Subject: Re: problems with SAVGOL and POLY_SMOOTH
Posted by Francesca Scipioni on Fri, 08 May 2015 13:06:26 GMT
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On Friday, May 8, 2015 at 12:10:53 AM UTC-5, Jeremy Bailin wrote:
> On Thursday, May 7, 2015 at 4:41:31 PM UTC-5, Francesca Scipioni wrote:
>> Hi!
>>
>> I'm tryng to apply the savgol algorithm to a spectrum of Cassini VIMS.
>> The spectrum is defined as a float array and had a dimension of 256.
>>
>> when I apply the convolution, I obtain an arry of zeros.
>>
>> I used also with poly_smooth, but the result is the same.
>>
>> I tryed all possible combination of nleft, nright, order, degree ecc., using very small or very big values, but the result doesn't change.
>>
>> Any idea about which can be the problem?
>>
>> Thanks,
>> Francesca
>
> Can you show us some specific code?
>
> -Jeremy.

files1 = '/Users/...../...../v1713114512_1_2_17_raw.txt'

Range = 260

Band1 = strarr(256)
Band_num1 = intarr(256)
Minimo1 = fltarr(256)
Massimo1 = fltarr(256)
spettro1 = fltarr(256)
st_dev1 = fltarr(256)
fmt = 'A,I,F,F,F,F'
readcol, files1, format=fmt, Band1, Band_num1, Minimo1, Massimo1, spettro1, st_dev1, SKIPLINE = 4, NUMLINE=260

plot, spettro1

savgolFilter = SAVGOL(2, 2, 0, 4, /double) ; I also tryed other combinations
spettro3 = fltarr(256)

```
spetrro3 = CONVOL(spettro1, savgolFilter)

; or (with the same result)
; poly_smooth( spettro1,  1, DEGREE=0,NLEFT=1,NRIGHT=1,DERIV_ORDER=0 )  ;

oplot, spettro3, color = 65280
```

The spettro1 values are

```
 0.944916
 0.953161
 0.921698
 0.954911
 0.922925
 0.918666
 0.934583
 0.907393
 0.890279
 0.885527
 0.878185
 0.907191
 0.913401
 0.896080
 0.883359
 0.918613
 0.898005
 0.872932
 0.858413
 0.851442
 0.839940
 0.818498
 0.806320
 0.807368
 0.807541
 0.800929
 0.839457
 0.827864
 0.835938
 0.832519
 0.820482
 0.811595
 0.789620
 0.759132
 0.691918
 0.598652
 0.489183
 0.445673
```

0.436680
0.436939
0.445523
0.438651
0.481776
0.547756
0.562844
0.564608
0.534664
0.594535
0.605254
0.676105
0.728975
0.748324
0.758822
0.733740
0.736142
0.748694
0.755424
0.768868
0.739329
0.726352
0.696078
0.632748
0.535247
0.434597
0.362188
0.326092
0.300800
0.285309
0.295063
0.266328
0.258386
0.250205
0.279463
0.325751
0.383798
0.451696
0.497129
0.540487
0.601897
0.643704
0.703089
0.709999
0.703514
0.688517
0.648048
0.595995

0.574927
0.554001
0.482696
0.469066
0.454911
0.444607
0.427108
0.451923
0.437827
0.401862
0.384808
0.377747
0.366368
0.351537
0.343991
0.356969
0.362911
0.353184
0.352417
0.328512
0.317759
0.292930
0.253015
0.206487
0.150402
0.106841
0.068634
0.042263
0.028128
0.022334
0.011552
0.001091
0.010740
0.012075
0.013127
0.005055
0.011474
0.014138
0.011764
0.011638
0.012457
0.002001
0.054650
0.008618
0.012289
0.010589
0.010678
0.013499

0.017883
0.021377
0.014646
0.020465
-0.004447
0.014564
0.016018
0.018516
0.030274
0.053877
0.045241
0.057105
0.067577
0.076199
0.087730
0.090628
0.104401
0.118718
0.126779
0.135805
0.149264
0.156811
0.171011
0.167874
0.170038
0.180615
0.177197
0.177835
0.157974
0.181071
0.182442
0.165855
0.177703
0.167839
0.166708
0.153052
0.154515
0.159896
0.139181
0.130814
0.119656
0.105711
0.109424
0.104764
0.093651
0.092645
0.063382
0.079162

0.076415
0.074927
0.071939
0.067798
0.064759
0.055266
0.108703
0.063316
0.057371
0.021088
0.040337
0.049434
0.042531
0.028866
0.022093
0.009693
0.049018
0.040305
0.039561
0.035064
0.033877
0.024407
-0.066850
-0.041002
0.021828
0.034775
-0.001342
0.054239
0.023999
0.064247
0.094230
0.024452
0.014036
0.028097
0.041927
0.045239
0.002342
0.027923
0.030359
0.031697
0.028263
0.029457
0.112607
0.028961
0.298060
0.064623
0.041895
-0.039256

0.031361
0.036728
0.036564
0.043188
-0.055092
0.017969
0.056107
0.044531
0.017920
-0.048235
0.029972
0.035818
0.102898
0.020244
0.058096
0.228025
0.109548
0.260482
0.049248
0.090254
0.005142
-0.000006
0.027815
0.060429
0.043408
0.036377

end
