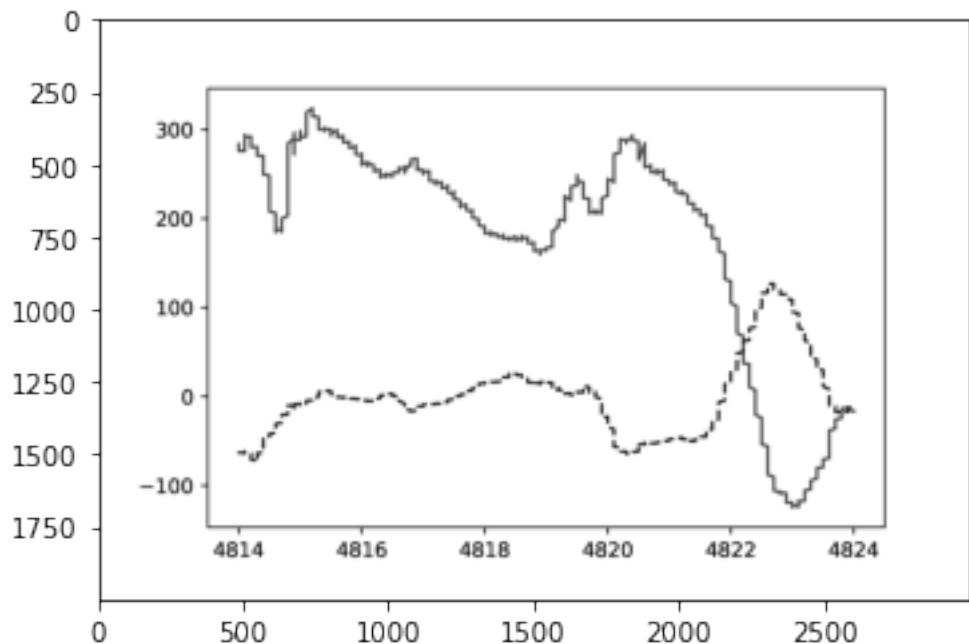
```
<class 'numpy.ndarray'>      --      311      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/187.png
187
```



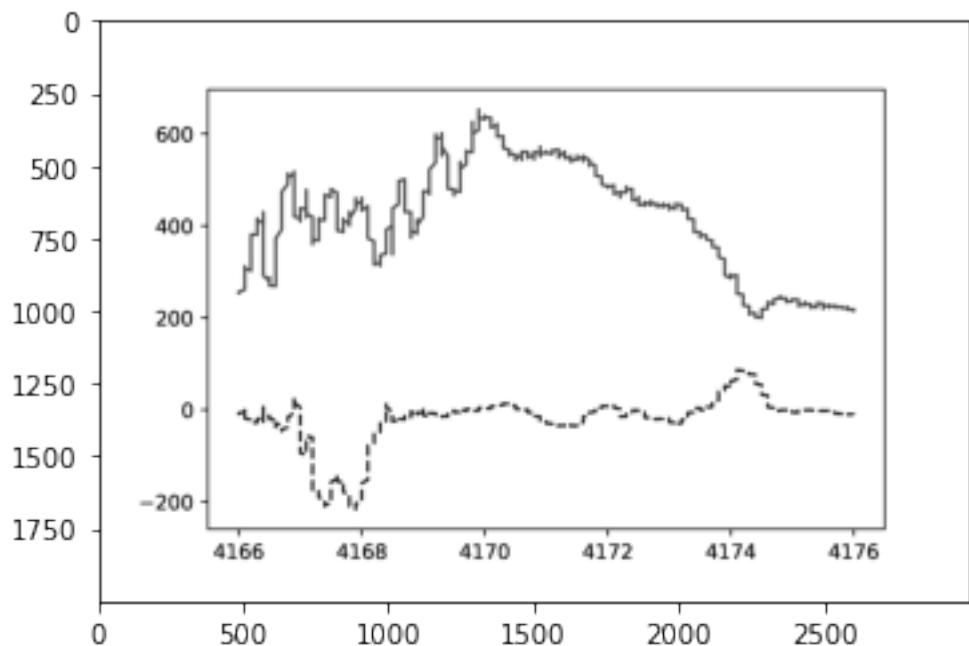
```
<class 'numpy.ndarray'>      --    312    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/300.png
300
```



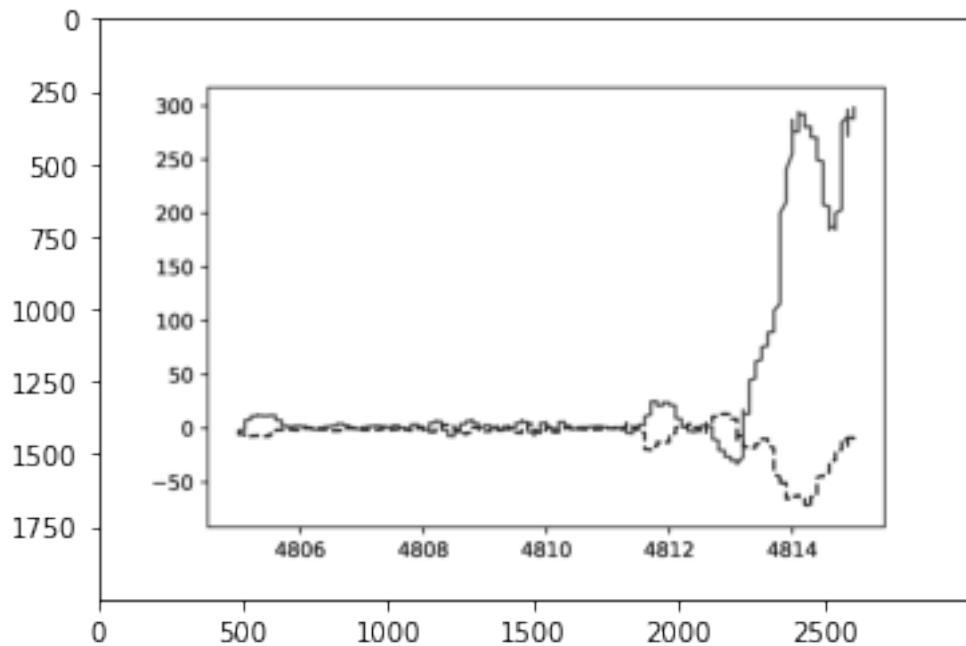
```
<class 'numpy.ndarray'> -- 313 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/137.png
137
```



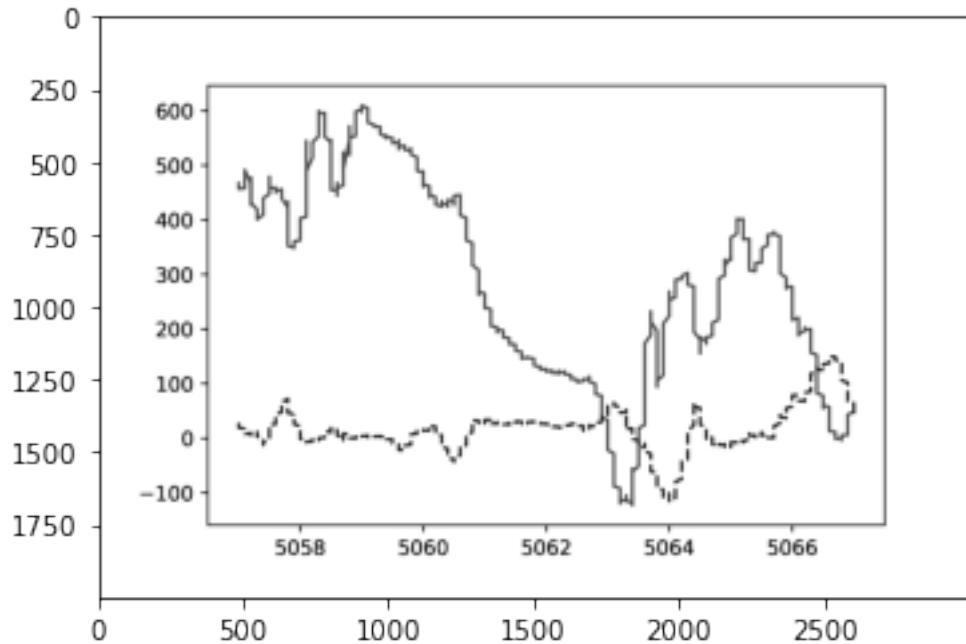
```
<class 'numpy.ndarray'> -- 314 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/65.png
65
```



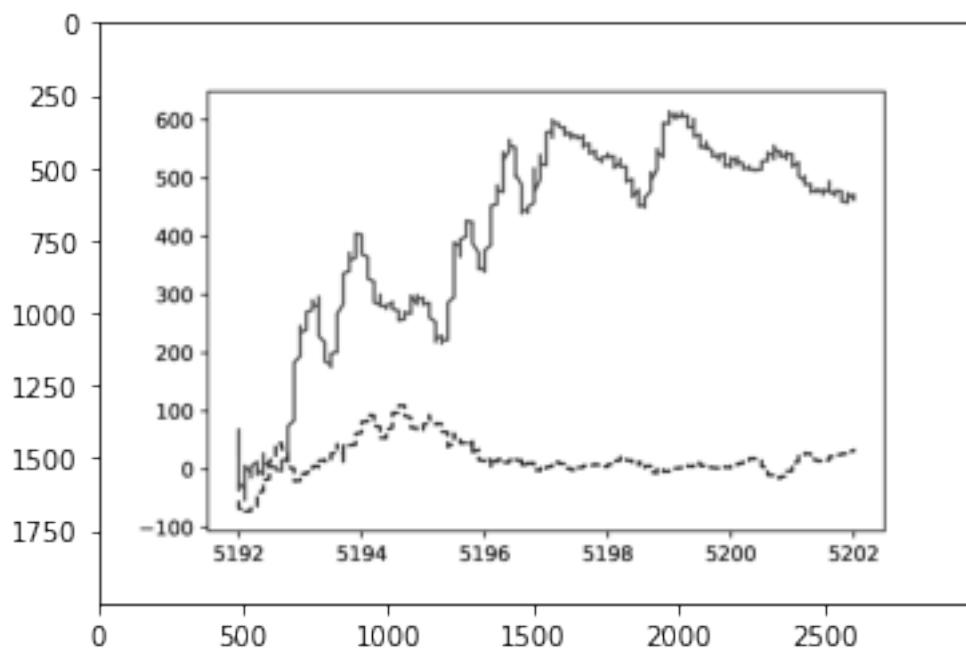
```
<class 'numpy.ndarray'>      --      315      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/136.png
136
```



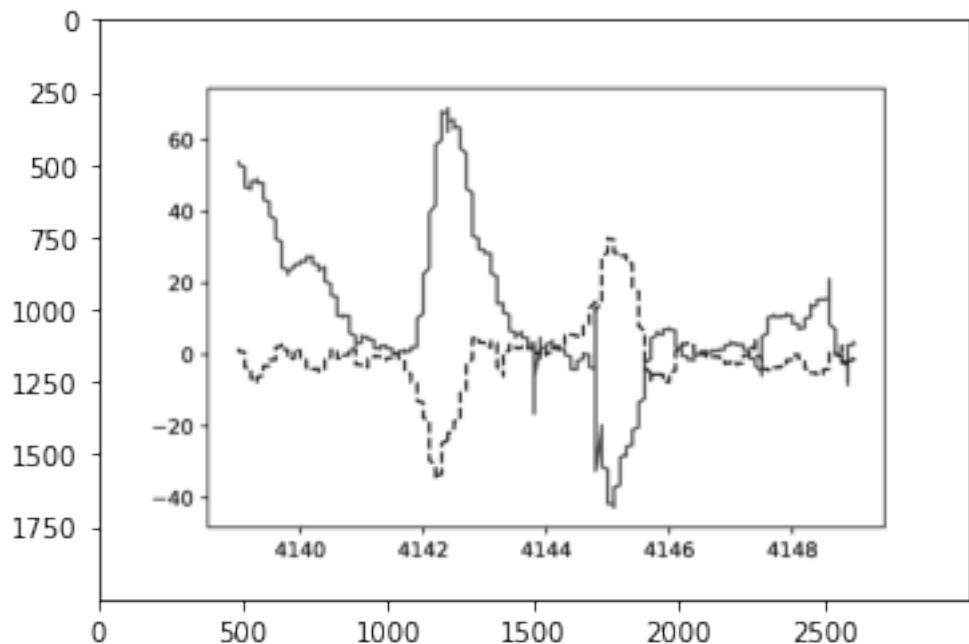
```
<class 'numpy.ndarray'>      --      316      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/164.png
164
```



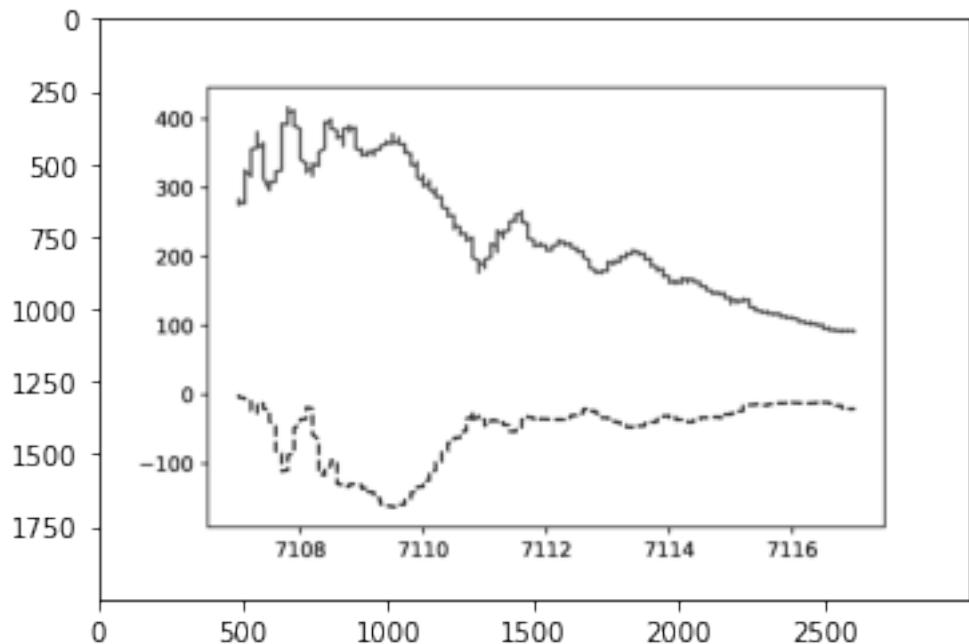
```
<class 'numpy.ndarray'>      --    317    --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/179.png
179
```



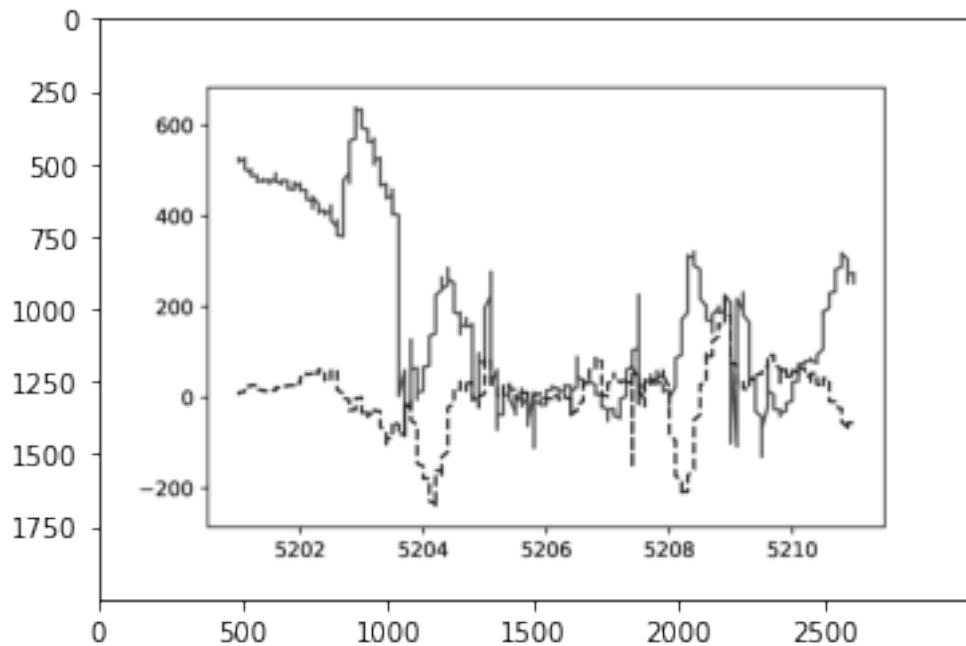
```
<class 'numpy.ndarray'> -- 318 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/62.png
62
```



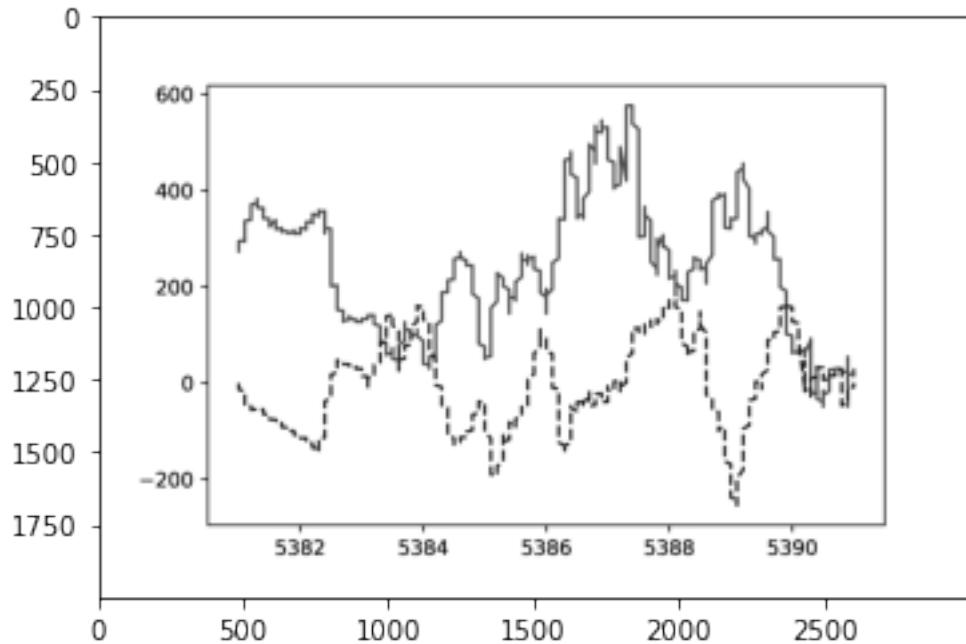
```
<class 'numpy.ndarray'> -- 319 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/337.png
337
```



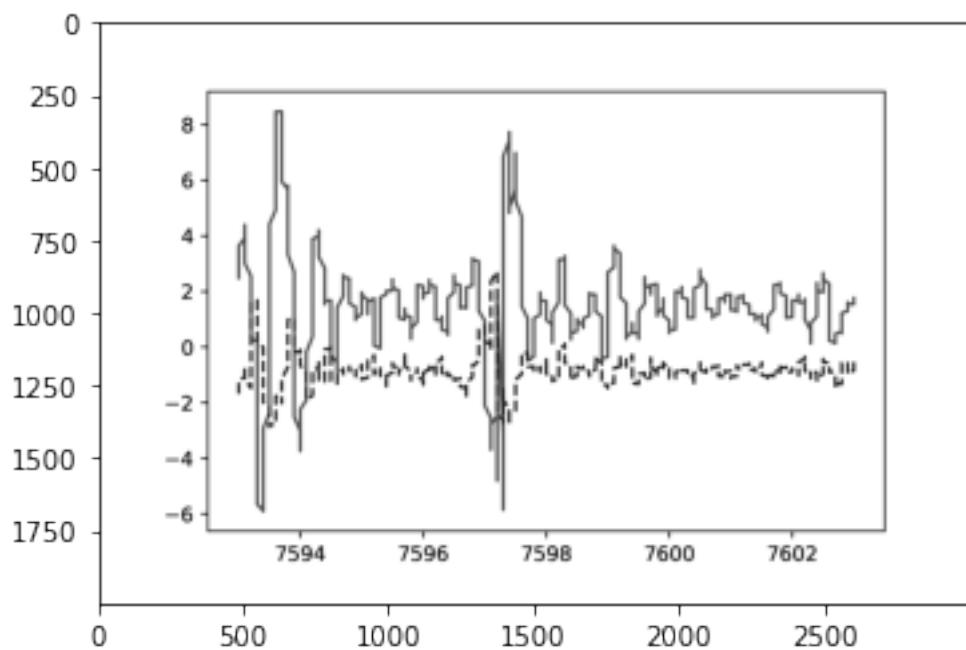
```
<class 'numpy.ndarray'>      --      320      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/180.png
180
```



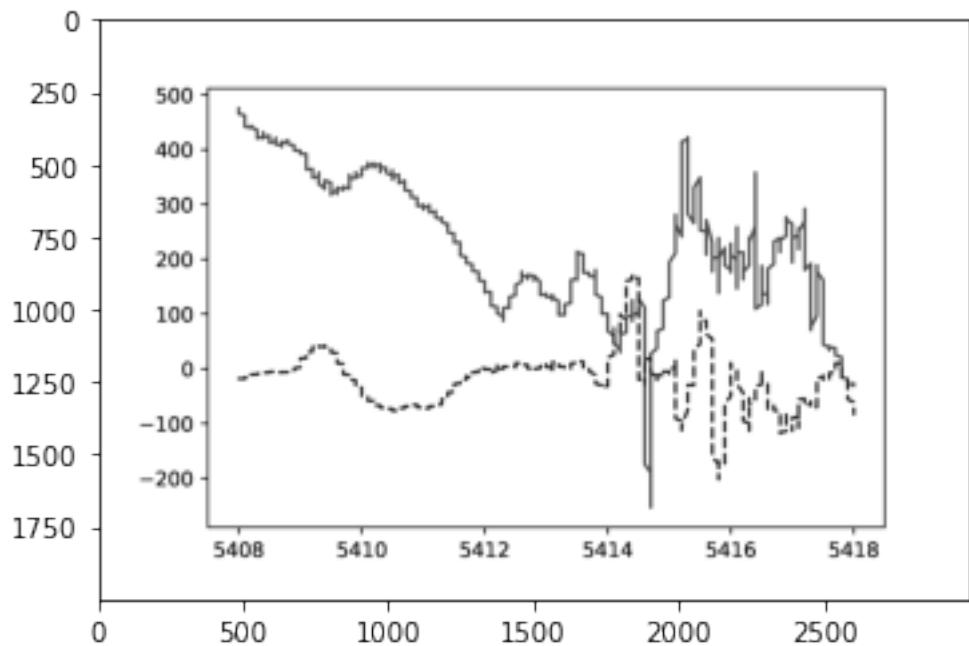
```
<class 'numpy.ndarray'>      --      321      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/200.png
200
```



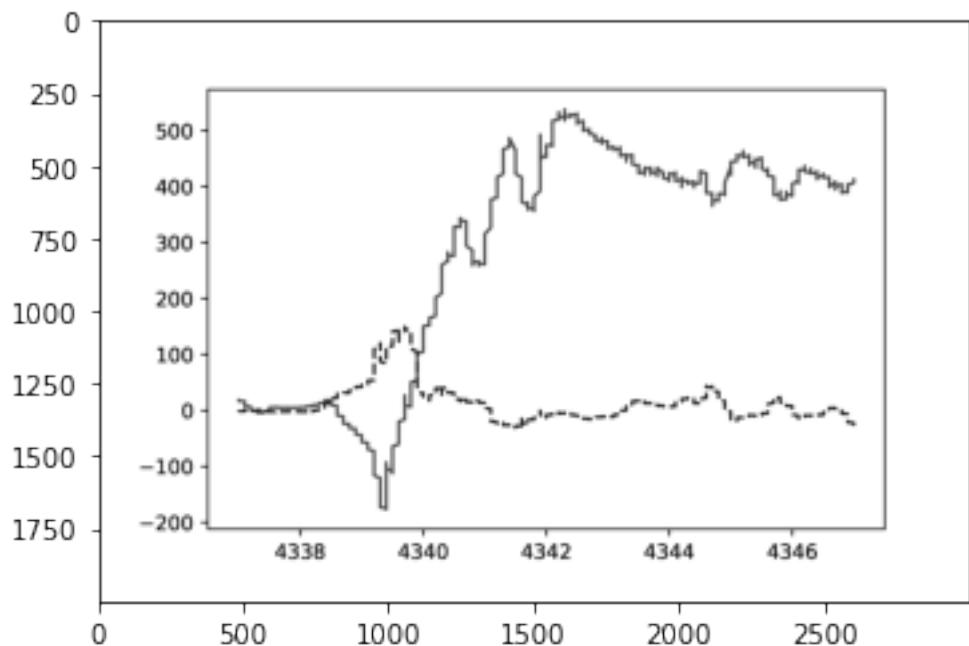
```
<class 'numpy.ndarray'>      --      322      --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/391.png
391
```



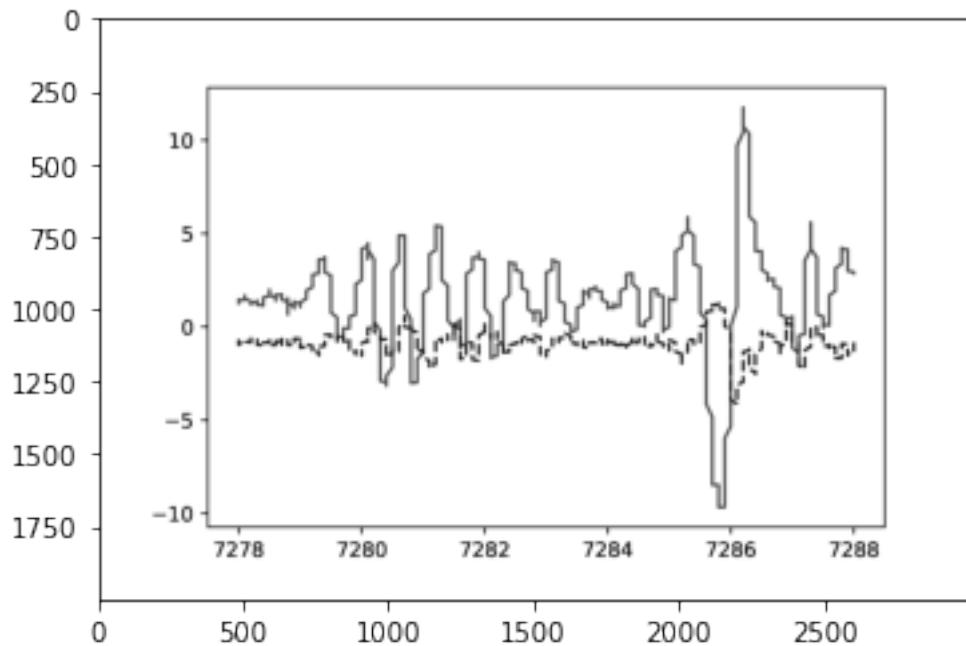
```
<class 'numpy.ndarray'> -- 323 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/203.png
203
```



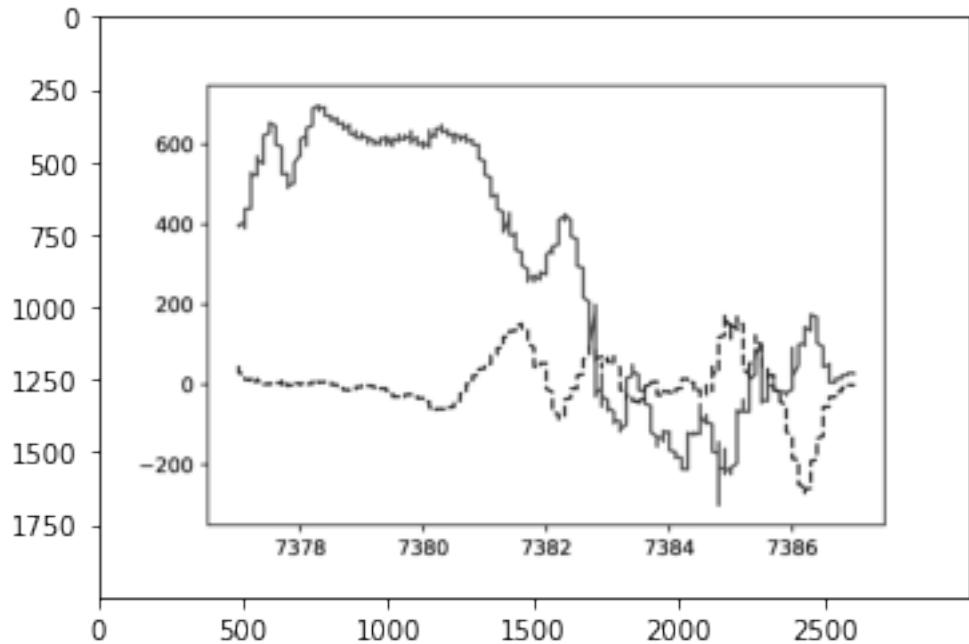
```
<class 'numpy.ndarray'> -- 324 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/84.png
84
```



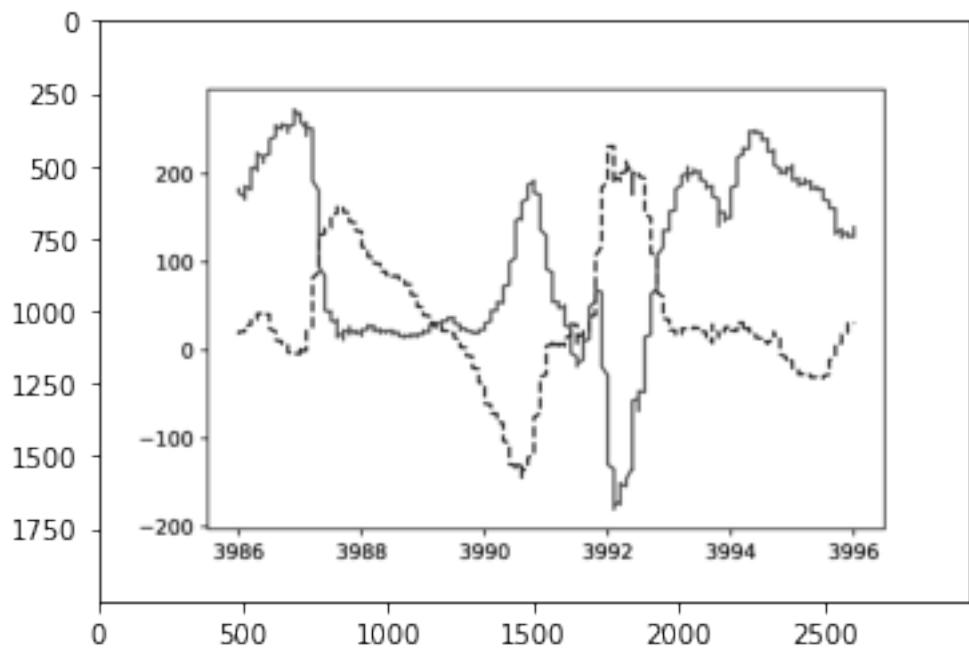
```
<class 'numpy.ndarray'>      --      325      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/356.png
356
```



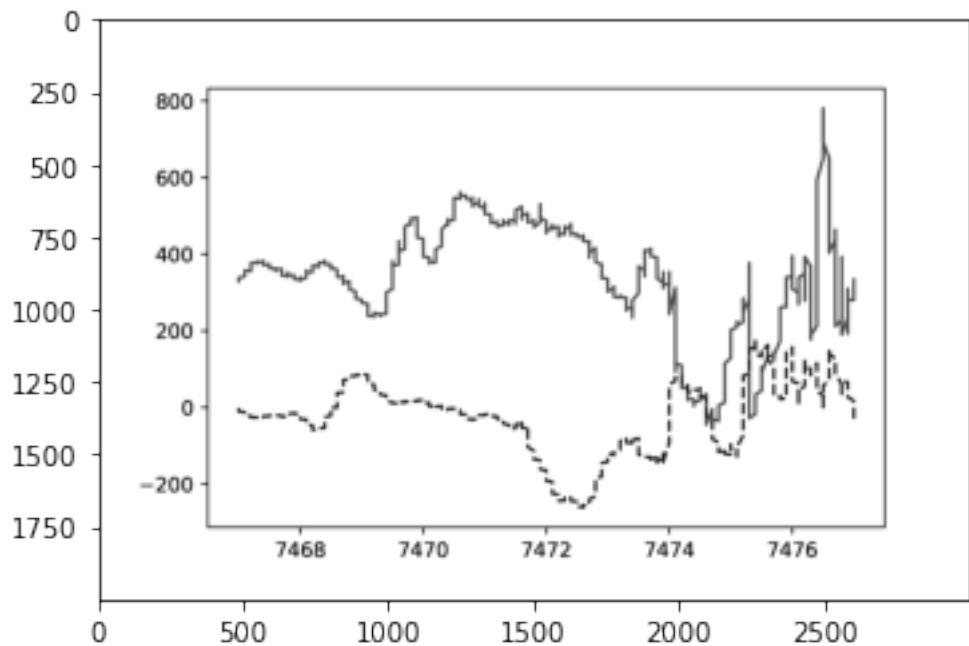
```
<class 'numpy.ndarray'>      --      326      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/367.png
367
```



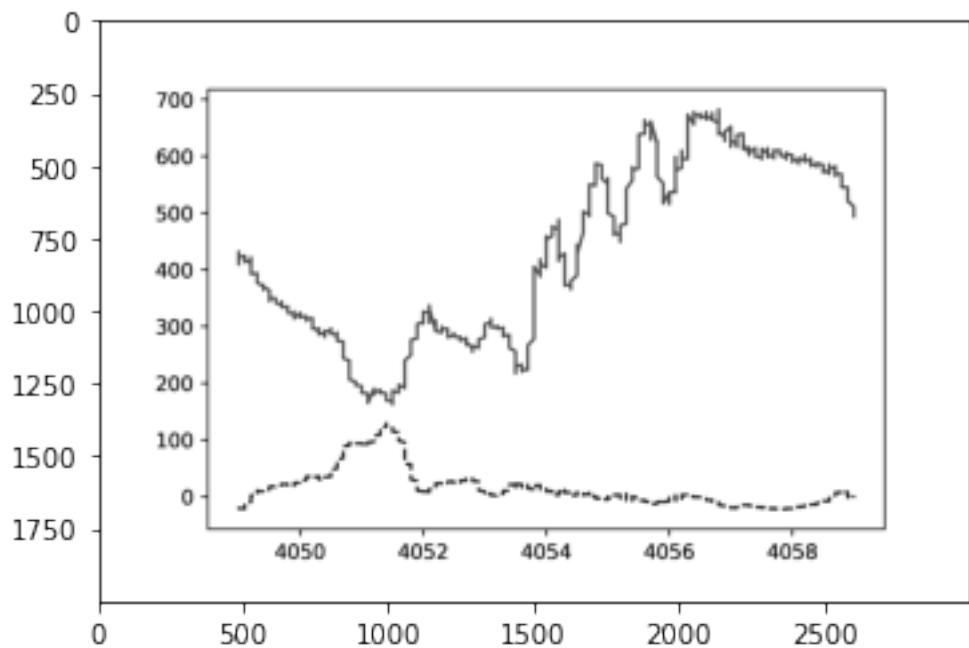
```
<class 'numpy.ndarray'>      --      327      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/45.png
45
```



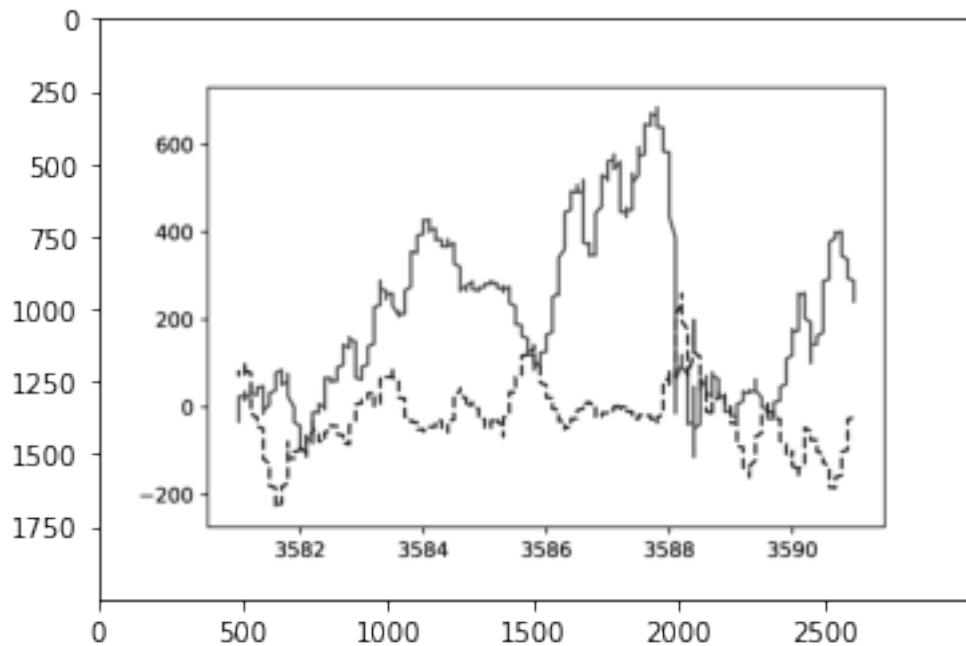
```
<class 'numpy.ndarray'>      --  328  --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/377.png
377
```



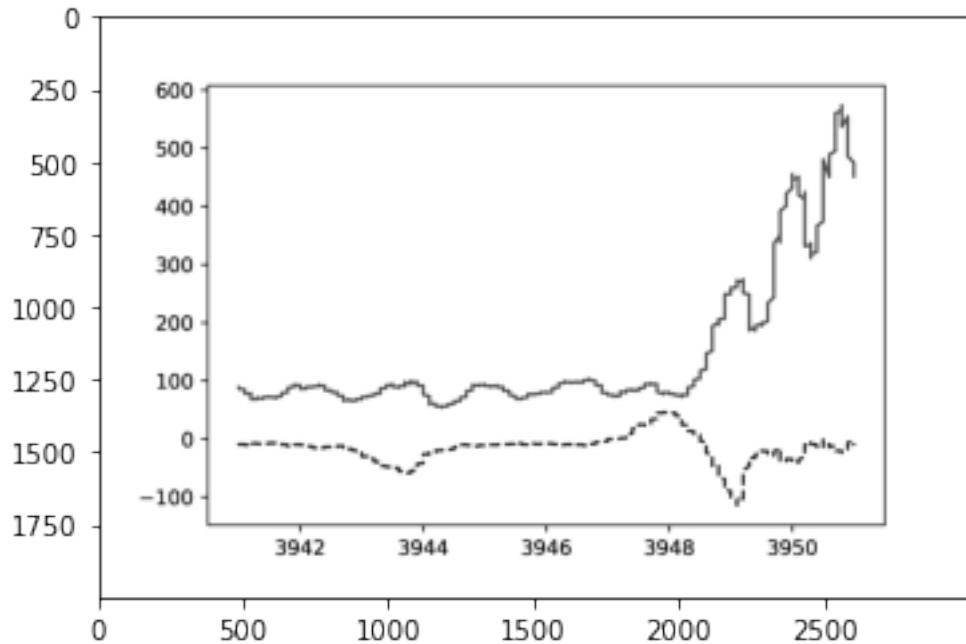
```
<class 'numpy.ndarray'>      --  329  --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/52.png
52
```



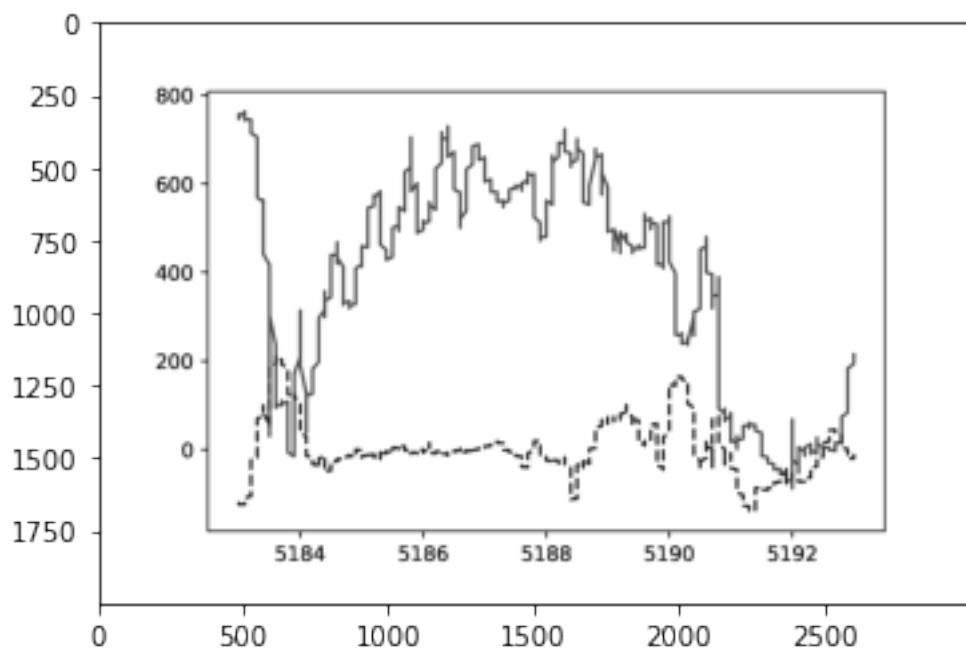
```
<class 'numpy.ndarray'>      --      330      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/0.png
0
```



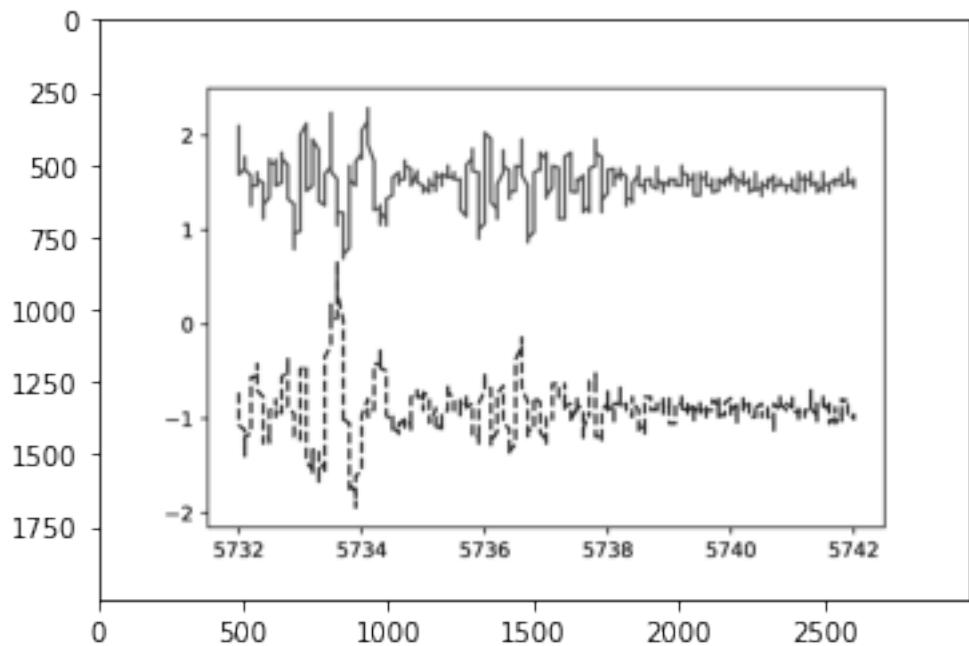
```
<class 'numpy.ndarray'>      --      331      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/40.png
40
```



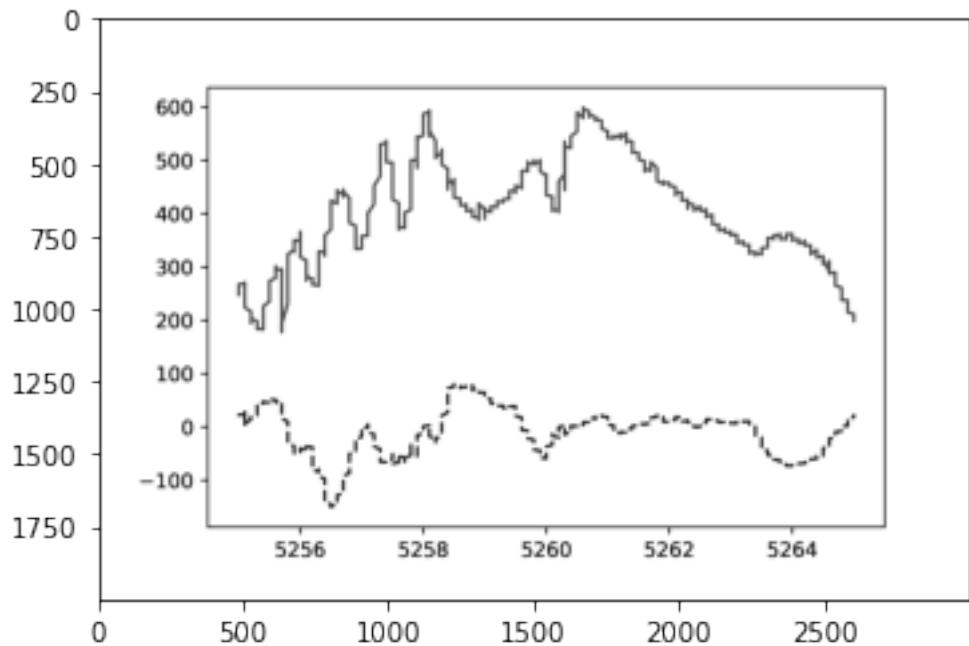
```
<class 'numpy.ndarray'>      --      332      --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/178.png
178
```



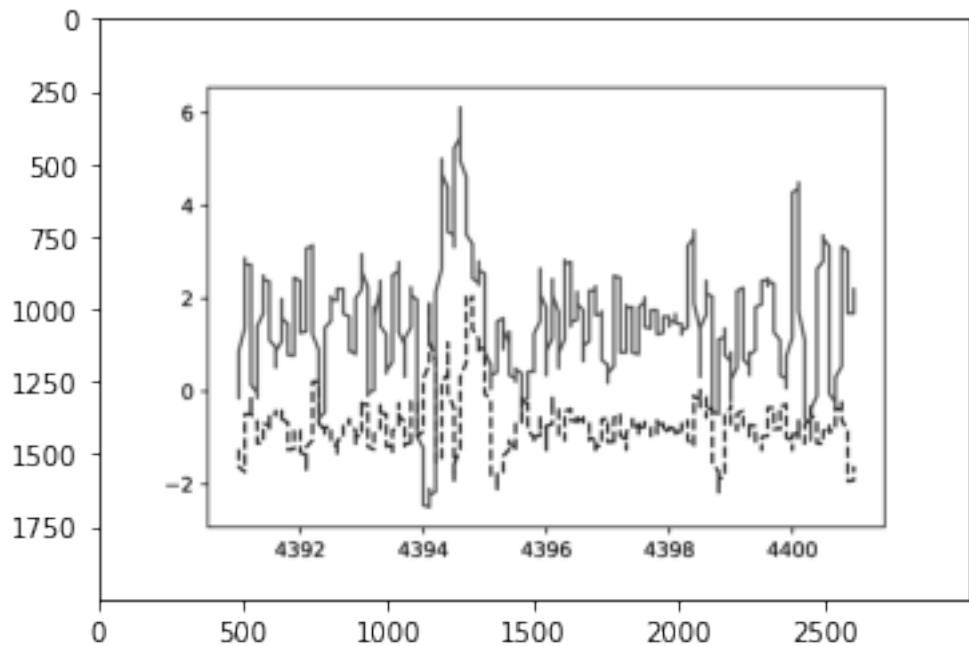
```
<class 'numpy.ndarray'> -- 333 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/239.png
239
```



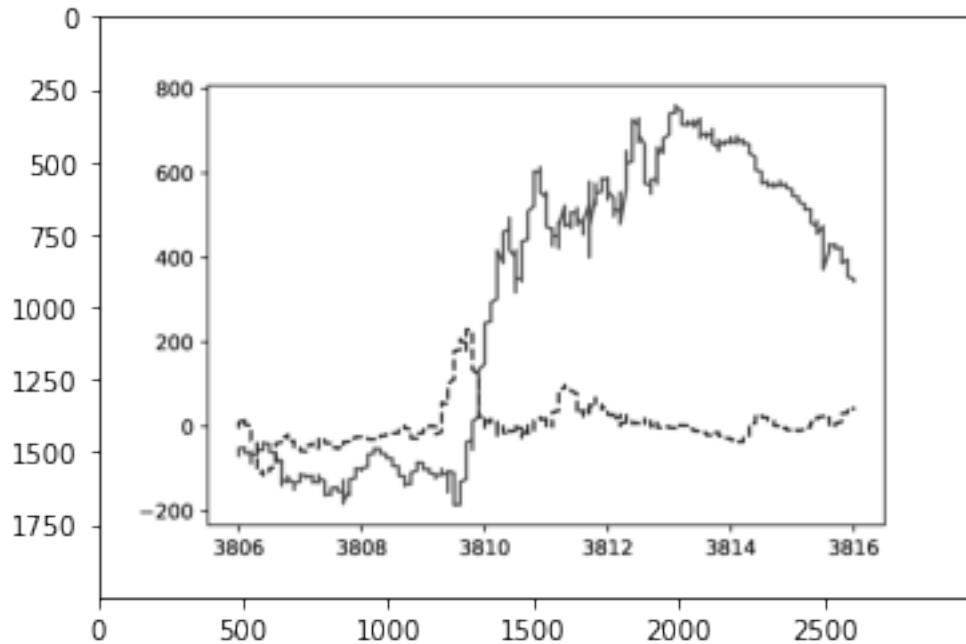
```
<class 'numpy.ndarray'> -- 334 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/186.png
186
```



