
Subject: Log-scaled colorbar example

Posted by [Kim](#) on Mon, 23 May 2011 14:14:19 GMT

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Hello,

After several unsuccessful attempts at trying to generate a log-scaled colorbar using the COLORBAR function, I came up with a way to manually create the colorbar. If someone could please look at the code and let me know if this seems correct I would really appreciate it.

Thank you,

Kim

```
w = WINDOW(dimensions=[800,800],layout=[2,1,1])
```

```
; LINEAR EXAMPLE
```

```
arr = FLTARR(200,200)
```

```
for i = 0, 199 do arr(*,i) =
```

```
(0+(100/199.)*FINDGEN(200)) ; scale the array to 200
```

```
intervals ranging from 0 to 100 (adapted from the jhuapl routine
```

```
maken)
```

```
x = [MIN(arr),MAX(arr)]
```

```
im = IMAGE(arr,/
```

```
current,rgb_table=34,layout=[2,1,1],title='linear') ; display the
```

```
image
```

```
cb =
```

```
colorbar(target=im,title='idl') ; add
```

```
standard colorbar
```

```
pos =
```

```
cb.position ;
```

```
determine position for the second colorbar
```

```
pos(1) = pos(1)-.1
```

```
pos(3) = pos(3)-.1
```

```
px = 200 & py = 20
```

```
sarr =
```

```
1+(200./255.)*FINDGEN(256) ; scale
```

```
the array to 256 intervals (adapted from the jhuapl routine maken)
```

```
z = REFORM(((sarr - x(0))*FLOAT(255)/(x(1)-x(0)) + 0),
```

```
[256,1])<255 ; adapted from the jhuapl routine scalearray
```

```
xx =
```

```
FIX(0+(255./255.)*FINDGEN(px)) ;
```

```
create a scaled x array
```

```
yy =
```

```
FIX(0+(255./255.)*FINDGEN(py)) ;
```

```
create a scaled y array
```

```
bararr = INTERPOLATE(z,xx,yy,/
```

```
grid) ; interpolate to fill in the
```

```
image array
```

```

    barimg = IMAGE(bararr,/
current,position=pos,rgb_table=34)      ; diplay the bar image
                                         ;
overplot the tick values
    p      = PLOT(x,
[0,1],position=pos,xrange=x,yrange=[0,1],xticklen=0.25,min_v
alue=x(0),max_value=x(1),xminor=4,yminor=0,ymajor=0,xtitle=' custom',/
nodata,/current,axis_style=1)

; LOG SCALED EXAMPLE
arr  = FLTARR(200,200)
for i = 0, 199 do arr(*,i) = (-2+(4/199.)*FINDGEN(200)) ; scale the
array to 200 intervals ranging from -2 to 2 (adapted from the jhuapl
routine maken)
x = [MIN(arr),MAX(arr)]
arr = 10^(arr)
im = IMAGE(arr,/current,rgb_table=34,layout=[2,1,2],title='log')
cb = colorbar(target=im,title='idl')
pos = cb.position
pos(1) = pos(1)-.1
pos(3) = pos(3)-.1
px = 200 & py = 20
sarr = -2+(2./255.)*FINDGEN(256) ; scale the array to 256 intervals
- adapted from the jhuapl routine maken
z = REFORM((((sarr - x(0))*FLOAT(255)/(x(1)-x(0)) + 0),
[256,1])<255 ; adapted from the jhuapl routine scalearray
xx = FIX(0+(255./255.)*FINDGEN(px))
yy = FIX(0+(255./255.)*FINDGEN(py))
bararr = INTERPOLATE(z,xx,yy,/grid)
barimg = IMAGE(bararr,/current,position=pos,rgb_table=34)
p      = PLOT(x,
[0,1],position=pos,xrange=x,yrange=[0,1],xticklen=0.25,min_v
alue=x(0),max_value=x(1),xminor=4,yminor=0,ymajor=0,xtitle=' custom',/
nodata,/current,axis_style=1)
p.xtickname=['.01','1','10','100']

```
