Subject: Colorbar Thinking in the Shower
Posted by David Fanning on Tue, 13 Sep 2011 16:28:12 GMT
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Folks,

I believe the best place in the world to think is in the shower, don't you?

Anyway, I went into the shower this morning with this question on my mind: "Why in the world would anyone design a color bar that worked the way the IDL 8.1 Colorbar() function works?" Just because I can't imagine doing it that way doesn't mean there isn't some good reason for it. What could that reason be?

And then it hit me. Designing a color bar this is way is *prefect* for displaying a single piece of data! You take your data, byte scale it into 256 colors, and display it with the Colorbar() function. Perfect. The color bar labels *exactly* reflect the data, from minimum to maximum, exactly the way you have meant them to be displayed.

What this color bar design is NOT good for is comparing *two* pieces of data. For example, if I collected sea ice data in June and I wanted to compare it to sea ice data I collected in August, this color bar design would be useless to me. I could display the data side-by-side, each with its own perfectly correct color bar. But, then I couldn't look at, say, a red color in both images or contour plots and draw any conclusions about what I was looking at! The two data sets would be scaled differently.

How would someone who understands function graphics better than I do approach the problem of displaying two data sets, each with a different data range, with a single color bar to explain the colors in each?

Comparing data seems to me to be something that is done rather frequently in the kind of work we do. :-)

Cheers,

David

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Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")