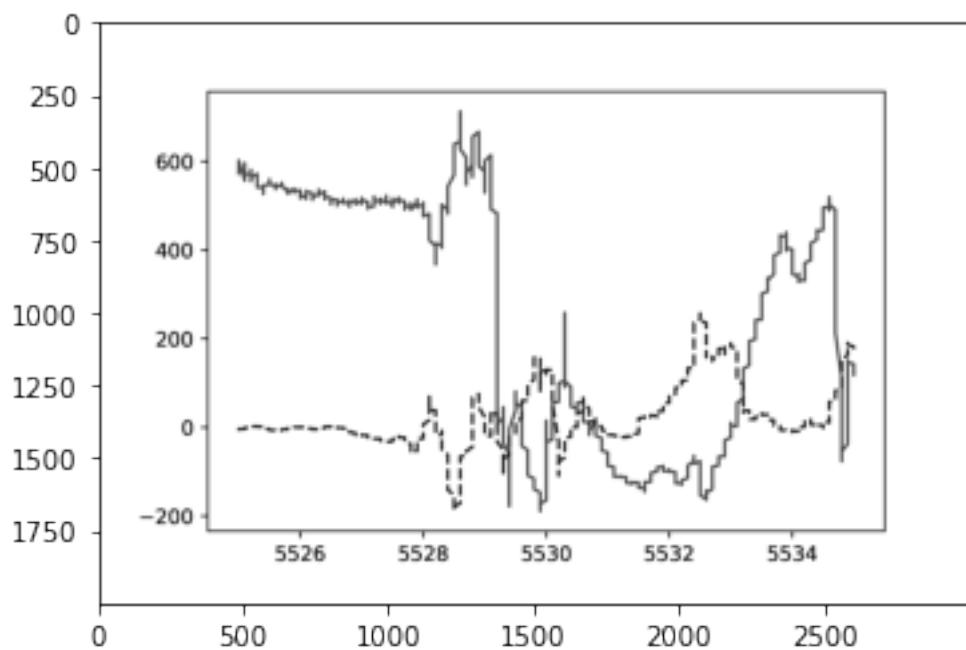
```
<class 'numpy.ndarray'>      --      335      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/90.png
90
```



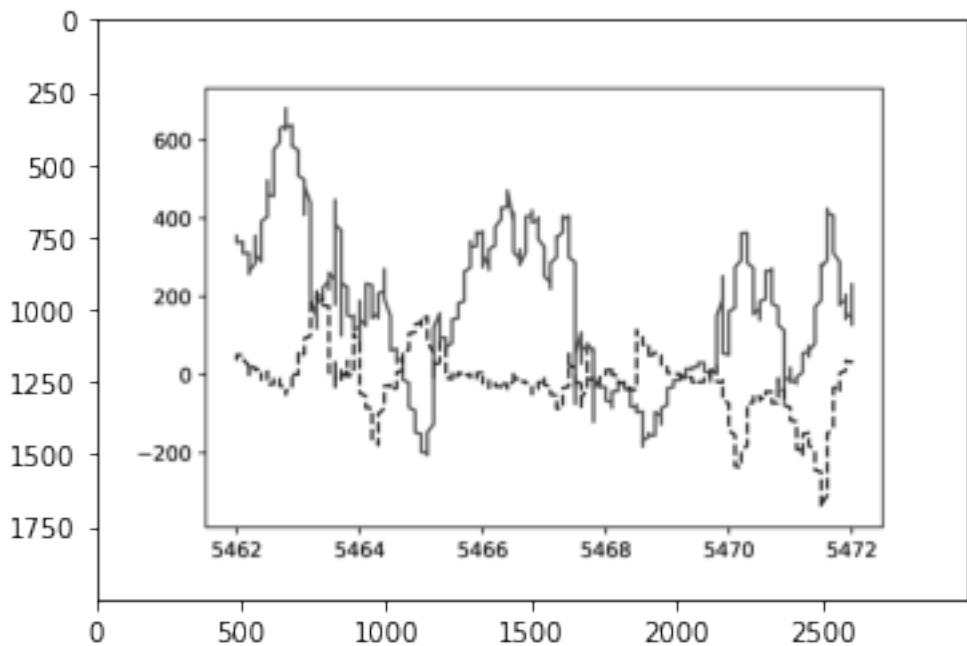
```
<class 'numpy.ndarray'>      --      336      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/25.png
25
```



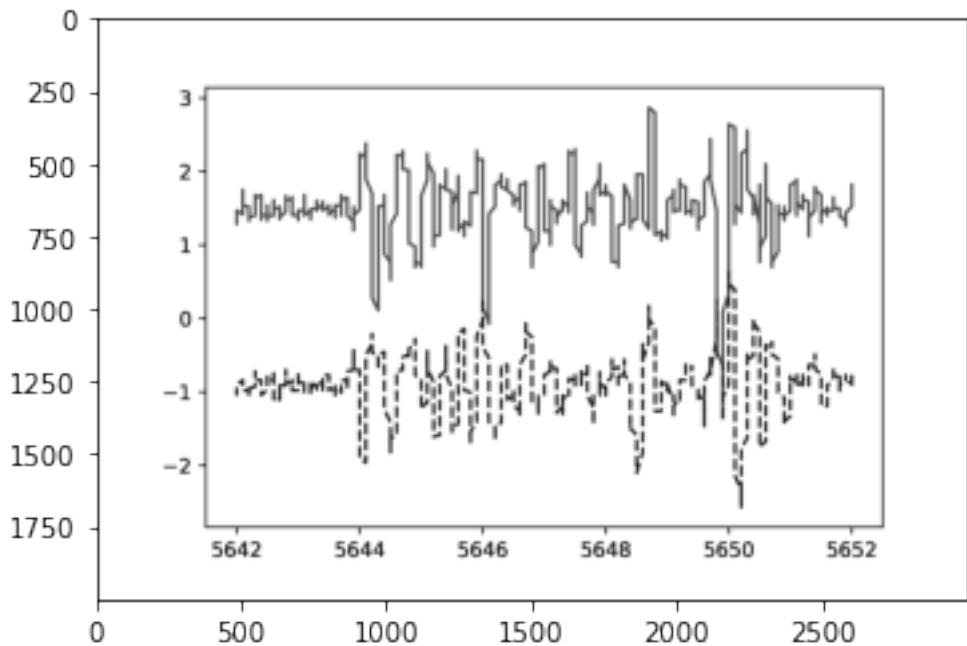
```
<class 'numpy.ndarray'>      --    337    --
/dtata/wheels/notebooks/Alex/PlotImgFolder/Train/216.png
216
```



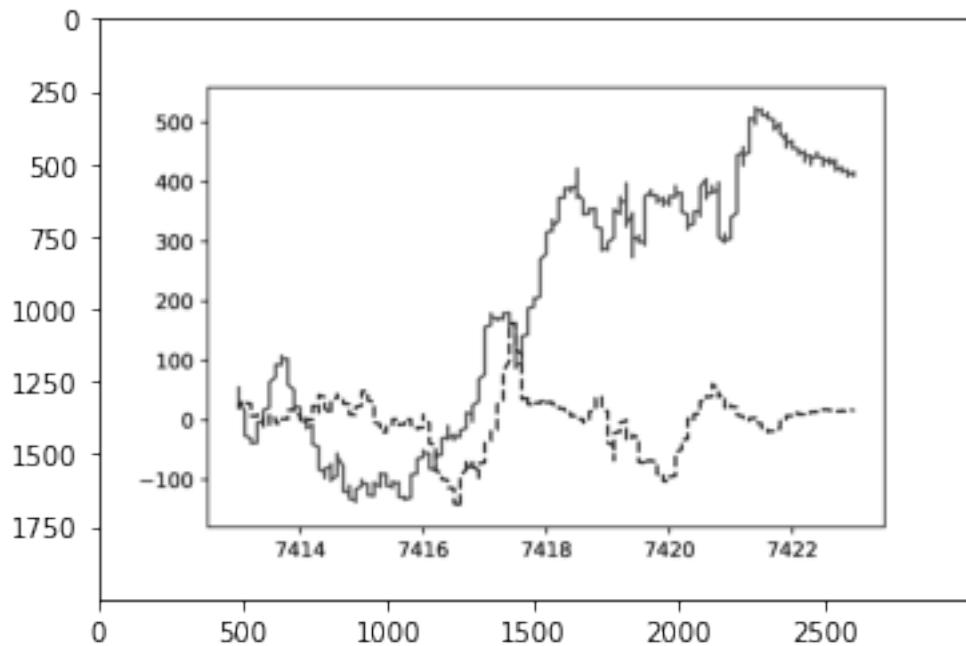
```
<class 'numpy.ndarray'> -- 338 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/209.png
209
```



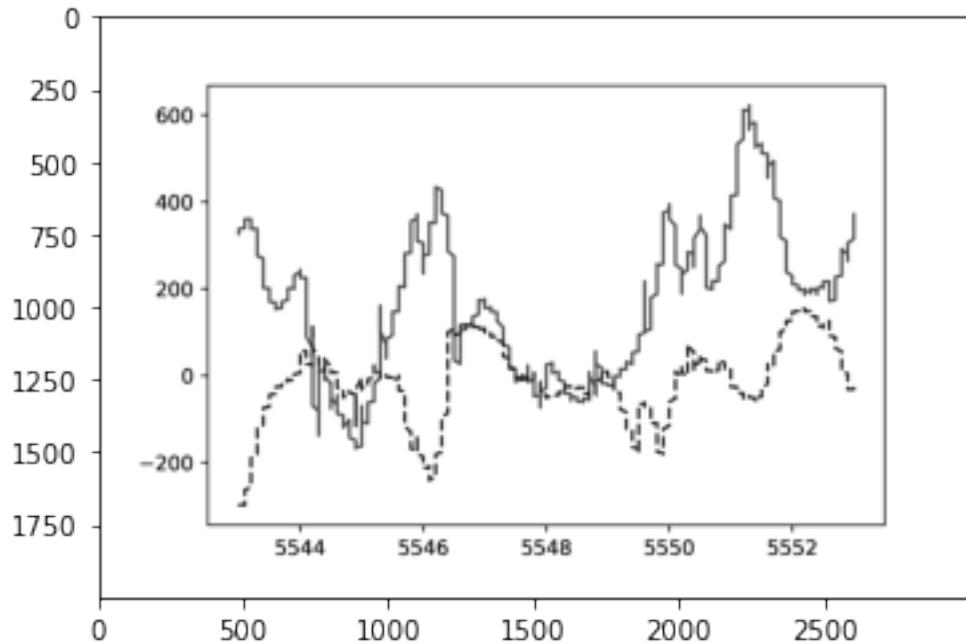
```
<class 'numpy.ndarray'> -- 339 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/229.png
229
```



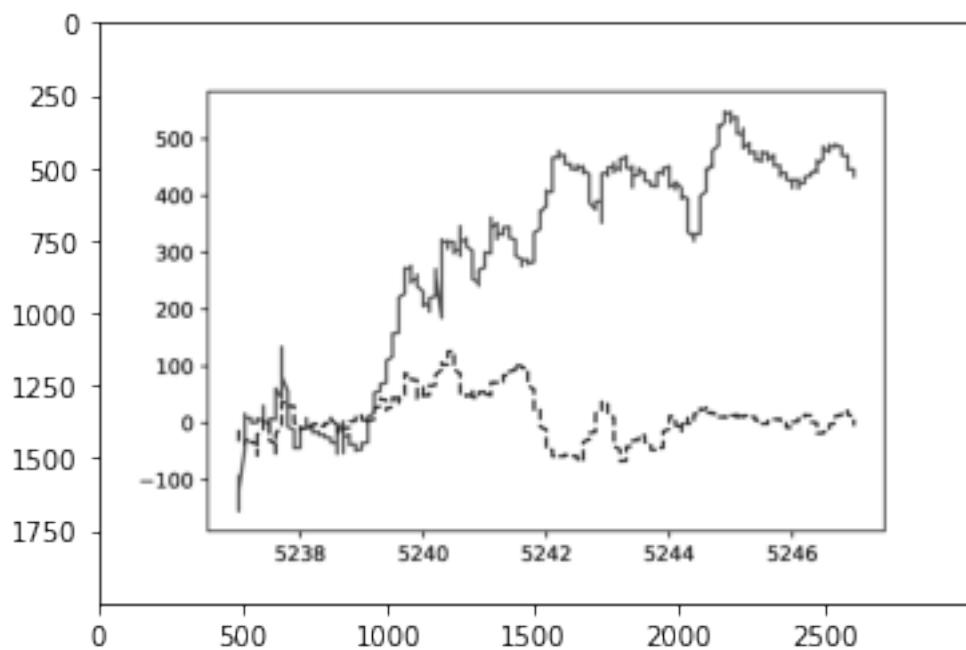
```
<class 'numpy.ndarray'>      --      340      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/371.png
371
```



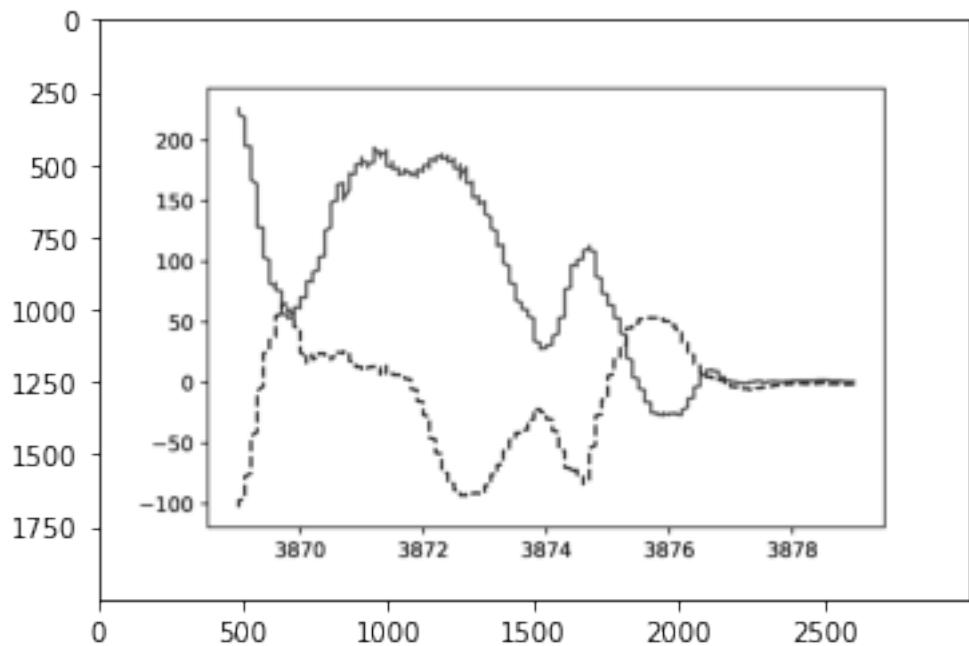
```
<class 'numpy.ndarray'>      --      341      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/218.png
218
```



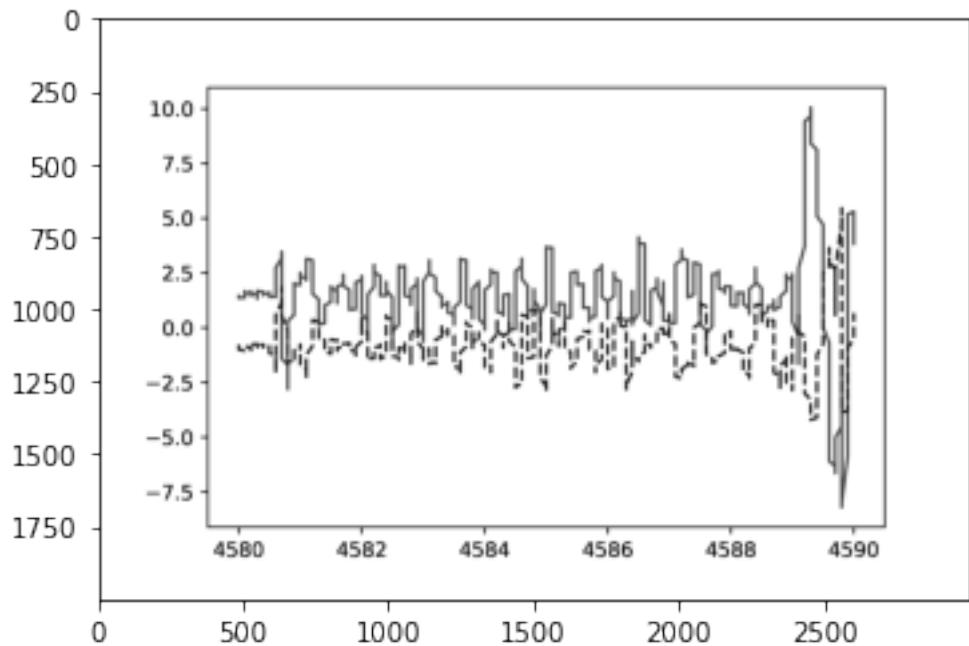
```
<class 'numpy.ndarray'>      --    342    --
/dtata/wheels/notebooks/Alex/PlotImgFolder/Train/184.png
184
```



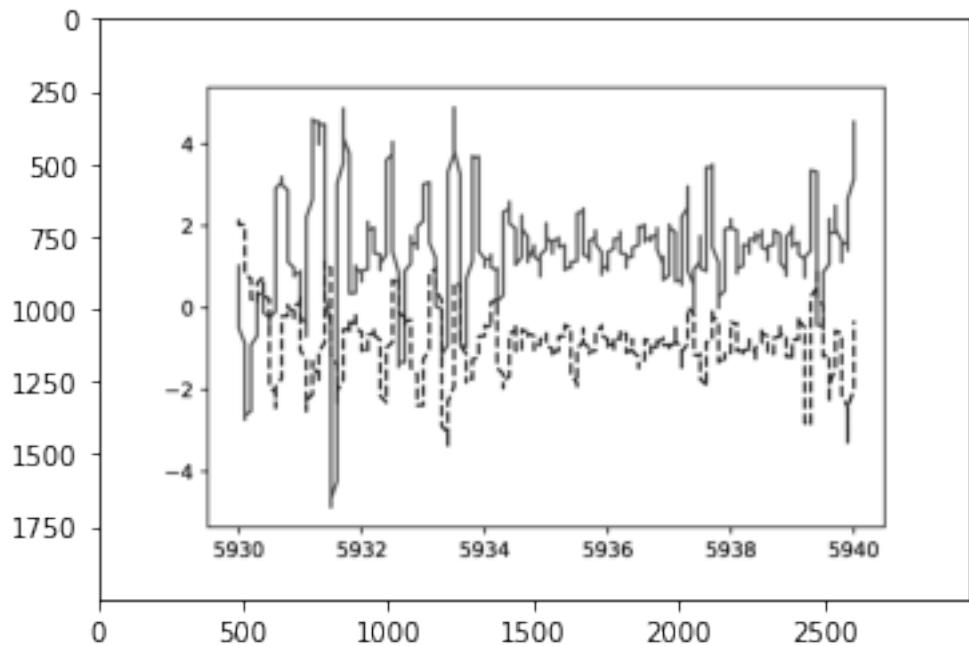
```
<class 'numpy.ndarray'> -- 343 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/32.png
32
```



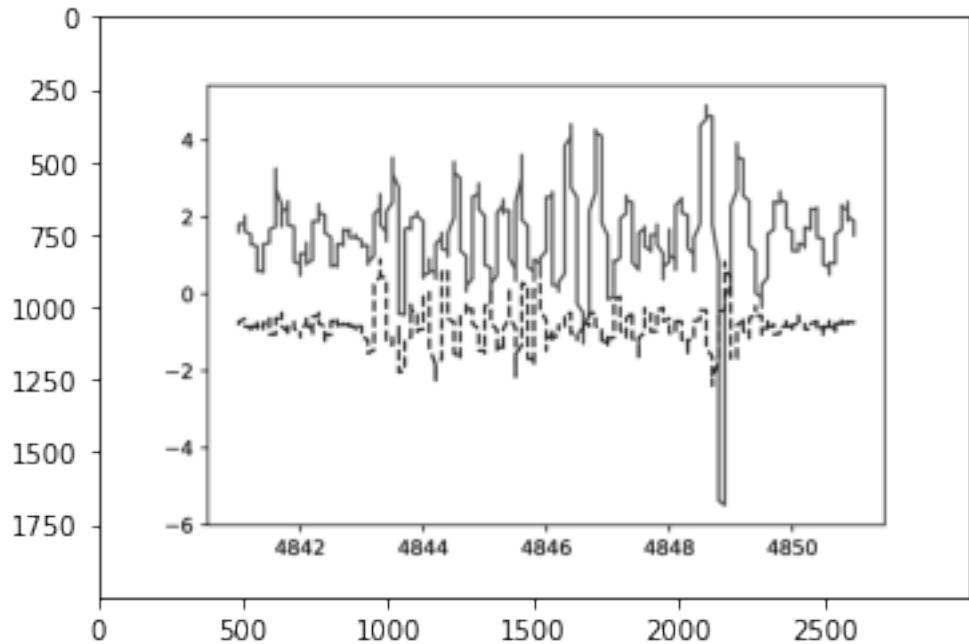
```
<class 'numpy.ndarray'> -- 344 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/111.png
111
```



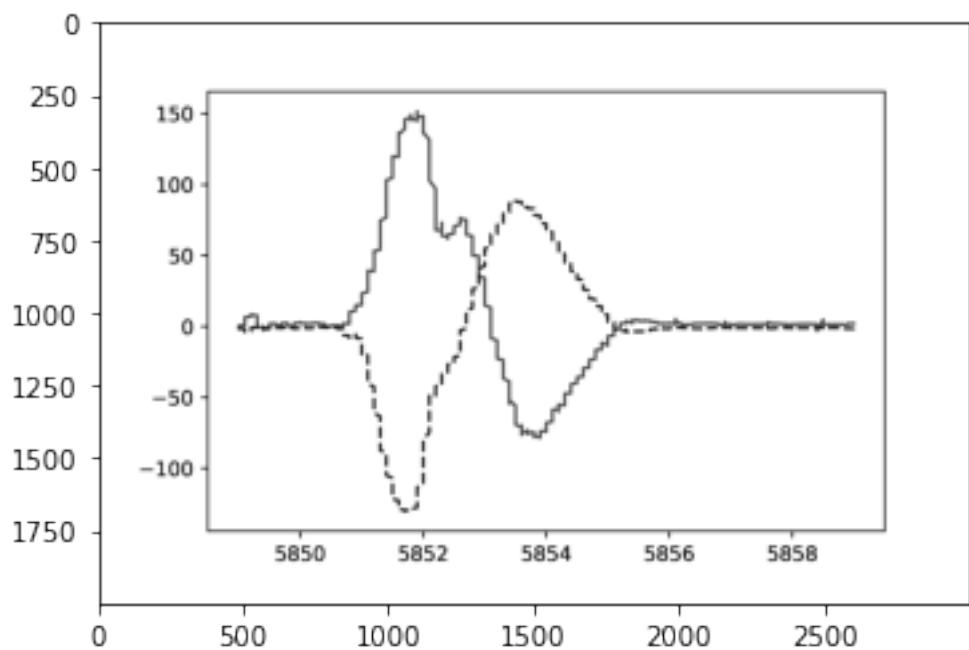
```
<class 'numpy.ndarray'>      --      345      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/261.png
261
```



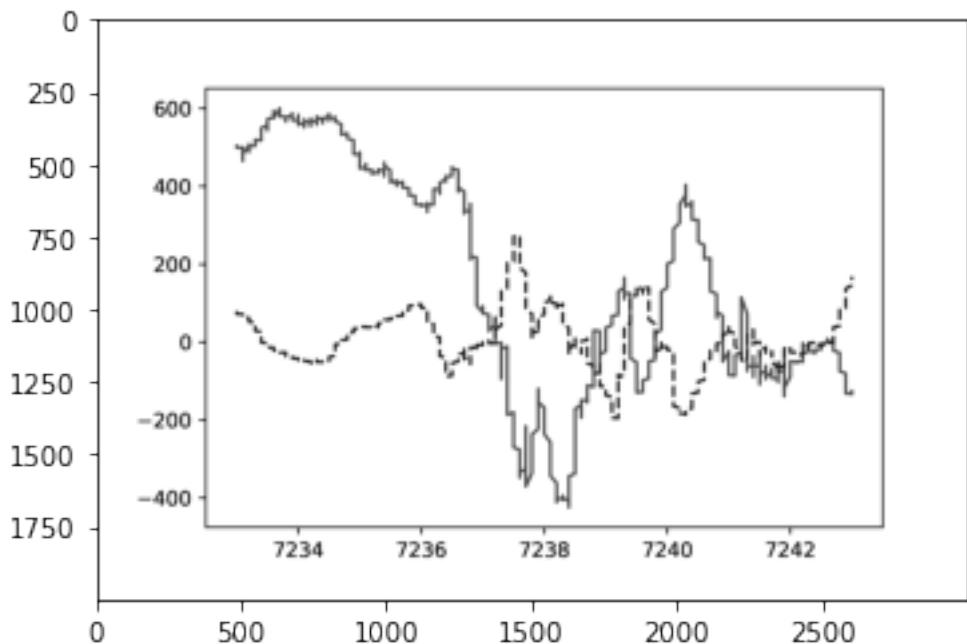
```
<class 'numpy.ndarray'>      --      346      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/140.png
140
```



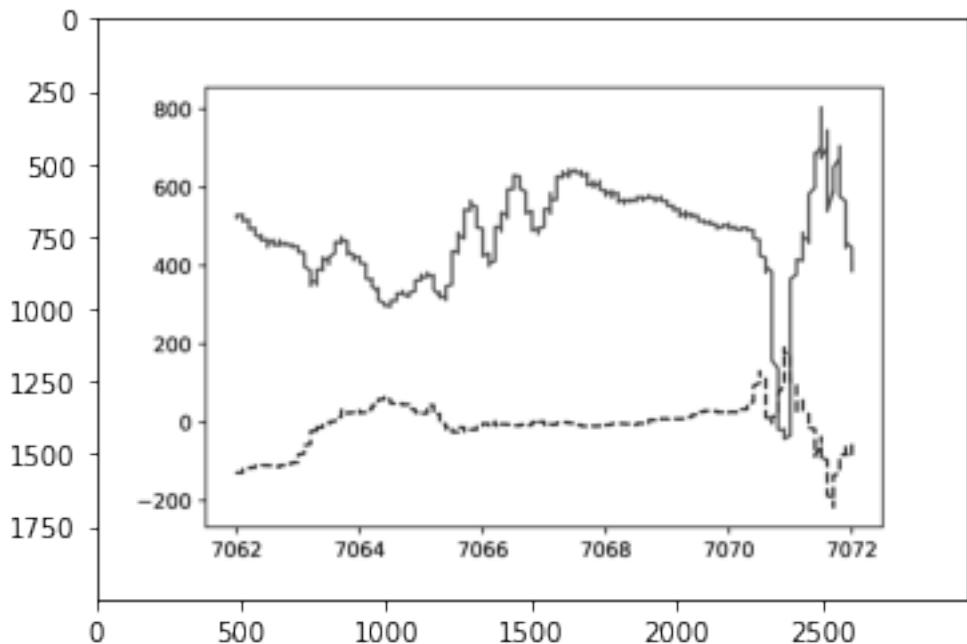
```
<class 'numpy.ndarray'>      --    347    --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/252.png
252
```



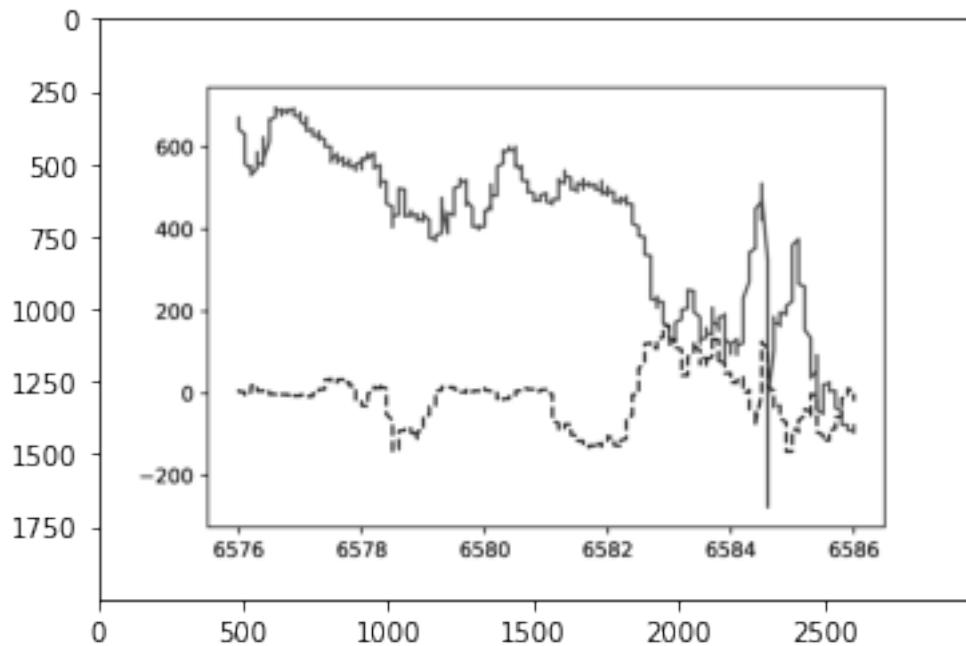
```
<class 'numpy.ndarray'> -- 348 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/351.png
351
```



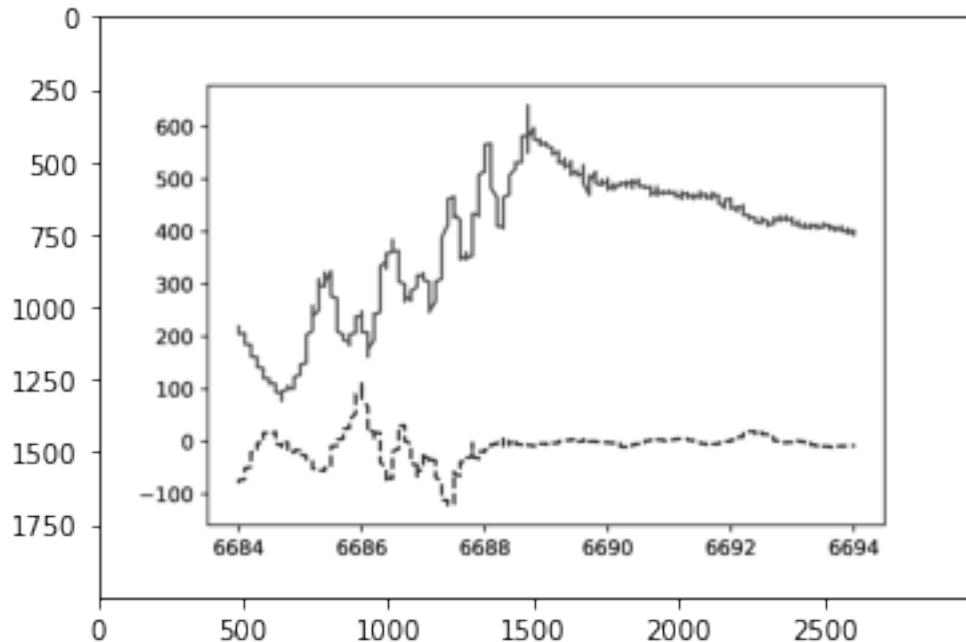
```
<class 'numpy.ndarray'> -- 349 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/332.png
332
```



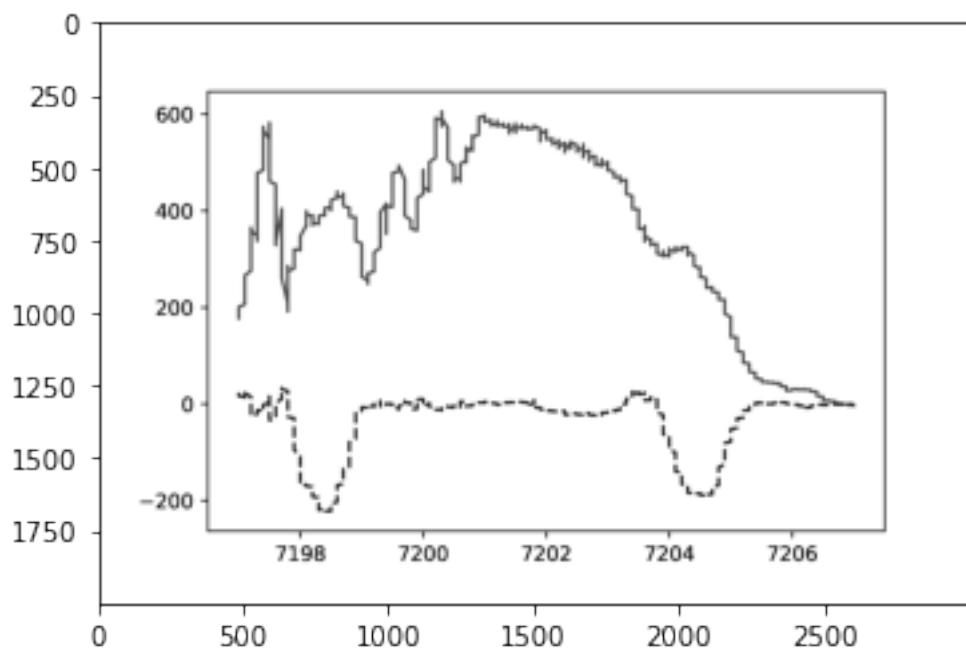
```
<class 'numpy.ndarray'>      --      350      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/278.png
278
```



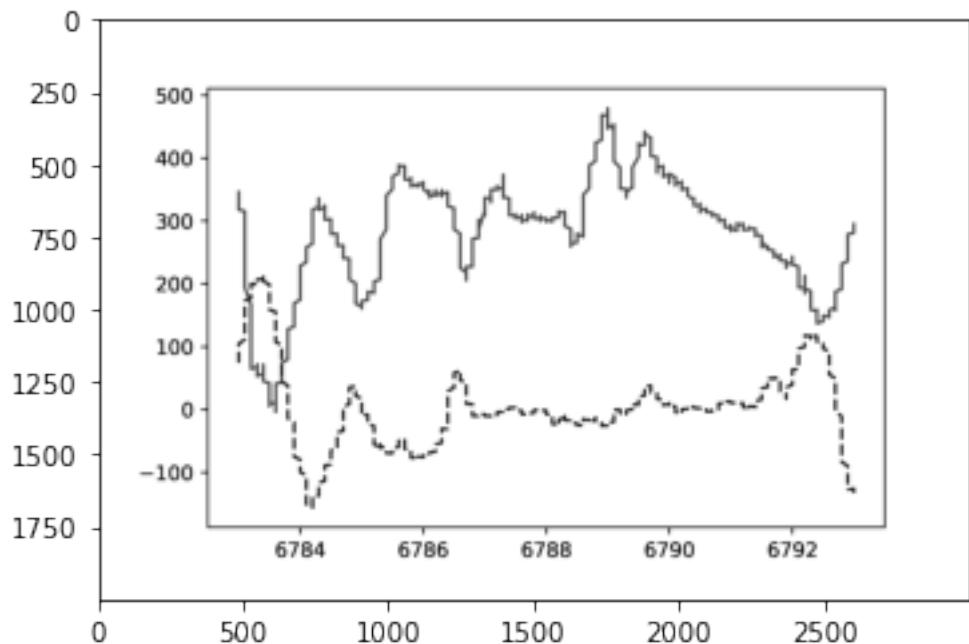
```
<class 'numpy.ndarray'>      --      351      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/290.png
290
```



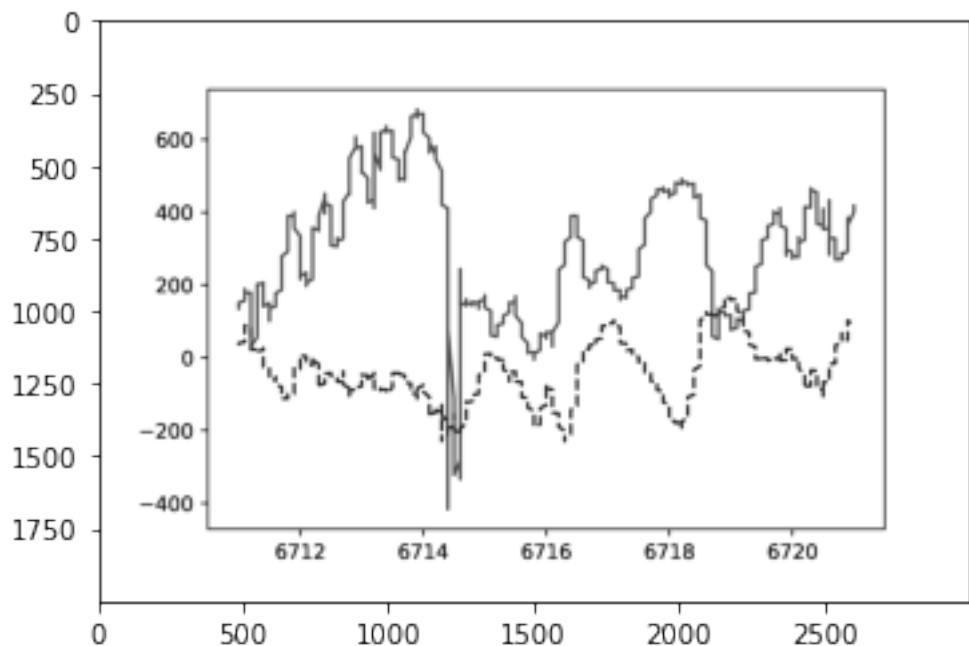
```
<class 'numpy.ndarray'>      --    352    --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/347.png
347
```



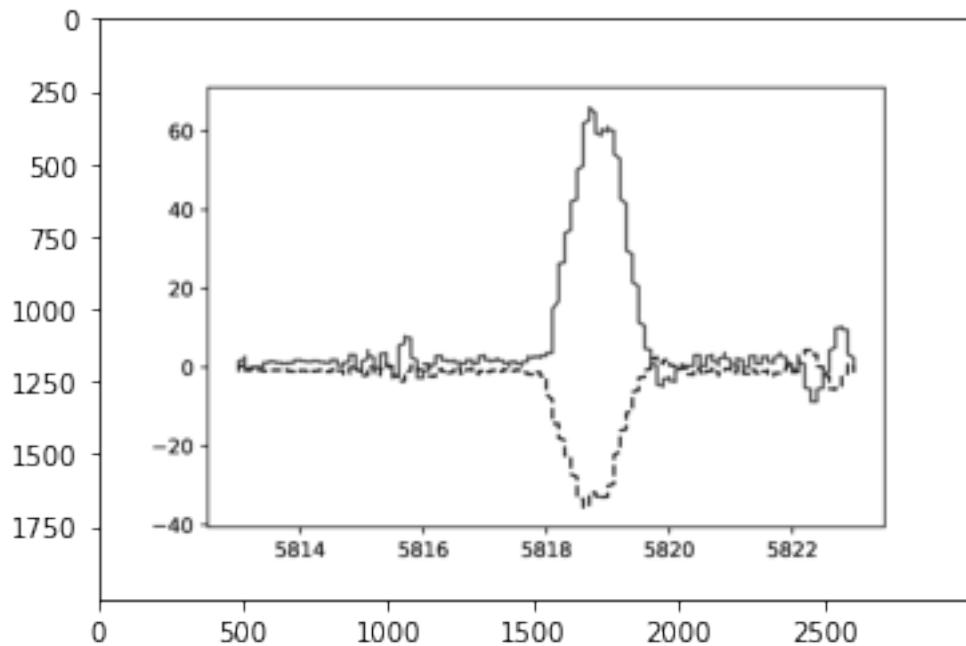
```
<class 'numpy.ndarray'> -- 353 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/301.png
301
```



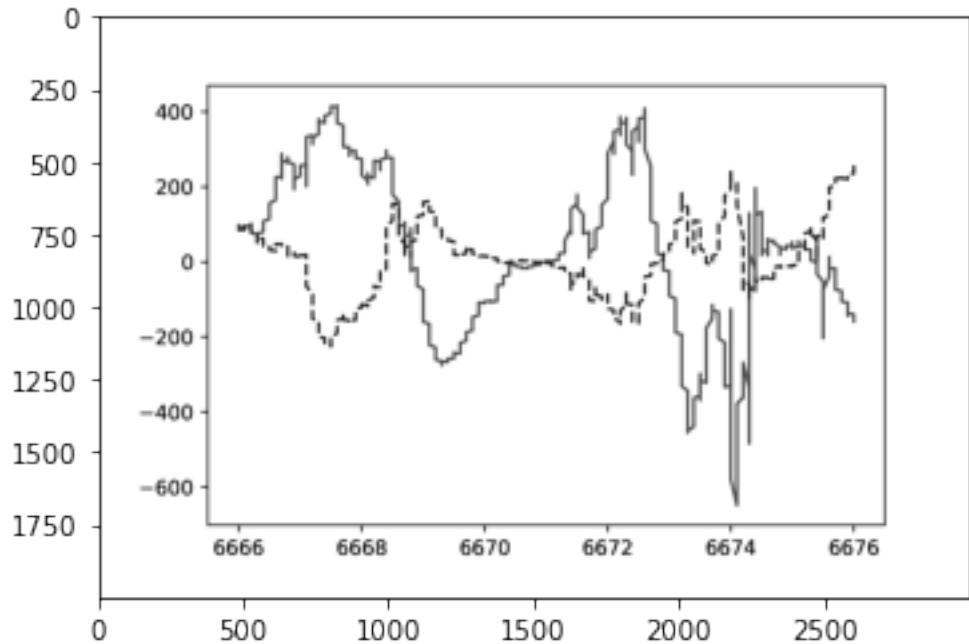
```
<class 'numpy.ndarray'> -- 354 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/293.png
293
```



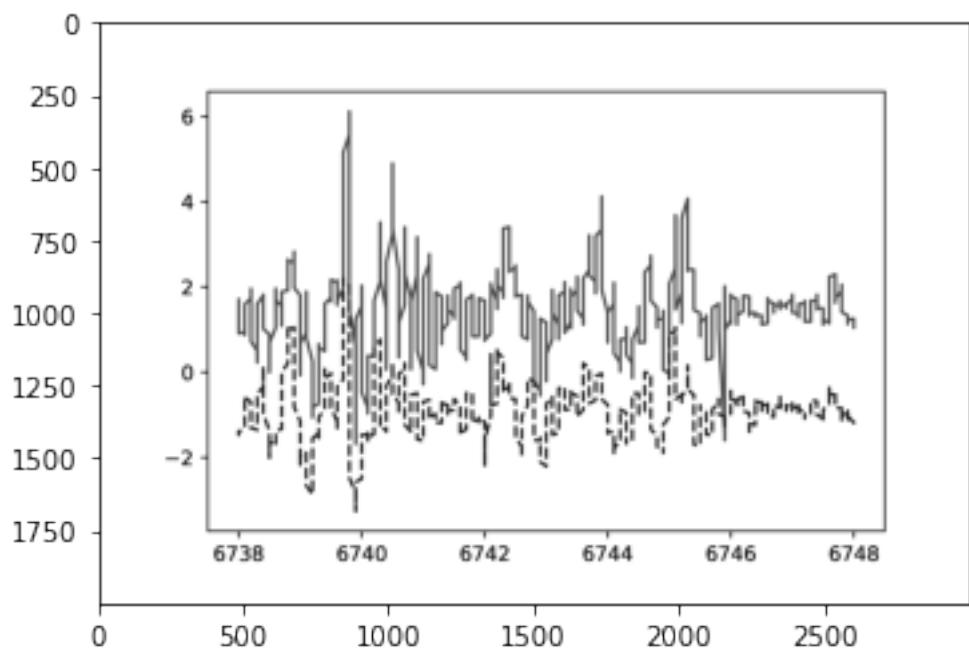
```
<class 'numpy.ndarray'>      --      355      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/248.png
248
```



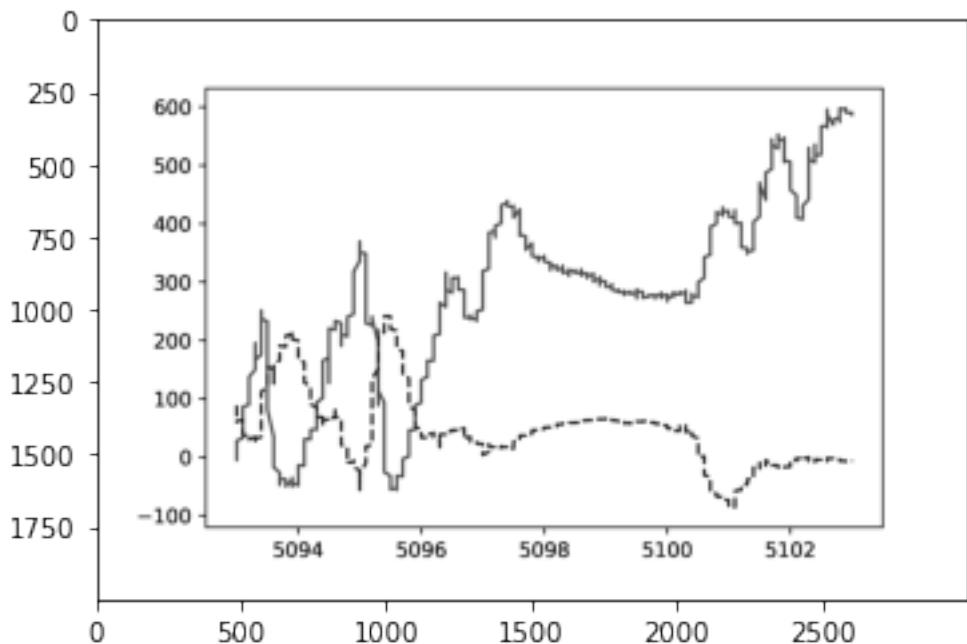
```
<class 'numpy.ndarray'>      --      356      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/288.png
288
```



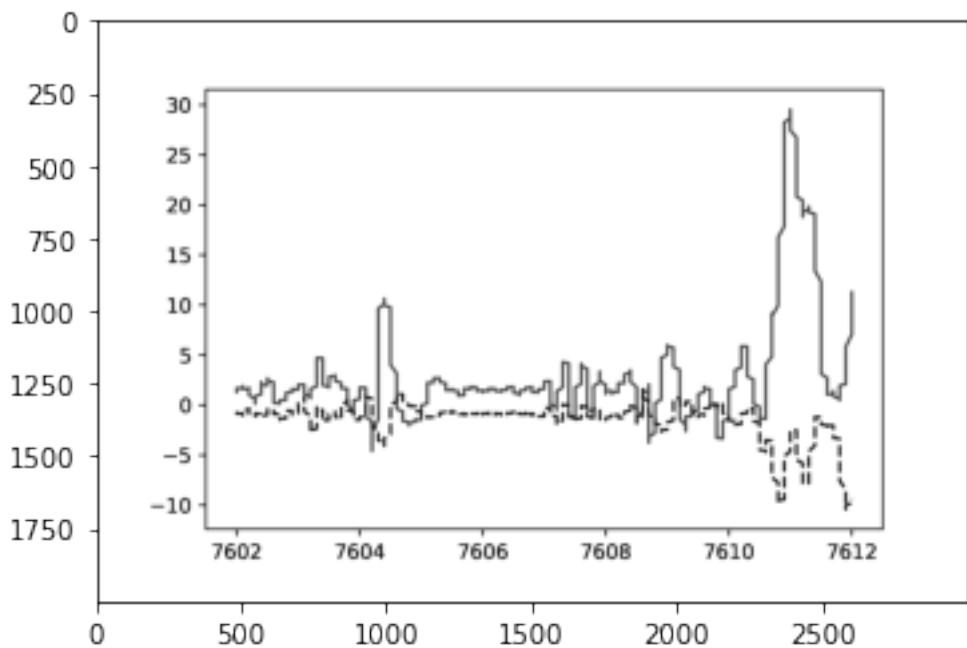
```
<class 'numpy.ndarray'>      --    357    --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/296.png
296
```



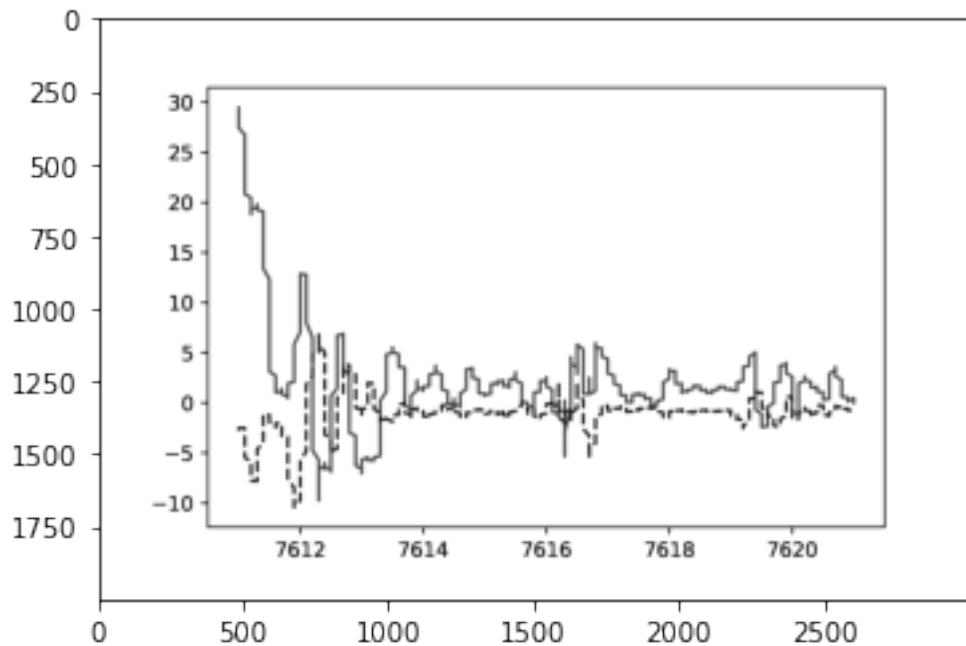
```
<class 'numpy.ndarray'> -- 358 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/168.png
168
```



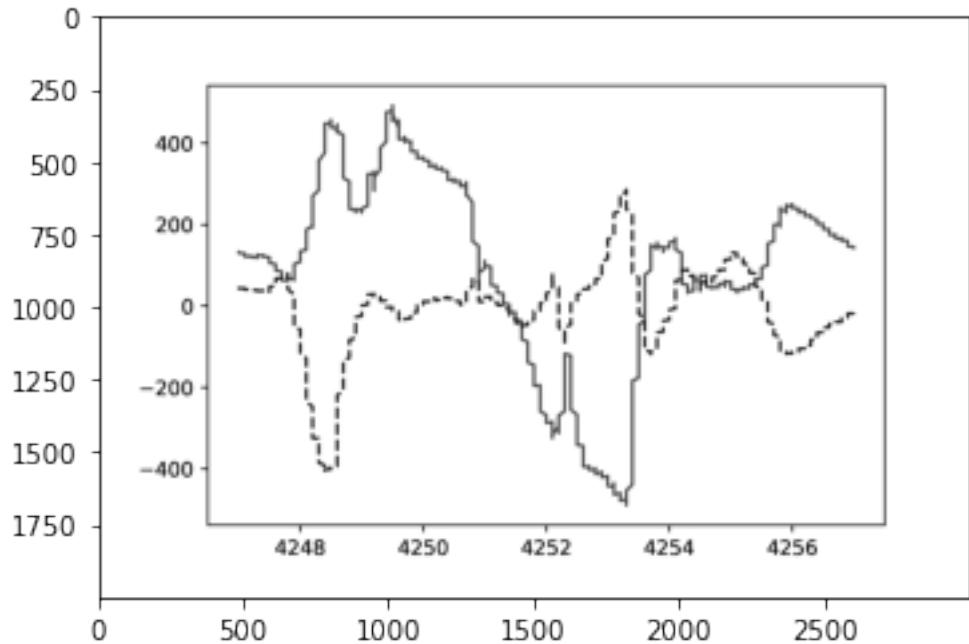
```
<class 'numpy.ndarray'> -- 359 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/392.png
392
```



