
Subject: Re: Log-scaled colorbar example

Posted by [Kim](#) on Tue, 24 May 2011 14:56:15 GMT

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> 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_V-
ALUE=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_VA-
LUE=(1),XMINOR=4,YMINOR=0,YMAJOR=0,XTITLE='CUSTOM',/NODATA,/
CURRENT,AXIS_STYLE=1)

```
