Subject: Re: symsize in data units
Posted by Craig Markwardt on Mon, 04 May 2009 01:21:55 GMT
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On May 1, 5:42 pm, ianpaul.free...@gmail.com wrote:
> Does anyone know a way to set the plotting symbol size in terms of
> data units? In particular, I'd like to make the plotting symbol a
> circle with diameter 4.3 data units. Then I'd like to do it both on-
> screen and output to postscript.

I think it's impossible to do with PSYM or SYMSIZE.

On the other hand, it's simple enough to write a small procedure that
OPLOT's what you want, in the units you want. For example, a circle
could be done like this,

```
pro plot_circle, xcent, ycent, symsize=radius, _EXTRA=extra
  th = 2*!dpi/100*dindgen(101)
  if n_elements(radius) EQ 0 then r = 1 else r = radius(0)
  x = r*cos(th) & y = r*sin(th)
  for i = 0, n_elements(xcent)-1 do $
    oplot, xcent(i)+x, ycent(i)+y, _EXTRA=extra
end
```

Then you can call PLOT_CIRCLE, x, y, symsize=4.5

Subject: Re: symsize in data units
Posted by pyoachim on Mon, 04 May 2009 21:31:01 GMT
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> I think it's impossible to do with PSYM or SYMSIZE.
>
> On the other hand, it's simple enough to write a small procedure that
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> could be done like this,
>
> pro plot_circle, xcent, ycent, symsize=radius, _EXTRA=extra
> th = 2*!dpi/100*dindgen(101)
> if n_elements(radius) EQ 0 then r = 1 else r = radius(0)
> x = r*cos(th) & y = r*sin(th)
> for i = 0, n_elements(xcent)-1 do $
> oplot, xcent(i)+x, ycent(i)+y, _EXTRA=extra
> end
>
> Then you can call PLOT_CIRCLE, x, y, symsize=4.5

Thanks Craig, that works great. I replaced your oplot with a polyfill

so I could get solid points. I was also surprised that I can get this
to make smaller postscript files than using the plotsym procedure. I
thought for sure your routine would make giant output.

Subject: Re: symsize in data units
Posted by Craig Markwardt on Tue, 05 May 2009 02:29:26 GMT
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On May 4, 5:31 pm, pyoac...@gmail.com wrote:
> > I think it's impossible to do with PSYM or SYMSIZE.
>
>
>
>> On the other hand, it's simple enough to write a small procedure that
>> OPLOT's what you want, in the units you want. For example, a circle
>> could be done like this,
>
>> pro plot_circle, xcent, ycent, symsize=radius, _EXTRA=extra
>>   th = 2*!dpi/100*dindgen(101)
>>   if n_elements(radius) EQ 0 then r = 1 else r = radius(0)
>>   x = r*cos(th) & y = r*sin(th)
>>   for i = 0, n_elements(xcent)-1 do $
>>   oplot, xcent(i)+x, ycent(i)+y, _EXTRA=extra
>> end
>
>> Then you can call PLOT_CIRCLE, x, y, symsize=4.5
>
> Thanks Craig, that works great. I replaced your oplot with a polyfill
> so I could get solid points. I was also surprised that I can get this
> to make smaller postscript files than using the plotsym procedure. I
> thought for sure your routine would make giant output.

Heh, if you want a bigger postscript file, you could change the 100
above to 1000 :-)

It's strange you say PLOTSYM makes bigger files, since it seems to use
only 50 points instead of 100 to construct a circle.

Craig