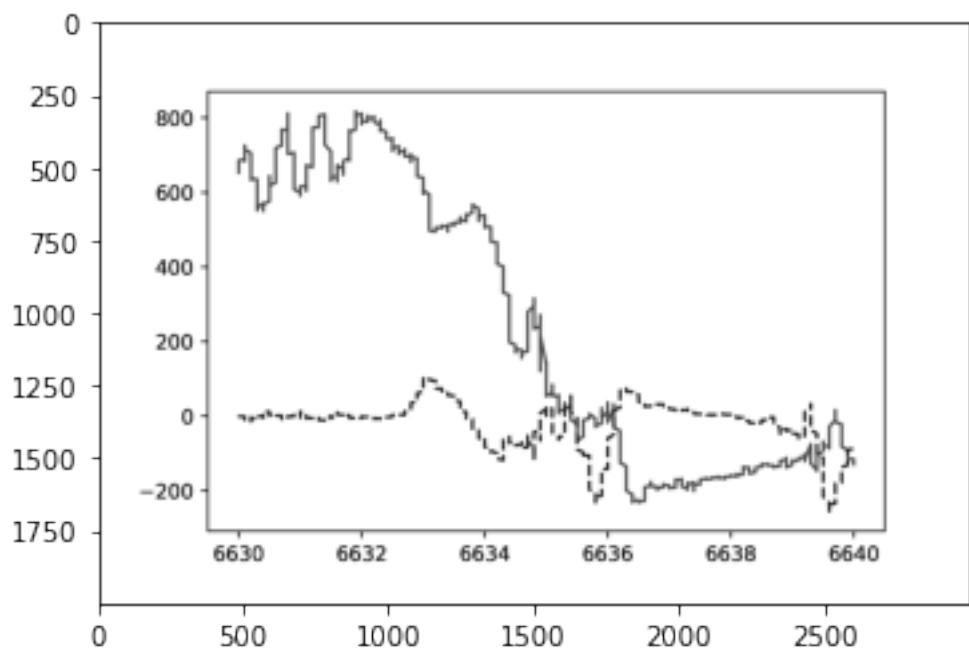
```
<class 'numpy.ndarray'>      --      360      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/393.png
393
```



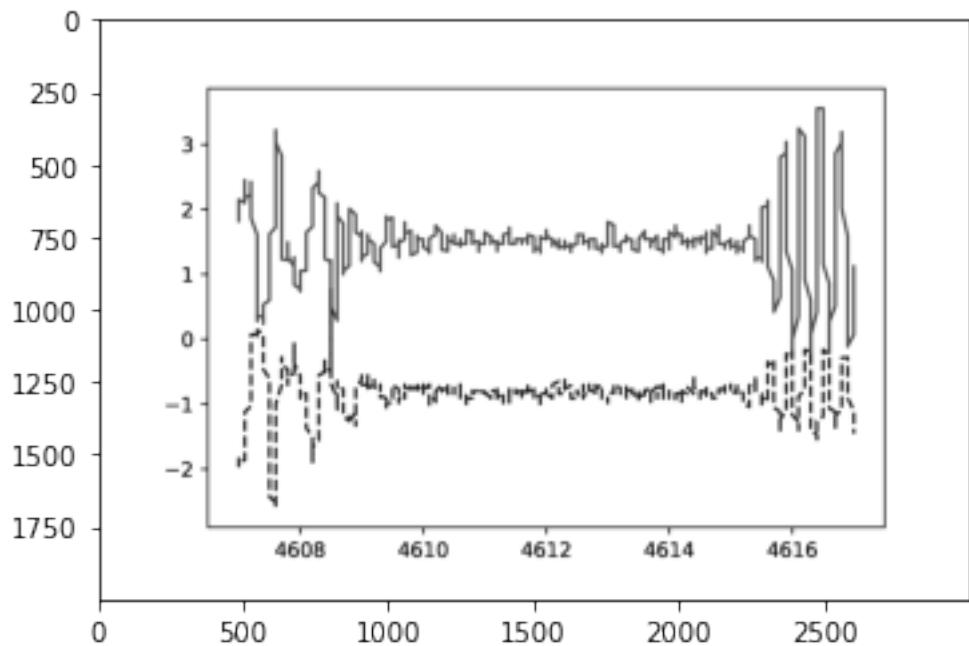
```
<class 'numpy.ndarray'>      --      361      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/74.png
74
```



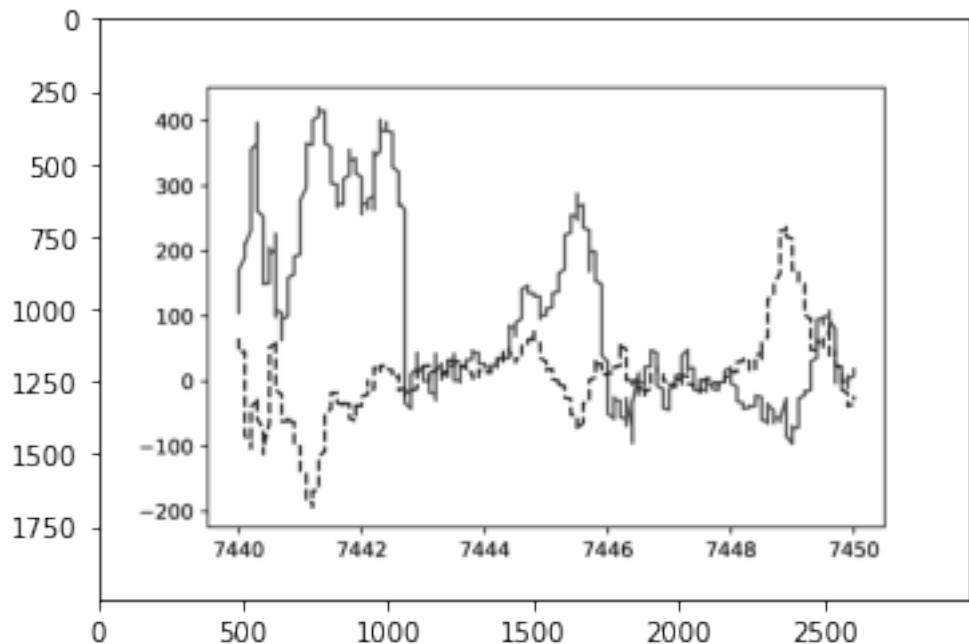
```
<class 'numpy.ndarray'>      -- 362  --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/284.png
284
```



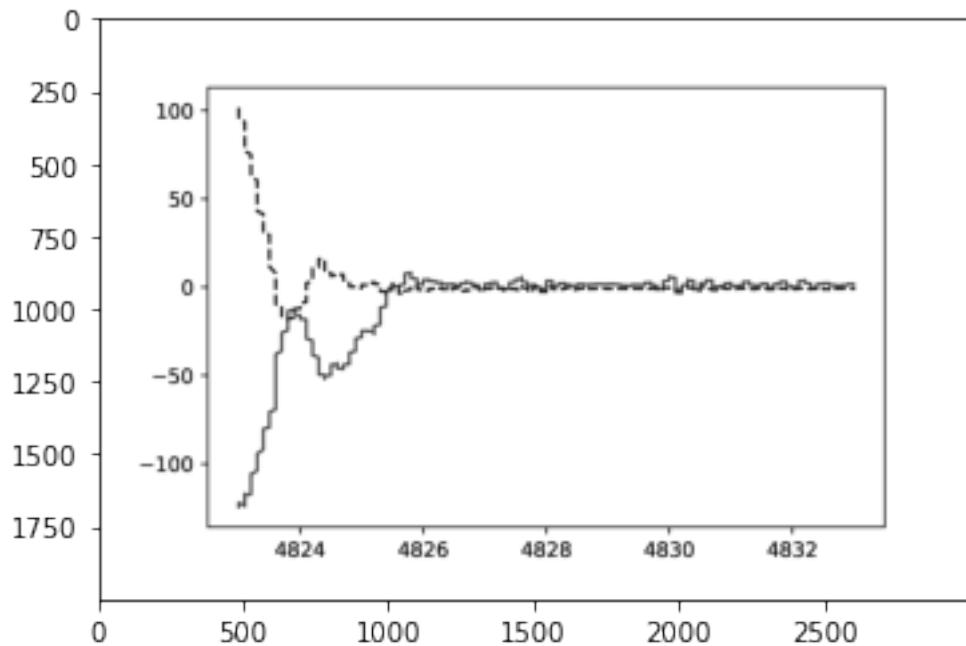
```
<class 'numpy.ndarray'> -- 363 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/114.png
114
```



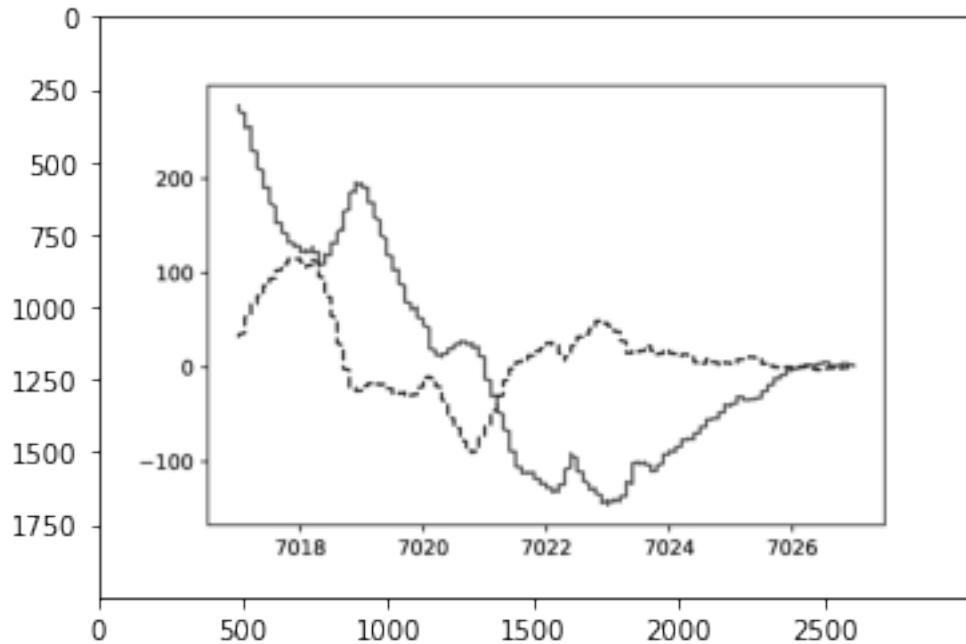
```
<class 'numpy.ndarray'> -- 364 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/374.png
374
```



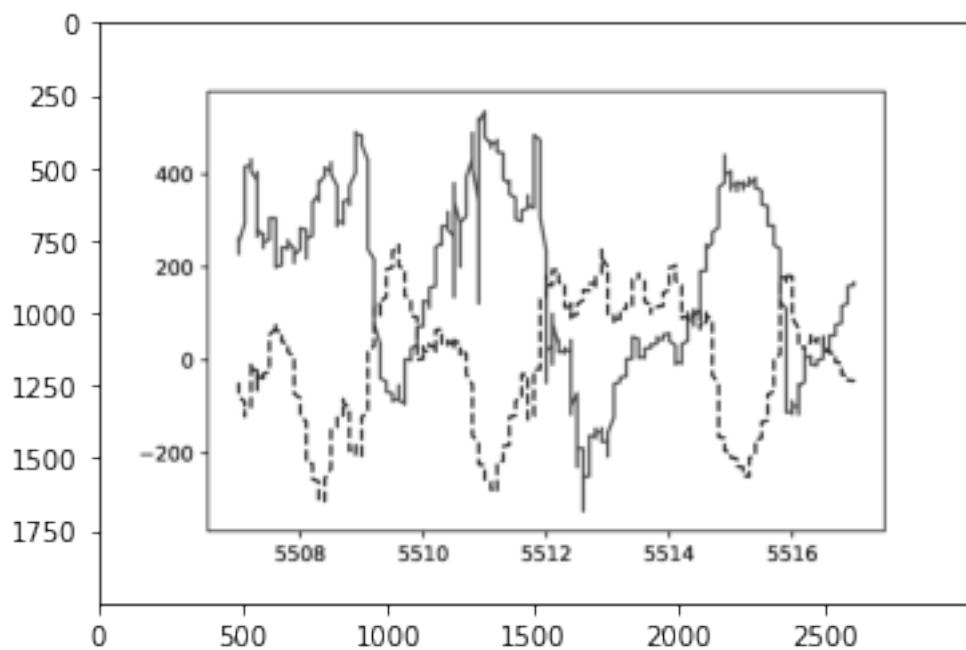
```
<class 'numpy.ndarray'>      --      365      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/138.png
138
```



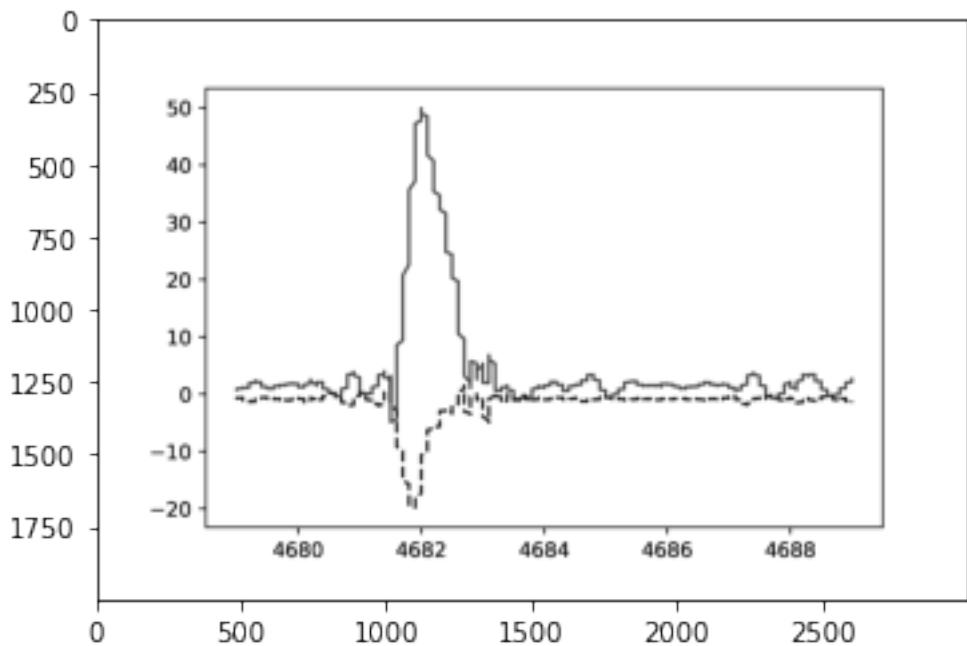
```
<class 'numpy.ndarray'>      --      366      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/327.png
327
```



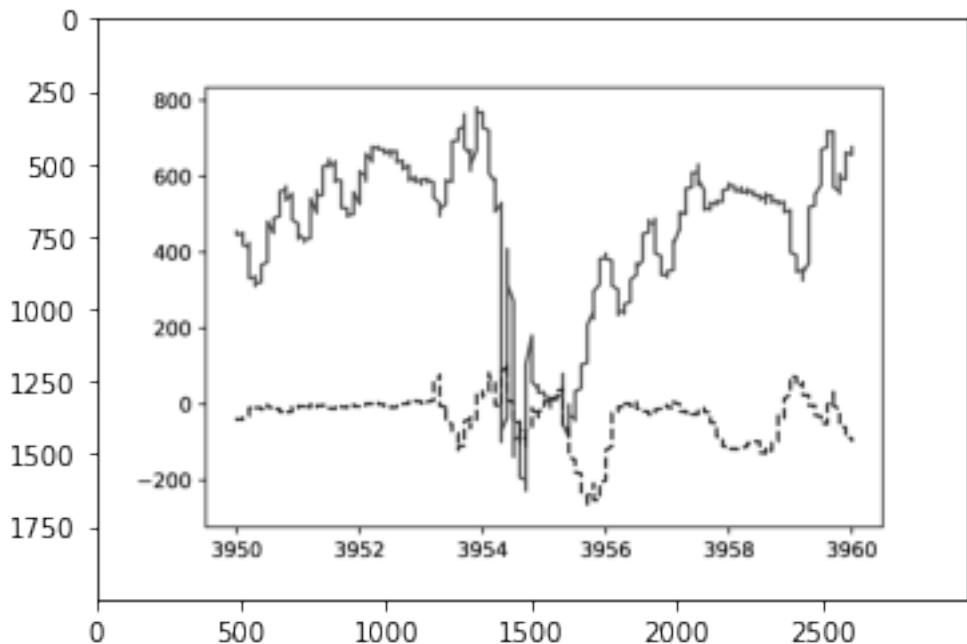
```
<class 'numpy.ndarray'>      --      367      --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/214.png
214
```



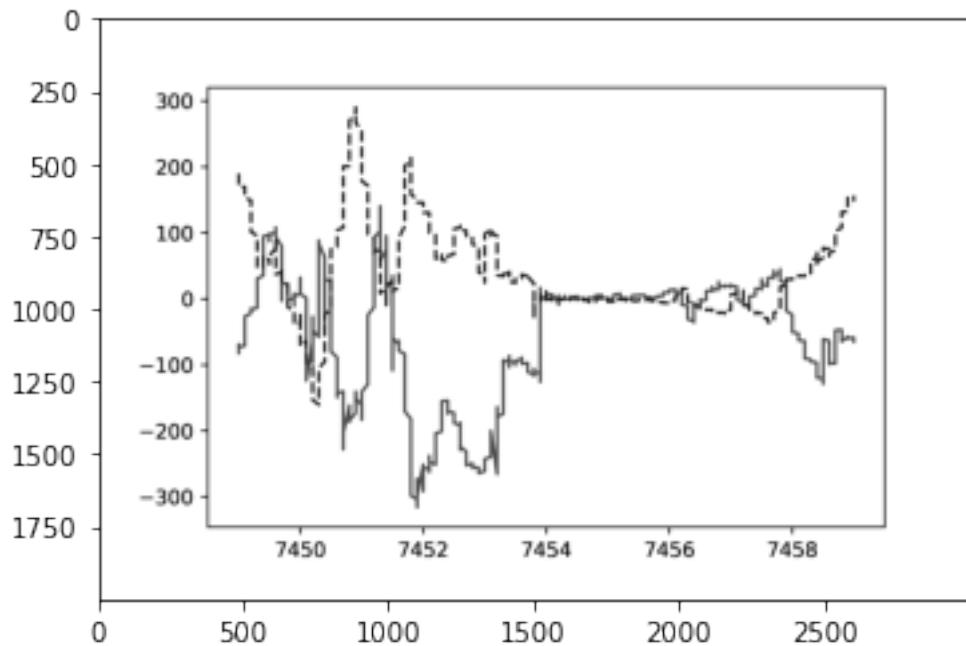
```
<class 'numpy.ndarray'> -- 368 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/122.png
122
```



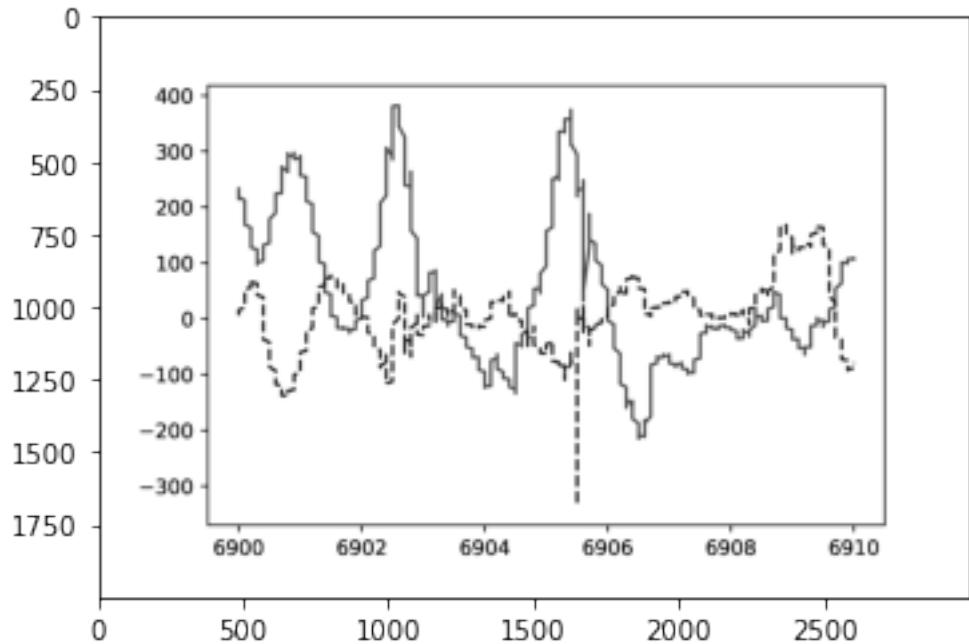
```
<class 'numpy.ndarray'> -- 369 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/41.png
41
```



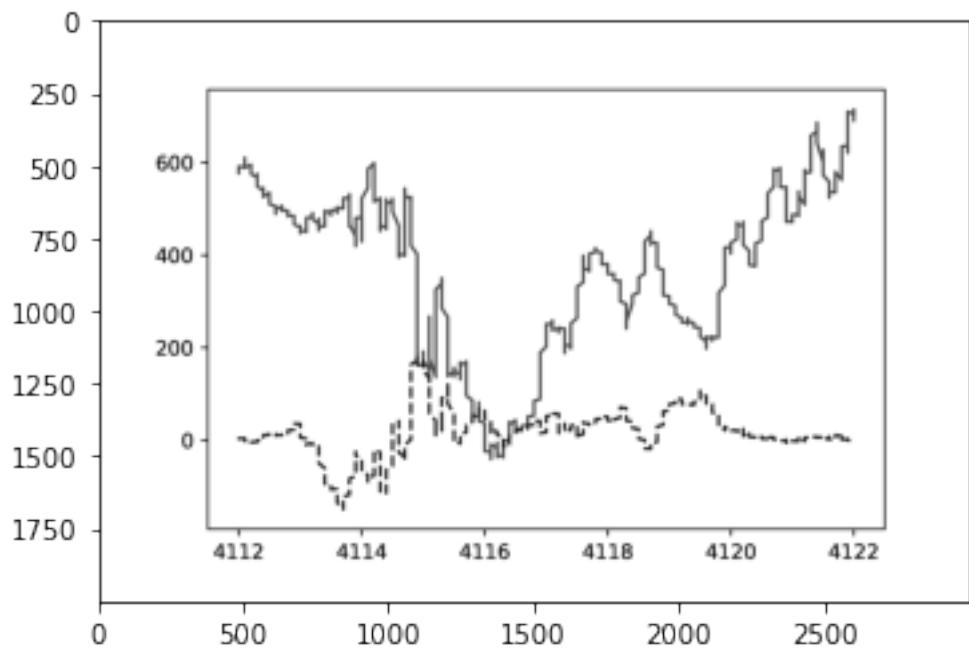
```
<class 'numpy.ndarray'>      --    370    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/375.png
375
```



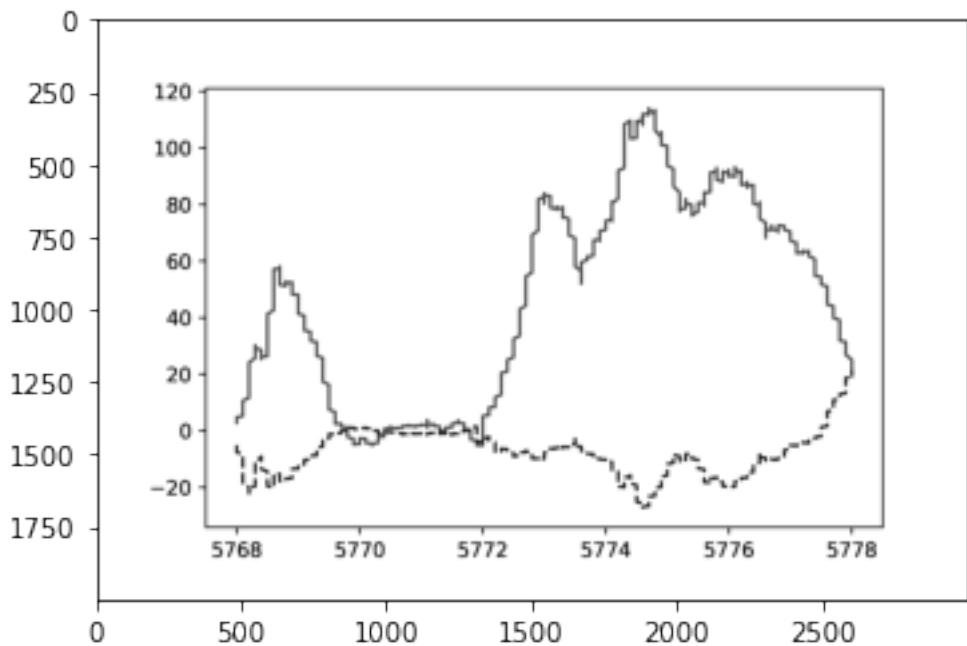
```
<class 'numpy.ndarray'>      --    371    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/314.png
314
```



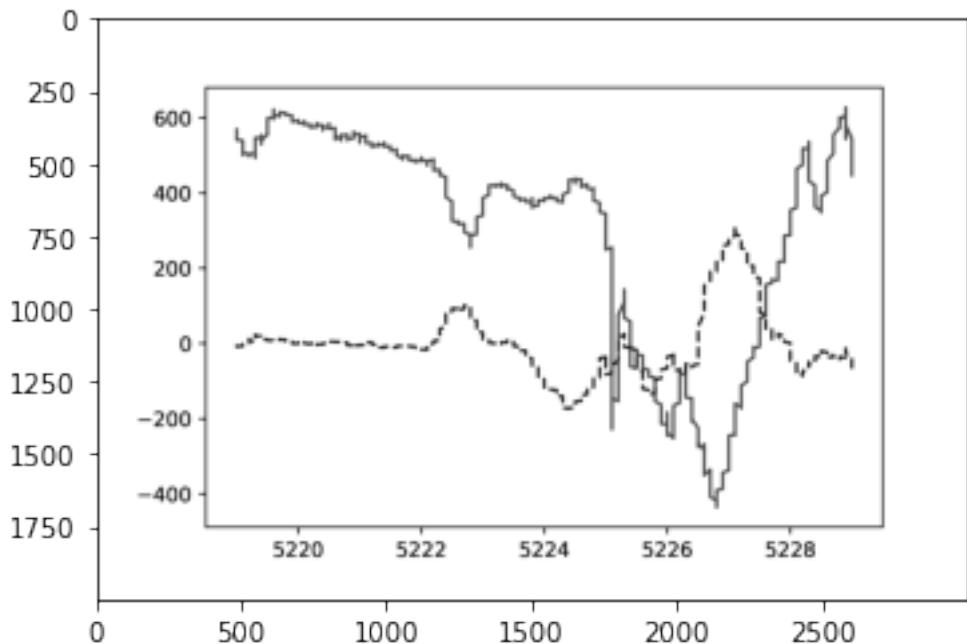
```
<class 'numpy.ndarray'>      --    372    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/59.png
59
```



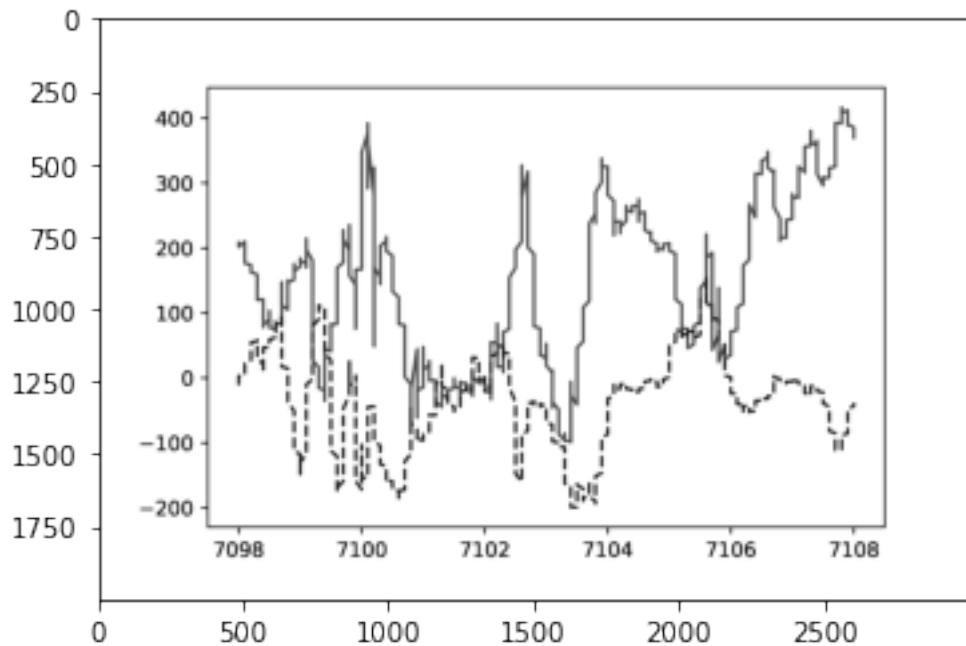
```
<class 'numpy.ndarray'> -- 373 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/243.png
243
```



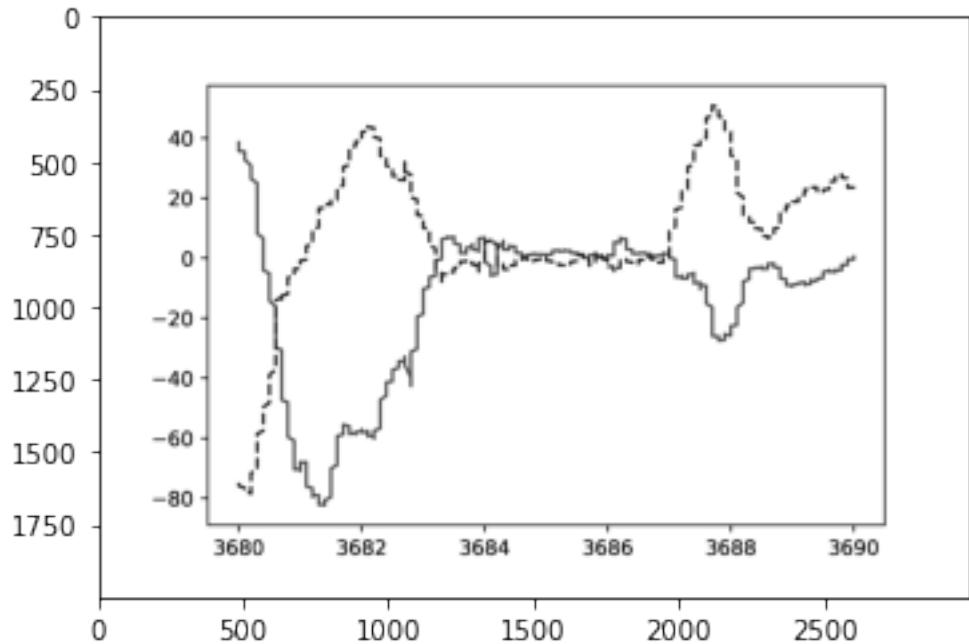
```
<class 'numpy.ndarray'> -- 374 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/182.png
182
```



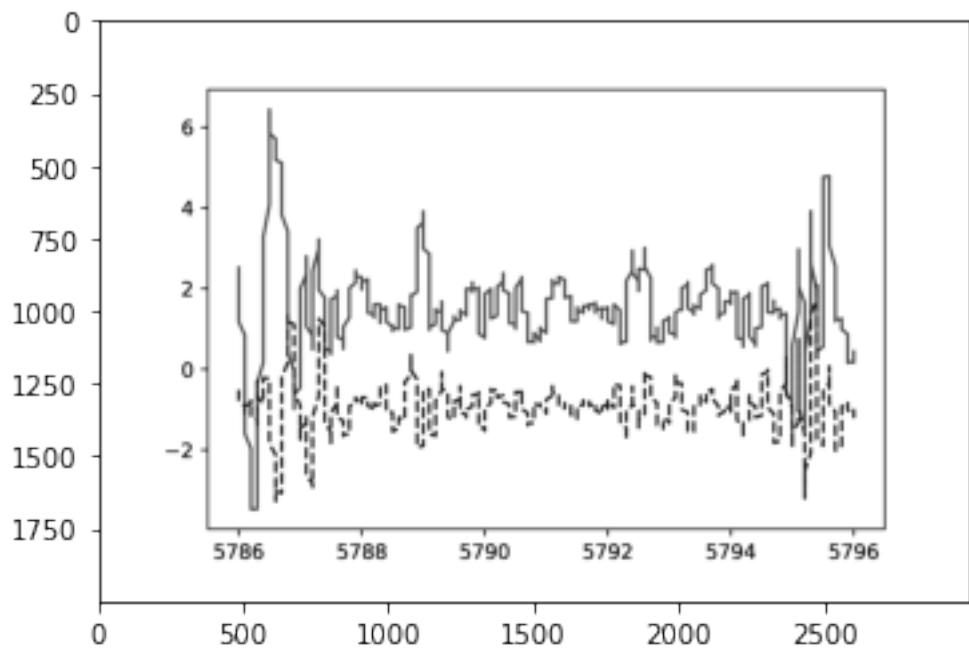
```
<class 'numpy.ndarray'>      --      375      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/336.png
336
```



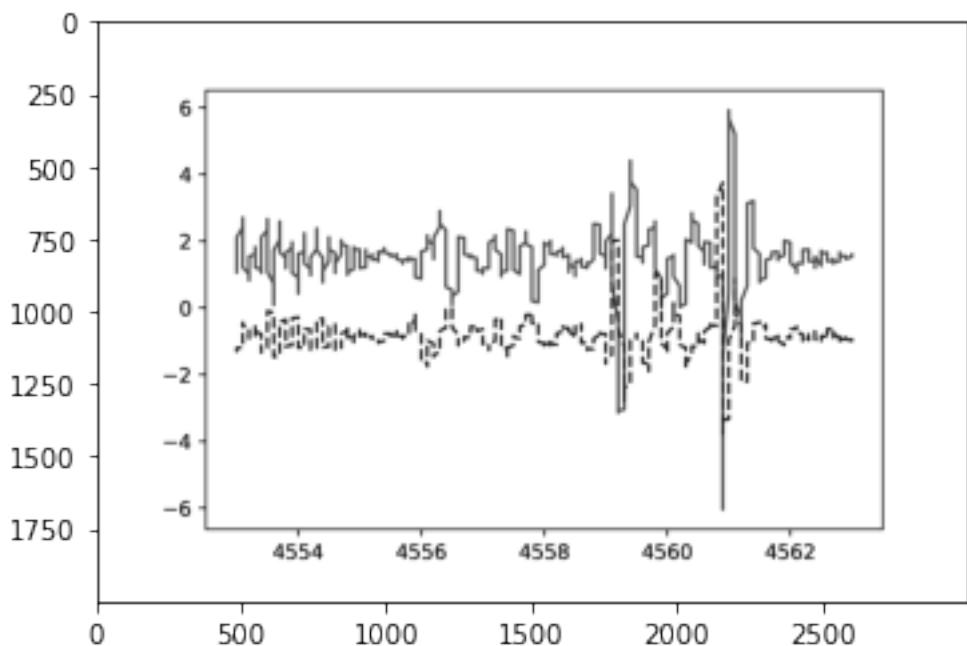
```
<class 'numpy.ndarray'>      --      376      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/11.png
11
```



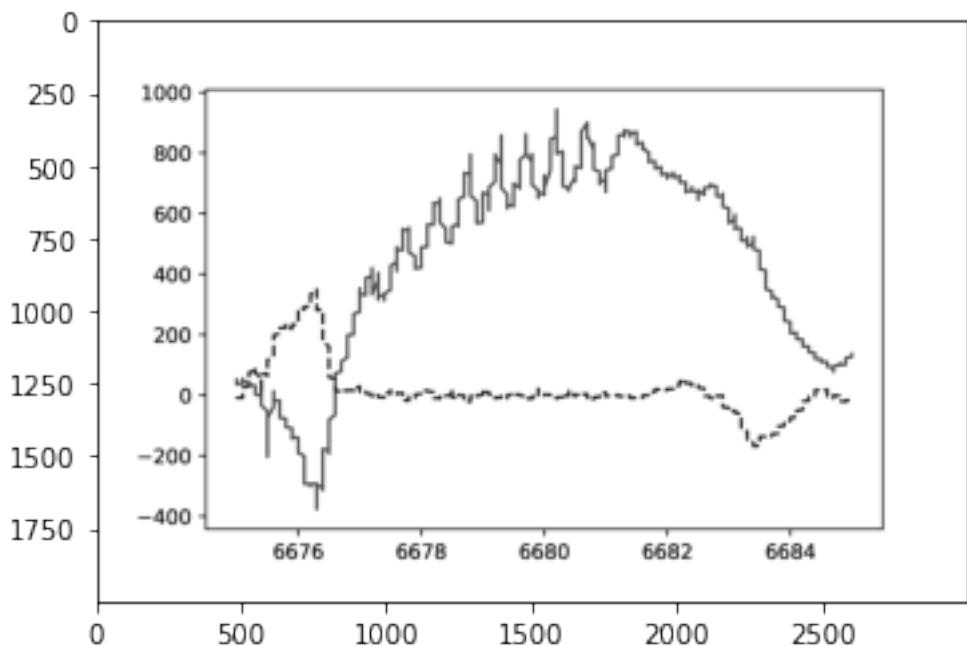
```
<class 'numpy.ndarray'>      --    377    --
/dtata/wheels/notebooks/Alex/PlotImgFolder/Train/245.png
245
```



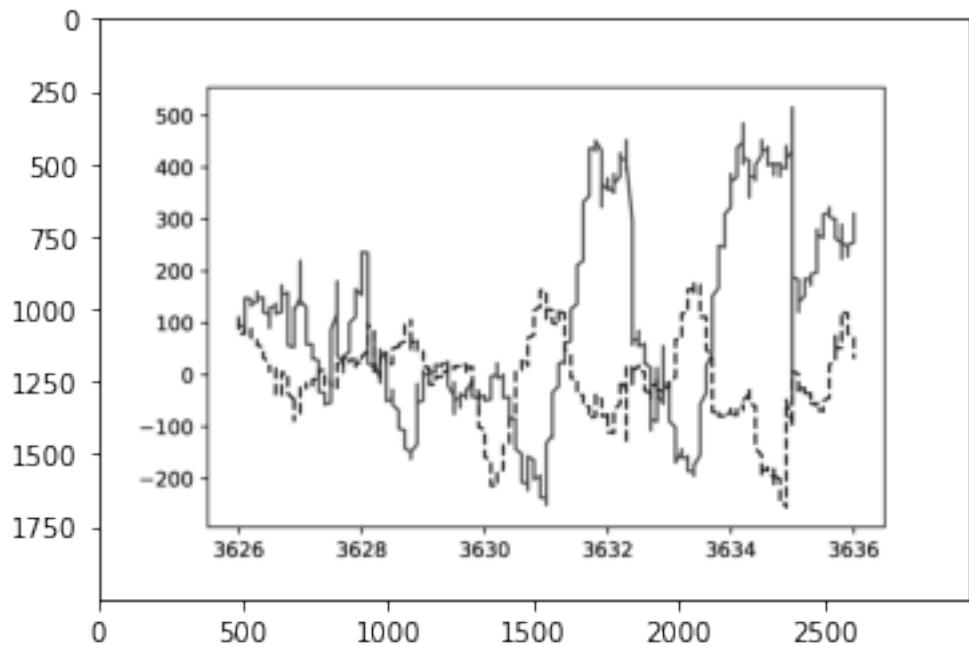
```
<class 'numpy.ndarray'> -- 378 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/108.png
108
```



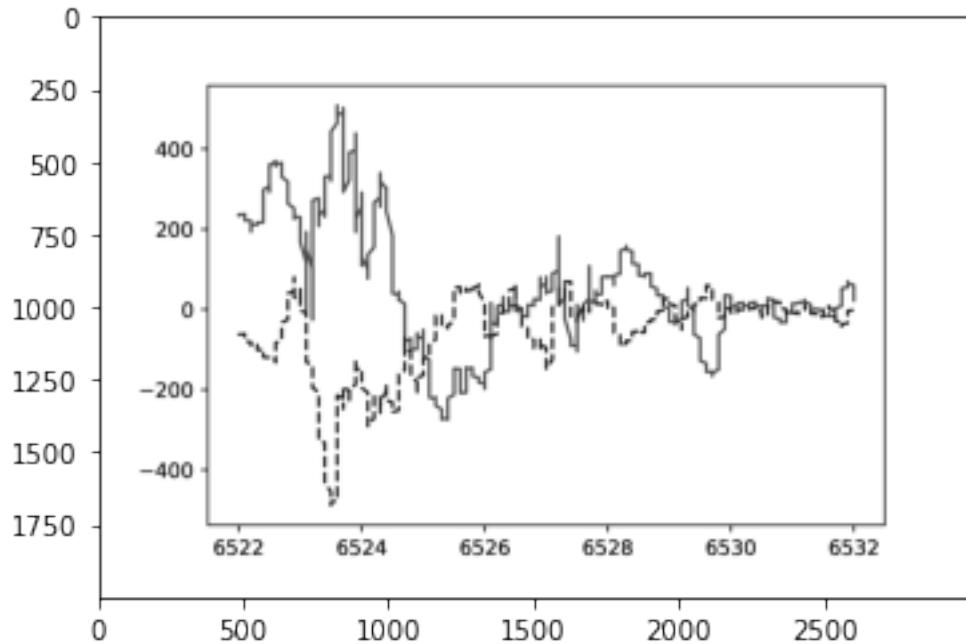
```
<class 'numpy.ndarray'> -- 379 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/289.png
289
```



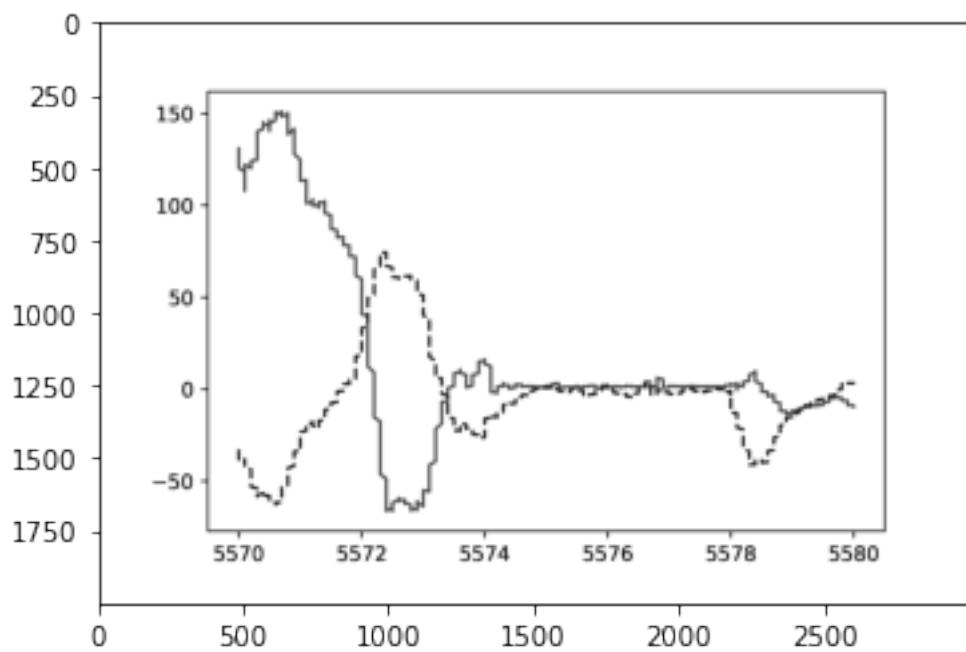
```
<class 'numpy.ndarray'>      --    380    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/5.png
5
```



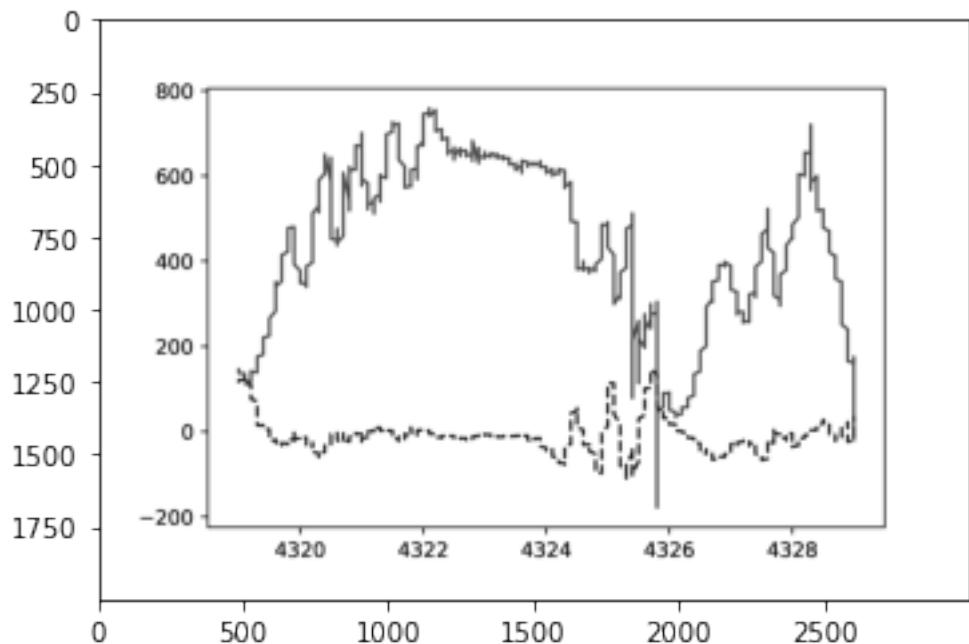
```
<class 'numpy.ndarray'>      --    381    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/272.png
272
```



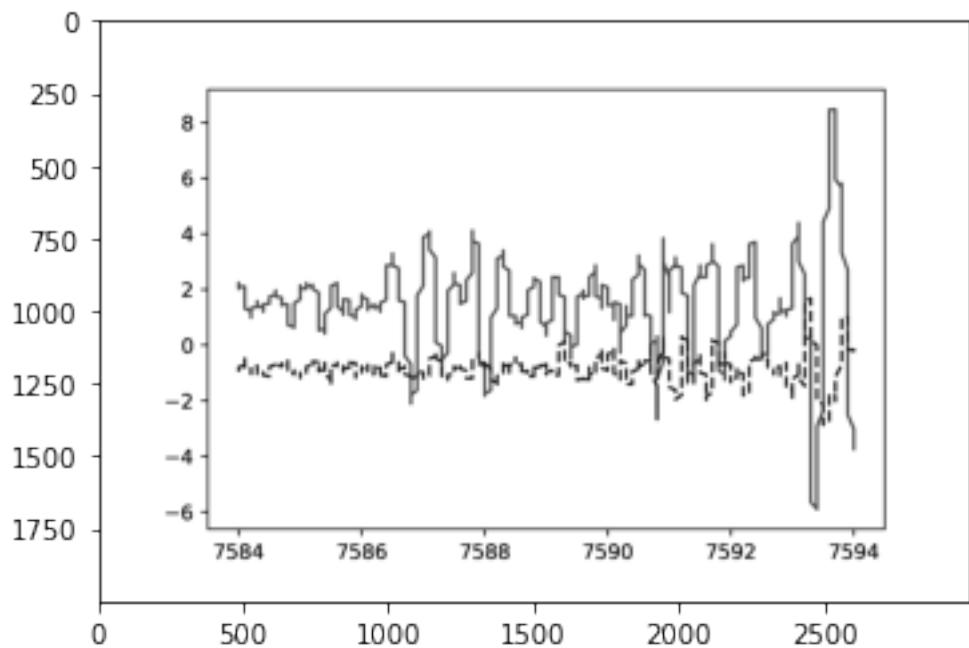
```
<class 'numpy.ndarray'>      --    382    --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/221.png
221
```



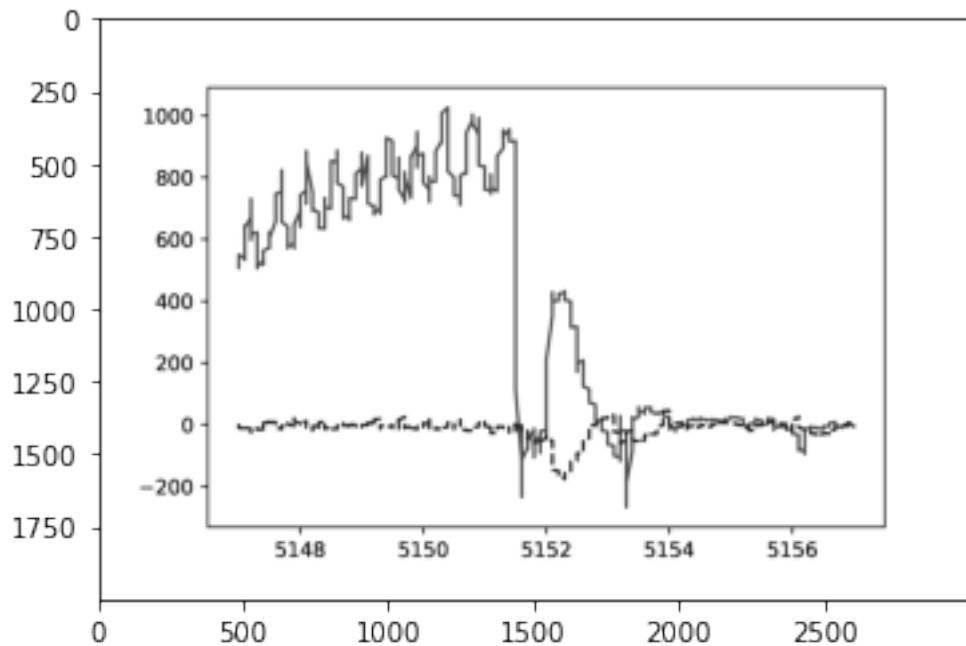
```
<class 'numpy.ndarray'> -- 383 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/82.png
82
```



