
Subject: Re: Log-scaled colorbar example

Posted by [Kim](#) on Tue, 24 May 2011 14:42:05 GMT

[View Forum Message](#) <> [Reply to Message](#)

>
> Can you reproduce this figure and color bar with your
> code? (I haven't been able to, but I've spent less than
> an hour trying.) When you can reproduce this figure, then
> I think you are on the right track.
>
> Cheers,
>
> David
>

I think I was able to reproduce your colorbar and generate a similar graphic as the example I provided above. I did find an error in the original code with the tickmarks and added /xlog to the plot command. I would appreciate your opinion on the following example. Thank you for your assistance,
Kim

```
; Read image
image = cgDemoData(7) ; World Elevation Data
image = Scale_Vector(image, 1, 2500L)
logImage = Alog10(image)
X = FLOAT([MIN(IMAGE),MAX(IMAGE)])
XLOG = [MIN(LOGIMAGE),MAX(LOGIMAGE)]

; Create the color bar image
PX = 200 & PY = 20
RGB_TABLE=33
COLOR_RANGE = [0.0,255.0]
NCOLORS = COLOR_RANGE(1) - COLOR_RANGE(0) + 1
SARR = X(0)+((X(1)-X(0))/
256)*FINDGEN(256)          ; scale the array to 256
intervals (adapted from the jhuapl routine maken)
Z = REFORM(((SARR - X(0))*FLOAT(COLOR_RANGE(1)-COLOR_RANGE(0))/(X(1)-
X(0)) + COLOR_RANGE(0)), [256,1])<255 ; adapted from the jhuapl
routine scalearray
XX = FIX(COLOR_RANGE(0)+((COLOR_RANGE(1)-COLOR_RANGE(0))/
(NCOLORS-1))*FINDGEN(PX))          ; create a scaled x
array
YY = FIX(COLOR_RANGE(0)+((COLOR_RANGE(1)-COLOR_RANGE(0))/
(NCOLORS-1))*FINDGEN(PY))          ; create a scaled y
array
BARARR = INTERPOLATE(Z,XX,YY,/
GRID)          ; interpolate to fill in the
```

image array

; Linear example

```
W = WINDOW(DIMENSIONS=[800,800],LAYOUT=[2,1,1])
IMG = IMAGE(IMAGE,RGB_TABLE=RGB_TABLE,/
CURRENT,LAYOUT=[2,1,1],TITLE='Linear')
CB = COLORBAR(TARGET=IMG,TITLE='IDL')
POS =
CB.POSITION
;
determine position for the second colorbar
POS(1) = pos(1)-.1
POS(3) = POS(3)-.1
BARIMG = IMAGE(BARARR,/
CURRENT,POSITION=POS,RGB_TABLE=RGB_TABLE) ; display the bar image
then 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 example

```
IMG2 = IMAGE(LOGIMAGE,RGB_TABLE=RGB_TABLE,/
CURRENT,LAYOUT=[2,1,2],TITLE='Log Scales')
CB = COLORBAR(TARGET=IMG2,TITLE='IDL')
POS = CB.POSITION
POS(1) = pos(1)-.1
POS(3) = POS(3)-.1
BARIMG = IMAGE(BARARR,/
CURRENT,POSITION=POS,RGB_TABLE=RGB_TABLE)
P = PLOT(XLOG,[0,1],/
XLOG,POSITION=POS,XRANGE=X,YRANGE=[0,1],XTICKLEN=0.25,MIN_VA
LUE=X(0),MAX_VALUE=(1),XMINOR=4,YMINOR=0,YMAJOR=0,XTITLE='CU STOM',/
NODATA,/CURRENT,AXIS_STYLE=1)
```
