Subject: Re: Save the Usersym vectors
Posted by Heinz Stege on Thu, 28 Jul 2016 20:44:49 GMT
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Hi Wayne,

it _is_ possible, to get the x and y vectors used to define the user plotting symbol. However, it is fairly complex. So first let me ask for a simple solution. You defined the user symbol before calling CGPLOTS. Isn't it possible, to save a copy of x and y when calling USERSYM?

If not, here is the compex way: First plot the user symbol in a vector-grafic-file:

```
device=!d.name
set_plot,'cgm'
device,file='temp.cgm'
plots,/device,!d.x_size/2,!d.y_size/2,psym=8,symsize=10.
device,/close
set_plot,device
```

I choose cgm here, since nobody probably is using it anymore and this code can be nested within the output to other grafic devices. Next read the temporary file into a byte array:

```
openr,lun,/get_lun,'temp.cgm'
a=bytarr((fstat(lun)).size)
readu,lun,a
free_lun,lun
```

Now you can extract the x and y vectors from the binary array:

```
start=(a['43'x] eq '3f'x)? '46'x : '44'x   ; see note
b=byte(a,start,2,(n_elements(a)-start)/2-2)
b=transpose(b)
xy=b[*,0]*256s+b[*,1]
xy=reform(xy,2,n_elements(xy)/2,/overwrite)
xy=transpose(xy)
xy=(xy-2s^14)/2730.
```

Please note that the calculation of START and the number of bytes in the following line is "quick and dirty". It may fail, particularly on different operating systems. I did not study the cgm format and found this rule by "hacking". I leave it to you, to read the specifications and make this better. ;-)

I run my calculation with this IDL version: { x86 Win32 Windows

Microsoft Windows 8.0.1 Oct 5 2010   32   64}

Enjoy, Heinz