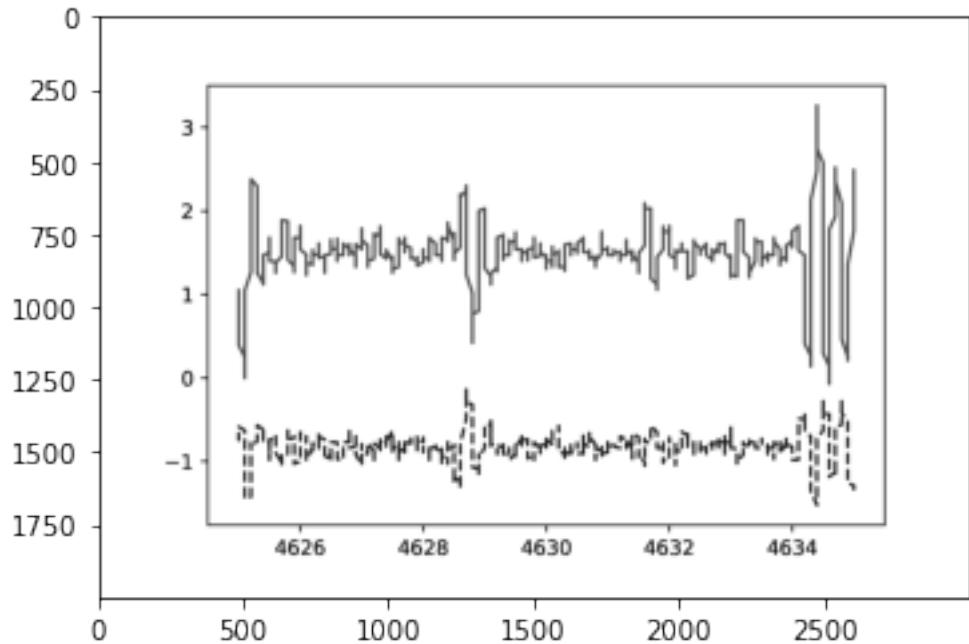
```
<class 'numpy.ndarray'> -- 384 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/390.png
390
```



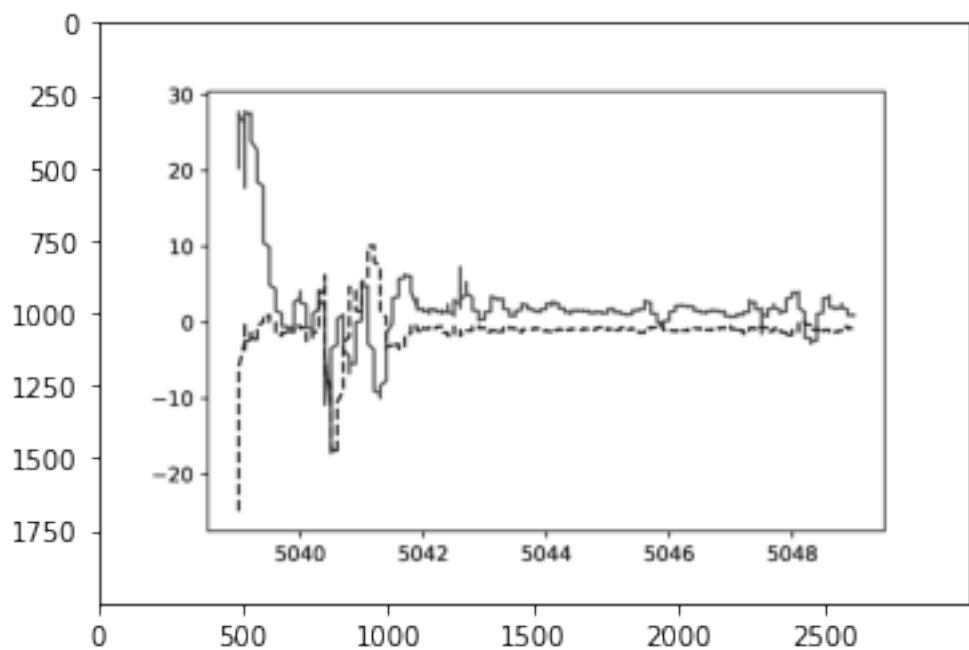
```
<class 'numpy.ndarray'>      --      385      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/174.png
174
```



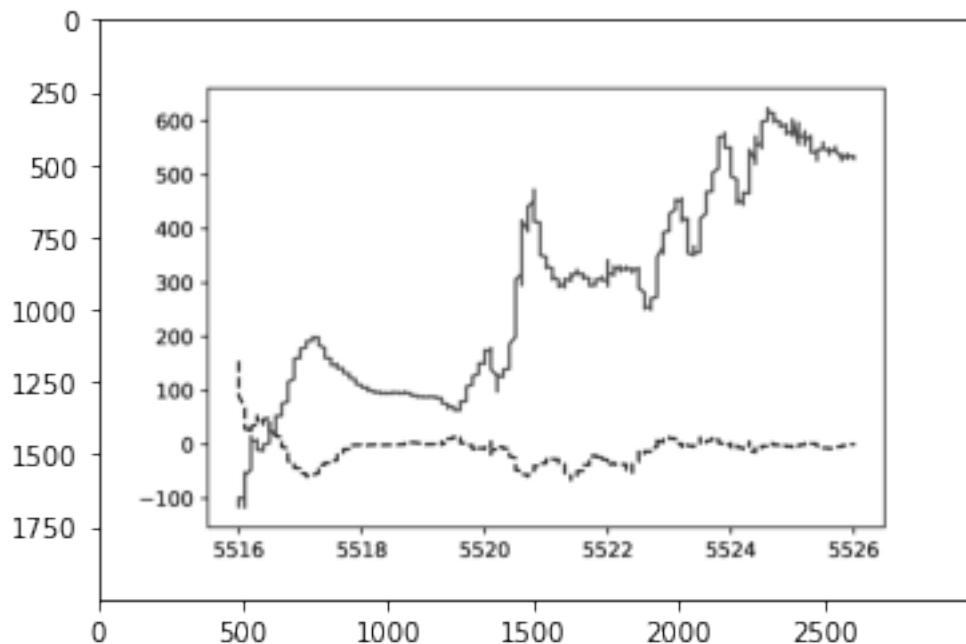
```
<class 'numpy.ndarray'>      --      386      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/116.png
116
```



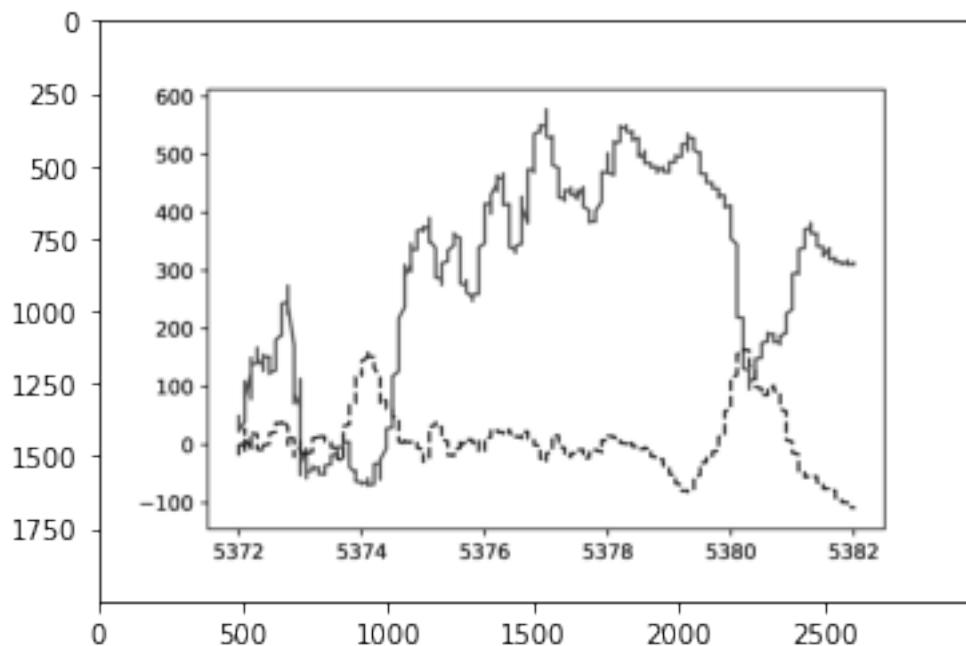
```
<class 'numpy.ndarray'>      --    387    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/162.png
162
```



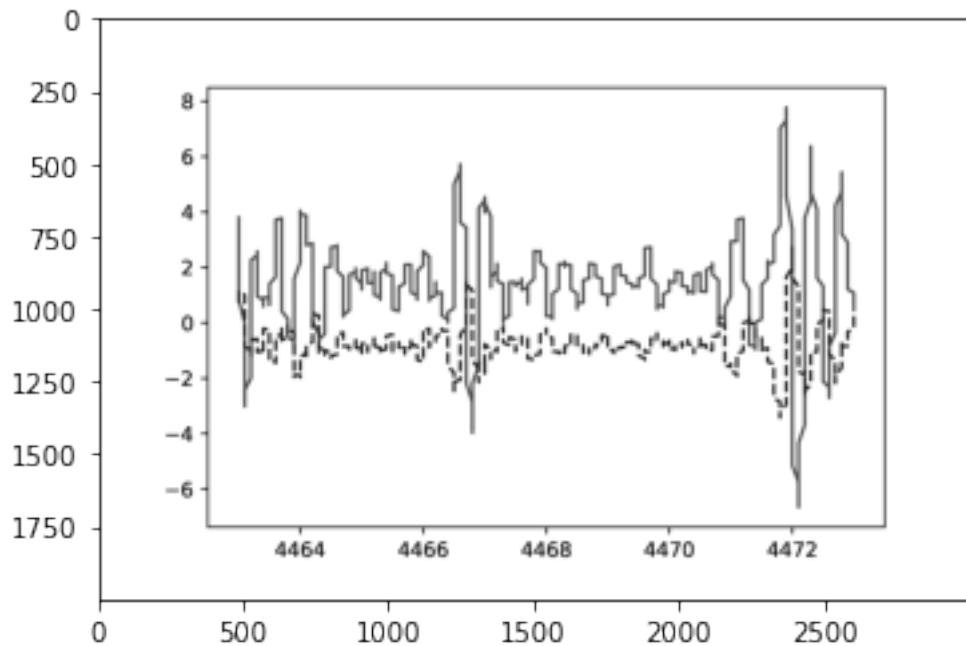
```
<class 'numpy.ndarray'> -- 388 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/215.png
215
```



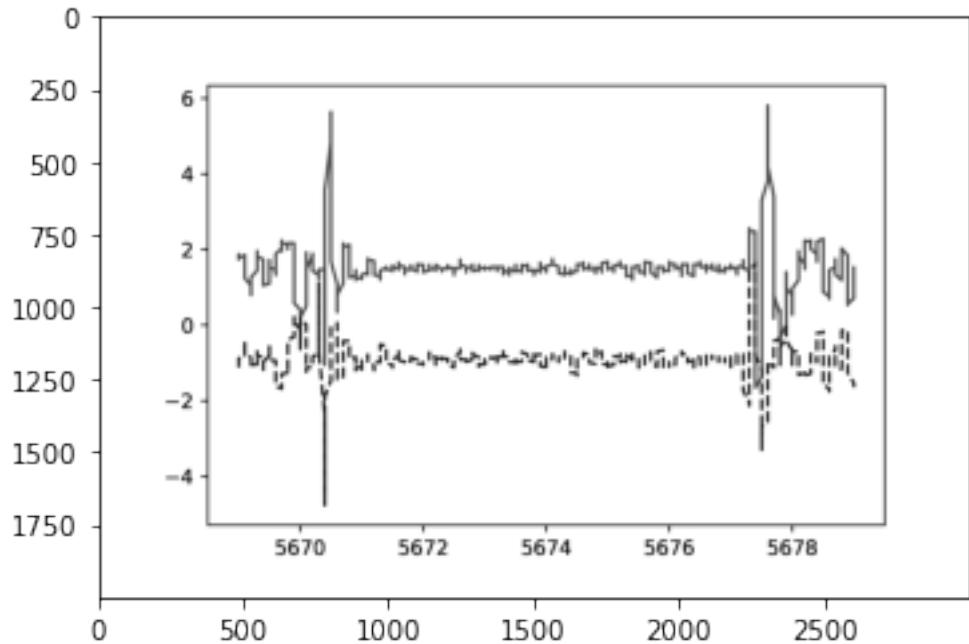
```
<class 'numpy.ndarray'> -- 389 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/199.png
199
```



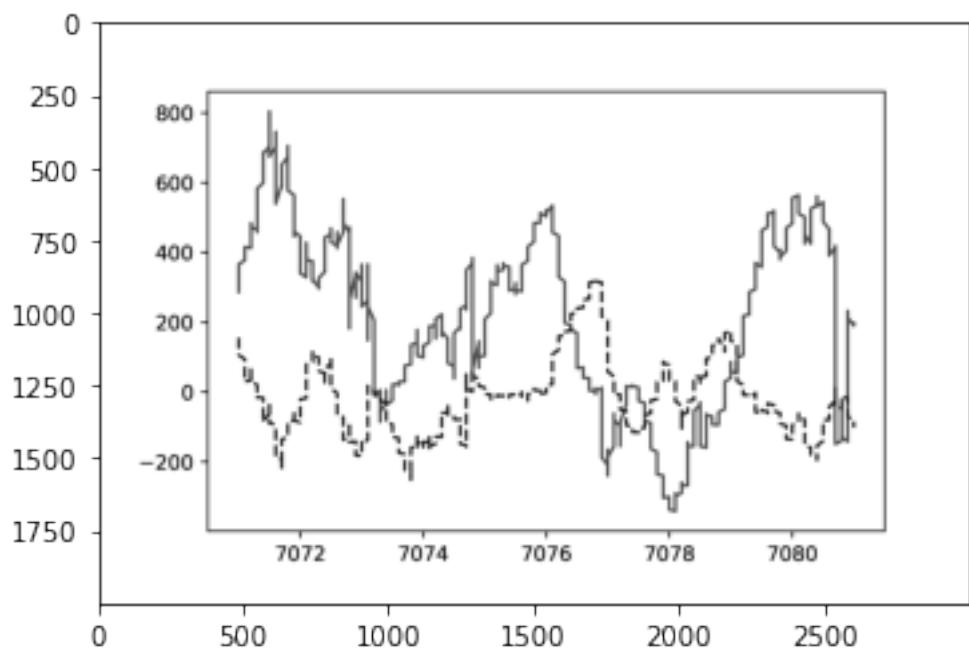
```
<class 'numpy.ndarray'>      --      390      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/98.png
98
```



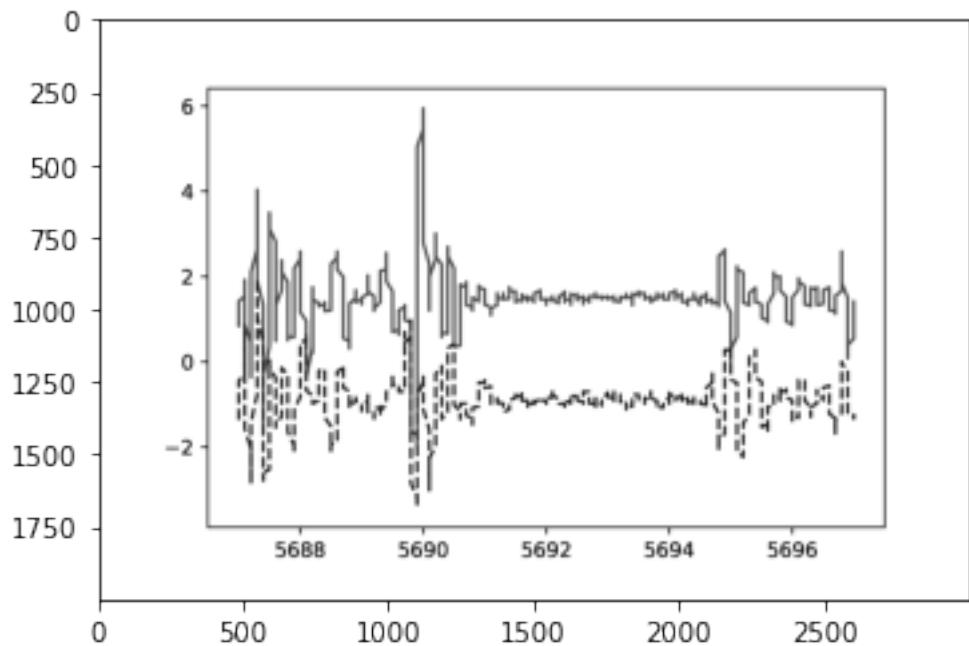
```
<class 'numpy.ndarray'>      --      391      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/232.png
232
```



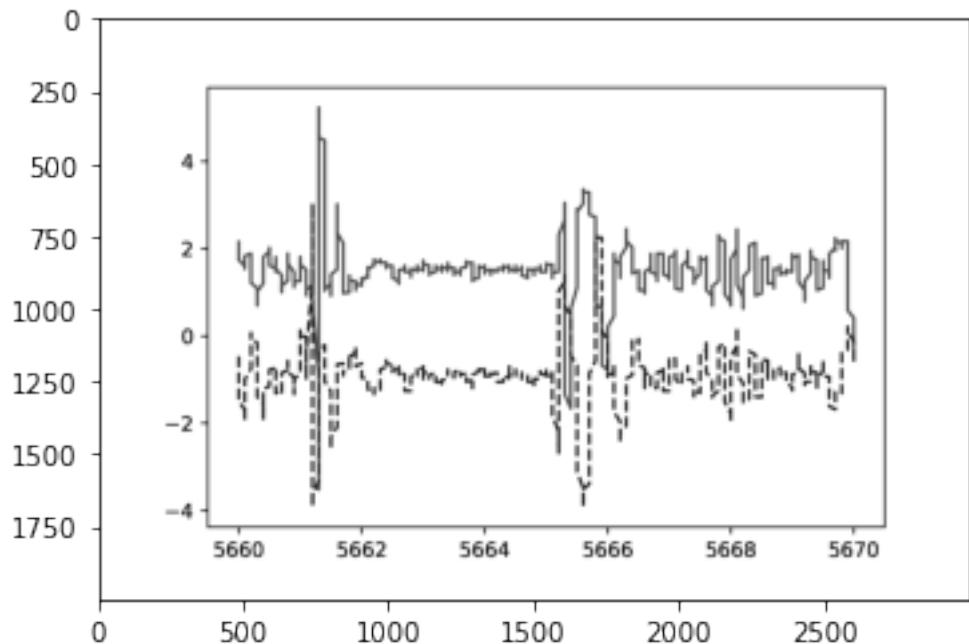
```
<class 'numpy.ndarray'>      --    392    --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/333.png
333
```



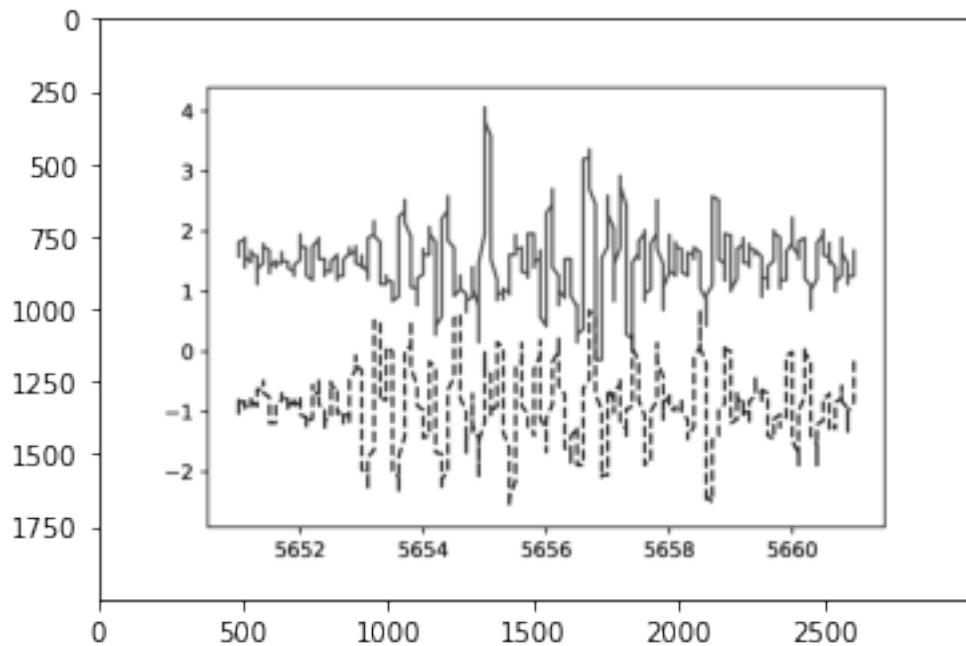
```
<class 'numpy.ndarray'> -- 393 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/234.png
234
```



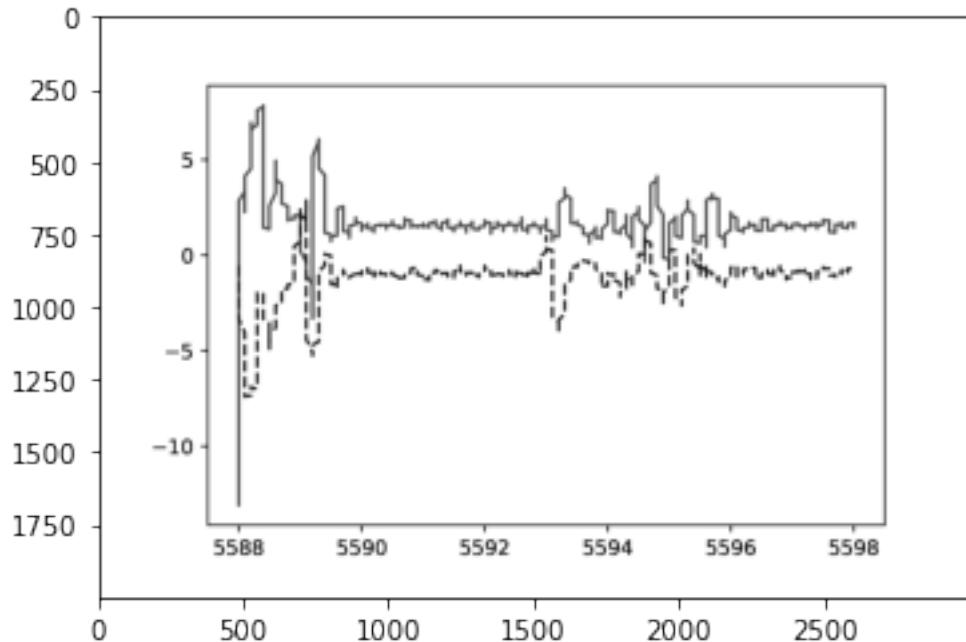
```
<class 'numpy.ndarray'> -- 394 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/231.png
231
```



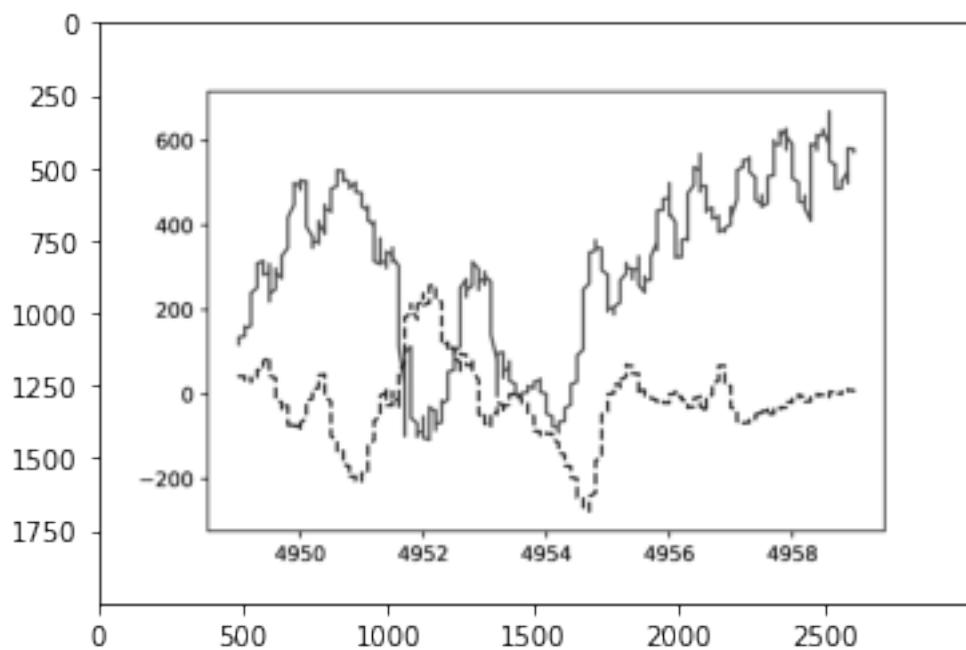
```
<class 'numpy.ndarray'>      --    395    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/230.png
230
```



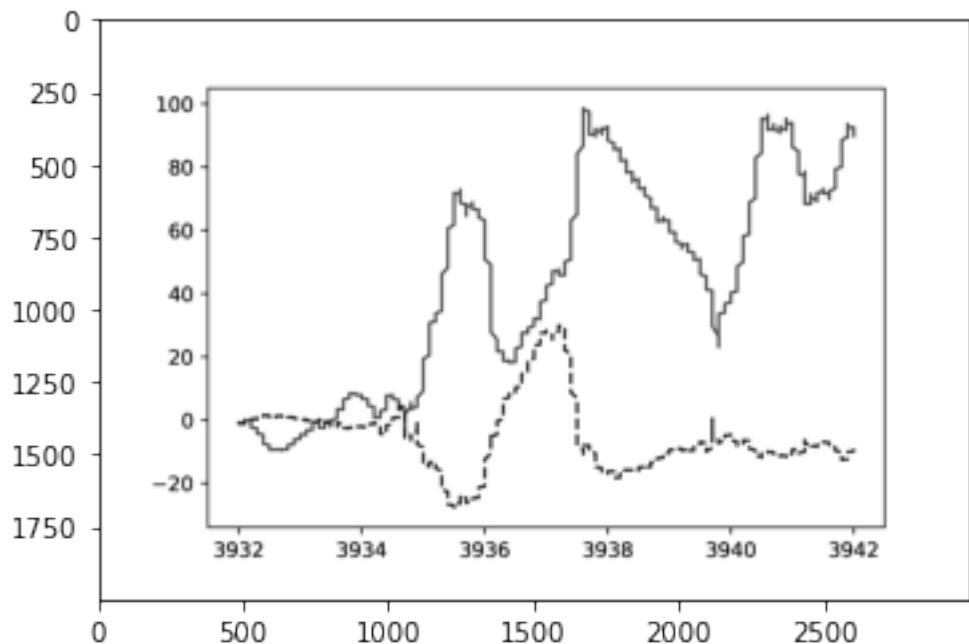
```
<class 'numpy.ndarray'>      --    396    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/223.png
223
```



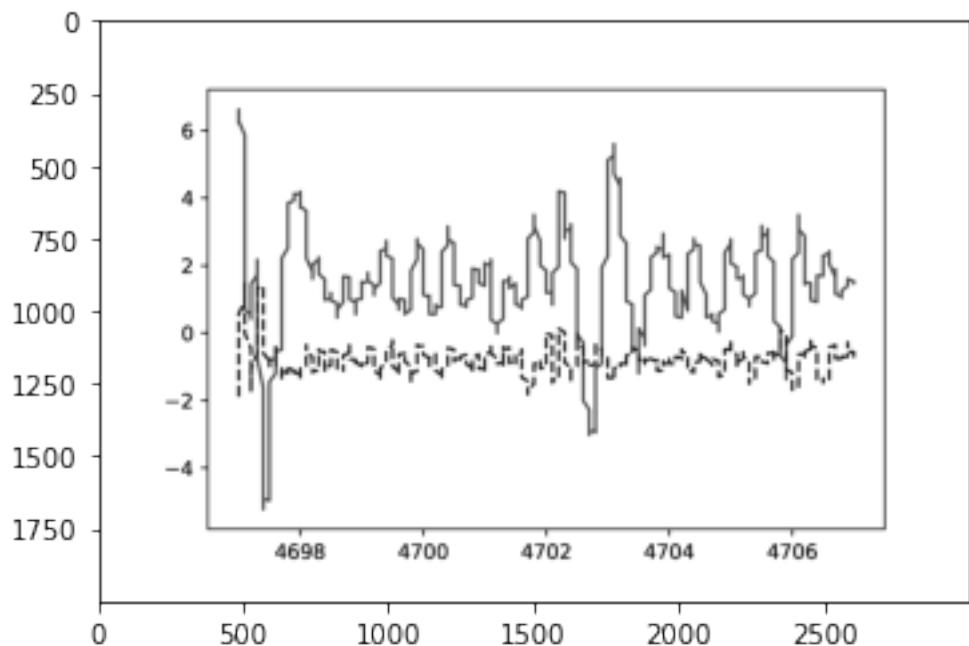
```
<class 'numpy.ndarray'>      --    397    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/152.png
152
```



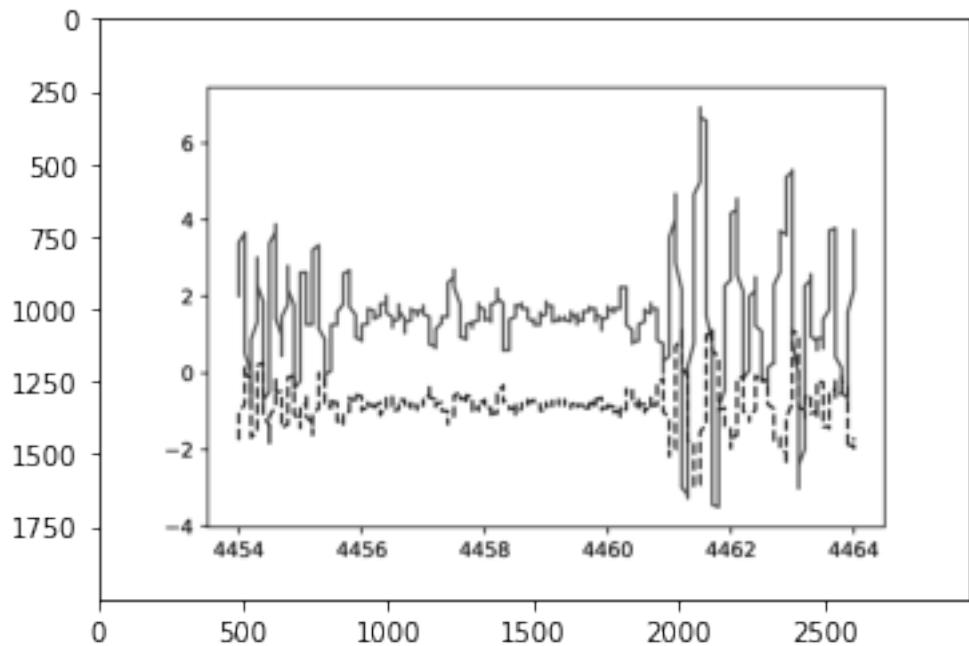
```
<class 'numpy.ndarray'> -- 398 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/39.png
39
```



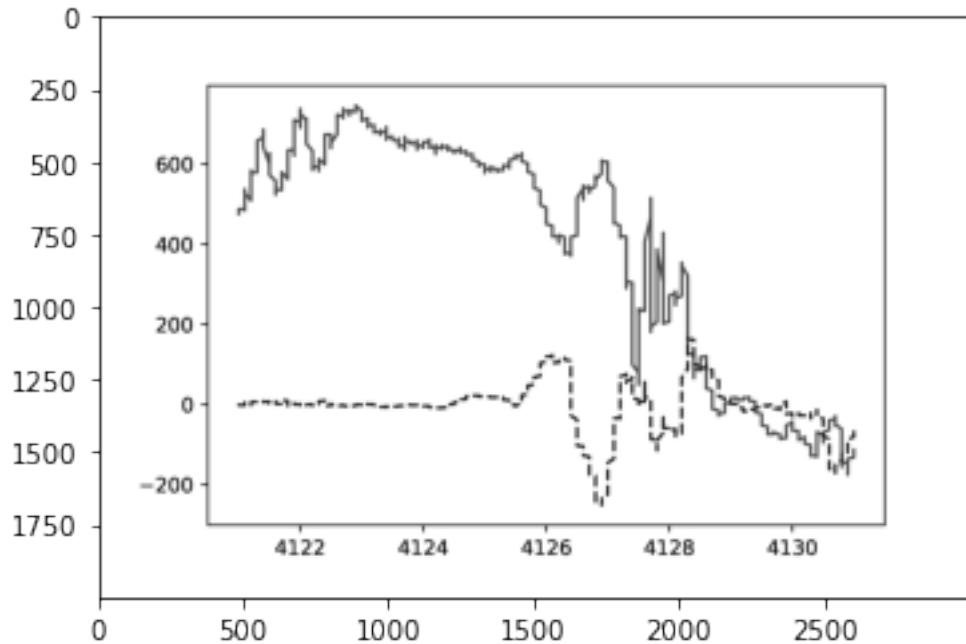
```
<class 'numpy.ndarray'> -- 399 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/124.png
124
```



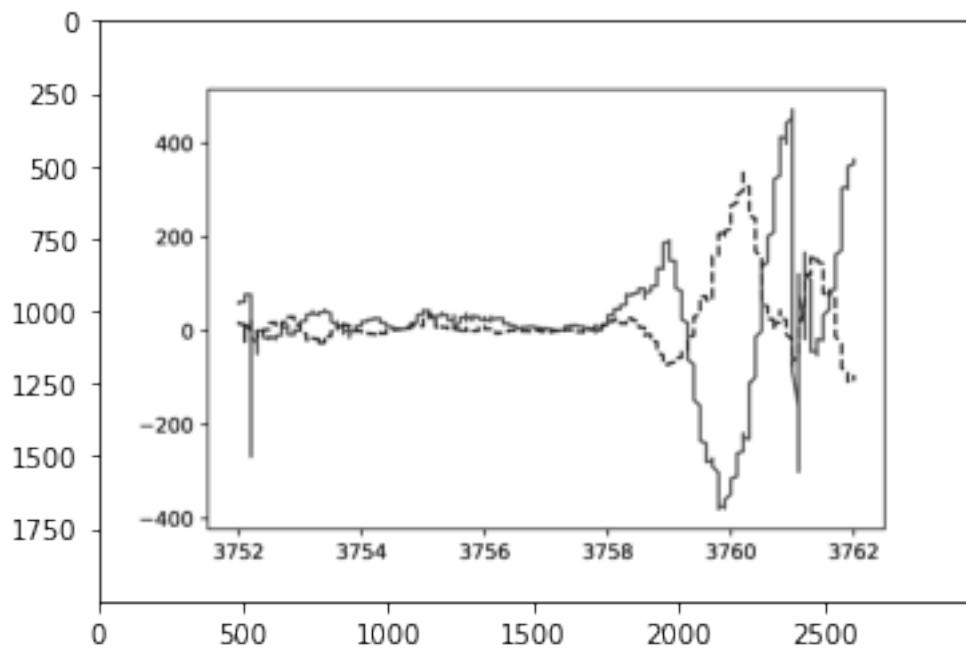
```
<class 'numpy.ndarray'>      --    400    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/97.png
97
```



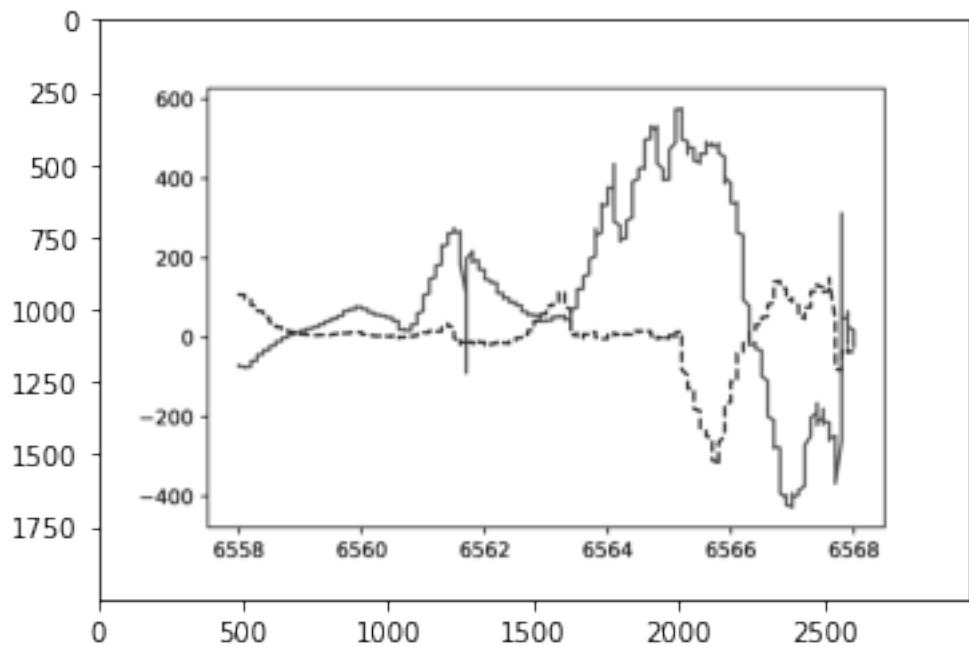
```
<class 'numpy.ndarray'>      --    401    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/60.png
60
```



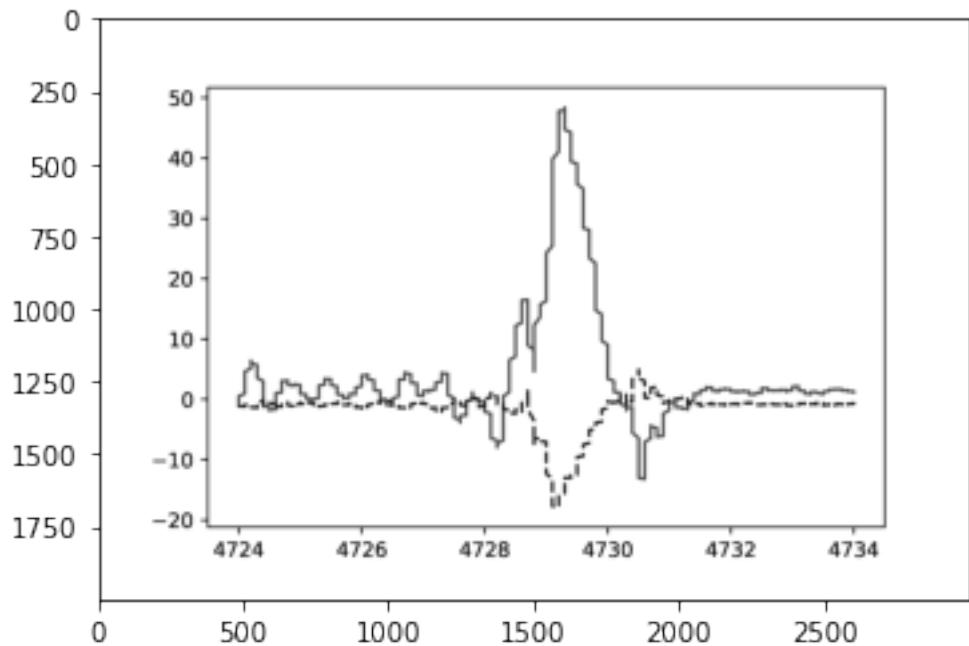
```
<class 'numpy.ndarray'>      --  402  --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/19.png
19
```



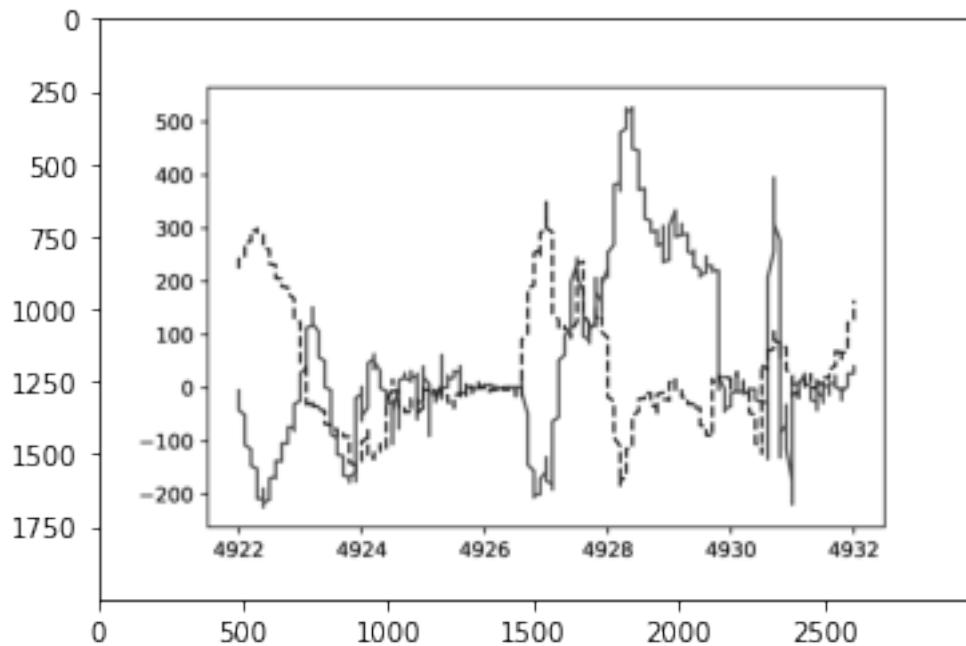
```
<class 'numpy.ndarray'> -- 403 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/276.png
276
```



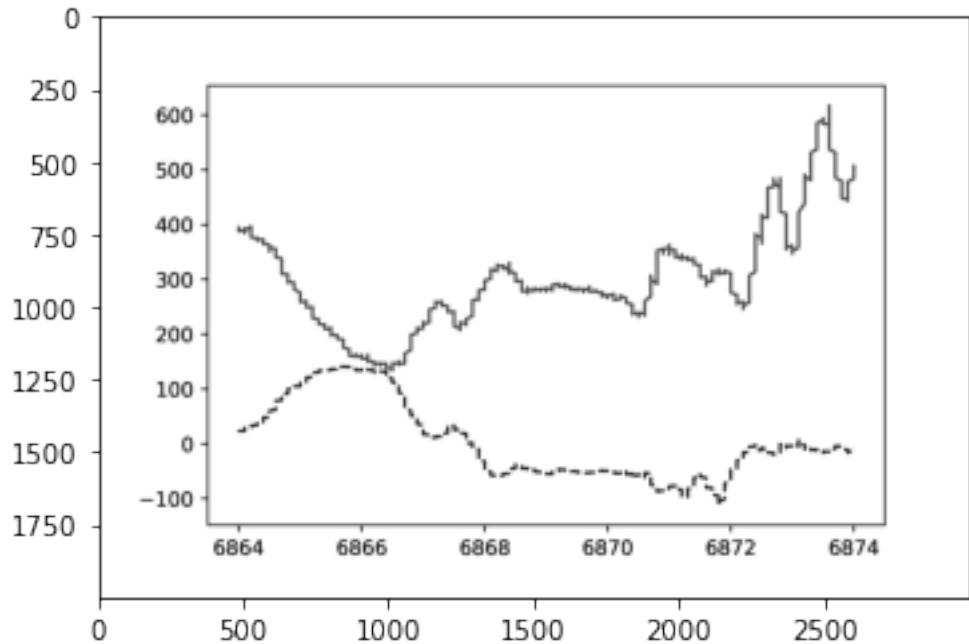
```
<class 'numpy.ndarray'> -- 404 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/127.png
127
```



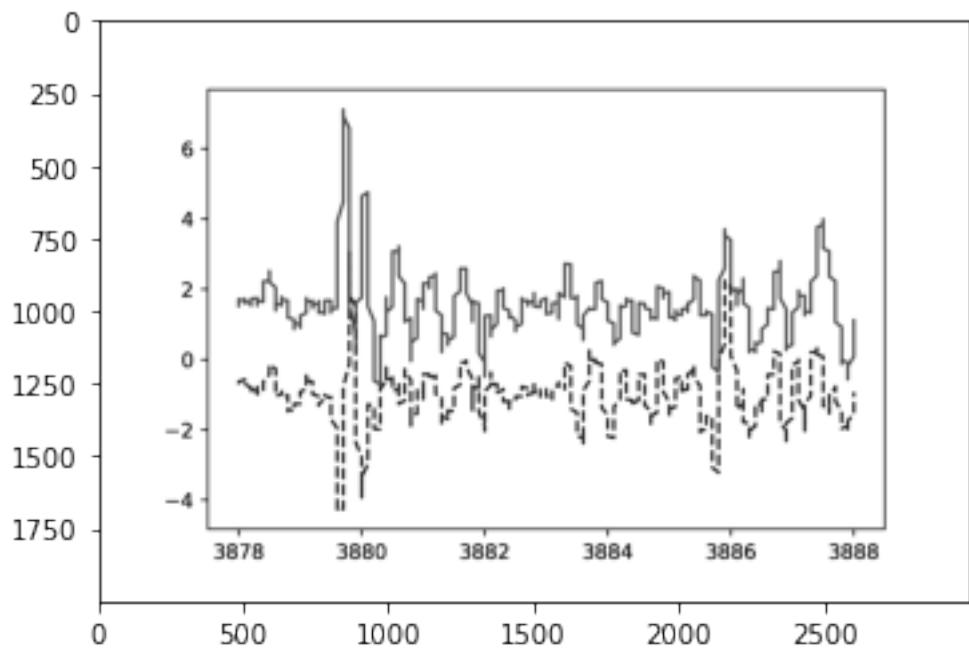
```
<class 'numpy.ndarray'>      --    405    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/149.png
149
```



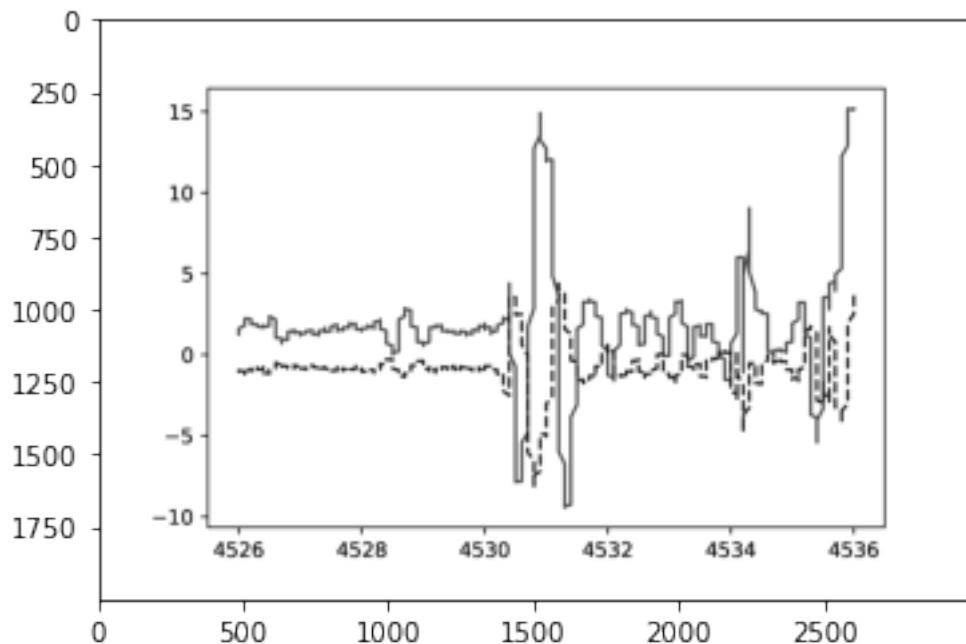
```
<class 'numpy.ndarray'>      --    406    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/310.png
310
```



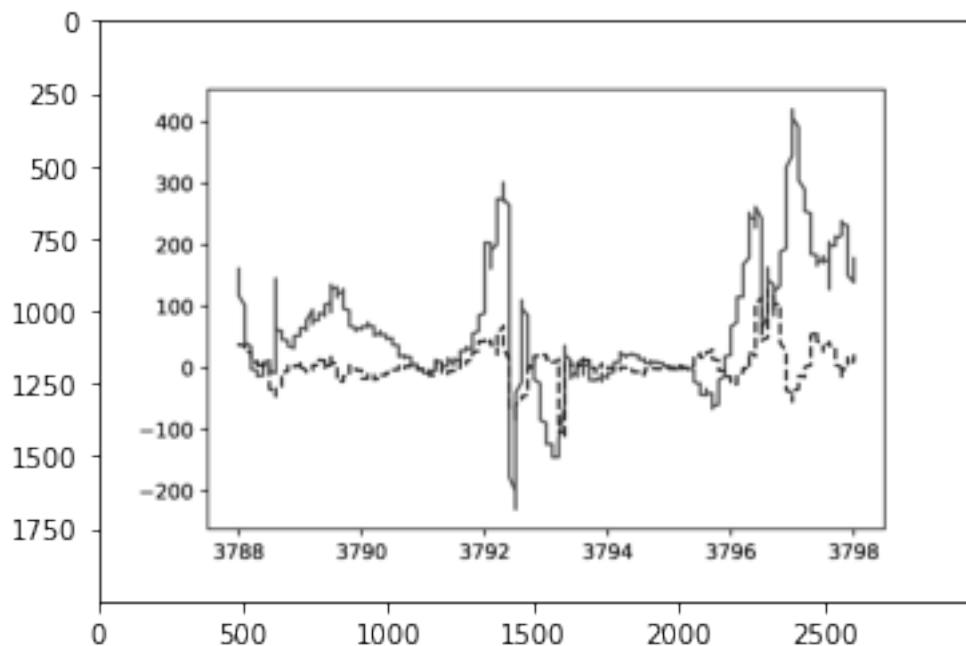
```
<class 'numpy.ndarray'>      --    407    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/33.png
33
```



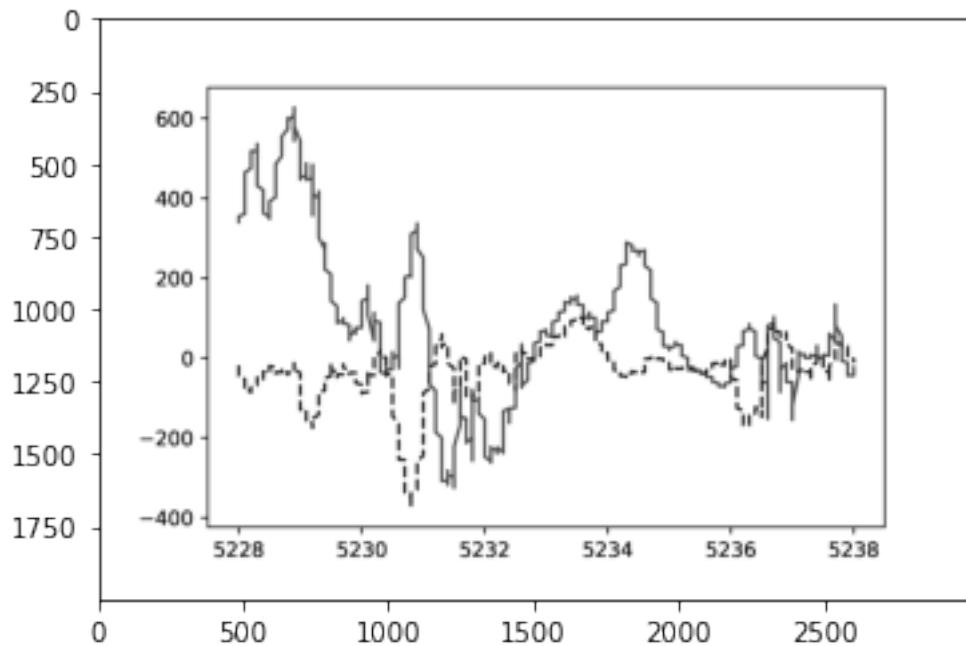
```
<class 'numpy.ndarray'>      --    408    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/105.png
105
```



