Subject: Re: Floating underflow in a plot
Posted by Heinz Stege on Tue, 14 Apr 2015 18:28:37 GMT
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On Tue, 14 Apr 2015 08:55:05 -0700 (PDT),
miguelfigueirasebastiao@gmail.com wrote:

> El martes, 14 de abril de 2015, 13:36:44 (UTC+2), Heinz Stege escribió:
>> Hi Miguel,
>>
>> there is a system variable named !EXCEPT. You can change its value to
>> !EXCEPT=2. This makes IDL running slower. But the floating underflow
>> message should be accompanied by another message, which tells you the
>> line of the code, where the floating underflow happens.
>>
>> HTH, Heinz
>
> The !EXCEPT=2 is actually in the code (line 4) and the problem arises at the line where oplot is used.
>
Oh, yes, of cause. I was too lazy to look into the code in detail.
Sorry for this.

Seems to be a very strange error. I can't explain it. However, are you
really sure, that the floating underflow error leads to missing
points, as you say in the answer to Craig's post?

You can eliminate the floating-underflow-error by skipping the points
near the position x=0.0 and y=0.0. This can be done be defining

```
  eps=(machar(/double)).eps
```

somewhere in the head of your code, and replacing the oplot command by
following lines:

```
  x=-sin(!PI-trajectoire(0,*))*trajectoire(1,*)
  y=-cos(!PI-trajectoire(0,*))*trajectoire(1,*)
  ii=where(abs(x) ge eps and abs(y) ge eps,count)
  if count ge 1 then $
    oplot,x[ii],y[ii],psym=3,color=fix(inc_color),NSUM=1
```

This should not make a visible change to your plot. However for me the
plot still looks some kind of "incomplete".

Cheers, Heinz