Subject: Colorbar with logarithm base 2
Posted by Mrunmayee on Mon, 28 Jun 2010 09:07:07 GMT
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I have a file with longitude(l), latitude(b) and temperature(Ts). I want to plot - just a rectangular plot - l and b but I want to color the symbols according to the temperature. So here is what I do:

Rdfloat,filename,l,b,Ts
tscolors = BytScl(Ts, top=!D.Table_Size-2) ; Shamelessly picked from David's "color according to elevation" routine.

Plot, l, b,/nodata
Plots, l, b, psym=symcat(16), color=tscolors ; Filled circle

Problem 1.
Ts is ranges from 10 to 2500 (approx) with most of the Ts values concentrated below 200. So, if I use it as above, I get only few spots with any color.
My solution: Making it log_10 doesn't help, because the range gets too small (~1 to ~3) and the plot looks far more uniformly colored. So, I made it log_2 which gives me a range of about (~3,~12). So I do following:
log2ts = Alog10(Ts)/Alog10(2.)
log2tscolors = BytScl(log2ts, top=!D.Table_Size-2)
And rest of the plotting, as above.

Problem 2.
I also want to show colorbar next to this plot, but not sure how to show colors according to Log_2. I mean, how do colors get scales when scheme is changed from linear to log?

Solution to either problem is appreciated, although solution to 2nd problem is of interest for pure 'academic' reasons.