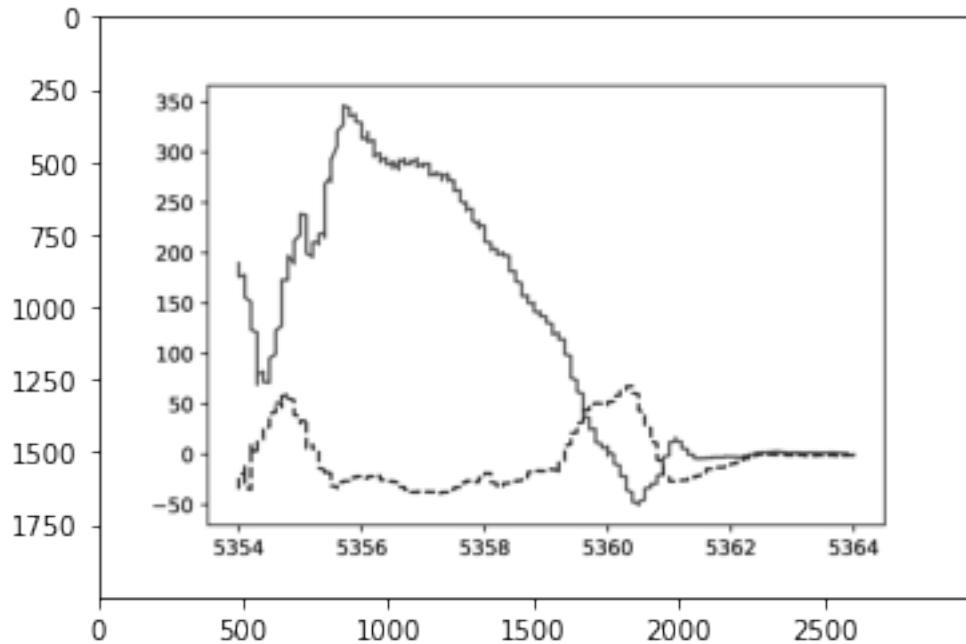
```
<class 'numpy.ndarray'>      --    409    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/23.png
23
```



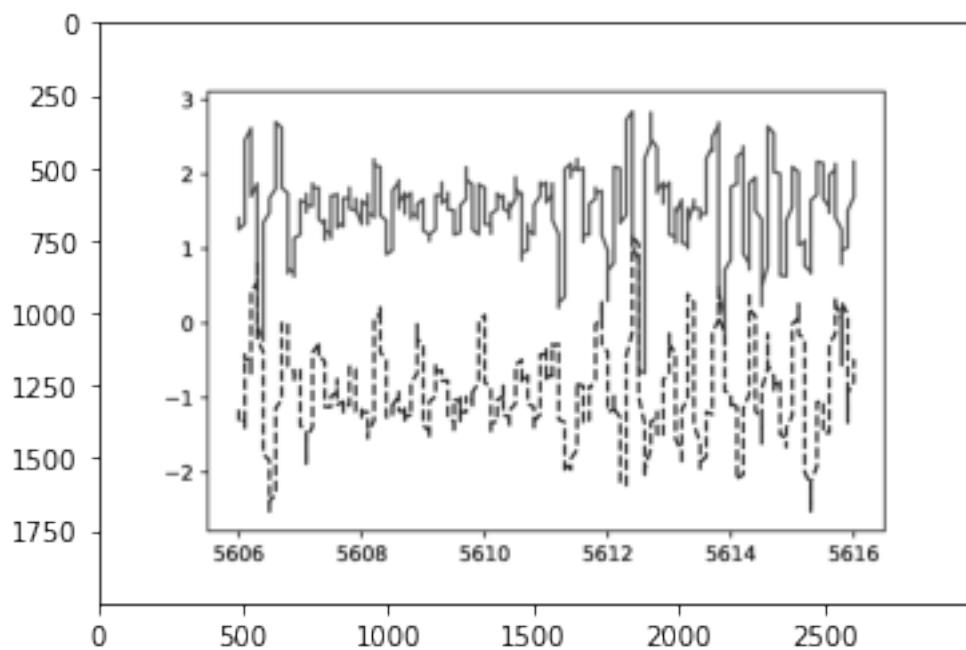
```
<class 'numpy.ndarray'>      --    410    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/183.png
183
```



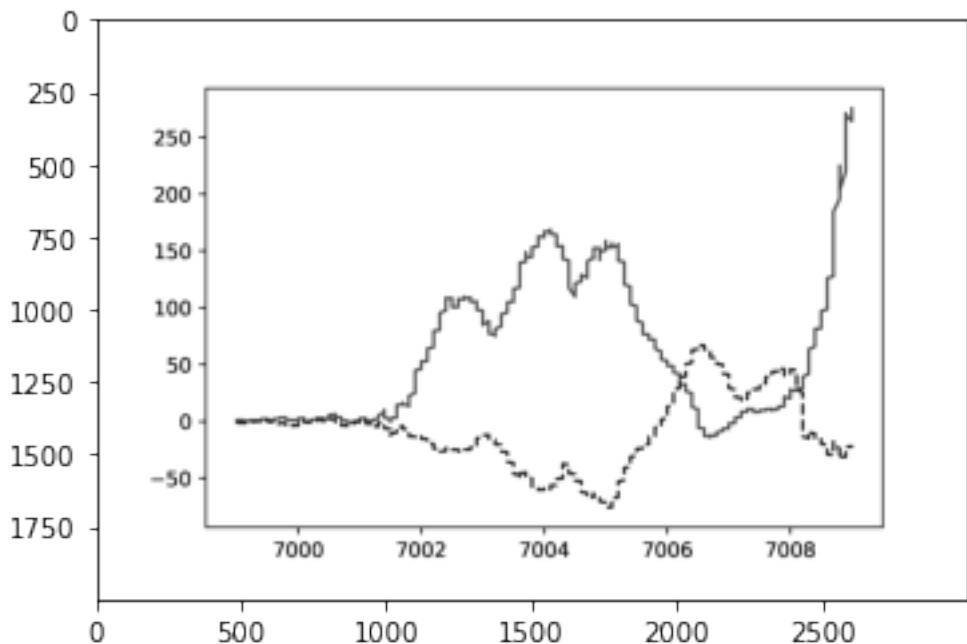
```
<class 'numpy.ndarray'>      --    411    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/197.png
197
```



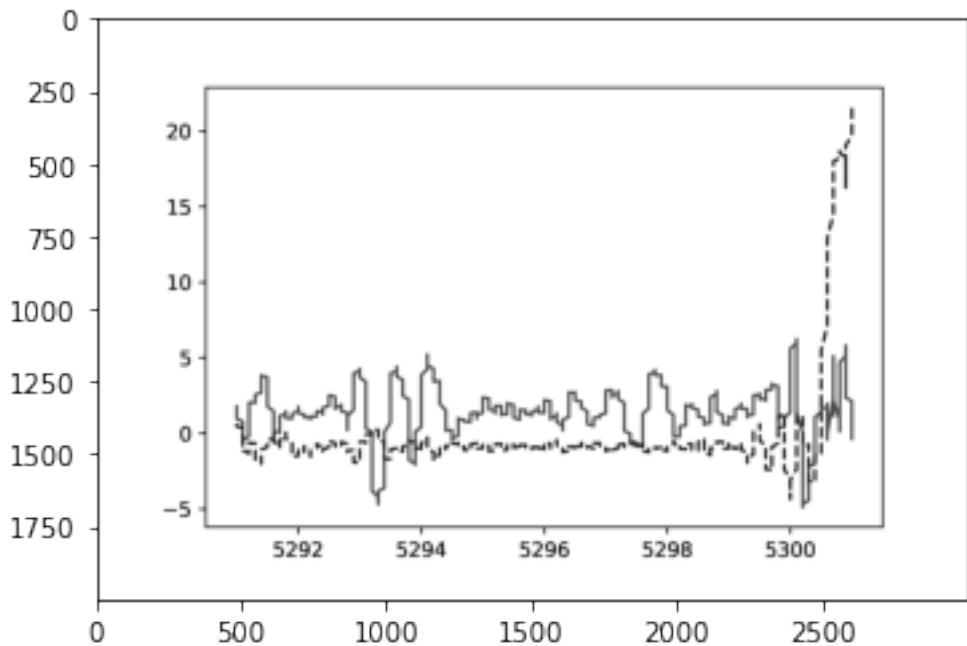
```
<class 'numpy.ndarray'>      --  412   --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/225.png
225
```



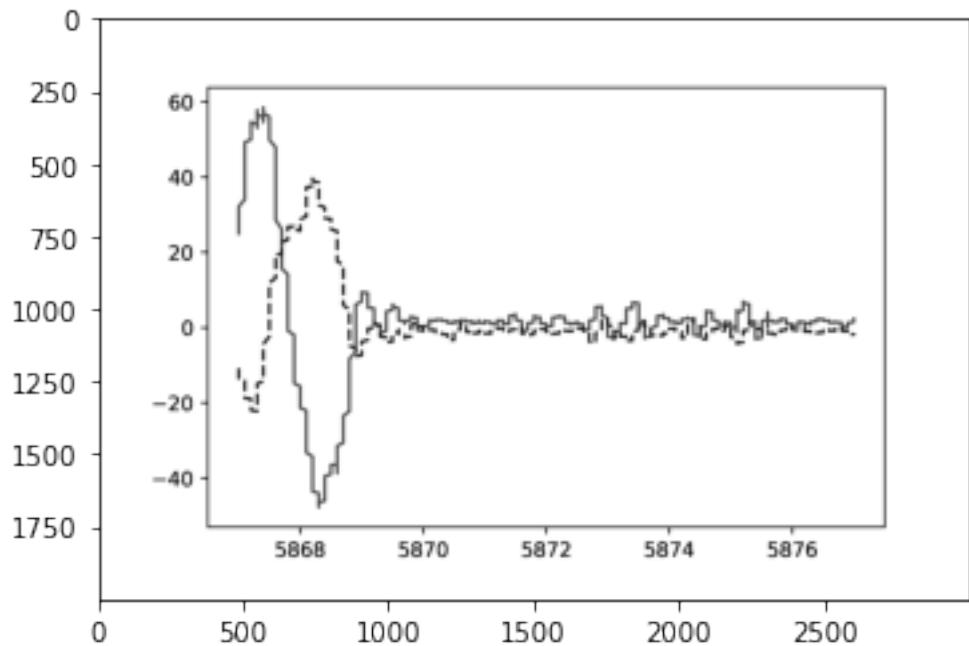
```
<class 'numpy.ndarray'> -- 413 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/325.png
325
```



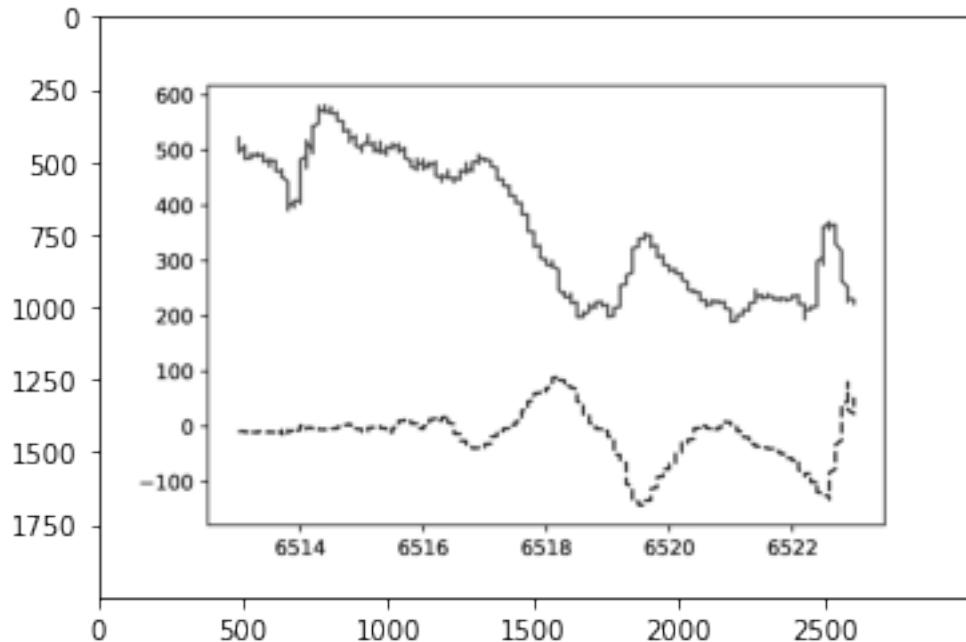
```
<class 'numpy.ndarray'> -- 414 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/190.png
190
```



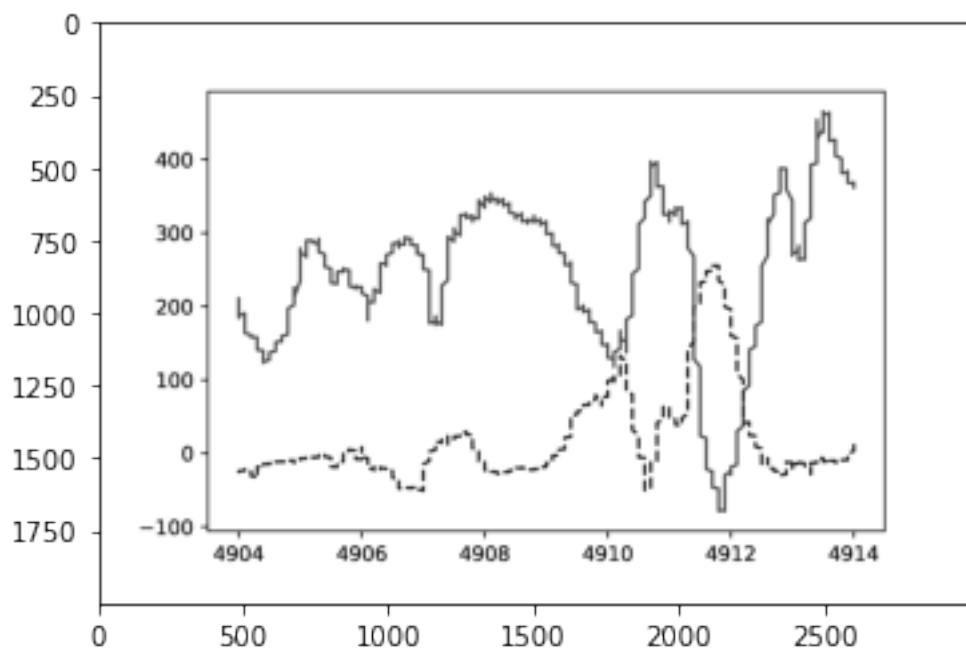
```
<class 'numpy.ndarray'>      --    415    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/254.png
254
```



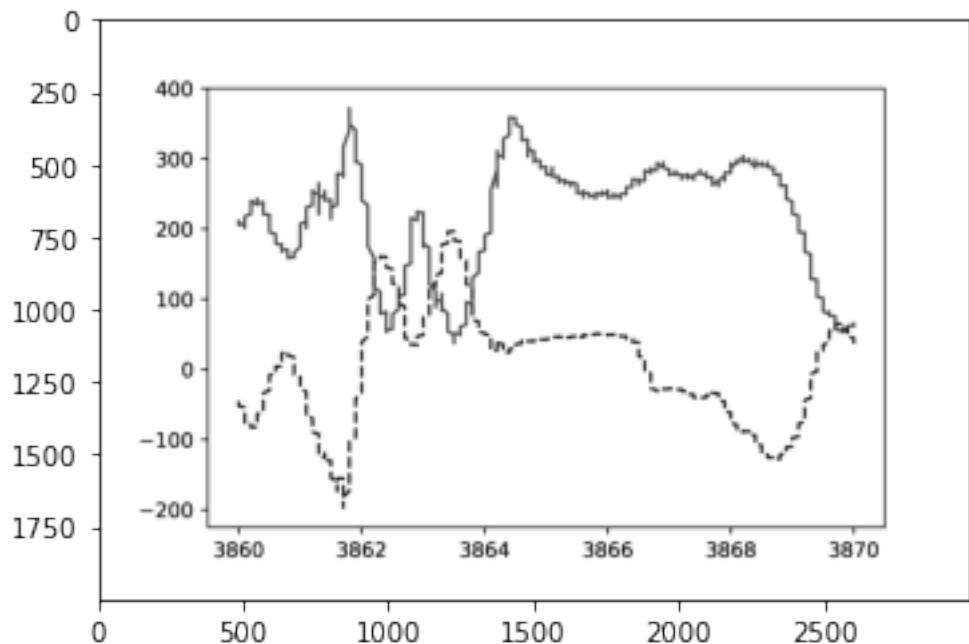
```
<class 'numpy.ndarray'>      --    416    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/271.png
271
```



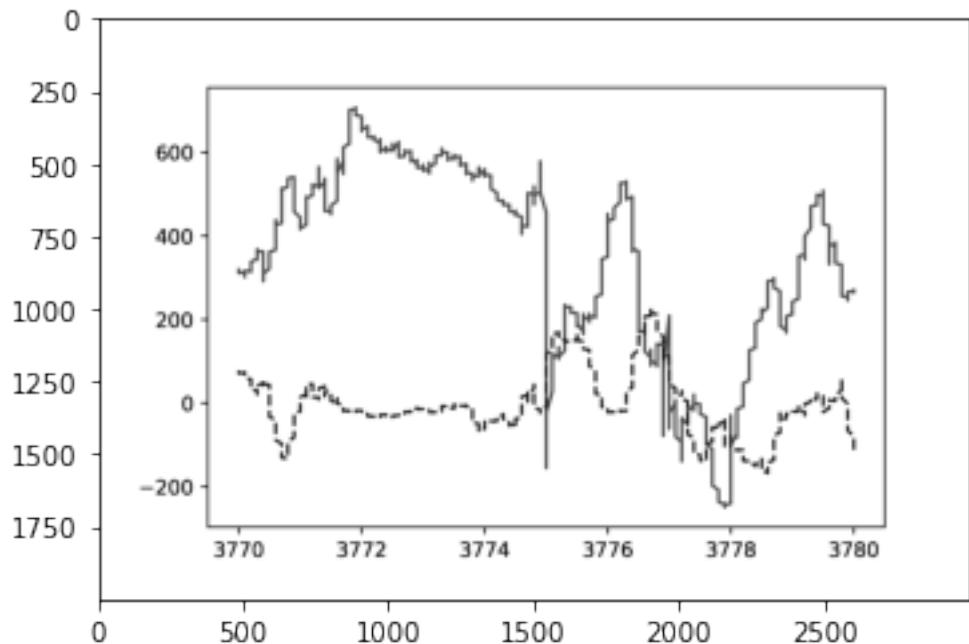
```
<class 'numpy.ndarray'>      --    417    --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/147.png
147
```



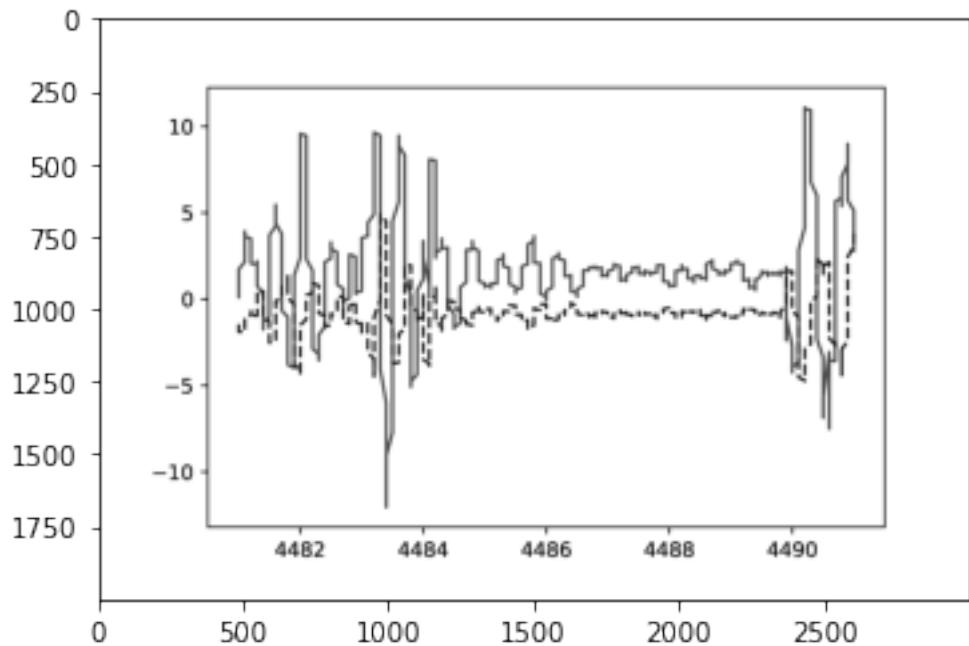
```
<class 'numpy.ndarray'> -- 418 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/31.png
31
```



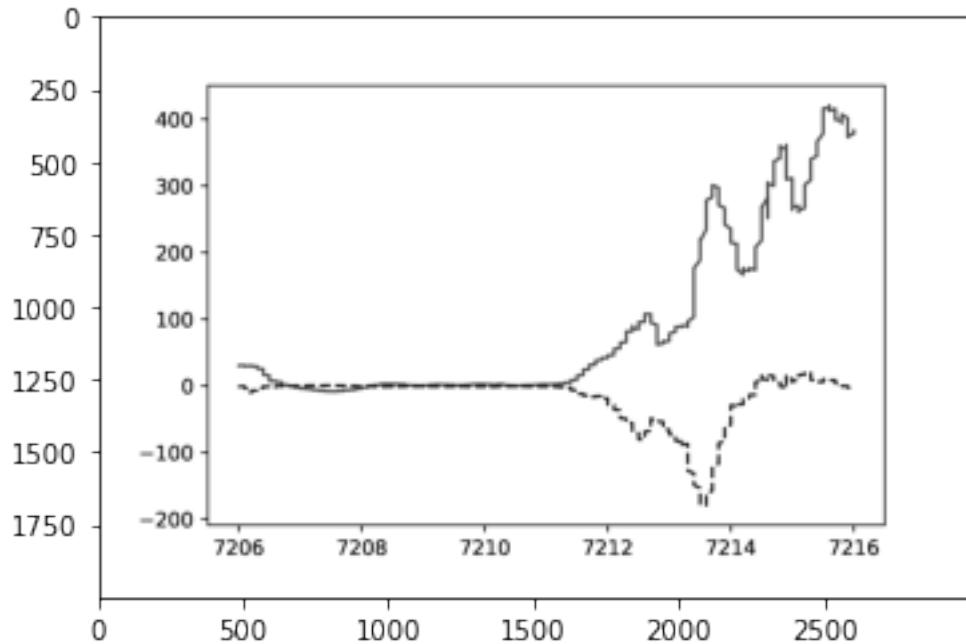
```
<class 'numpy.ndarray'> -- 419 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/21.png
21
```



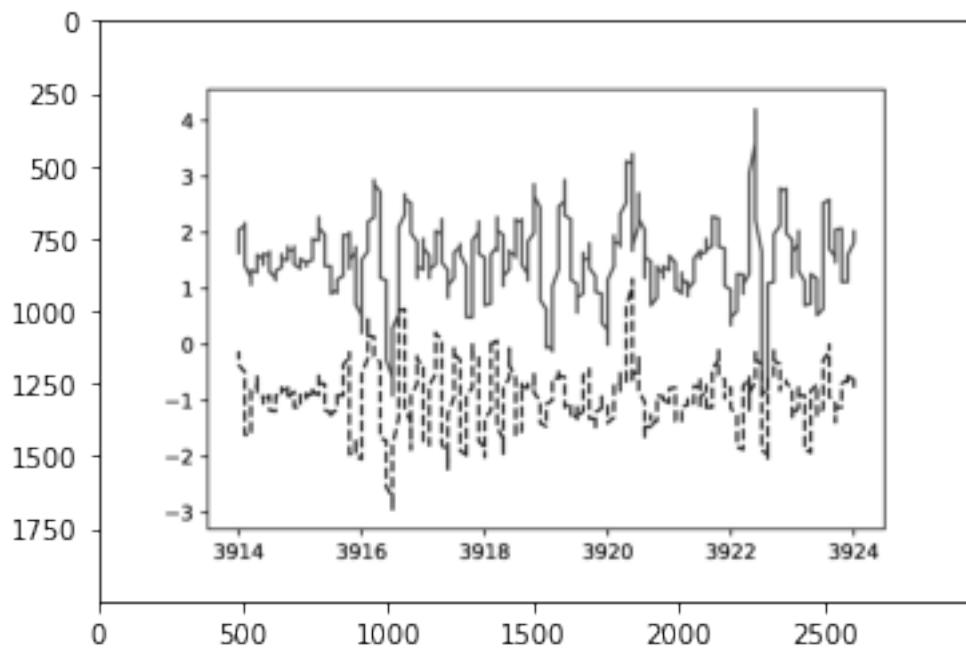
```
<class 'numpy.ndarray'>      --    420    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/100.png
100
```



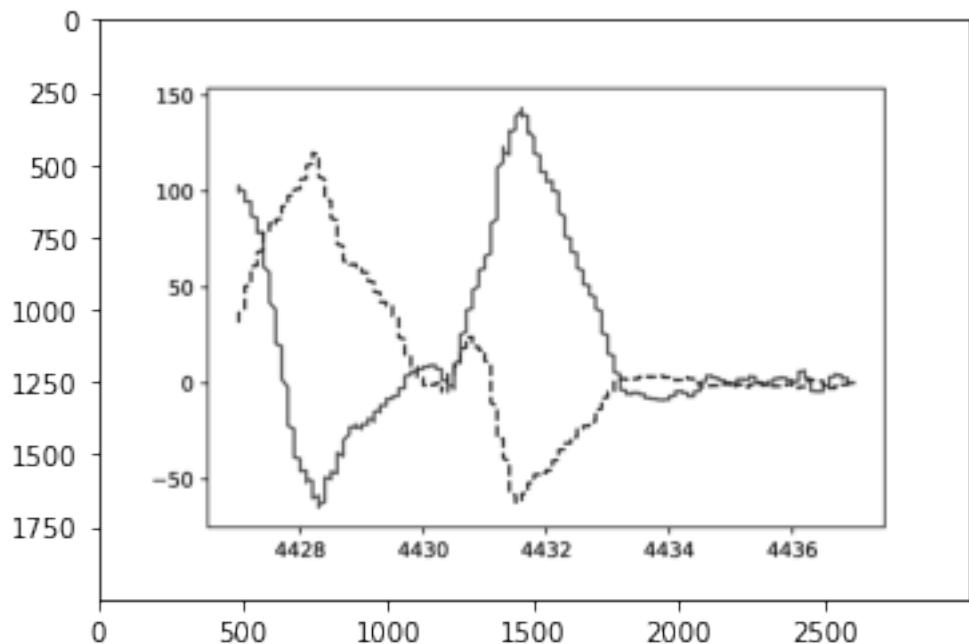
```
<class 'numpy.ndarray'>      --    421    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/348.png
348
```



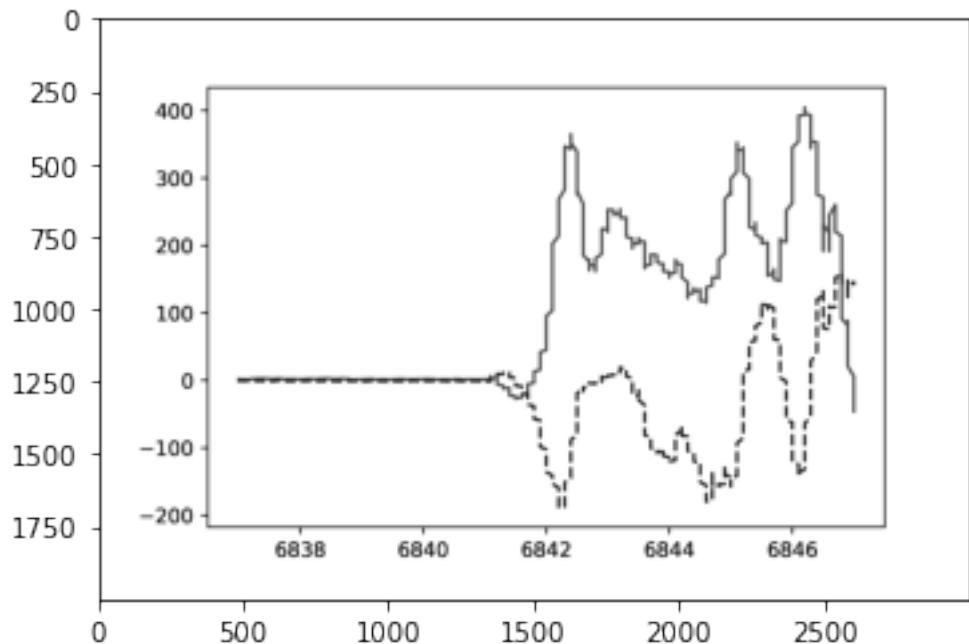
```
<class 'numpy.ndarray'>      --  422   --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/37.png
37
```



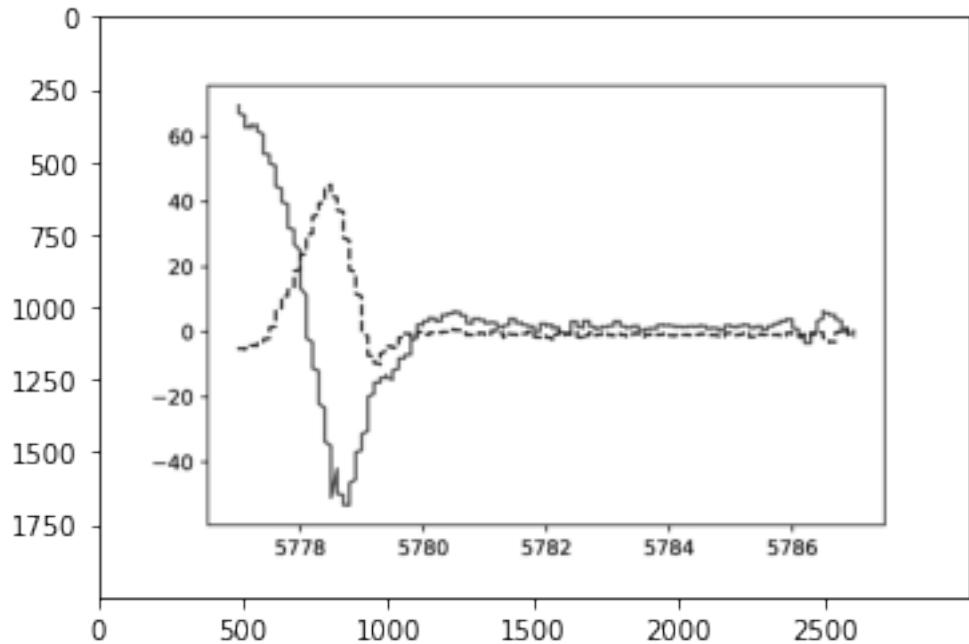
```
<class 'numpy.ndarray'> -- 423 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/94.png
94
```



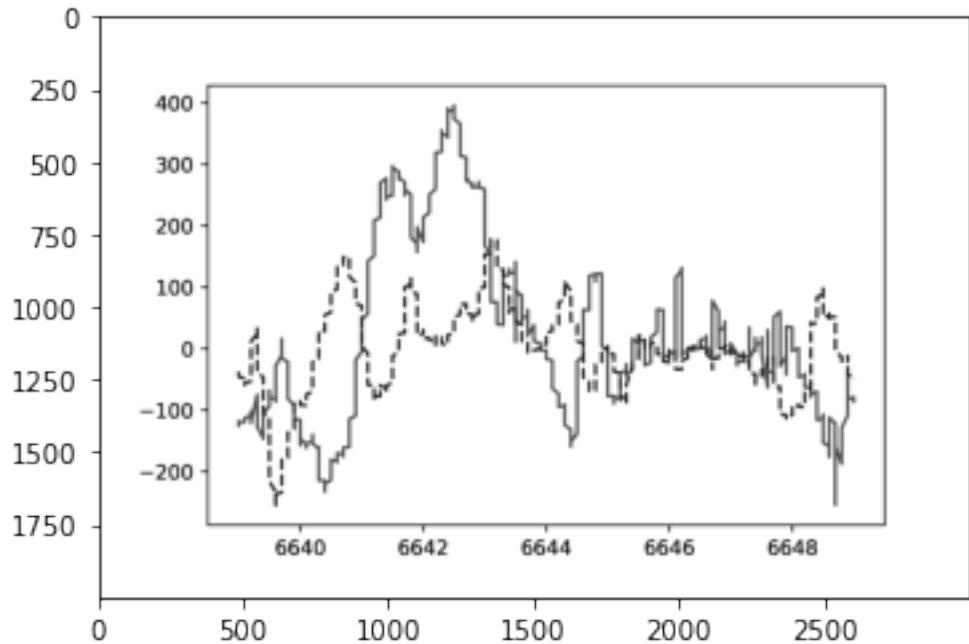
```
<class 'numpy.ndarray'> -- 424 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/307.png
307
```



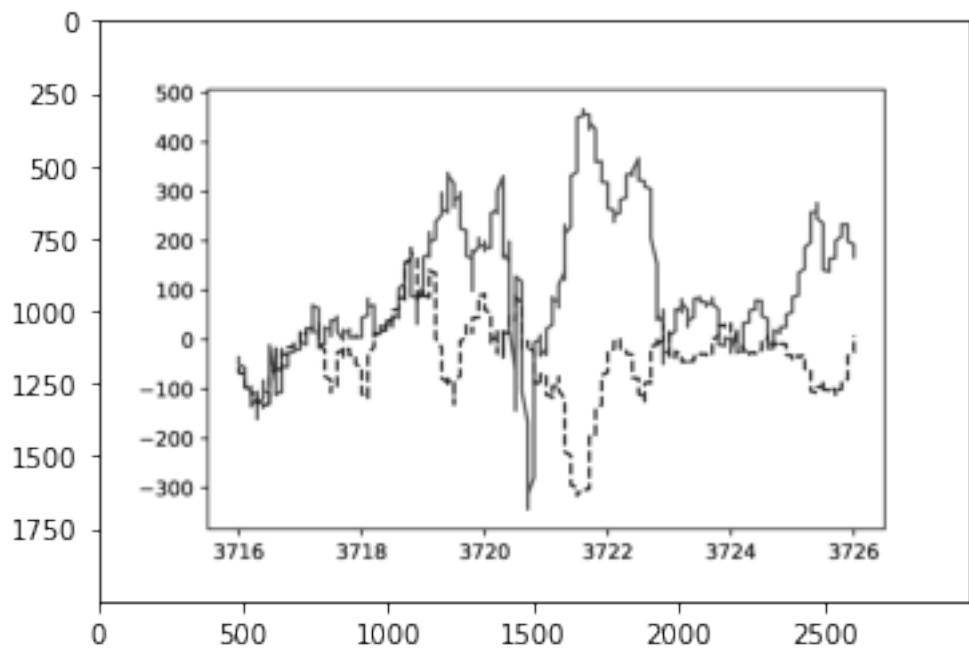
```
<class 'numpy.ndarray'>      --    425    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/244.png
244
```



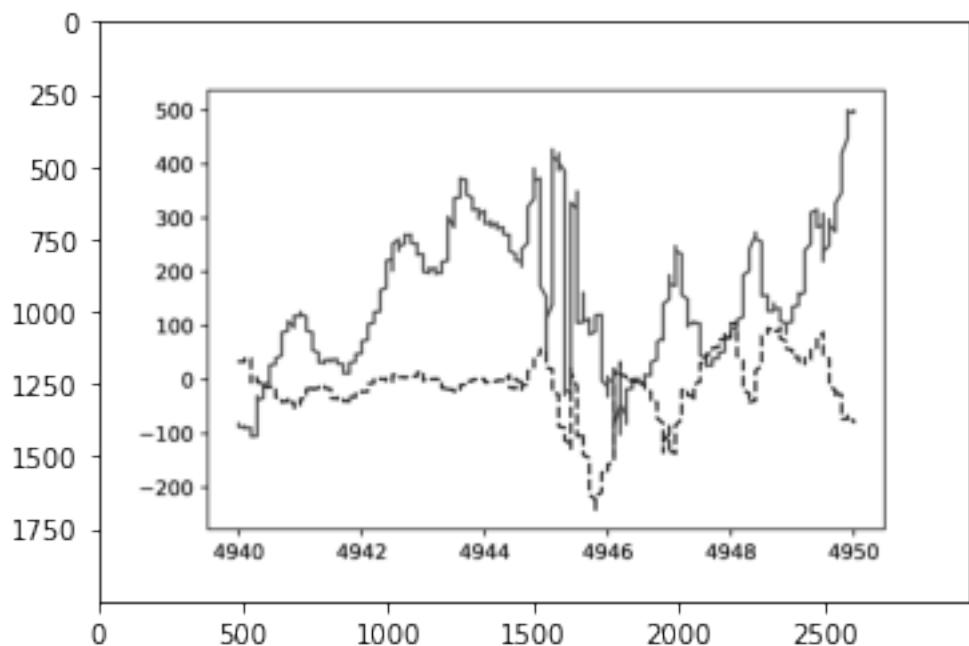
```
<class 'numpy.ndarray'>      --    426    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/285.png
285
```



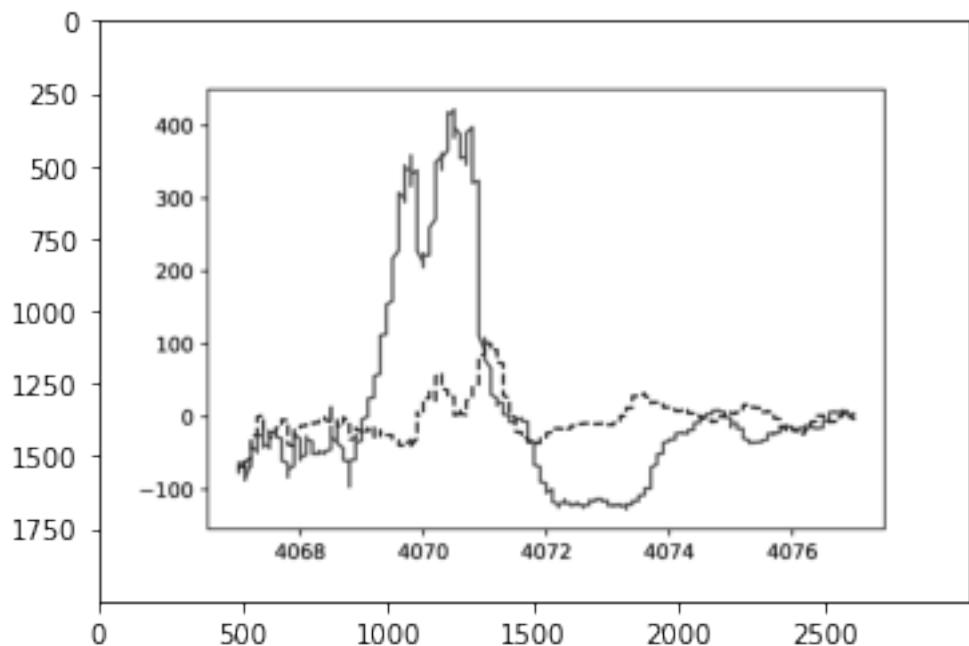
```
<class 'numpy.ndarray'>      --  427   --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/15.png
15
```



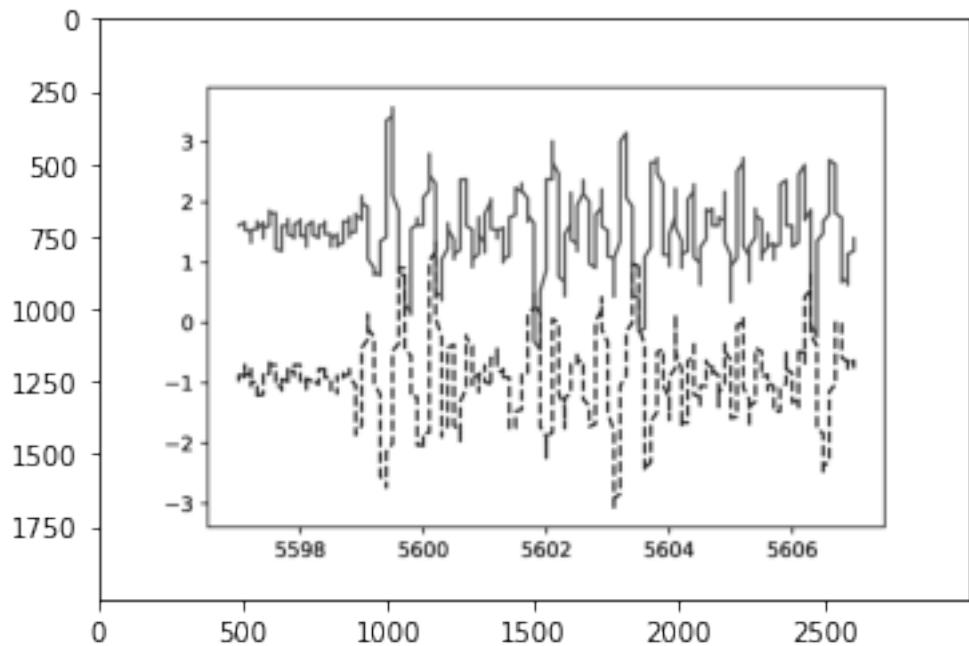
```
<class 'numpy.ndarray'>      --  428  --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/151.png
151
```



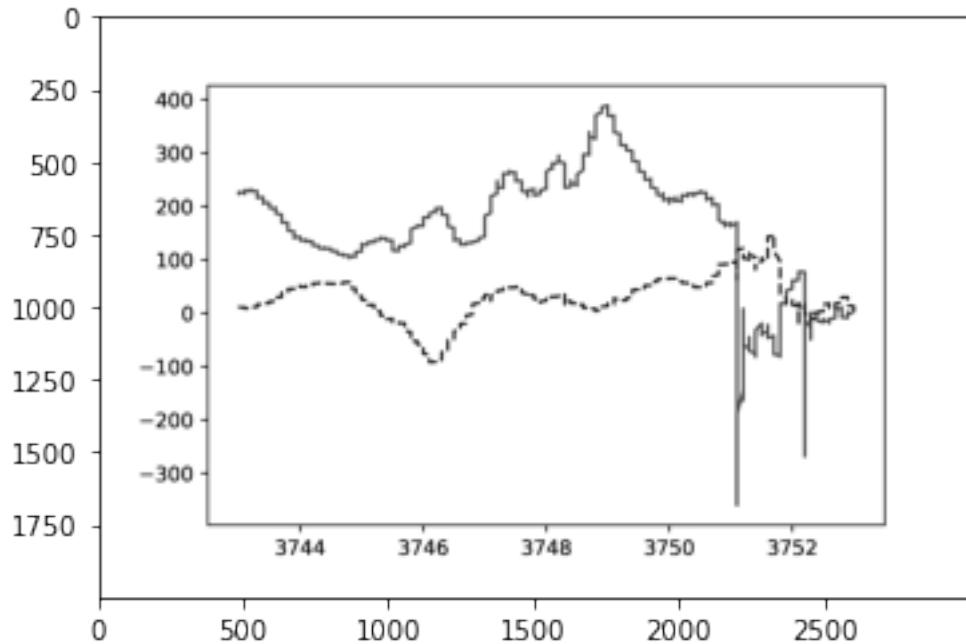
```
<class 'numpy.ndarray'>      --  429  --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/54.png
54
```



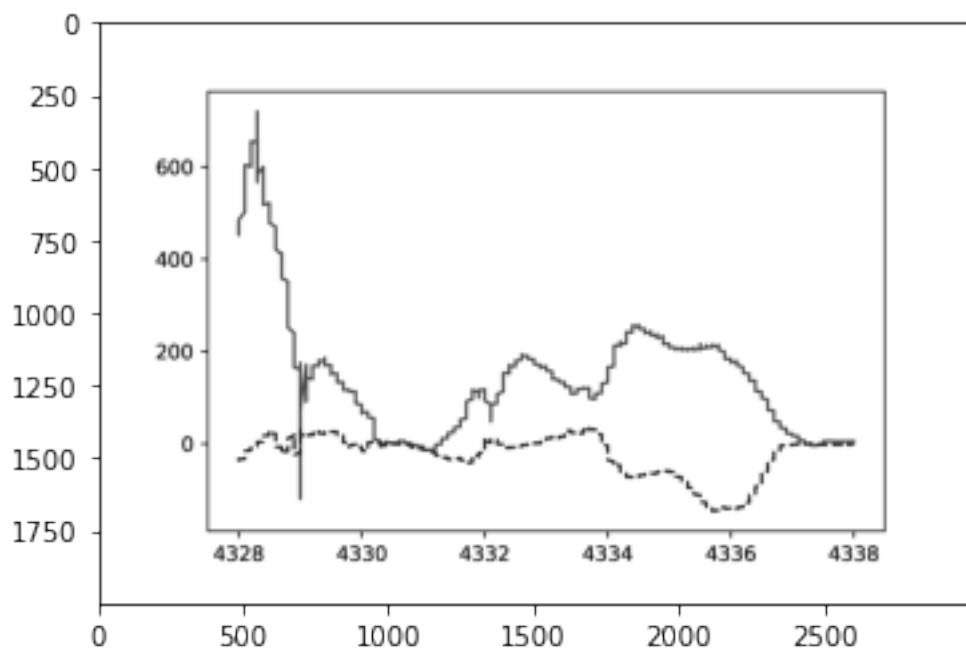
```
<class 'numpy.ndarray'>      --    430    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/224.png
224
```



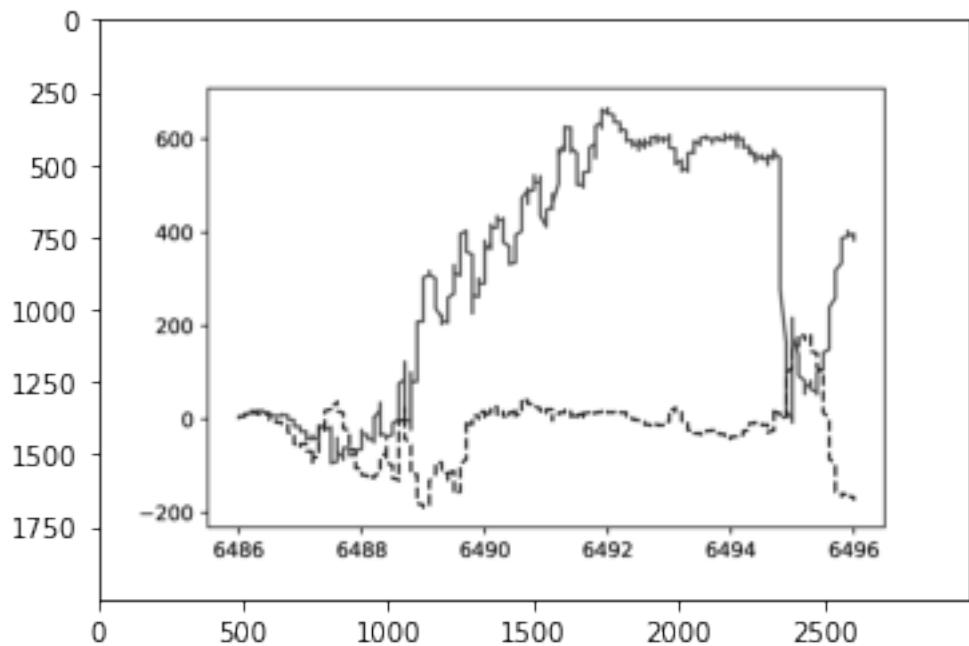
```
<class 'numpy.ndarray'>      --    431    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/18.png
18
```



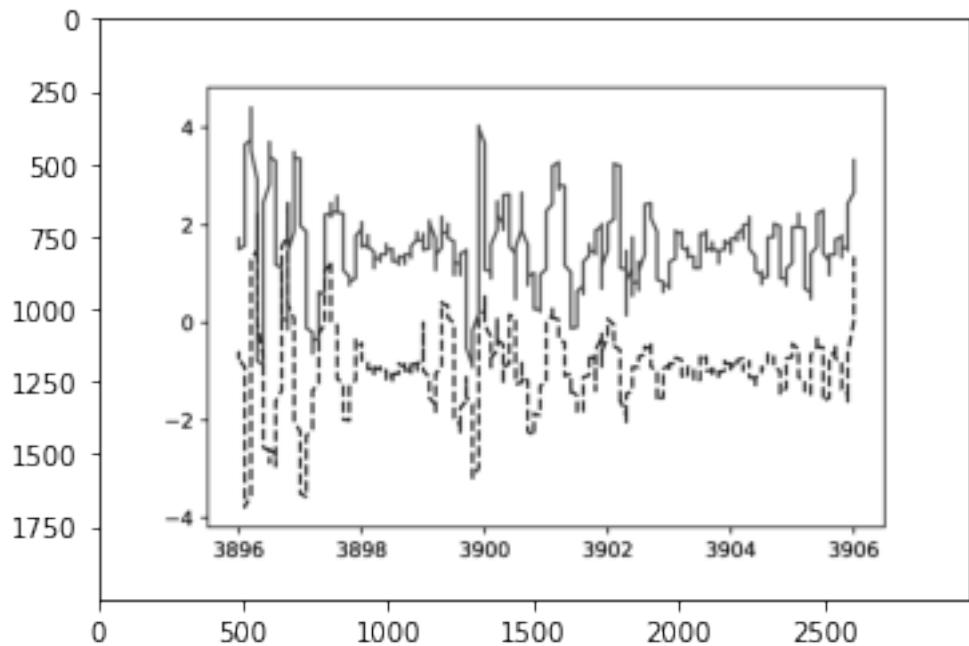
```
<class 'numpy.ndarray'>      --    432    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/83.png
83
```



