Subject: Problems with color tables and write_png
Posted by kathryn.ksm on Mon, 17 Sep 2007 20:40:37 GMT
View Forum Message <> Reply to Message

Howdy,

I think I'm in over my head with IDL's color handling, and I would be so grateful for any help!

I have a small plotting routine that uses PLOT to lay out a grid of dots, and then POLYFILL to draw circles over selected grid dots, where the color of the circle is drawn from a color table (and represents a data value). I then add a COLORBAR, from D. Fanning's website, to add a linear or log-scaled reference to the color values in the image.

I've had a lot of problems even getting this to display correctly on my screen, and in particular, if I call this routine multiple times in a row the colors always go very weird. I managed to get around this by writing a reset_display routine that manually sets a bunch of display variables, resetting my background to white etc.. But now, after I have gotten these figures to display beautifully to screen, I can't get them into any form of image file correctly.

My first attempt was:
write_png, 'myfile.png', tvrd(/true)

These png files have bizarre colors - violet or blue backgrounds and a scheme not resembling the one on screen at all. I also tried just writing to a ps file, but the ps device crashed on the used of the DECOMPOSED keyword in colorbar. I have not tried messing with that further yet.

I've experimented some with using TVREAD, and I have experimented miscellaneously with setting the DECOMPOSED variable for the current device, and playing with the options to TVRD, and I have tried a SAVEIMAGE procedure by Liam Gumley, and various other little tricks on the web, which claim to handle 24-bit true color images correctly. Nothing changes. At this point I'm not even sure what to poke at to make any progress. Any help?

I tossed together a quick example of the sort of thing I'm trying to do. The typical calling sequence I would use for this is something like:
IDL> plot_test,[0,2],color_scale=[1.1,23.]
IDL> write_png, 'testout.png',tvrd(/true)

The colors I get out don't resemble the ones that went in in the least...

Thanks for any help,

Kathryn

```
---------------------------------------
pro plot_test, indices, color_scale = color_scale,$
               log_color=log_color, title=title


; create grid of dots

; create a window for this display

if n_elements(title) eq 0 then title=''

; example simple grid of 4 points:
x_pos=[1., 2., 1., 2.]
y_pos=[1.,1.,2.,2]

;plot, the center points for each detector:
plot, x_pos, y_pos,  xrange=[0,3],yrange=[0,3],/xstyle,/ystyle,/iso,$
  psym = 3, title = title

; plotting:

Device, decomposed = 0
LoadCT, 33

if (keyword_set(color_scale)) then begin
    original_color_scale=float(color_scale)
    color_scale=float(color_scale)

    if keyword_set(log_color) then begin
       color_scale=alog10(color_scale)
    endif

    color_values = ((color_scale - min(color_scale))/max(color_scale))
* 255

endif

for i=0,n_elements(indices)-1 do begin
    polyfill, circle(x_pos[indices[i]],y_pos[indices[i]],0.25), color=
color_values[i]
endfor

if keyword_set(log_color) then begin
```

```
    colorbar, /vertical, /ylog, yticks=0,format='(F6.2)',$
      range=[min(original_color_scale),max(original_color_scale)]
endif else begin
    bar_title='Linear scale'
    colorbar, /vertical, format='(F6.2)',$
          range=[min(color_scale),max(color_scale)]
endelse

end
```
