Subject: Problems on the Savitzky-Golay smoothing filter
Posted by mengran on Wed, 20 May 2009 10:59:10 GMT
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Hi,everybody,
I have got a annoying problem about the implementing the Savitzky-Golay filter to smooth the time series RS data in the IDL. Actually, I know the function of the Savitzky-Golay filter in IDL is SAVGOL.But the question is the result I got is either a horizon line or the same as the original line(In other words, the filter seems not to work at all), when I changed the parameters of the SAVGOL function. (when the DEGREE = NL + NR(PARA OF THE SAVGOL FUNCTION), THE RESULT IS THE SAME AS THE ORIGINAL, OTHERWISE, THE RUSULT IS A HORISON LINE)
My pro is as follows. The class1 to class9 from txt files are the samples of the time series RS data.
Is there sth wrong with my code ? Or the RS data that I used is not appropriate for the Savitzky-Golay filter, and I take a wrong method to smooth data ? I need your suggestions, thanks a lot !

```
PRO Savgol_example

  ;RESTORE, 'C:\WorkSpace\Default\myPlotTemplate.sav'
  rootPath = 'C:\WorkSpace\Default\class'

   n = 1 & filename = strarr(9)
for i = 0, 8 do begin

 filename[i] = strjoin([rootPath, strtrim(n, 2),'.txt'])
     n++

endfor
for i = 0,8 do begin

  plotTemplate = ASCII_TEMPLATE(filename[1])
  y1 = READ_ASCII(filename[1], TEMPLATE = plotTemplate, COUNT =
$              count,NUM_RECORDS = 46 )
  x = indgen(46)
 iPlot,x,y1.FIELD1, NAME = 'Original Curve', $
  COLOR=[255, 0, 0], SYM_INDEX = 4, yrange = [0,+8000], VIEW_TITLE =
strmid(filename[1], 21, 6)
  void = ITGETCURRENT(TOOL=oTool)
  void = oTool->DoAction('Operations/Insert/Legend')


 ; savgol
 savgolFilter = SAVGOL(2, 2, 0,4)
 iPlot,x,CONVOL(y1.FIELD1, savgolFilter), /OVERPLOT, $
  COLOR=[0, 0, 255], THICK=2, $
```

```
   NAME='Savitzky-Golay'
   void = oTool->DoAction('Operations/Insert/LegendItem')
  ;SAVE, plotTemplate, FILENAME='C:\WorkSpace\Default
\myPlotTemplate.sav'

 endfor

END
```

Subject: Re: Problems on the Savitzky-Golay smoothing filter
Posted by jhongs1988 on Fri, 04 Mar 2016 21:35:33 GMT
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El miércoles, 20 de mayo de 2009, 5:59:10 (UTC-5), mengran escribió:

```
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>
>   endfor
>
>  END
```