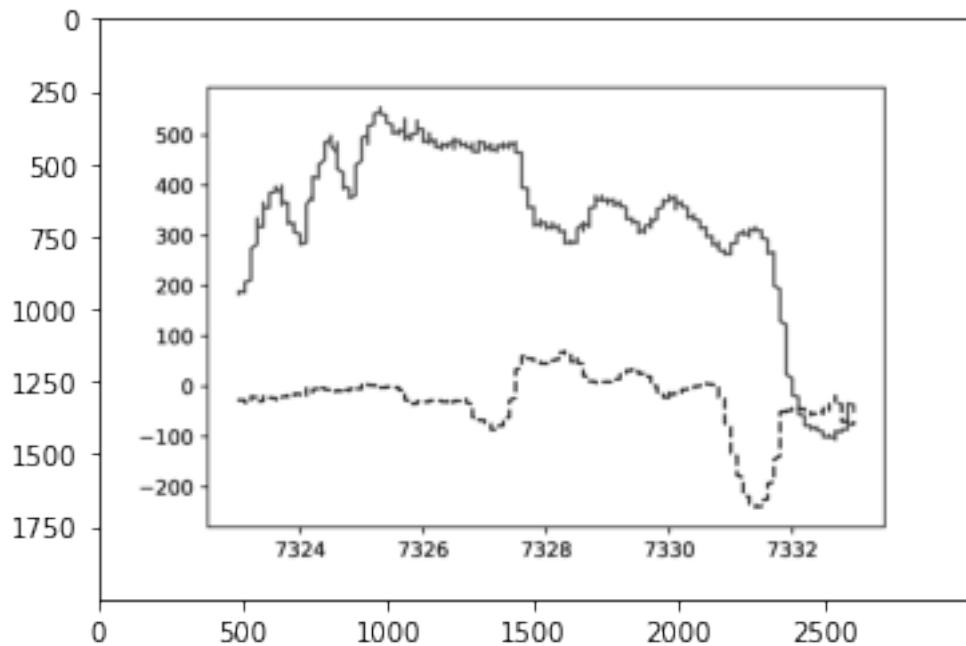
```
<class 'numpy.ndarray'> -- 433 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/268.png
268
```



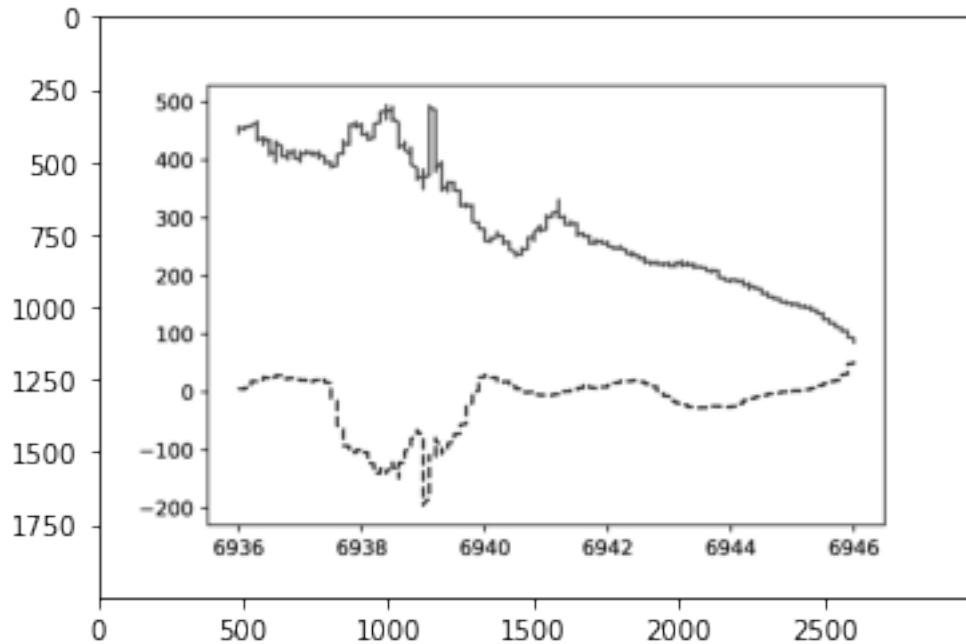
```
<class 'numpy.ndarray'> -- 434 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/35.png
35
```



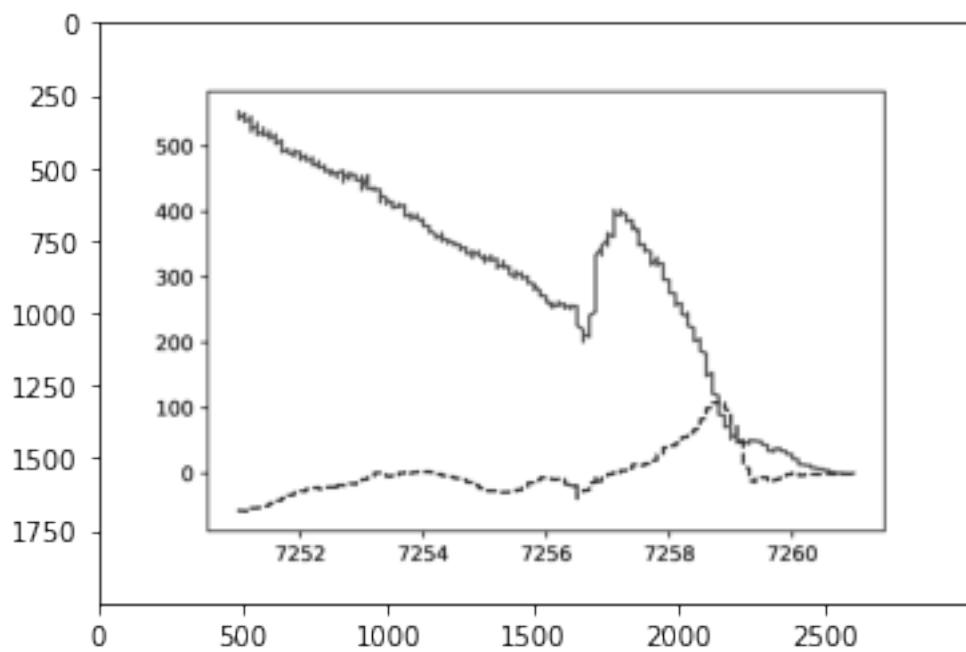
```
<class 'numpy.ndarray'>      --    435    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/361.png
361
```



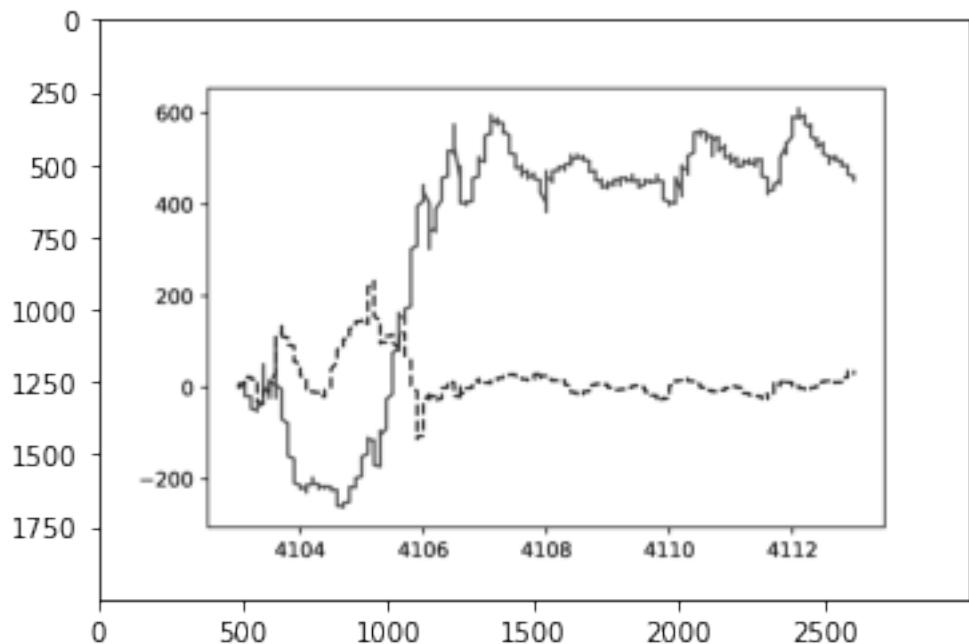
```
<class 'numpy.ndarray'>      --    436    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/318.png
318
```



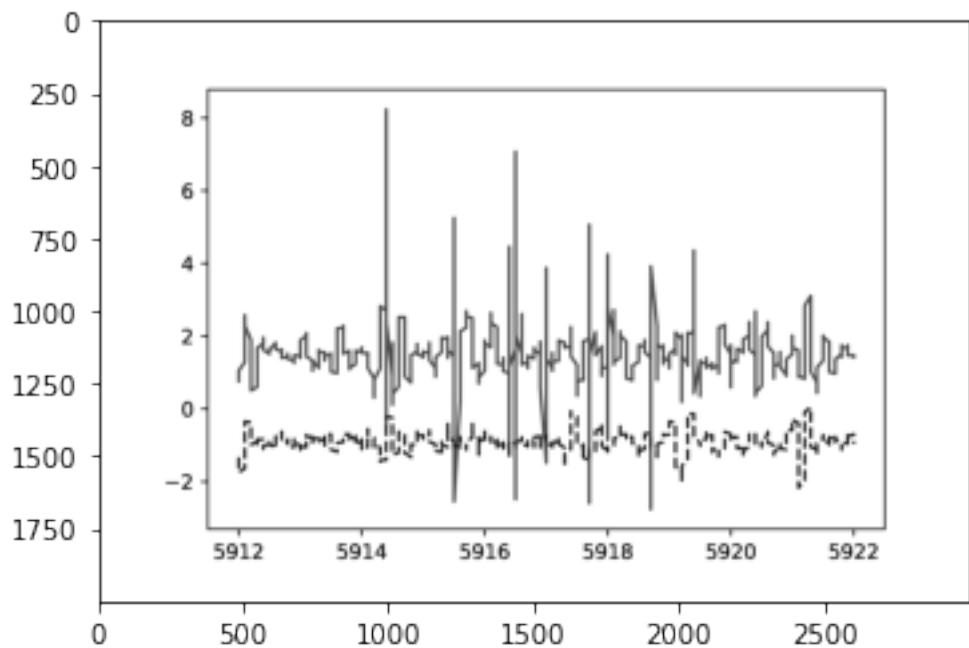
```
<class 'numpy.ndarray'>      --    437    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/353.png
353
```



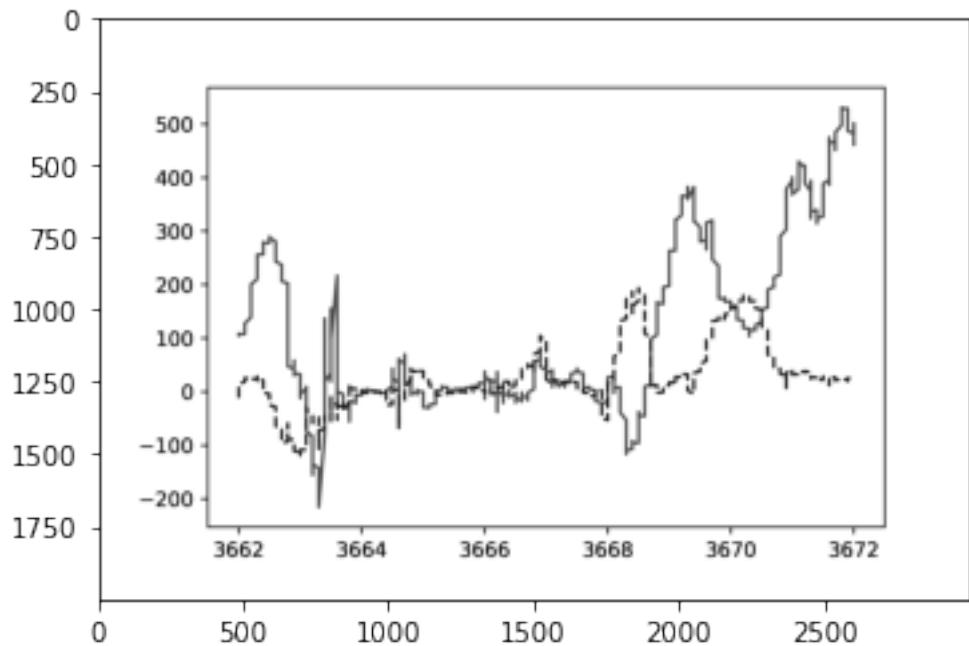
```
<class 'numpy.ndarray'> -- 438 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/58.png
58
```



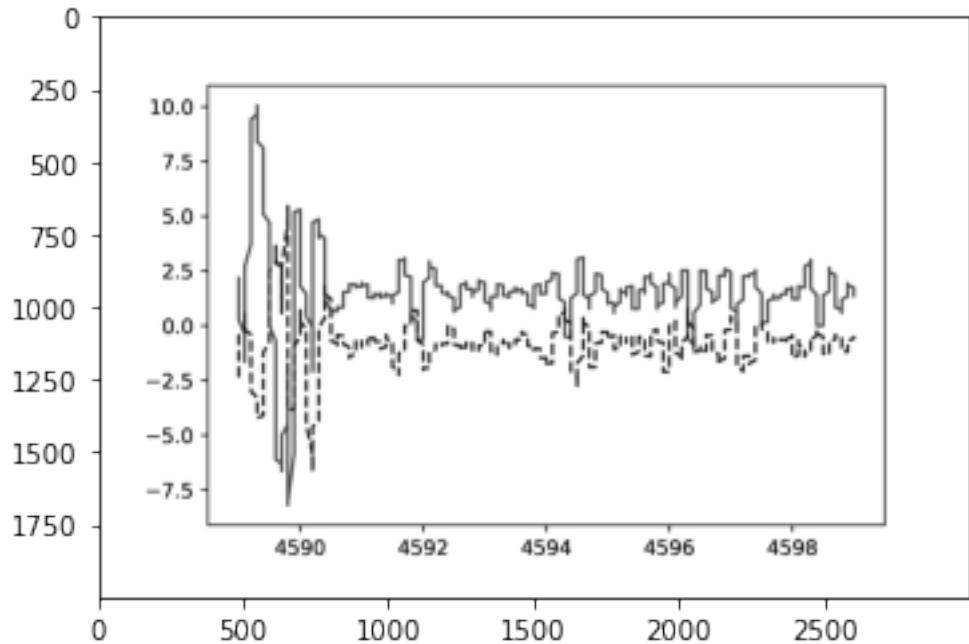
```
<class 'numpy.ndarray'> -- 439 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/259.png
259
```



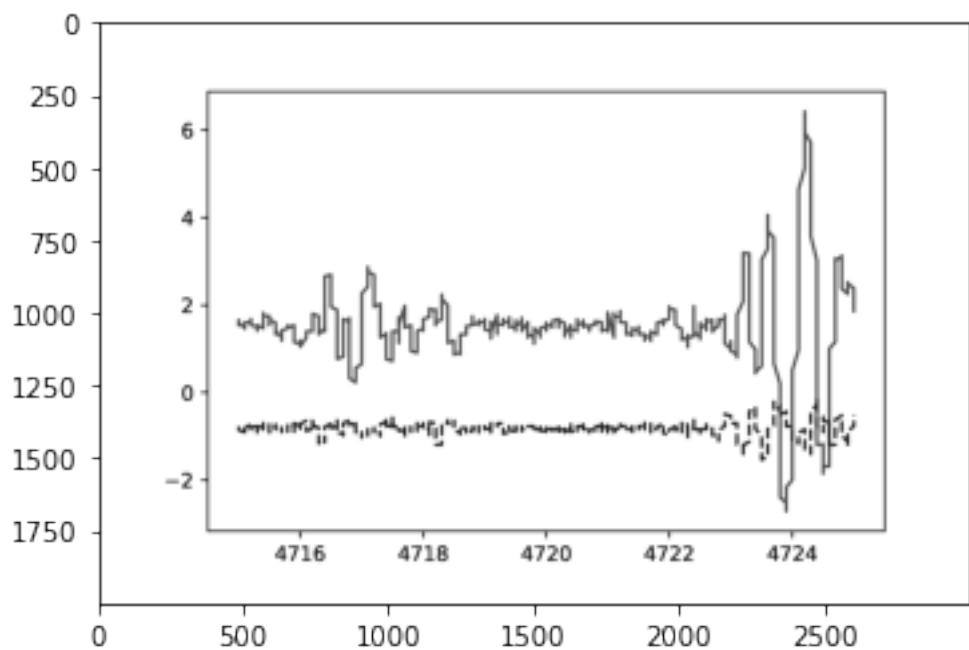
```
<class 'numpy.ndarray'>      --    440    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/9.png
9
```



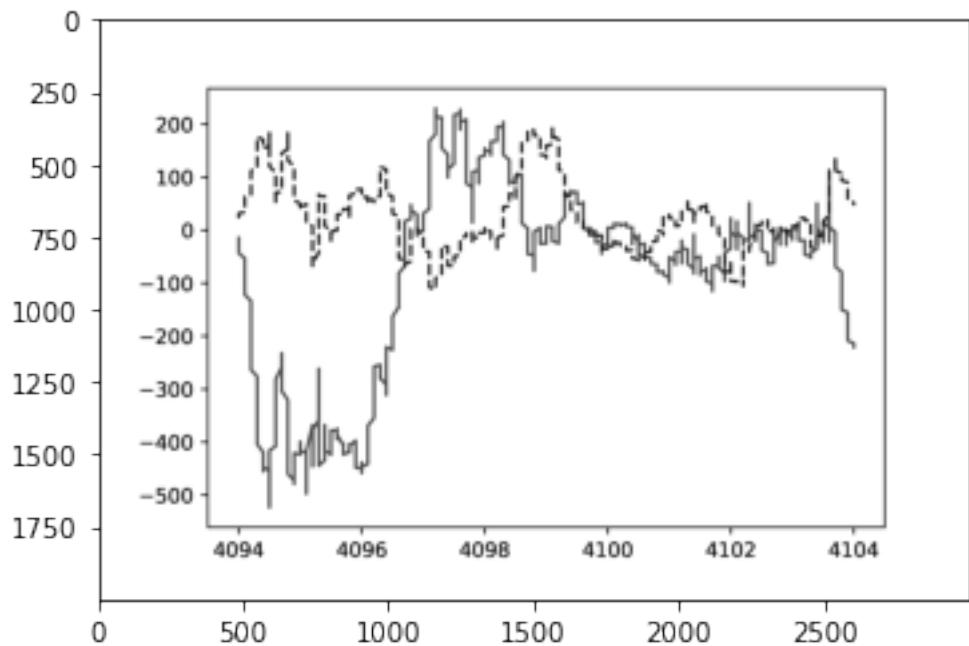
```
<class 'numpy.ndarray'>      --    441    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/112.png
112
```



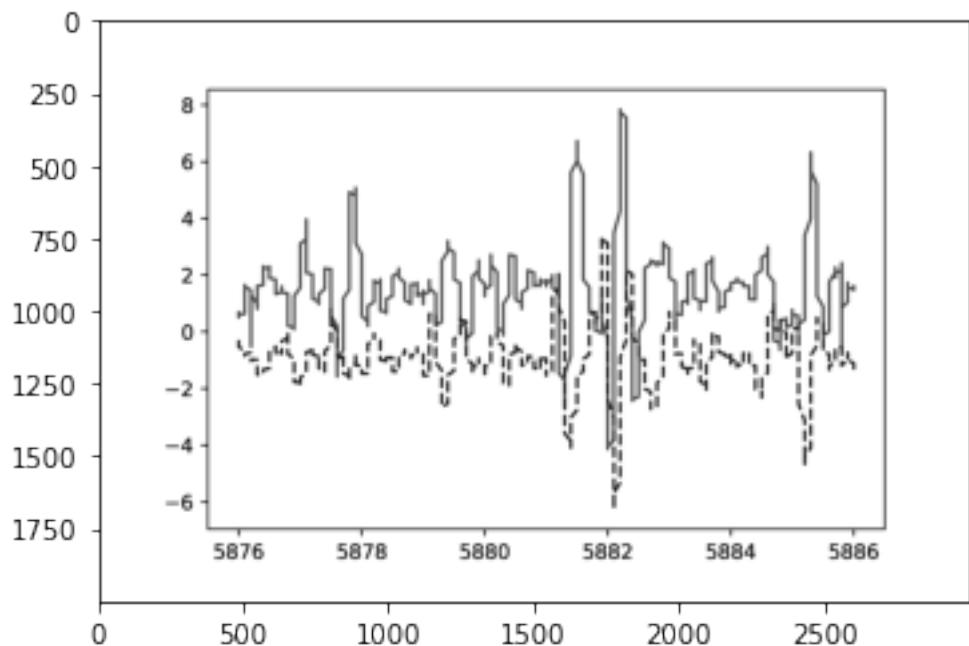
```
<class 'numpy.ndarray'>      --  442   --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/126.png
126
```



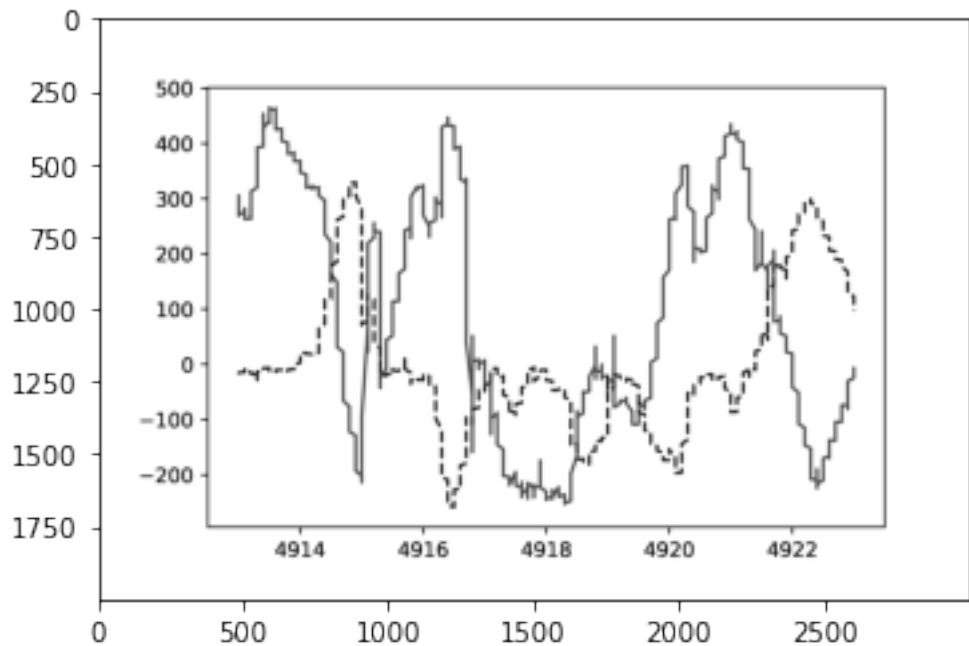
```
<class 'numpy.ndarray'>      --    443    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/57.png
57
```



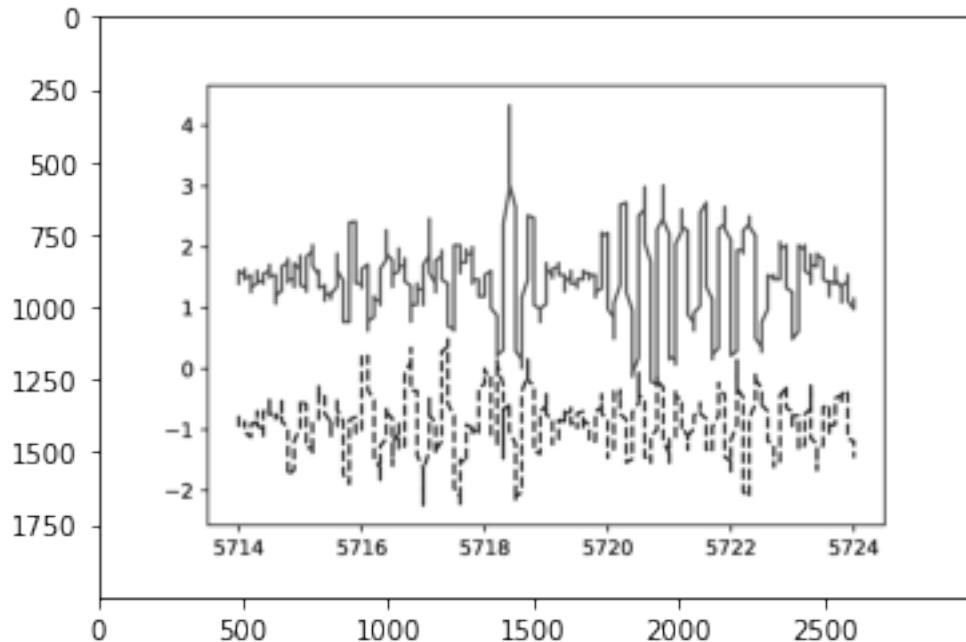
```
<class 'numpy.ndarray'>      --    444    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/255.png
255
```



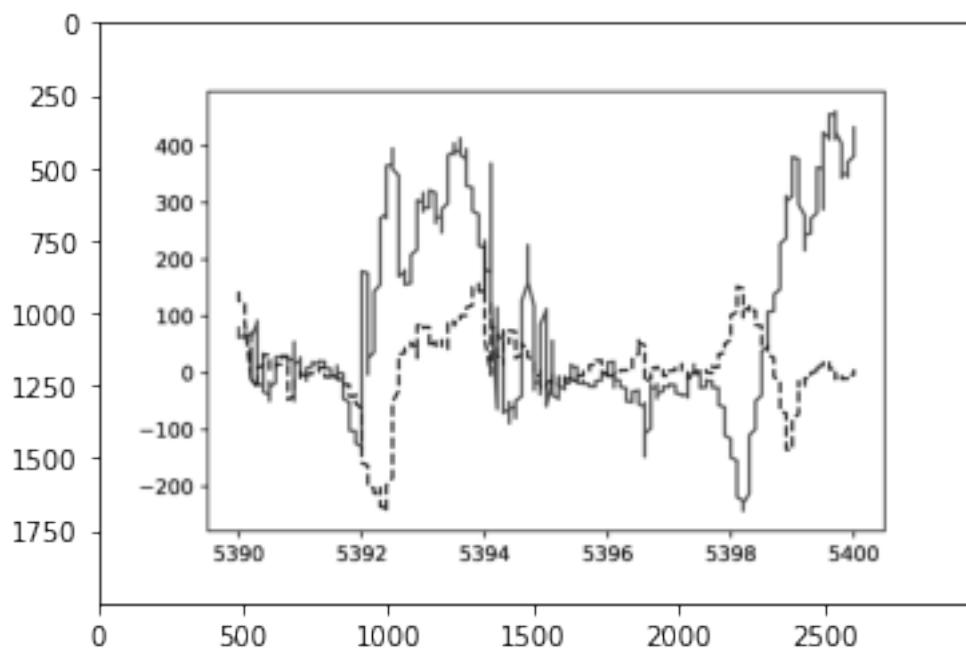
```
<class 'numpy.ndarray'>      --    445    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/148.png
148
```



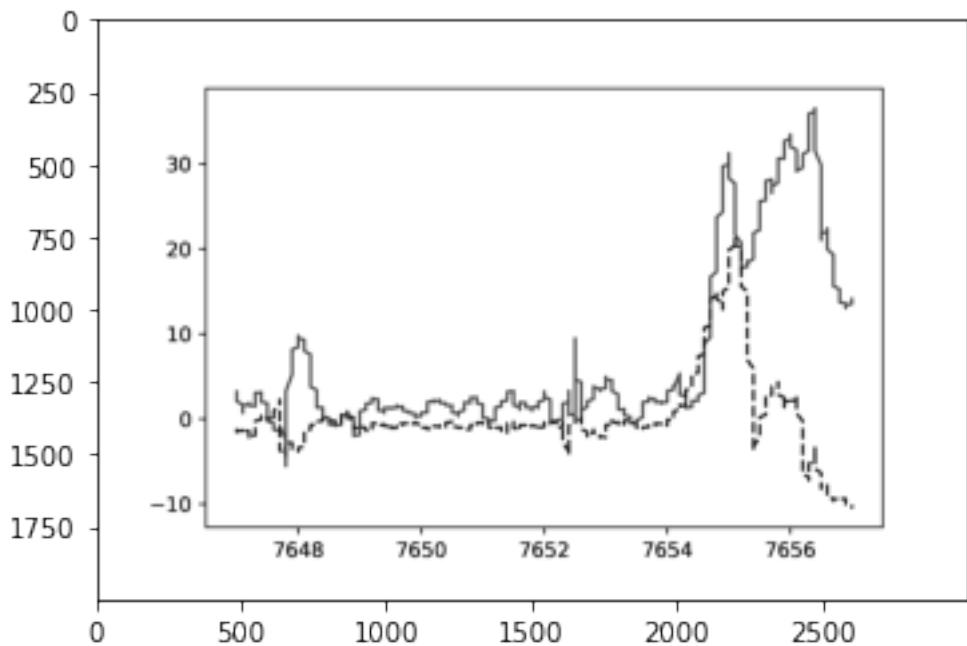
```
<class 'numpy.ndarray'>      --    446    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/237.png
237
```



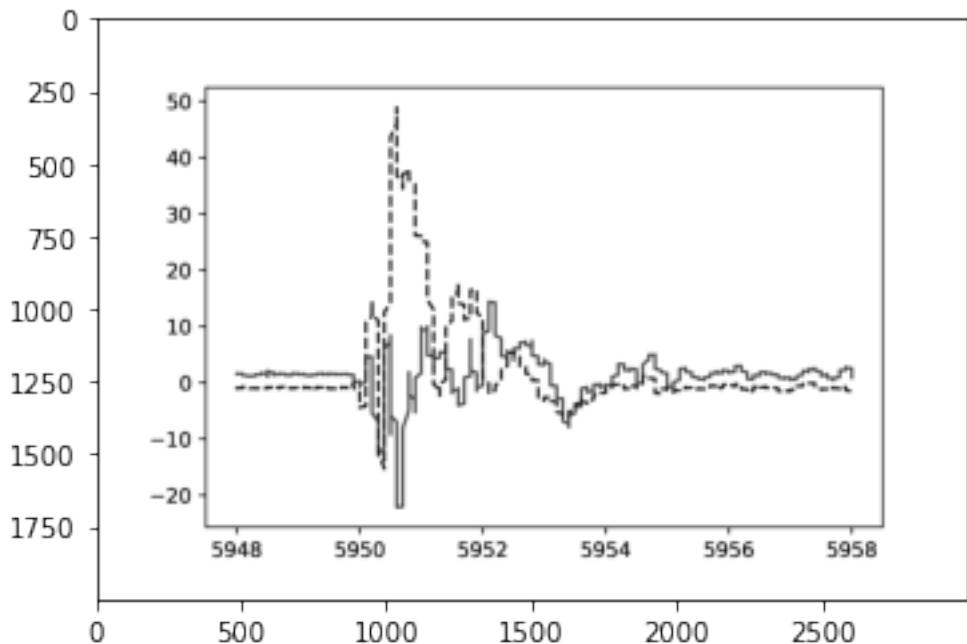
```
<class 'numpy.ndarray'>      --    447    --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/201.png
201
```



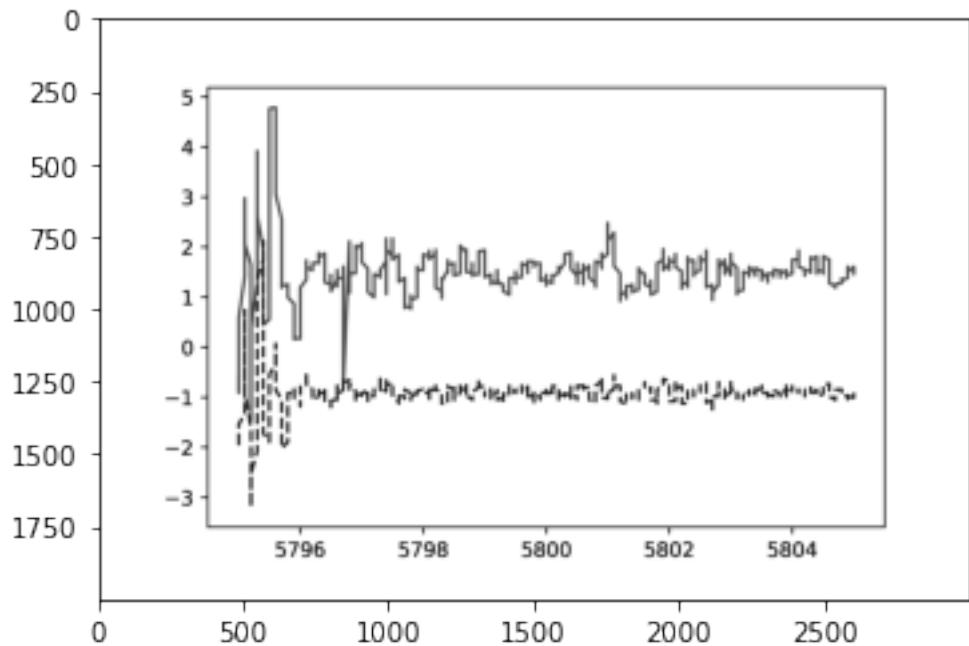
```
<class 'numpy.ndarray'> -- 448 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/397.png
397
```



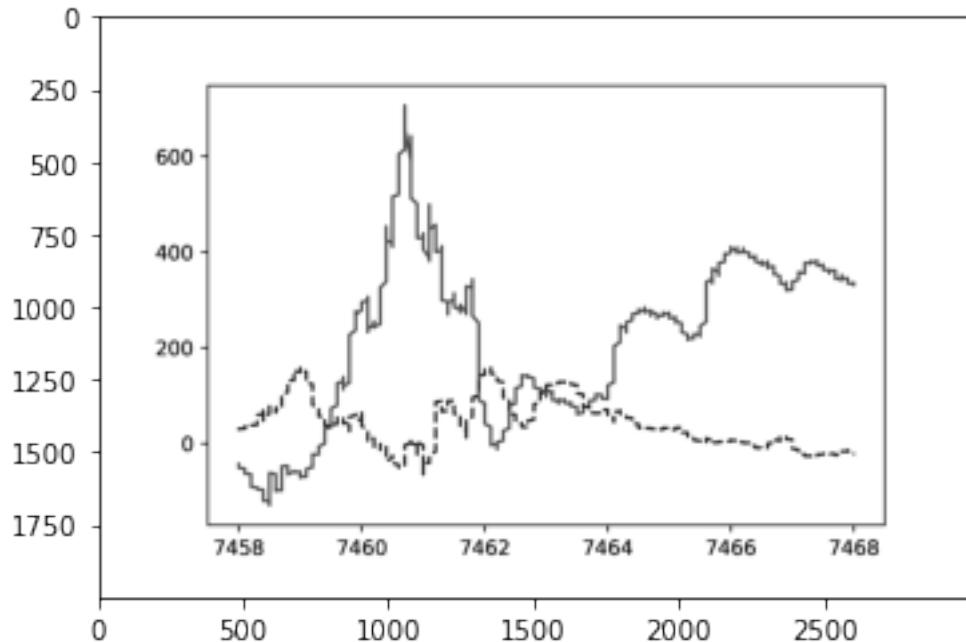
```
<class 'numpy.ndarray'> -- 449 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/263.png
263
```



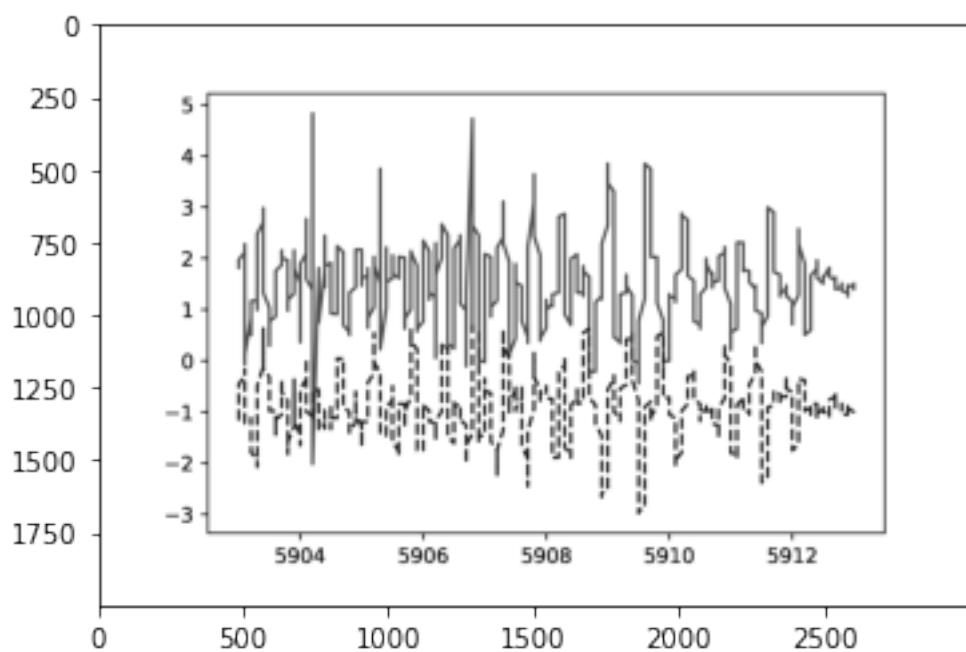
```
<class 'numpy.ndarray'>      --    450    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/246.png
246
```



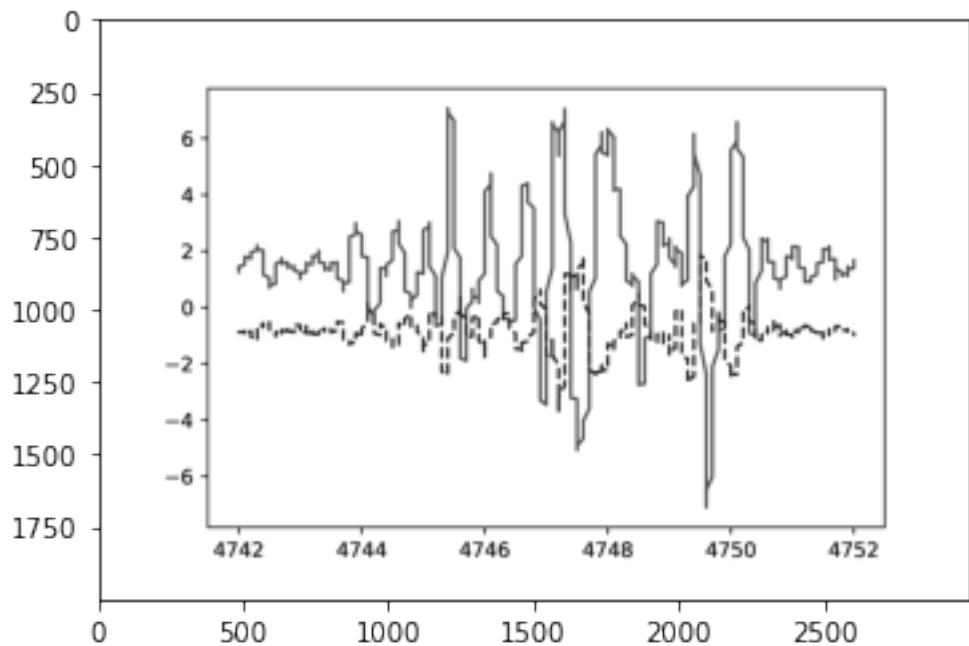
```
<class 'numpy.ndarray'>      --    451    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/376.png
376
```



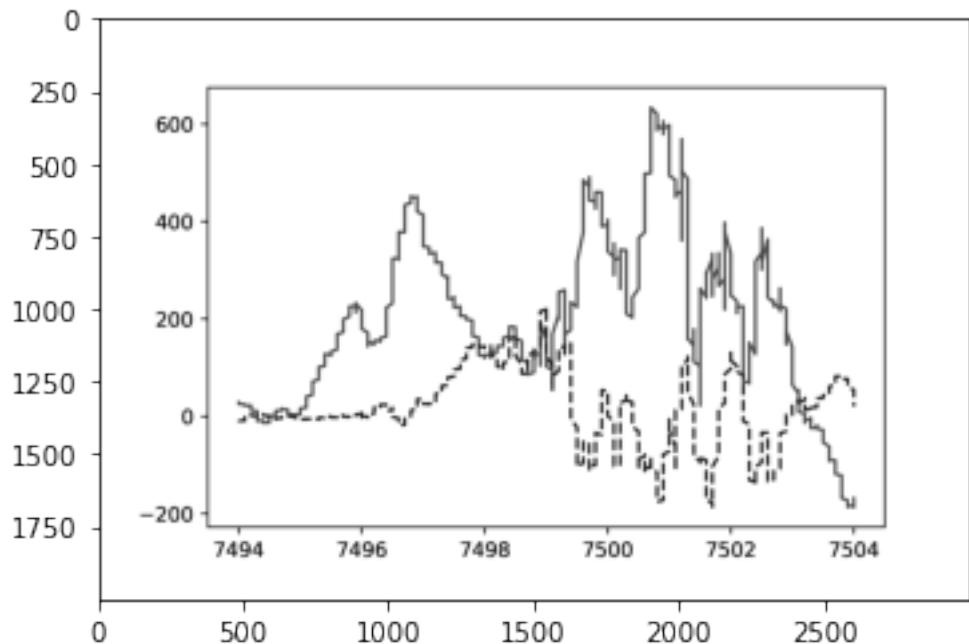
```
<class 'numpy.ndarray'>      --  452   --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/258.png
258
```



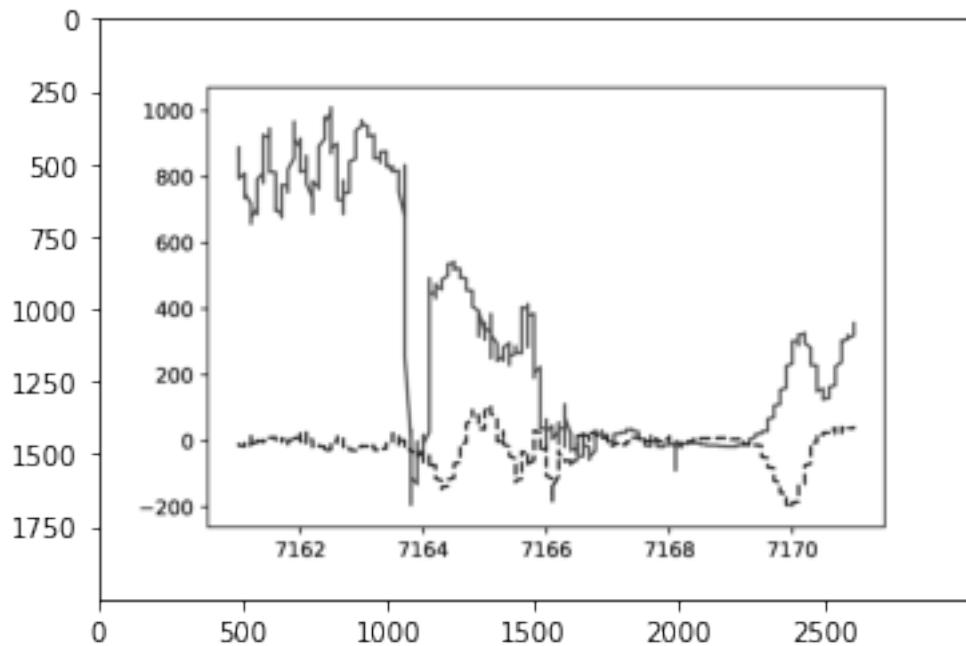
```
<class 'numpy.ndarray'>      --    453    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/129.png
129
```



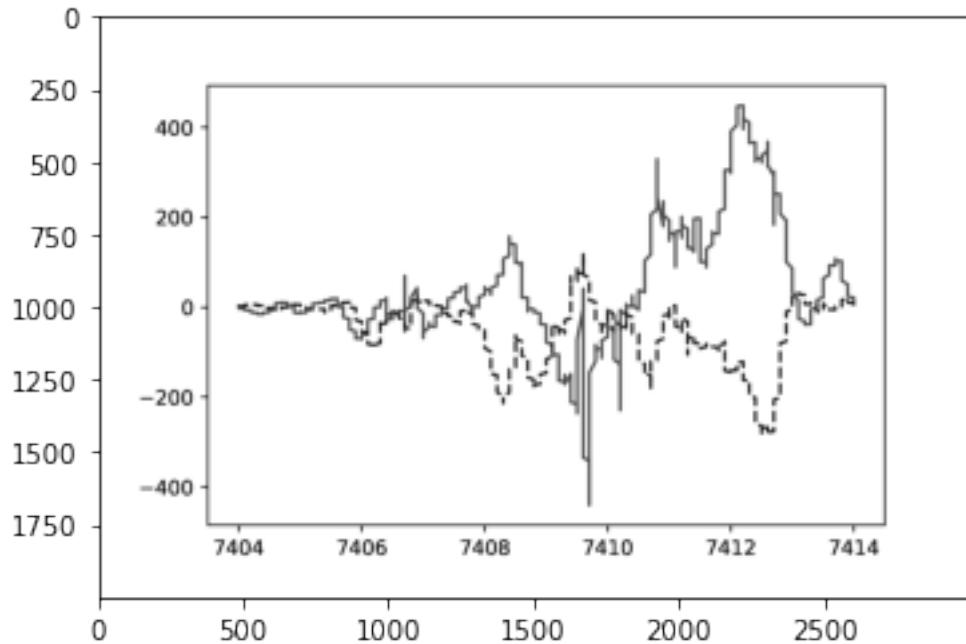
```
<class 'numpy.ndarray'>      --    454    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/380.png
380
```



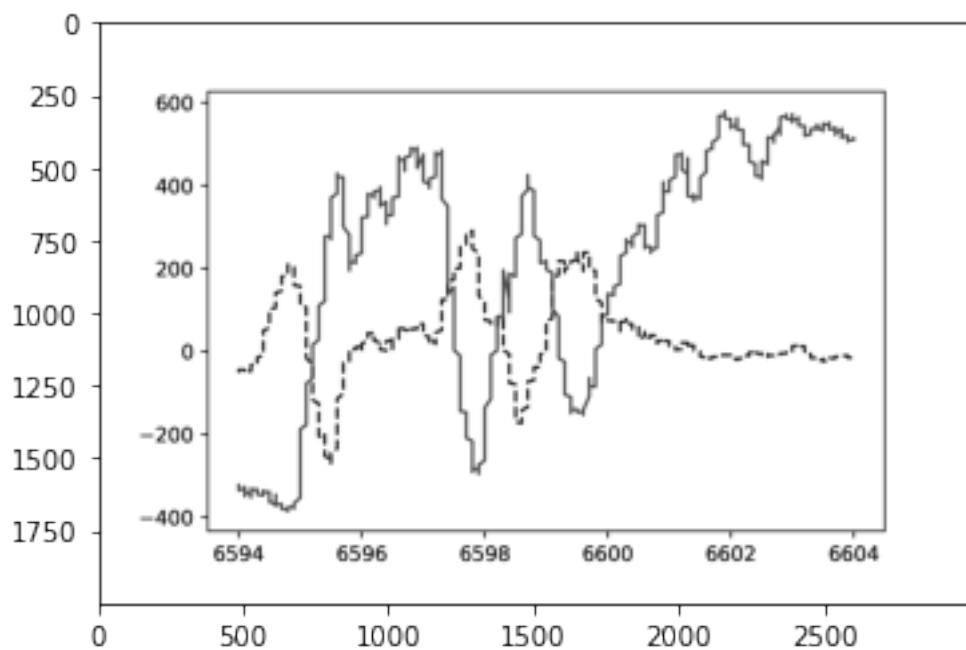
```
<class 'numpy.ndarray'>      --      455      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/343.png
343
```



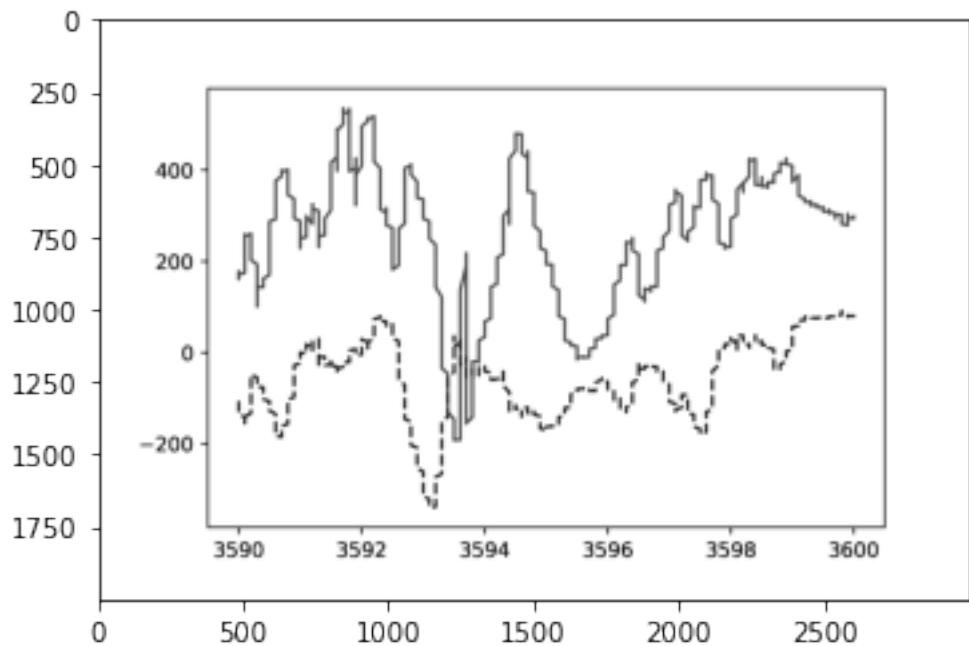
```
<class 'numpy.ndarray'>      --      456      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/370.png
370
```



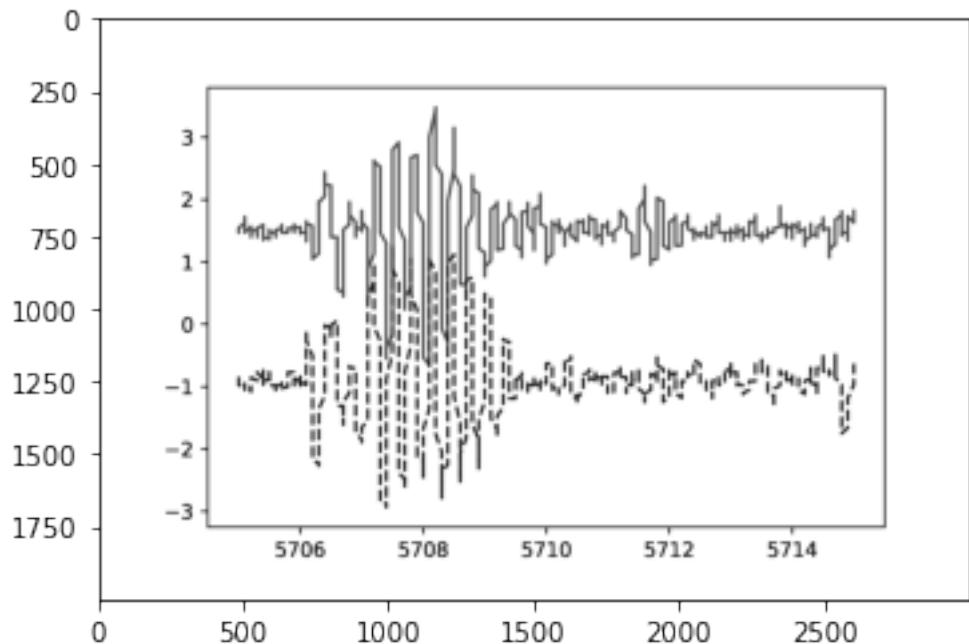
```
<class 'numpy.ndarray'>      --  457   --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/280.png
280
```



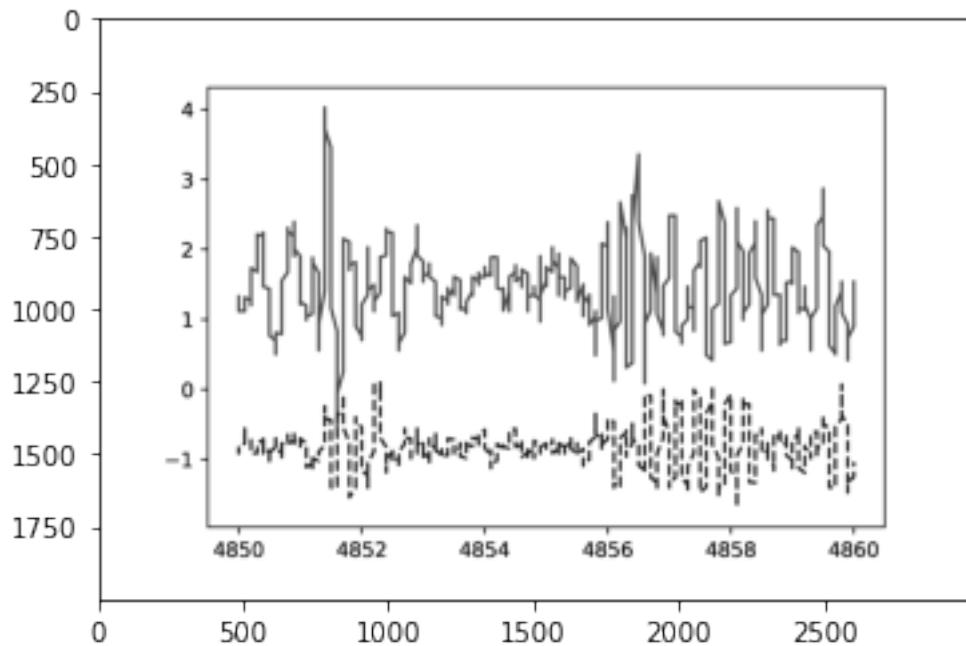
```
<class 'numpy.ndarray'> -- 458 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/1.png
1
```



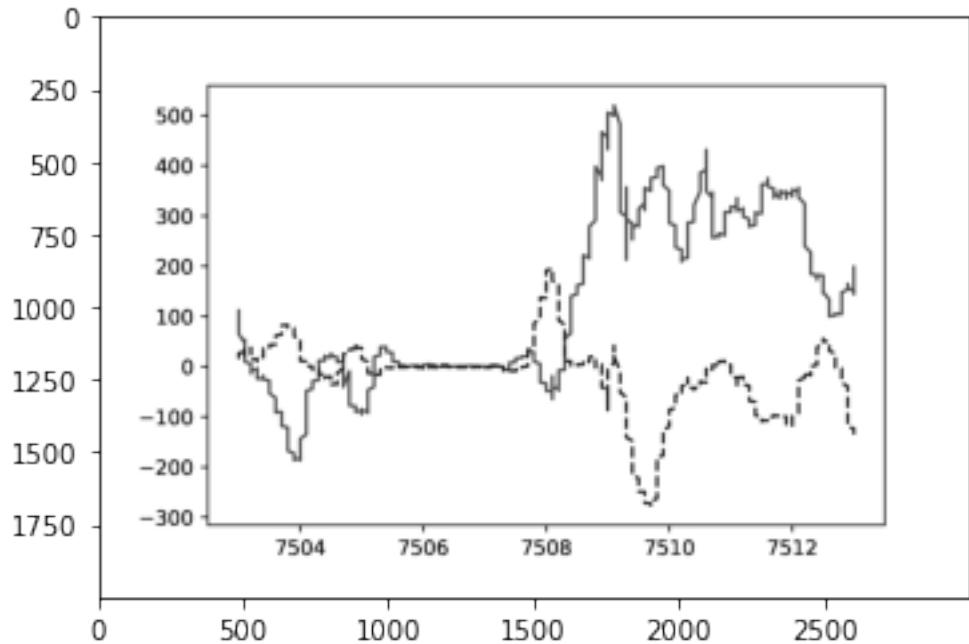
```
<class 'numpy.ndarray'> -- 459 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/236.png
236
```



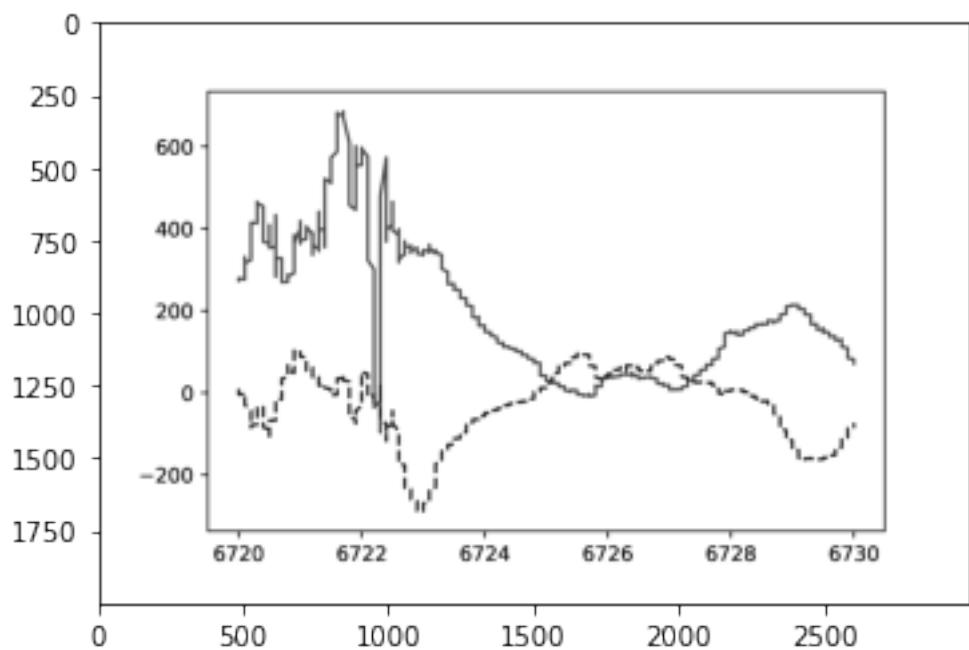
```
<class 'numpy.ndarray'>      --    460    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/141.png
141
```



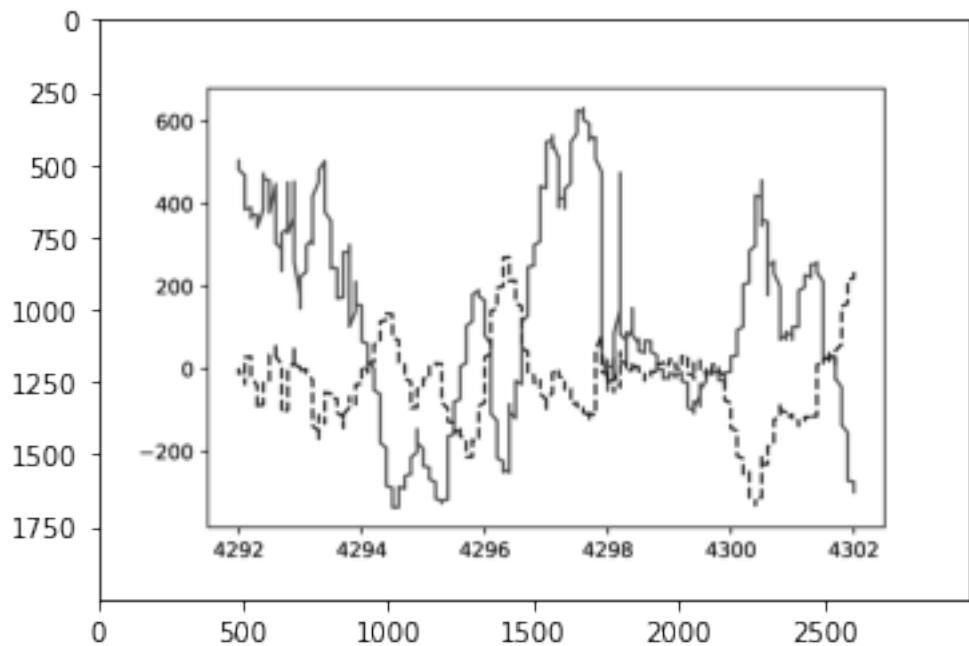
```
<class 'numpy.ndarray'>      --    461    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/381.png
381
```



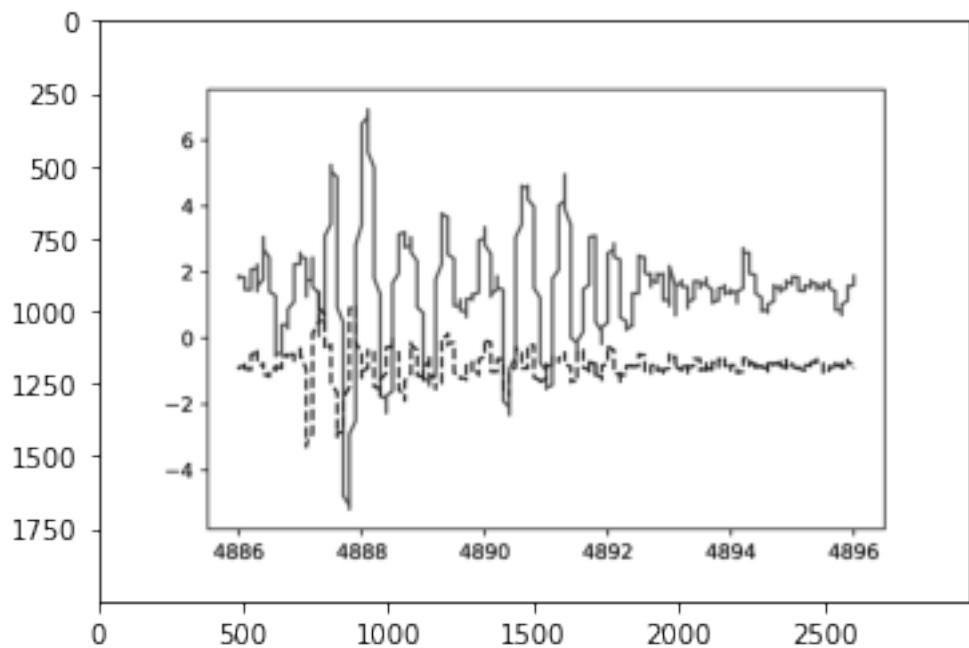
```
<class 'numpy.ndarray'>      --  462   --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/294.png
294
```



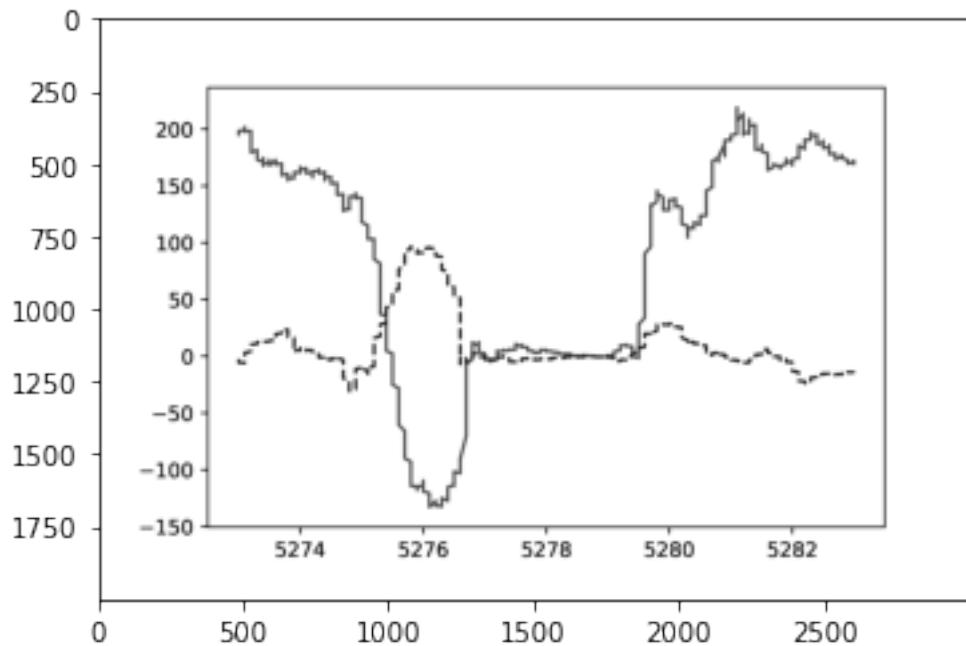
```
<class 'numpy.ndarray'> -- 463 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/79.png
79
```



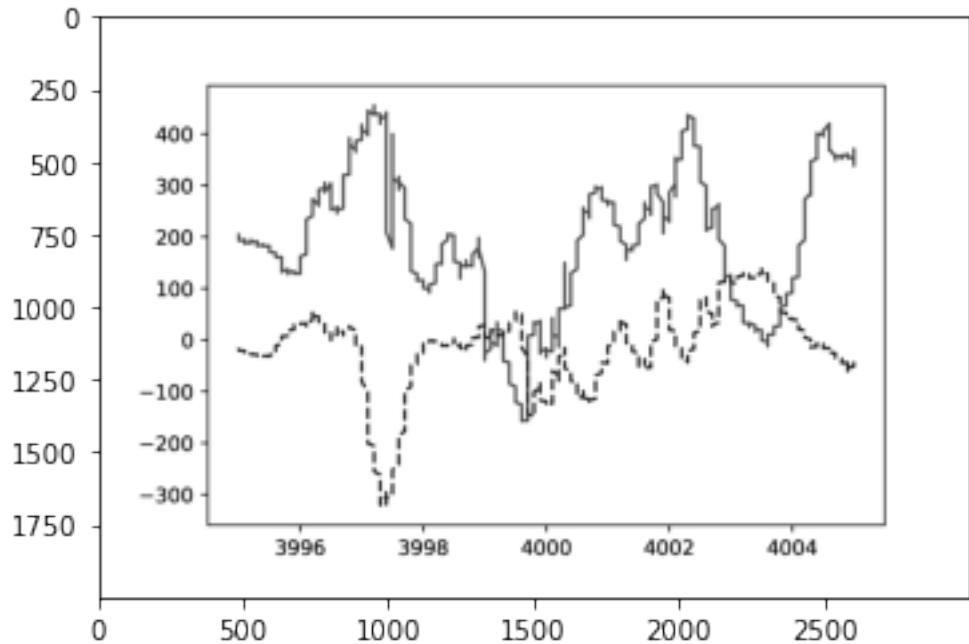
```
<class 'numpy.ndarray'> -- 464 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/145.png
145
```



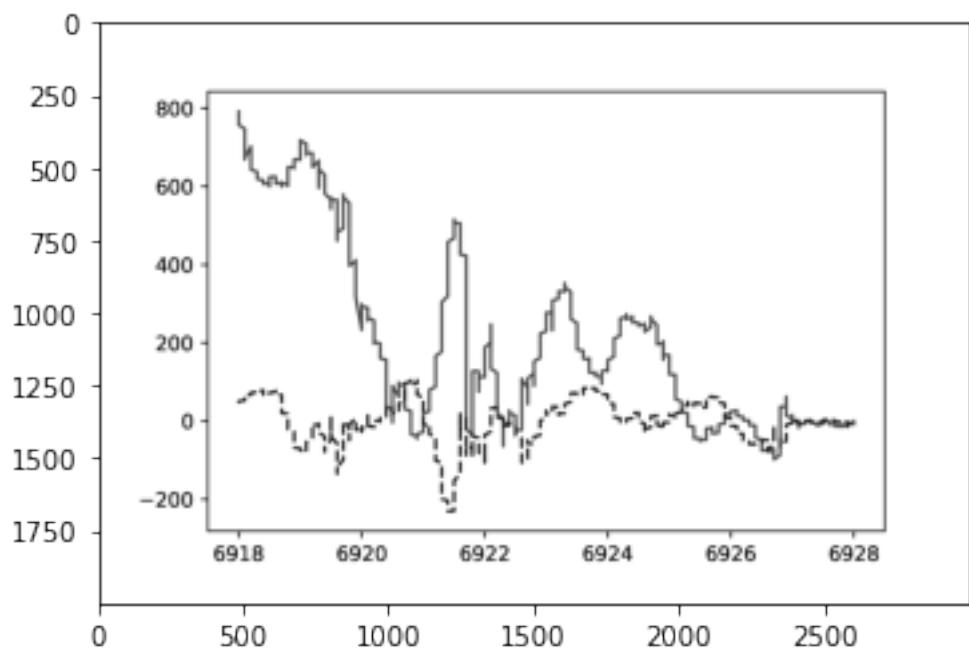
```
<class 'numpy.ndarray'>      --      465      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/188.png
188
```



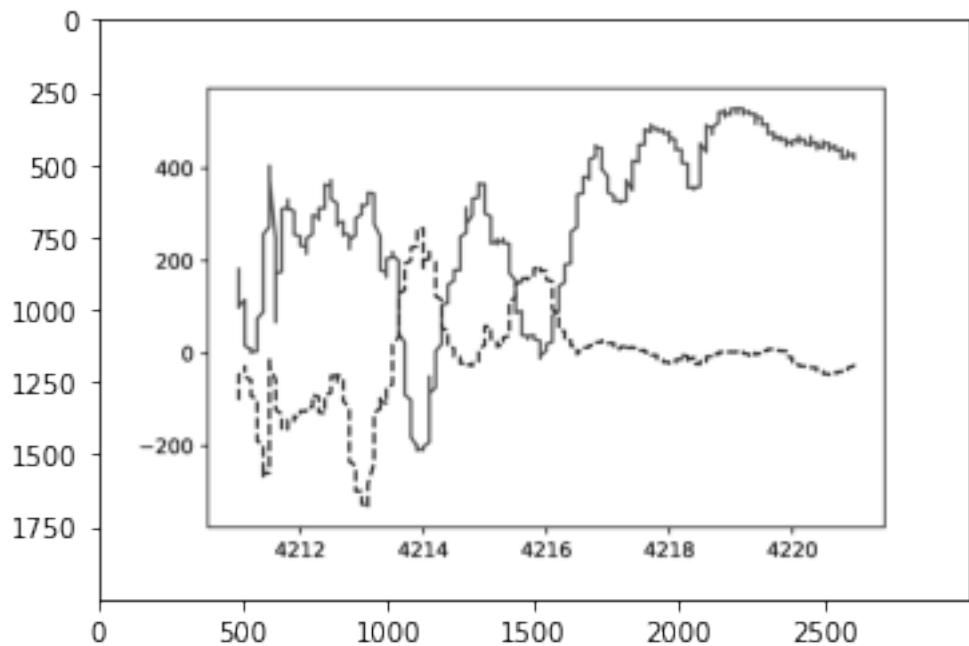
```
<class 'numpy.ndarray'>      --      466      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/46.png
46
```



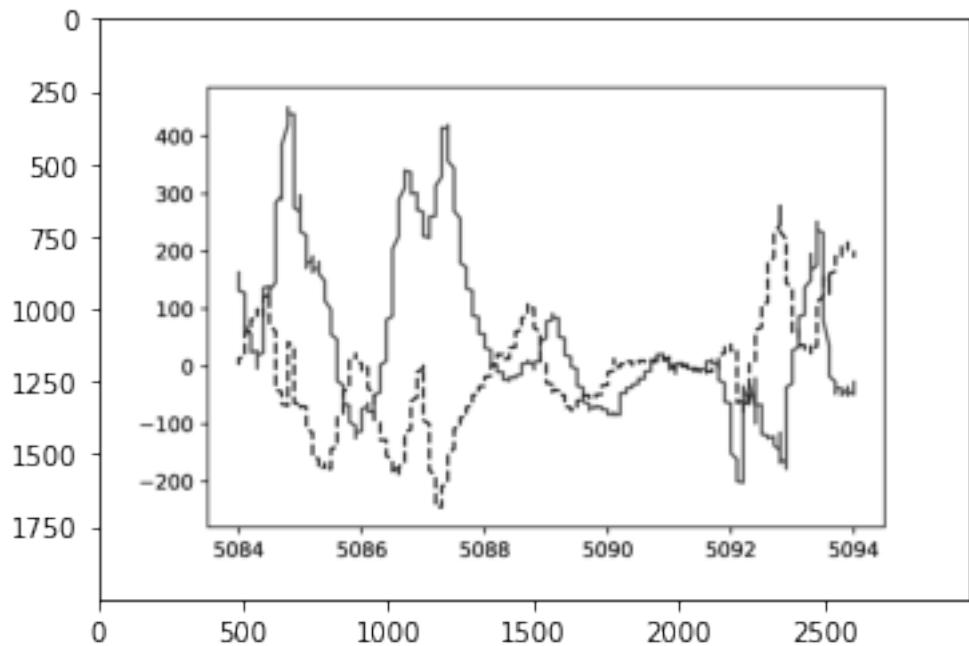
```
<class 'numpy.ndarray'>      --    467    --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/316.png
316
```



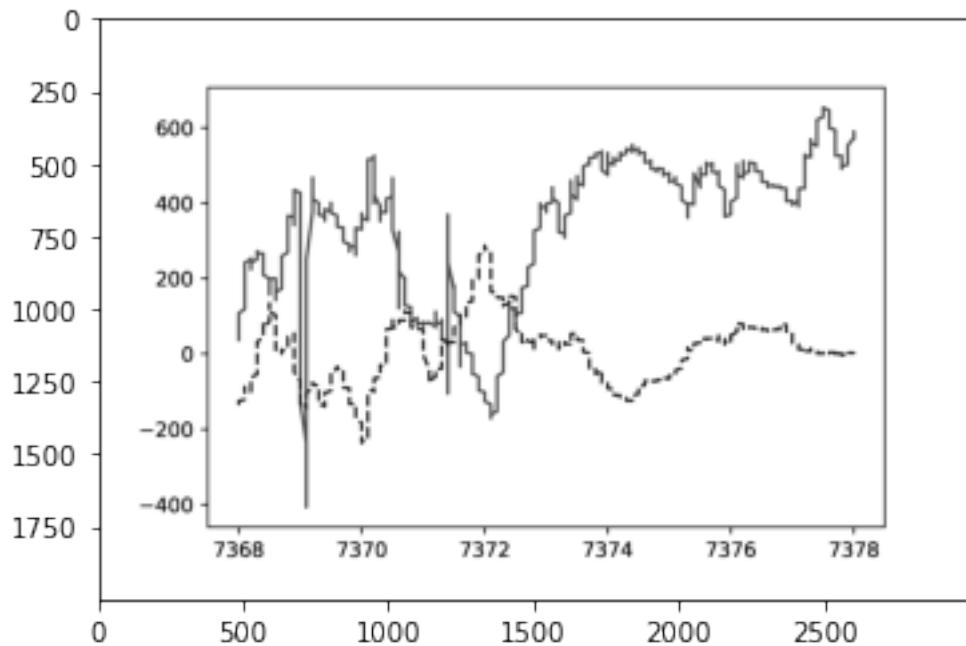
```
<class 'numpy.ndarray'> -- 468 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/70.png
70
```



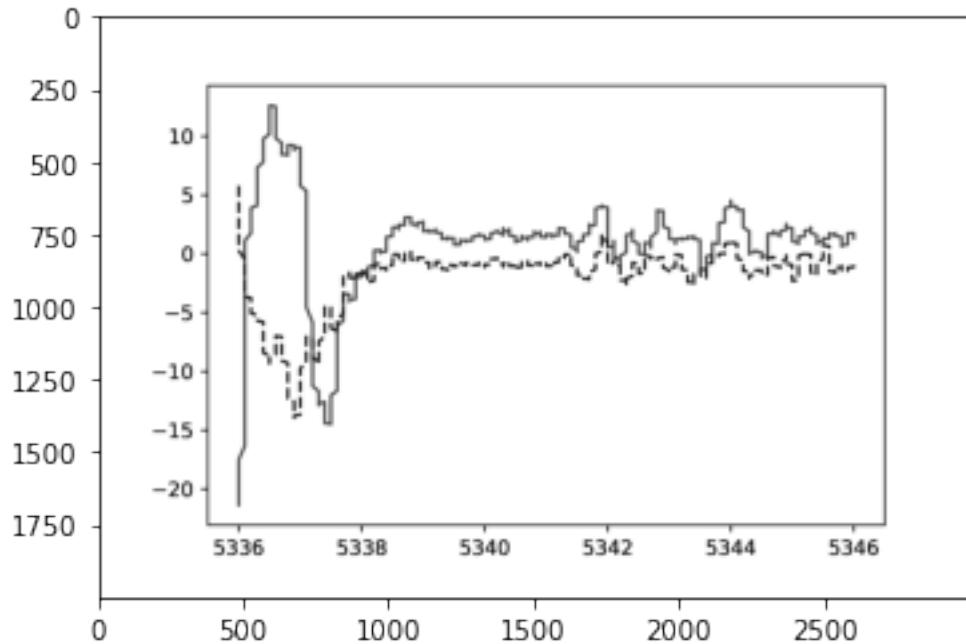
```
<class 'numpy.ndarray'> -- 469 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/167.png
167
```



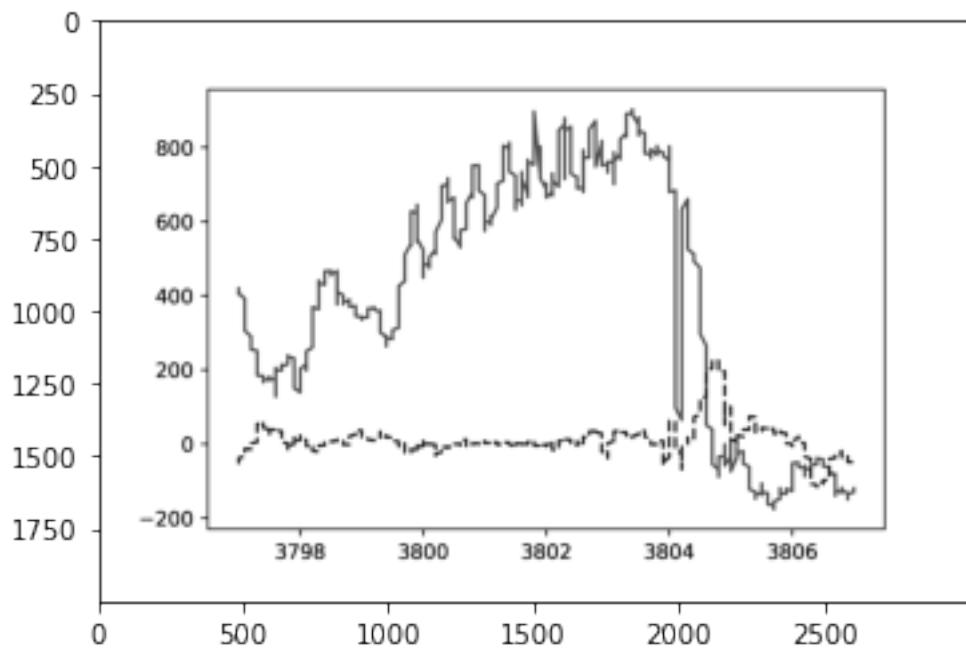
```
<class 'numpy.ndarray'>      --    470    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/366.png
366
```



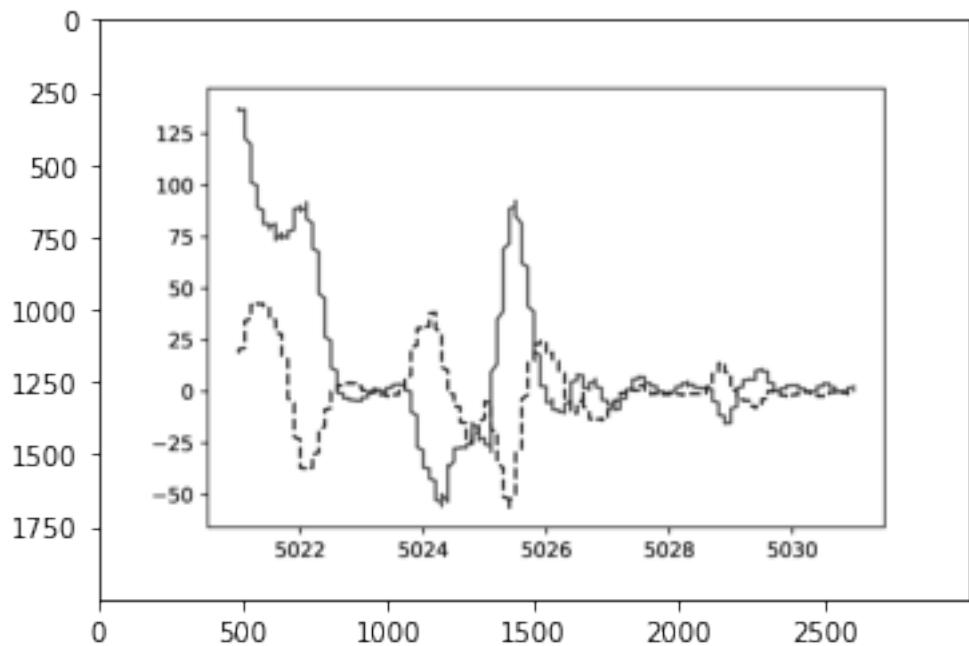
```
<class 'numpy.ndarray'>      --    471    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/195.png
195
```



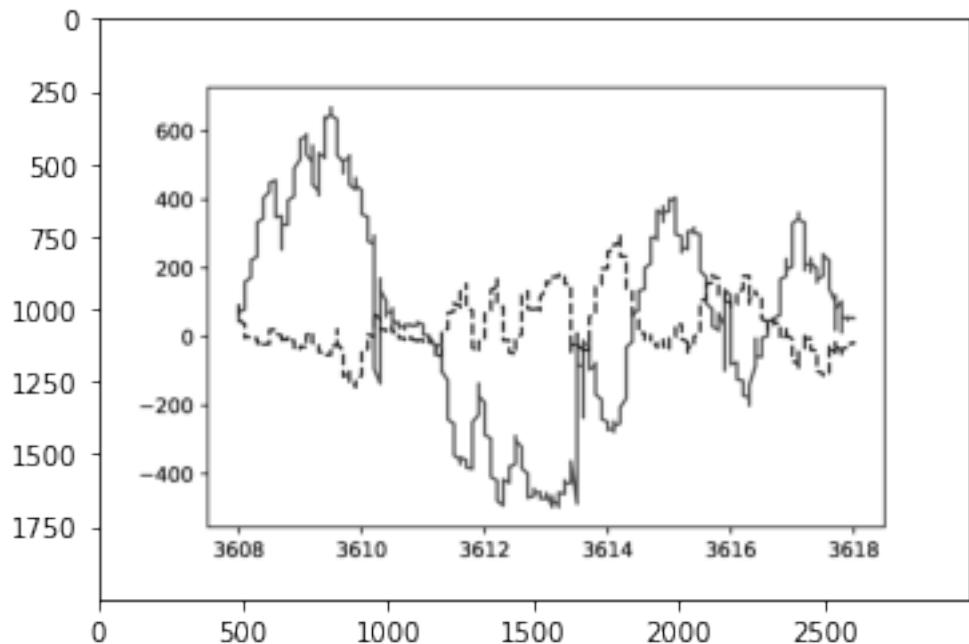
```
<class 'numpy.ndarray'>      --    472    --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/24.png
24
```



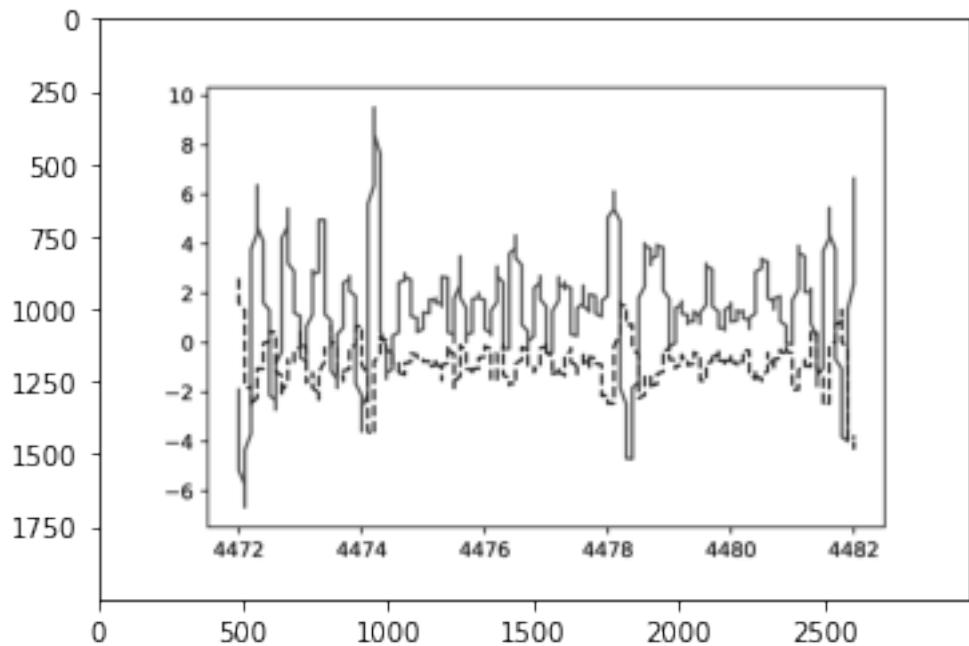
```
<class 'numpy.ndarray'> -- 473 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/160.png
160
```



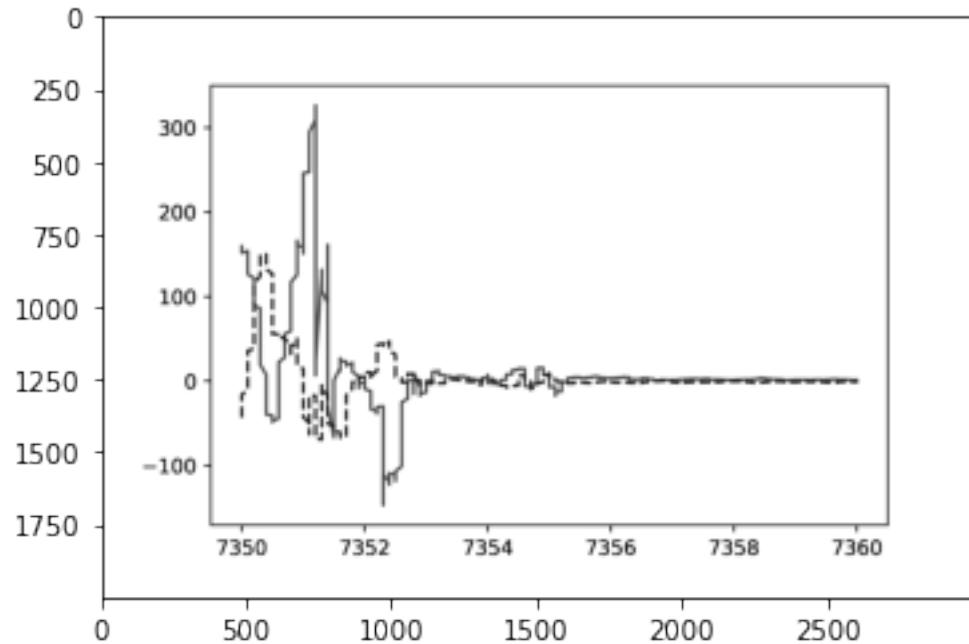
```
<class 'numpy.ndarray'> -- 474 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/3.png
3
```



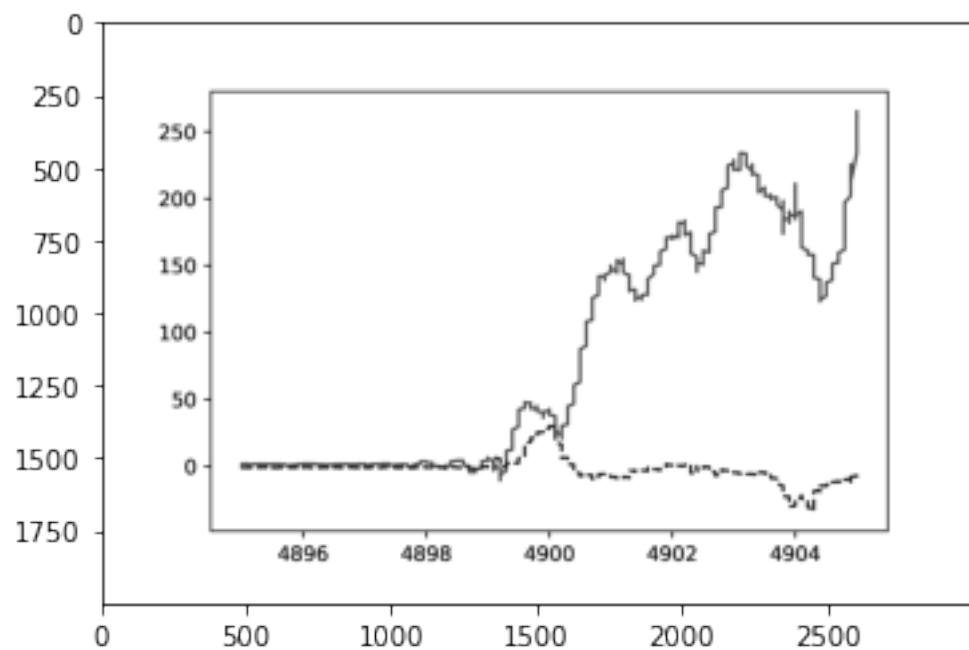
```
<class 'numpy.ndarray'>      --    475    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/99.png
99
```



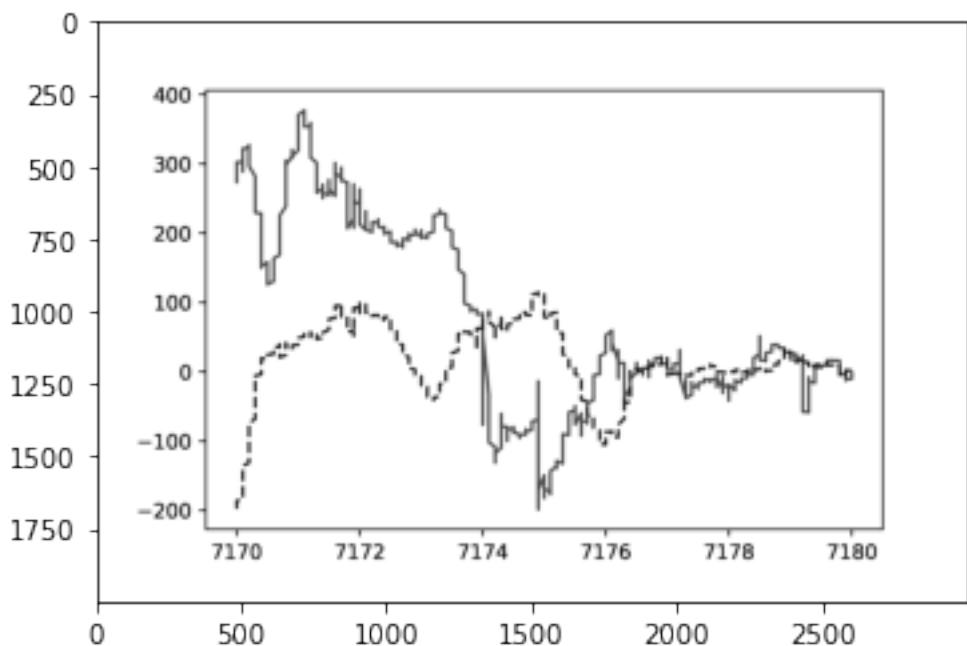
```
<class 'numpy.ndarray'>      --    476    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/364.png
364
```



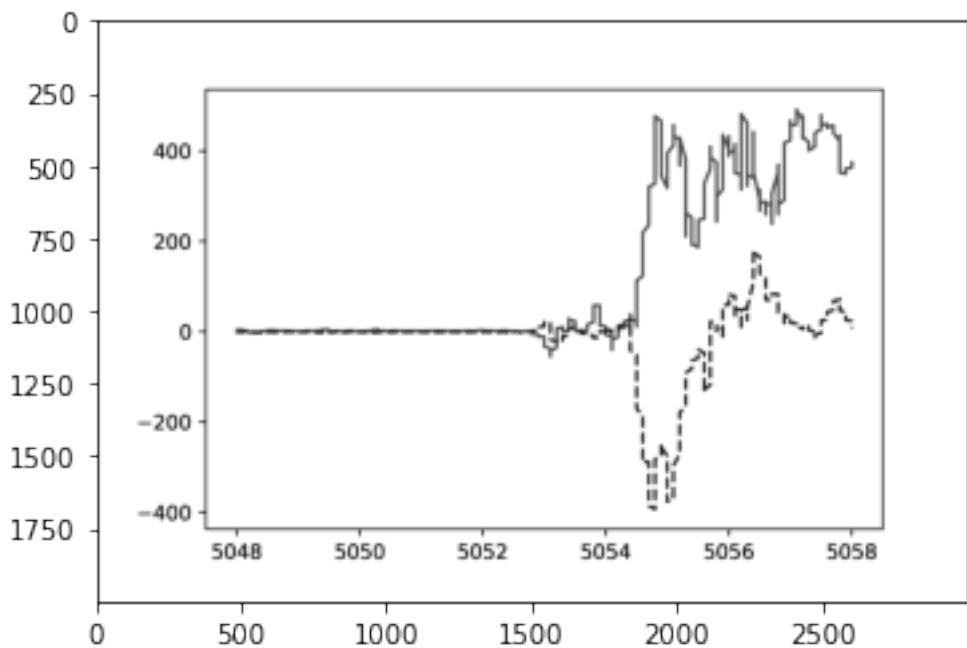
```
<class 'numpy.ndarray'>      --  477   --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/146.png
146
```



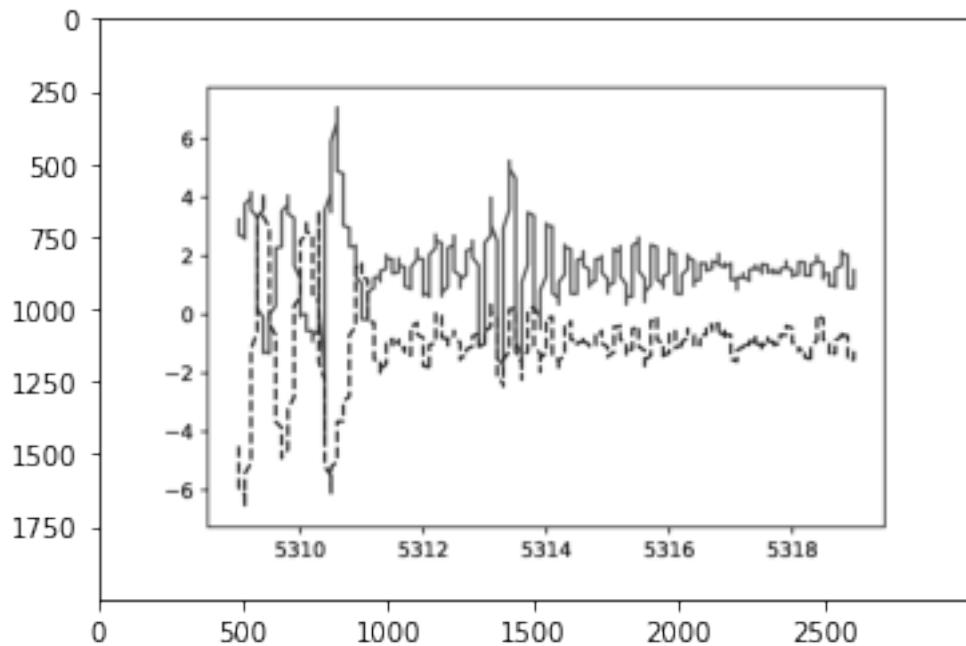
```
<class 'numpy.ndarray'> -- 478 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/344.png
344
```



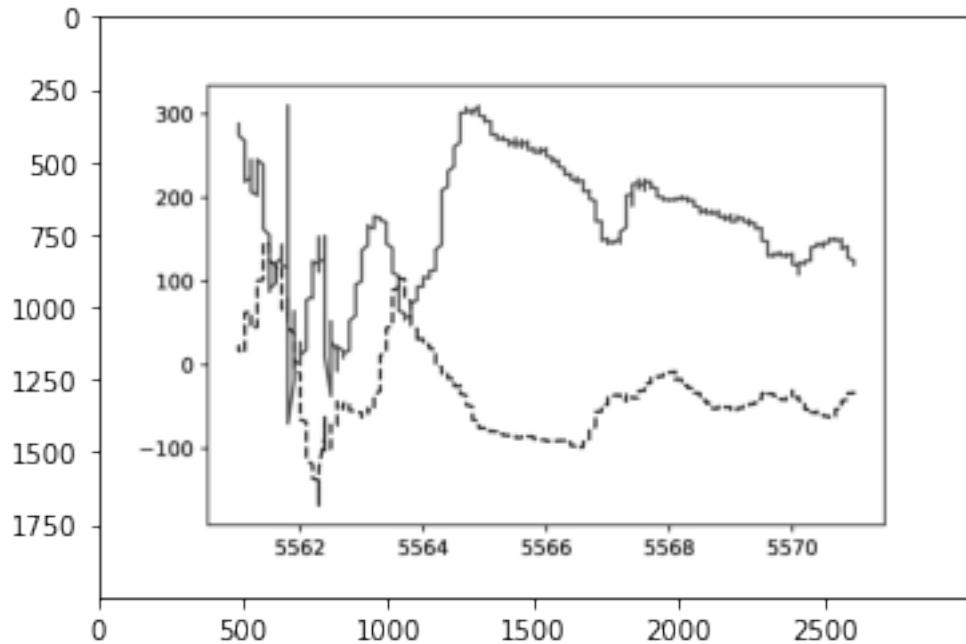
```
<class 'numpy.ndarray'> -- 479 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/163.png
163
```



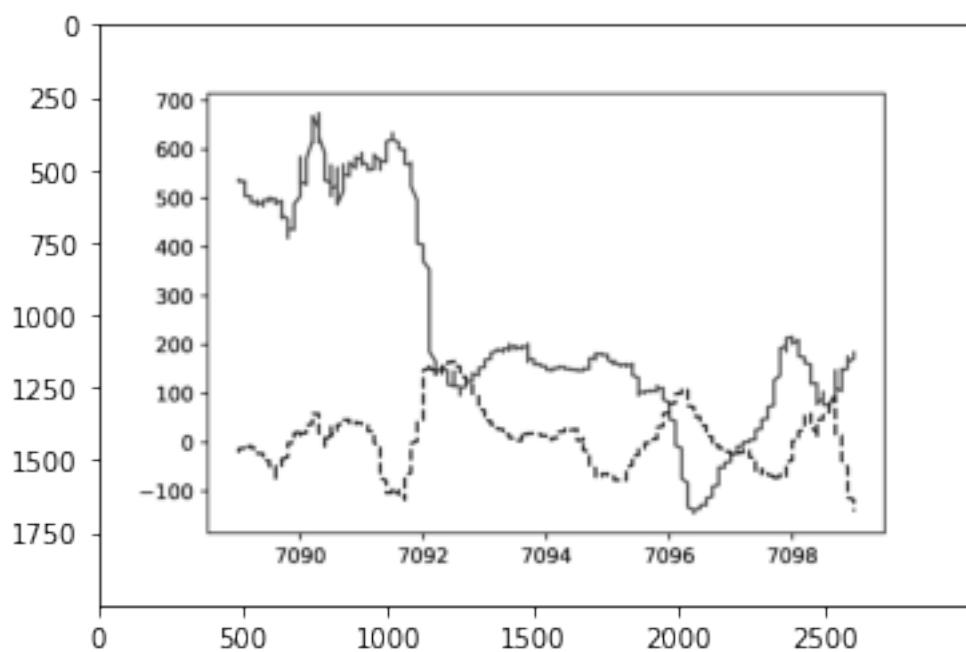
```
<class 'numpy.ndarray'>      --    480    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/192.png
192
```



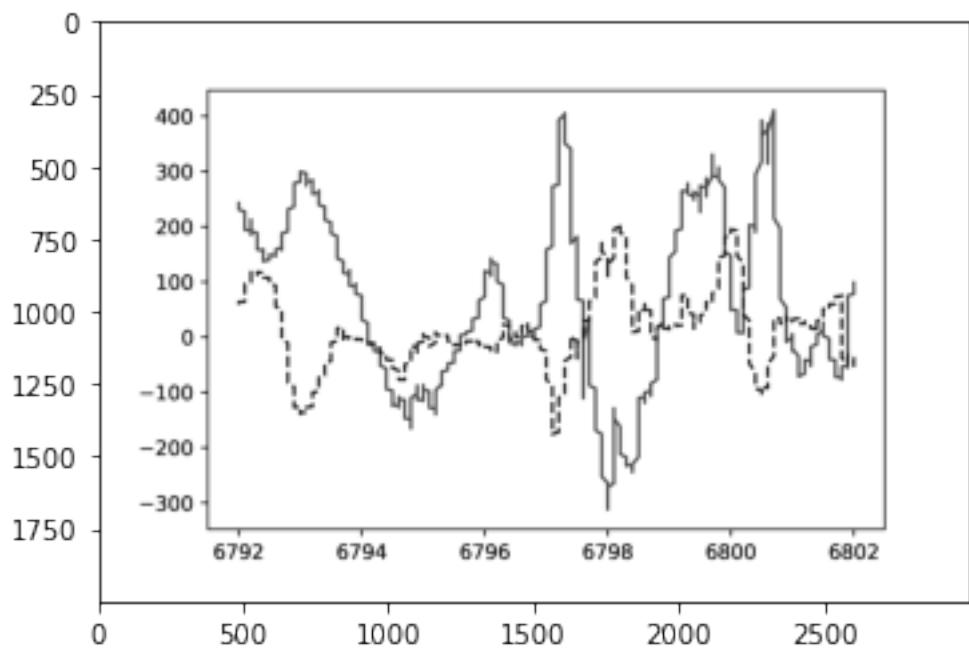
```
<class 'numpy.ndarray'>      --    481    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/220.png
220
```



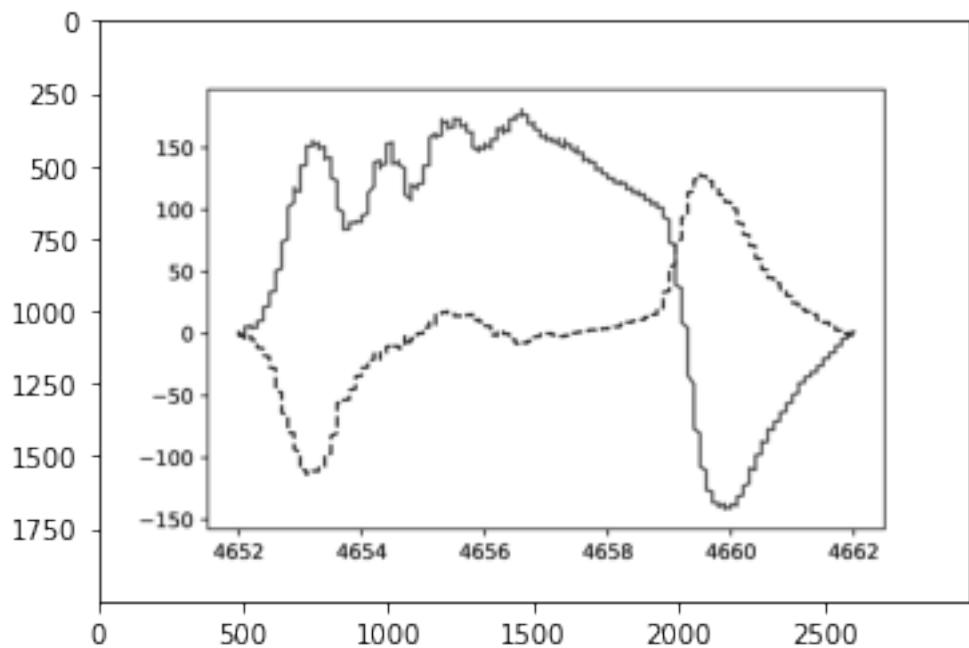
```
<class 'numpy.ndarray'>      --    482    --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/335.png
335
```



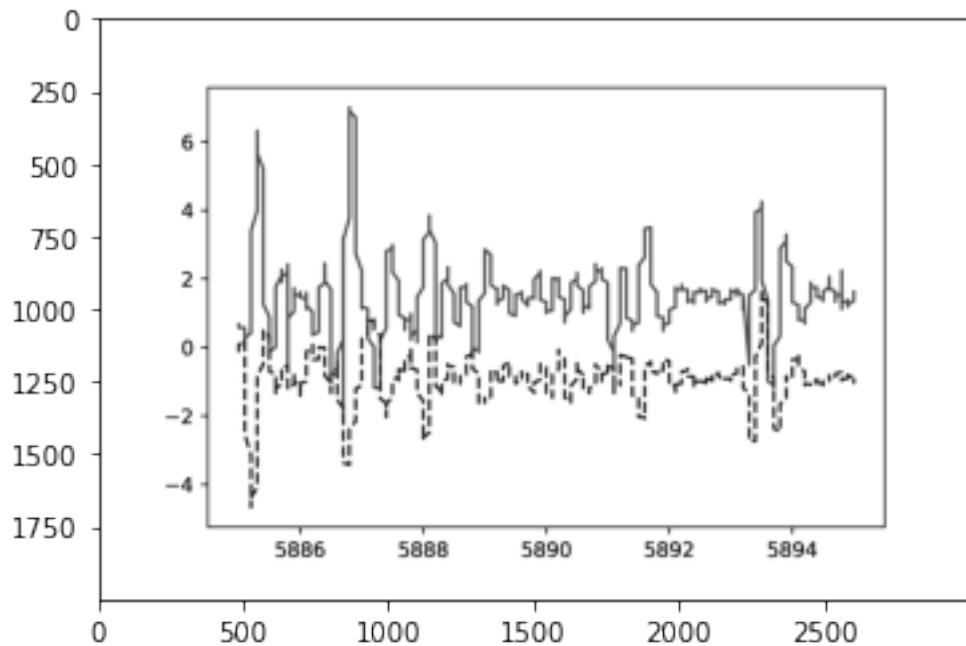
```
<class 'numpy.ndarray'> -- 483 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/302.png
302
```



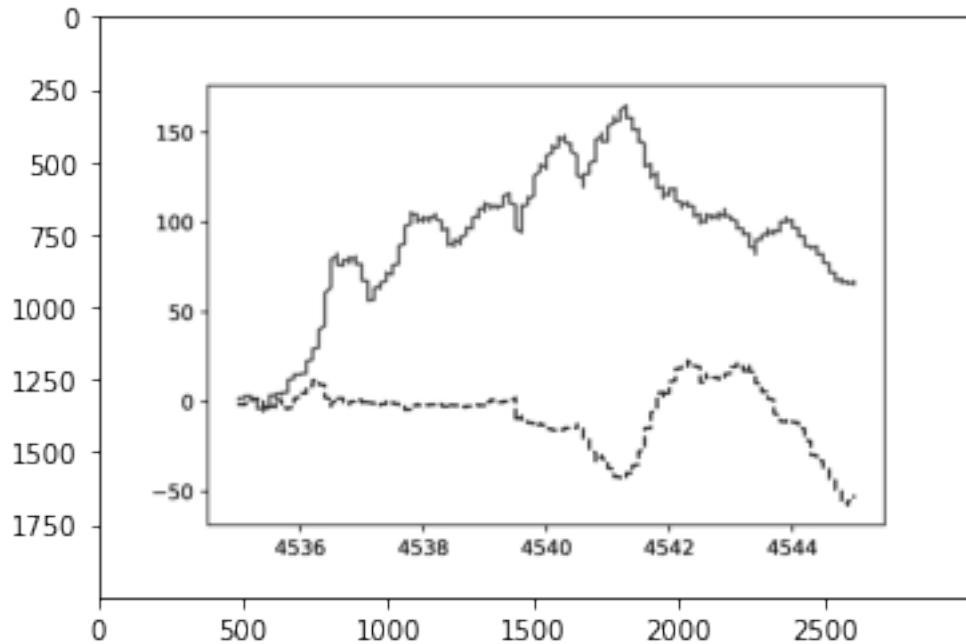
```
<class 'numpy.ndarray'> -- 484 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/119.png
119
```



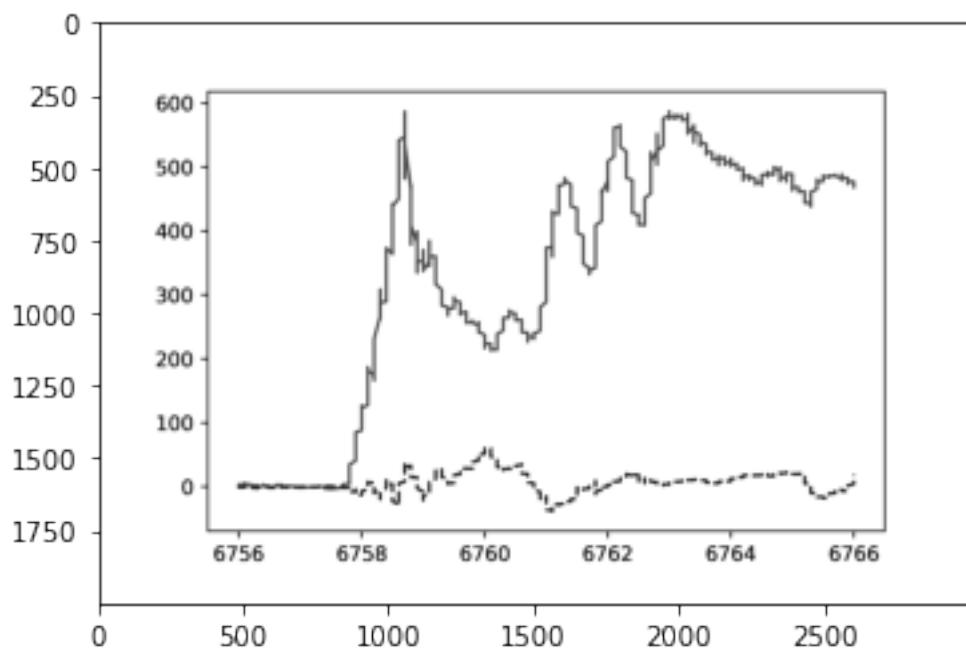
```
<class 'numpy.ndarray'>      --    485    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/256.png
256
```



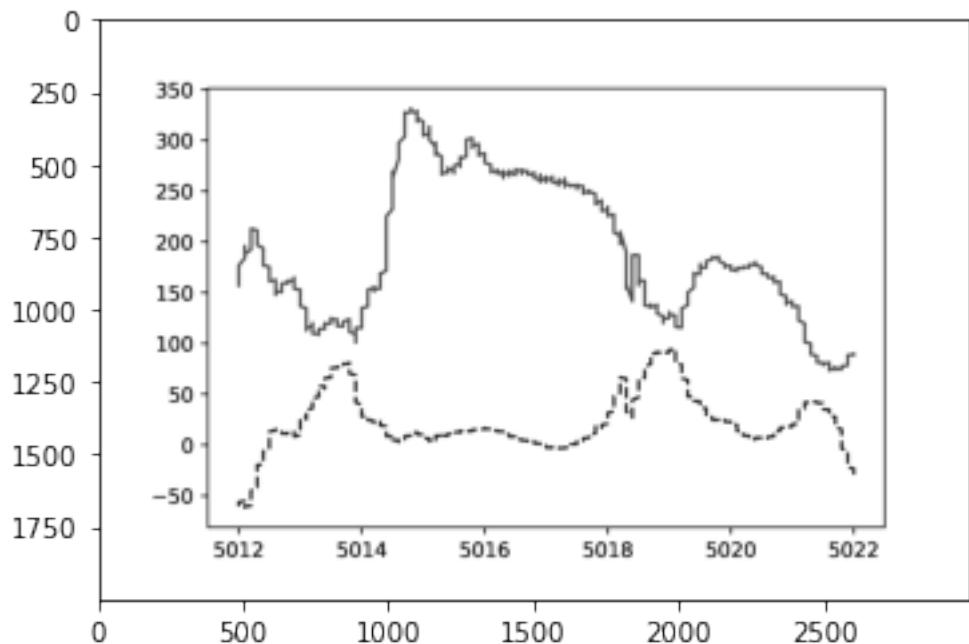
```
<class 'numpy.ndarray'>      --    486    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/106.png
106
```



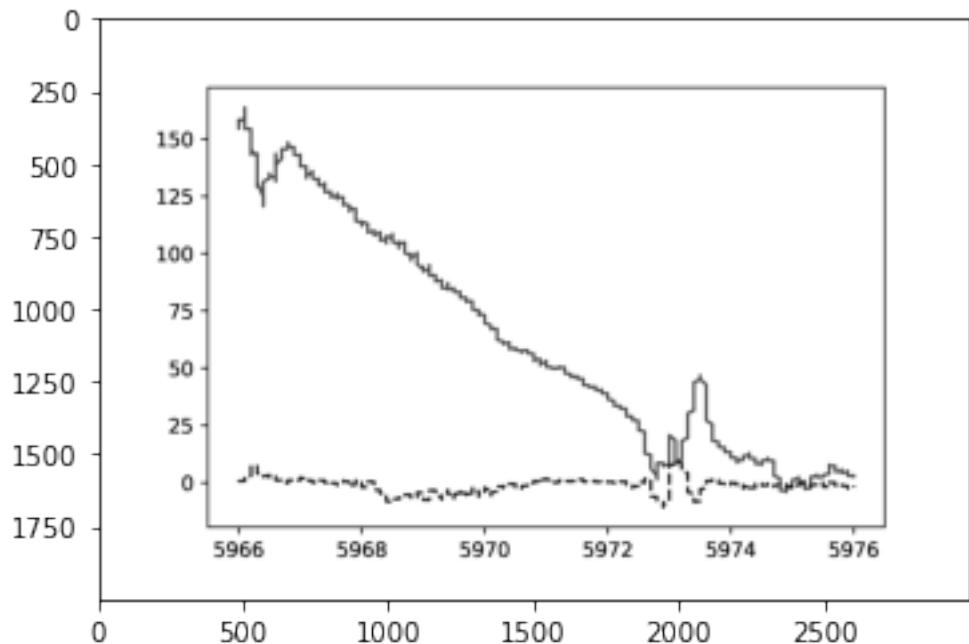
```
<class 'numpy.ndarray'>      -- 487  --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/298.png
298
```



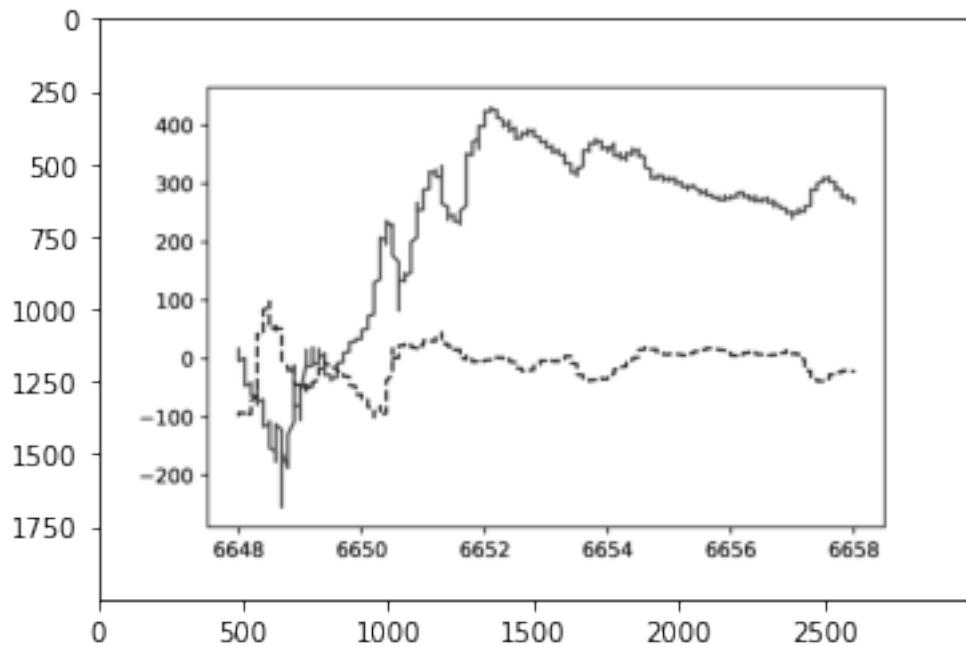
```
<class 'numpy.ndarray'>      --    488    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/159.png
159
```



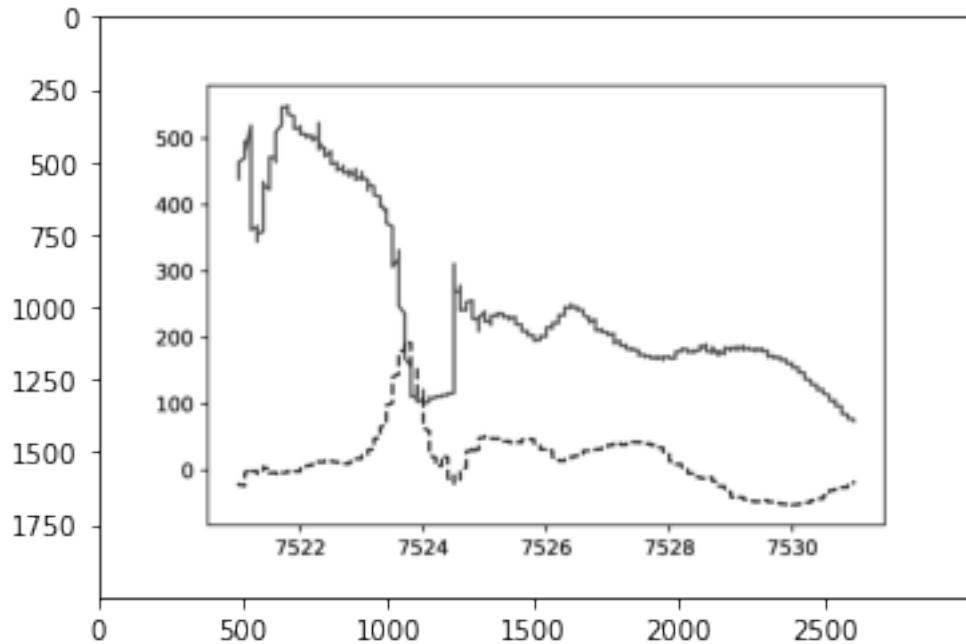
```
<class 'numpy.ndarray'>      --    489    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/265.png
265
```



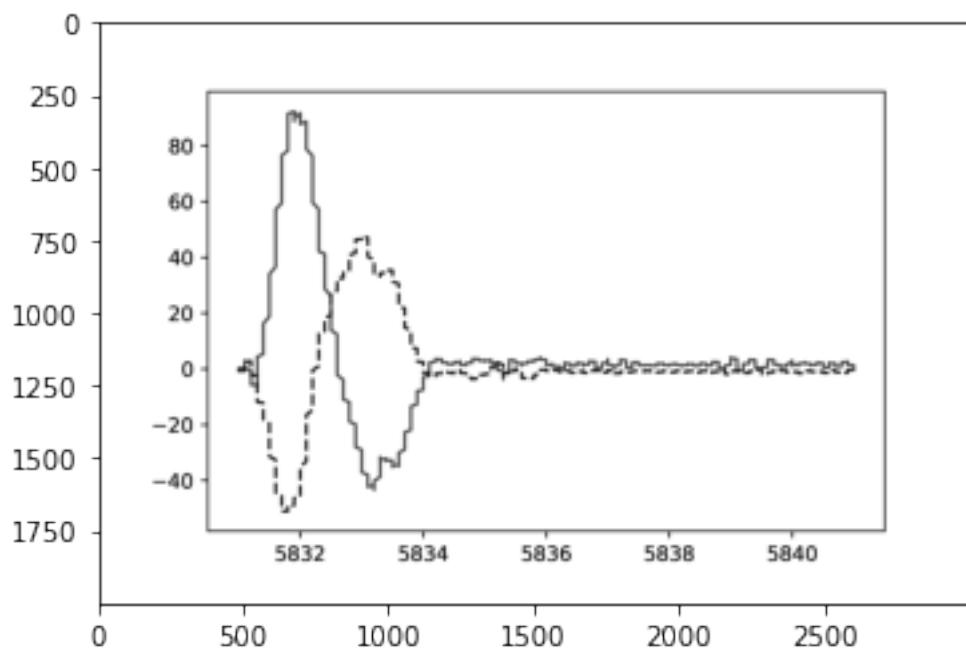
```
<class 'numpy.ndarray'>      --    490    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/286.png
286
```



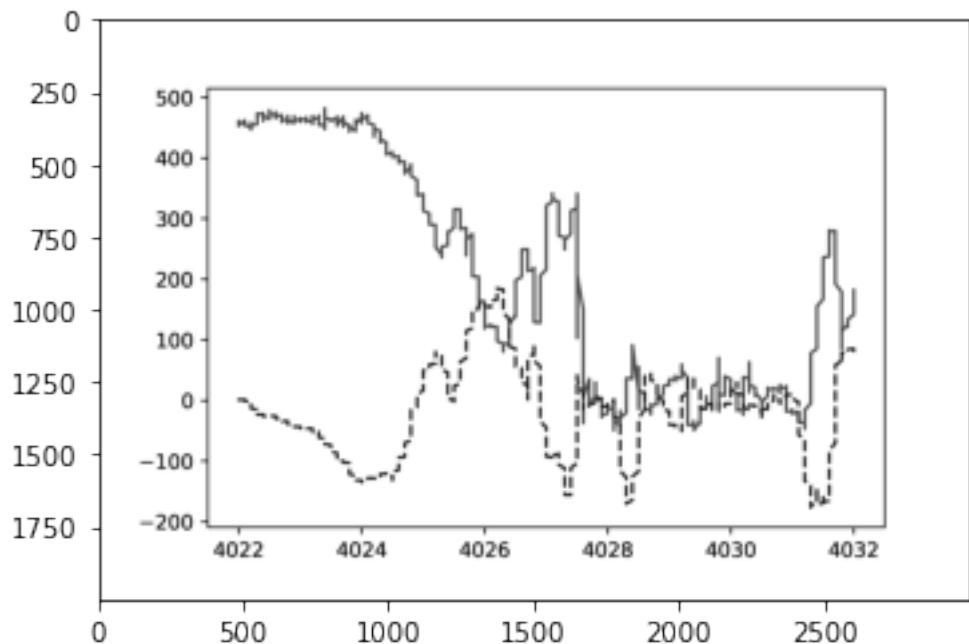
```
<class 'numpy.ndarray'>      --    491    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/383.png
383
```



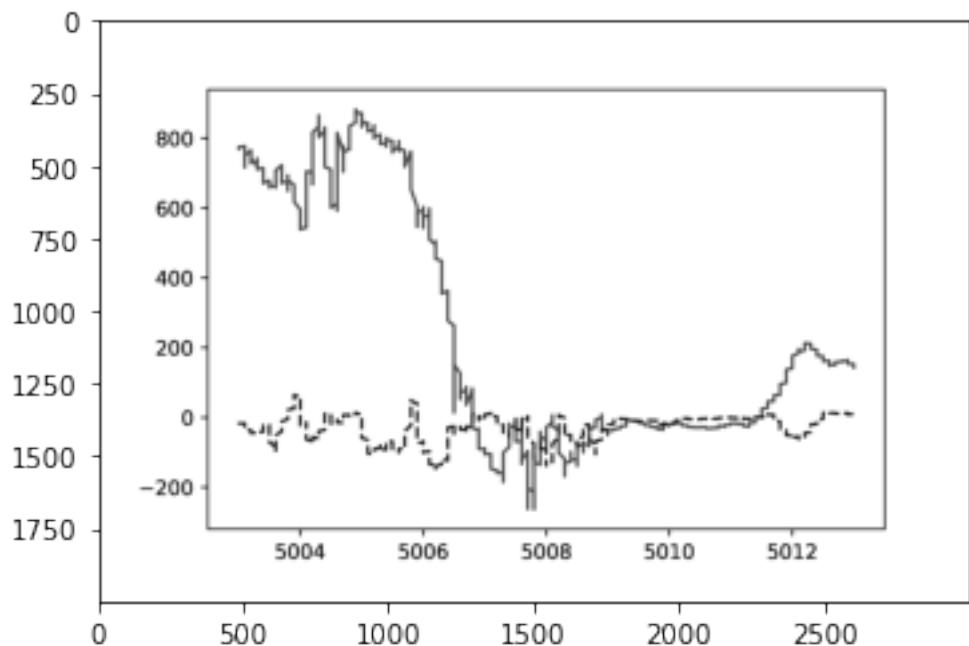
```
<class 'numpy.ndarray'>      --  492   --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/250.png
250
```



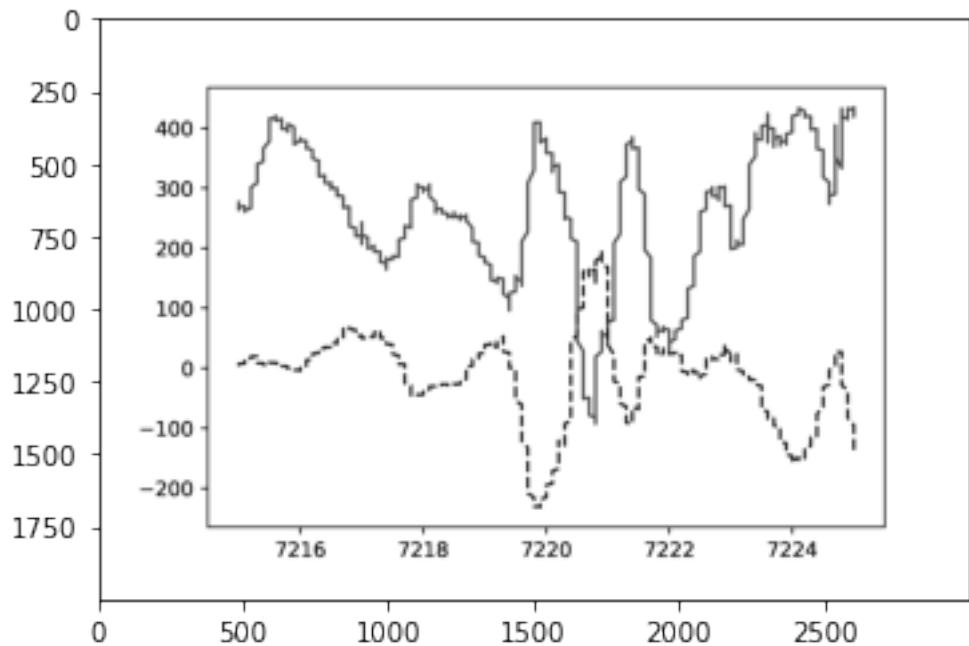
```
<class 'numpy.ndarray'> -- 493 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/49.png
49
```



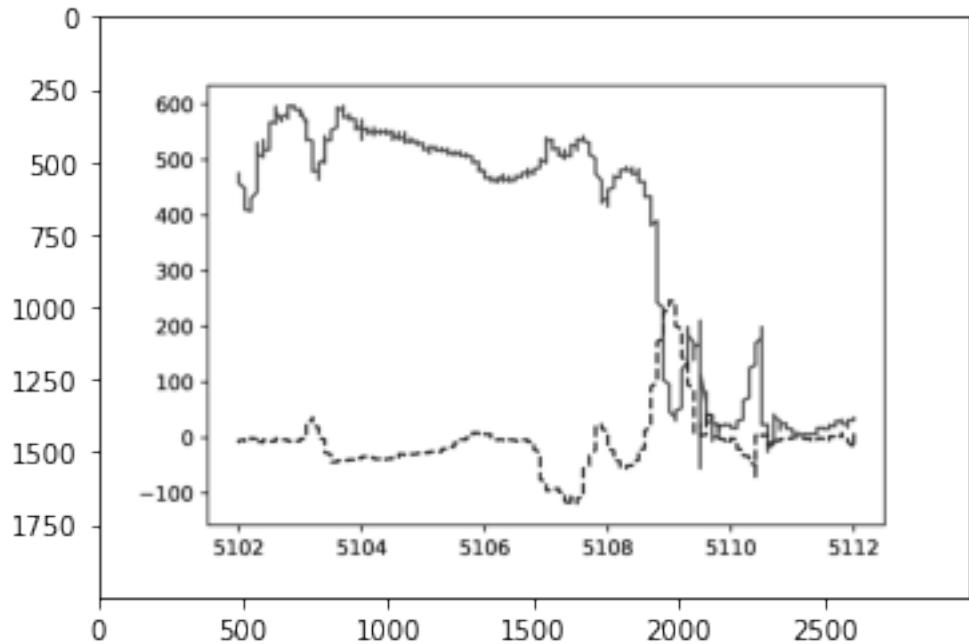
```
<class 'numpy.ndarray'> -- 494 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/158.png
158
```



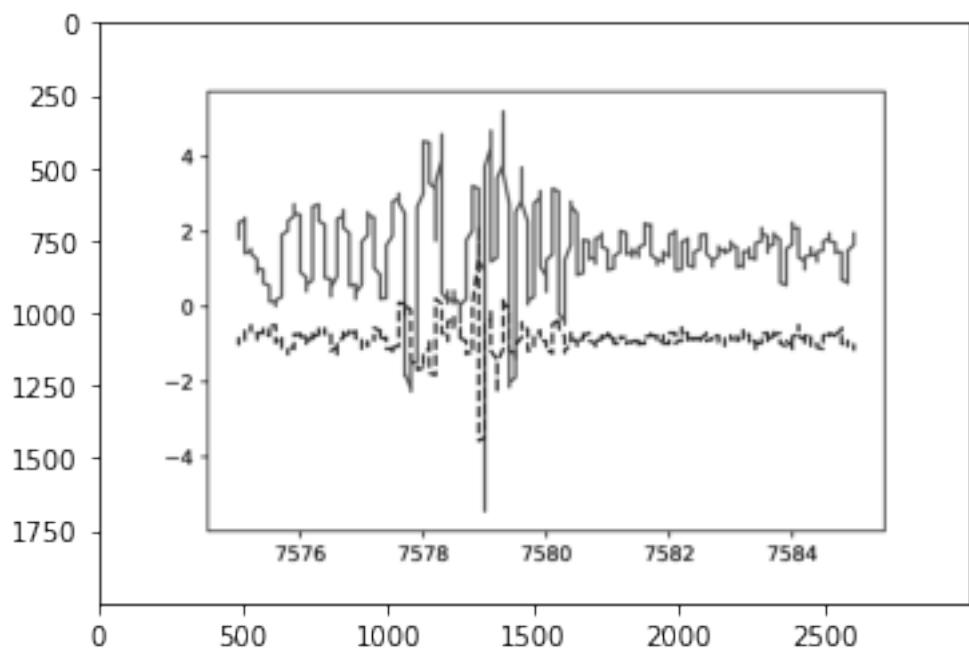
```
<class 'numpy.ndarray'>      --    495    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/349.png
349
```



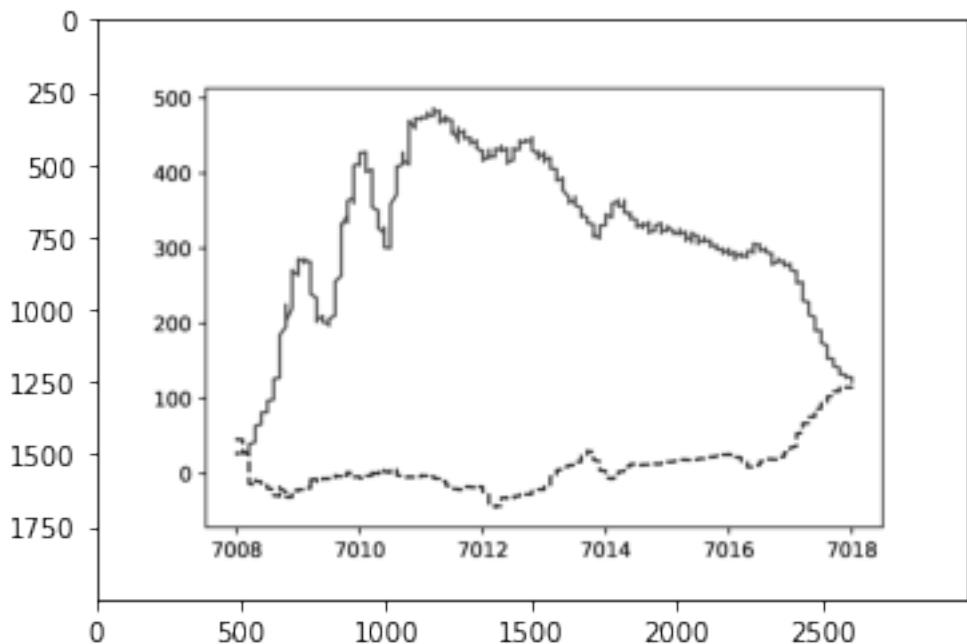
```
<class 'numpy.ndarray'>      --    496    --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/169.png
169
```



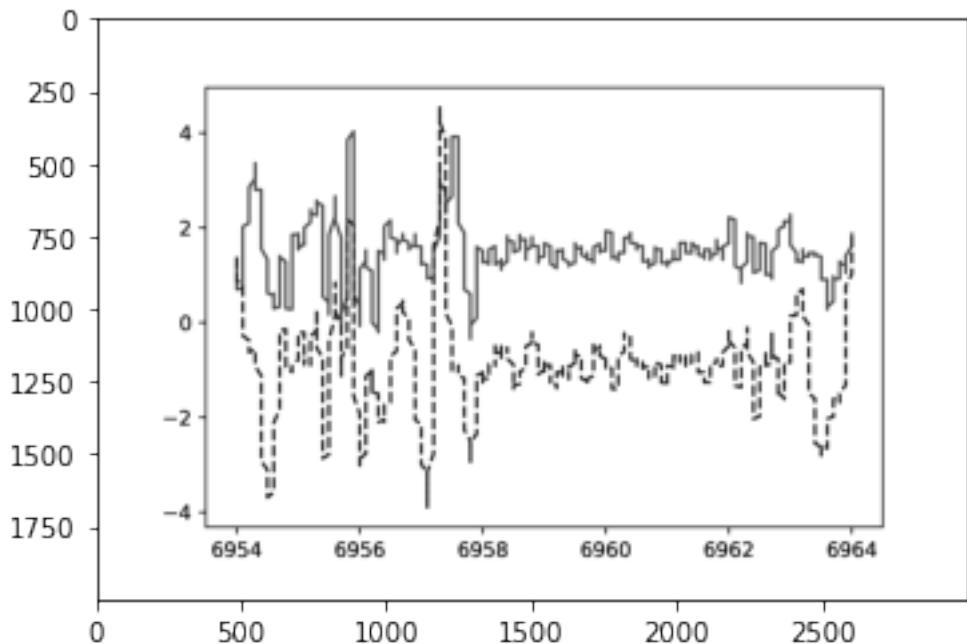
```
<class 'numpy.ndarray'>      --    497    --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/389.png
389
```



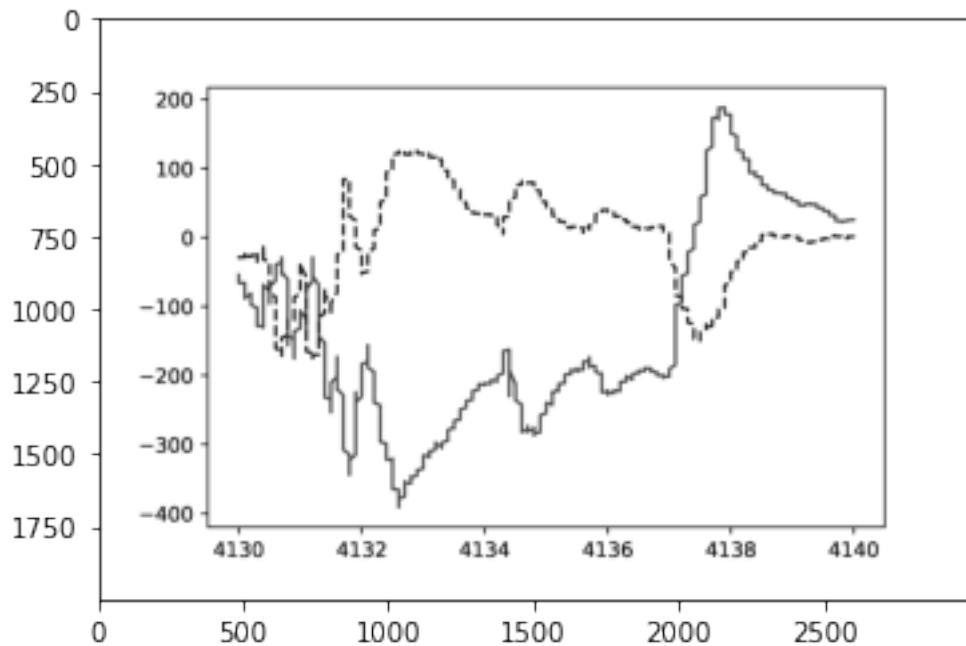
```
<class 'numpy.ndarray'> -- 498 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/326.png
326
```



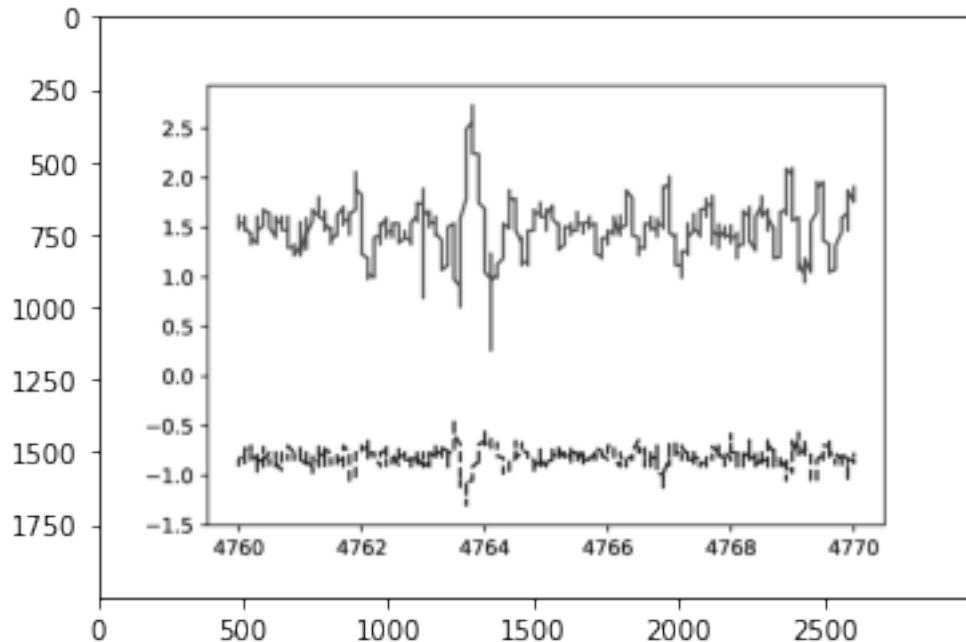
```
<class 'numpy.ndarray'> -- 499 --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/320.png
320
```



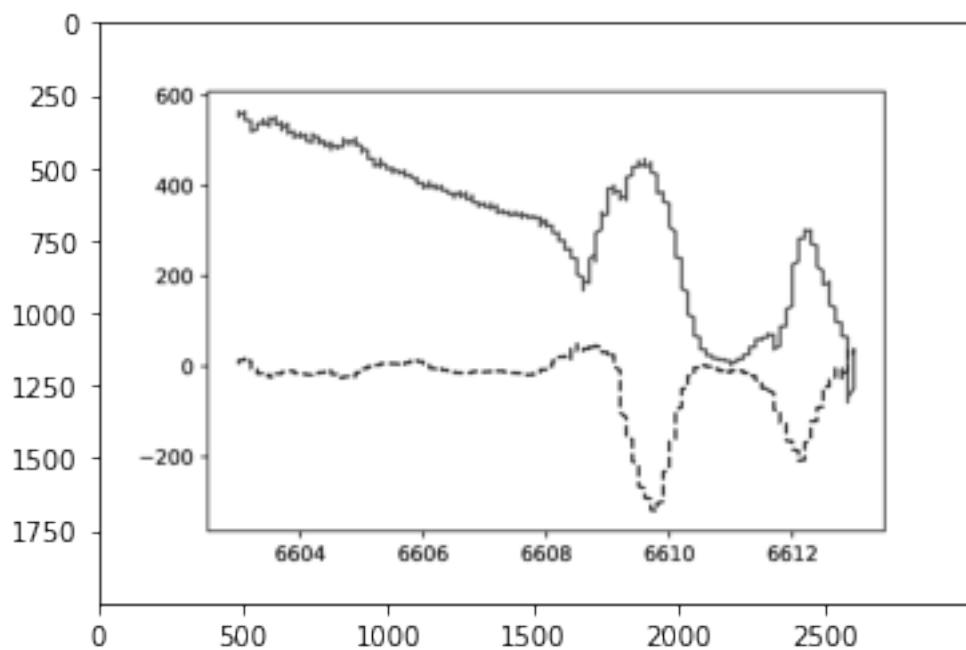
```
<class 'numpy.ndarray'>      --      500      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/61.png
61
```



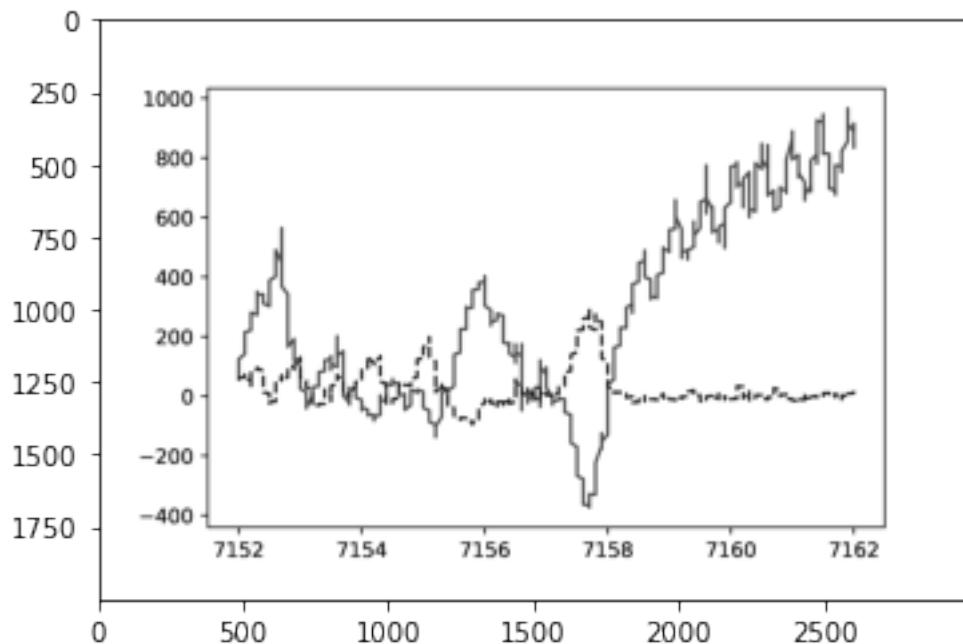
```
<class 'numpy.ndarray'>      --      501      --
/data/wheels/notebooks/Alex/PlotImgFolder/Train/131.png
131
```



```
<class 'numpy.ndarray'>      --  502  --
/datas/wheels/notebooks/Alex/PlotImgFolder/Train/281.png
281
```



```
<class 'numpy.ndarray'>      --  503  --
/daten/wheels/notebooks/Alex/PlotImgFolder/Train/342.png
342
```



```
[41]: (list) #x and y
p = pd.DataFrame(list)
p.to_csv('try.csv', header = None, index = None)
# retrieving dataframe from CSV file
```

```
[ ]:
```

2 CNN CODE

This would be the nn code that needs to be adapted however dataset problems don't allow me to do it

2.0.1 Pre Processing

```
[ ]: cols = ['wheelRotationalSpeedX', 'frameRotationalSpeedY', 'frAcc', 'Action']

df = df[cols]

# Fill NaN with 0
```

```

df.replace([np.inf, -np.inf], np.nan, inplace=True)
df = df.fillna(0)

#Convert Sprinting to 1
df.Action.replace({'Sprinting': 1}, inplace=True)

sns.countplot(df['Action'])

```

```

[ ]: kernel_size = 100
trainSize = 0.8 #size of the train split
split = int(len(df)*trainSize)

#Assign Columns of the Dataframe
X = df[['wheelRotationalSpeedX','frameRotationalSpeedY','frAcc']]
y = df['Action']

#Scale
from sklearn.preprocessing import StandardScaler
scaler = StandardScaler()

X = scaler.fit_transform(X) #only X(for now) because makes the model easier for ↴minimal cost

#Split data

# X
X_train = X[: split - 1]
X_test = X[split:]

# y
y_train = y[: split - 1]
y_test = y[split:]

X_train = X_train.reshape((X_train.shape[0], X_train.shape[1], 1))
X_test = X_test.reshape((X_test.shape[0], X_test.shape[1], 1))
X_train.shape

#X.shape == (860311, 3)
#X_train.shape == (688247, 3) -> In 2d
X_train.shape# (688247, 3, 1) -> In 3d

```

Convert the X_train, X_test, y_train, y_test to Tensors

```

[ ]: #training data needs to be into torch format and to do so we need data to be in ↴numpy format
#thats why we use to_numpy()

```

```

X_train = torch.from_numpy(X_train).float()
X_train = X_train.unsqueeze_(-1)
#X_train = X_train.expand(3,3,10)
X_train = X_train.transpose(2, 0)
#X_train = X_train.reshape()

#torch.squeeze: Returns a tensor with all the dimensions of the input(y_train) ↴
#of size 1 removed
# x = torch.zeros(2, 1, 2, 1, 2)
#     x.size() => torch.Size([2, 1, 2, 1, 2])
# y = torch.squeeze(x)
#     y.size() => torch.Size([2, 2, 2])
y_train = torch.squeeze(torch.from_numpy(y_train.to_numpy()).float())
X_test = torch.from_numpy(X_test).float()
X_test = X_test.unsqueeze_(-1)
X_test = X_test.transpose(2, 0)
y_test = torch.squeeze(torch.from_numpy(y_test.to_numpy()).float())

X_train_Resample = X_train#.squeeze(axis = 3)#because otherwise it had 4d and ↴
#we only want 3d
y_train_Resample = y_train

print(X_train.shape, y_train.shape)
print(X_test.shape, y_test.shape)
print(X_train_Resample)

```

```

[ ]: #To define a CNN in PyTorch, you need __init__() & forward()
class CNN(nn.Module):
    #def __init__(self, n_features, l1=150, l2=50):#method that defines the ↴
    #layers of the model
    def __init__(self):
        super(CNN, self).__init__()#(have to try adding and removing layers)
        self.layer1 = nn.Sequential(#convolutional layers(parameters have to be ↴
    #changed)
            nn.Conv2d(3, 8, kernel_size = (3,3), stride=(3,3), ↴
    #padding=0),#(amount of channels, output, kernel-size, stride(how much does ↴
    #it move))
            nn.ReLU(inplace=True),#mathematical function
            nn.MaxPool2d(kernel_size=2, stride=2))#the pooling goes to a 2x2 ↴
    #matrix and select the highest value and delete the others

```

```

    self.layer2 = nn.Sequential(
        nn.Conv2d(8, 16, kernel_size = (3,3), stride=(3,3), padding=0), #first number '8' is the last of the previous layer
        nn.ReLU(inplace=True),
        nn.MaxPool2d(kernel_size=2, stride=2))

#nn layers(i have to try adding and removing layers)
self.fc1 = nn.Linear(7 * 7 * 64, 1000)#(input features, output features)
self.fc2 = nn.Linear(1000, 100)
self.fc3 = nn.Linear(100, 1)#we want it binary

def forward(self, x):#defines how the model should compute on an input x
    out = self.layer1(x)
    out = self.layer2(out)
    out = out.reshape(out.size(0), -1)#change shape of out till you fix
    out = self.drop_out(out)
    out = self.fc1(out)
    out = self.fc2(out)
    return torch.sigmoid(self.fc3(out))

#NN_model(X_train.shape[1])
CNN()

```

```

[ ]: #create model
model = CNN()

# Loss and optimizer
criterion = nn.CrossEntropyLoss()#runs the model and learns from mistakes (look
    for binary cross entropy loss)
optimizer = torch.optim.Adam(model.parameters(), lr=learning_rate)

```

```

[ ]: # Train the model
device = torch.device("cuda:1" if torch.cuda.is_available() else "cpu")#look if
    cuda(GPU) is available
X_train = X_train.to(device)
y_train = y_train.to(device)

X_test = X_test.to(device)
y_test = y_test.to(device)

model = model.to(device)
criterion = criterion.to(device)

```

```
[ ]: def round_tensor(t, decimal_places=3):
    return round(t.item(), decimal_places)

Results_acc = pd.DataFrame(columns = ['Epoch', 'Acc_train', 'Acc_test'])
Results_loss = pd.DataFrame(columns = ['Epoch', 'Loss_train', 'Loss_test'])
Results_recall = pd.DataFrame(columns = ['Epoch', 'Recall_train', ↴
    'Recall_test'])
Results_prec = pd.DataFrame(columns = ['Epoch', 'Prec_train', 'Prec_test'])

for epoch in range(300):
    y_pred = model(X_train_Resample)
    y_pred = torch.squeeze(y_pred)
    train_loss = criterion(y_pred, y_train_Resample)

    if epoch % 10 == 0:

        train_acc = calculate_accuracy(y_train_Resample, CNN.
    ↪post_forward(y_pred))
        train_loss = criterion(y_pred,y_train_Resample)
        Confusion = confusion_matrix(y_train_Resample.cpu(),y_pred.ge(.5).
    ↪view(-1).cpu())
        train_recall = Confusion[1][1]/(Confusion[1][1] + Confusion[1][0])
        train_prec = Confusion[1][1]/(Confusion[0][1] + Confusion[1][1])

        y_test_pred = CNN(X_test)
        y_test_pred = torch.squeeze(y_test_pred)
        test_loss = criterion(y_test_pred, y_test)
        test_acc = calculate_accuracy(y_test, CNN.post_forward(y_test_pred))

        Confusion = confusion_matrix(y_test.cpu(),y_test_pred.ge(.5).
    ↪view(-1).cpu())
        test_recall = Confusion[1][1]/(Confusion[1][1] + Confusion[1][0])
        test_prec = Confusion[1][1]/(Confusion[0][1] + Confusion[1][1])

        Acc = {'Epoch': epoch, 'Acc_train': round_tensor(train_acc), ↴
    'Acc_test': round_tensor(test_acc)}
        Loss = {'Epoch': epoch, 'Loss_train': round_tensor(train_loss), ↴
    'Loss_test': round_tensor(test_loss)}
        Recall = {'Epoch': epoch, 'Recall_train': ↴
    round_tensor(train_recall), 'Recall_test': round_tensor(test_recall)}
        Prec = {'Epoch': epoch, 'Prec_train': round_tensor(train_prec), ↴
    'Prec_test': round_tensor(test_prec)}

        Results_acc = Results_acc.append(Acc, ignore_index=True)
        Results_loss = Results_loss.append(Loss, ignore_index=True)
        Results_recall = Results_recall.append(Recall, ignore_index=True)
```

```

Results_prec = Results_prec.append(Prec, ignore_index=True)

#           print(
#f'''epoch {epoch}
#Train set - loss: {round_tensor(train_loss)}, accuracy:{round_tensor(train_acc)}
#Test set - loss: {round_tensor(test_loss)}, accuracy: {round_tensor(test_acc)}
#''')

optimizer.zero_grad()

train_loss.backward()

optimizer.step()

```

```

[ ]: # Evaluate the model
model.eval()
with torch.no_grad():
    correct = 0
    total = 0
    for images, labels in test_loader:
        outputs = model(images)
        _, predicted = torch.max(outputs.data, 1)
        total += labels.size(0)
        correct += (predicted == labels).sum().item()

    print('Test Accuracy of the model on the 10000 test images: {} %'.
          format((correct / total) * 100))

# Save the model and plot
torch.save(model.state_dict(), MODEL_STORE_PATH + 'conv_net_model.ckpt')

```

[]:

[]:

[]: