Subject: fun with nonlinearity and COLORBAR
Posted by Jeremy Bailin on Thu, 21 Oct 2010 19:20:56 GMT
View Forum Message <> Reply to Message

I'm looking for advice on a plot I'm making that uses David's COLORBAR routine. The problem is that the mapping between color index in the image and data value is quite non-linear - and not a simple transformation, either (it's generated via histogram equalization).

There are a few ways I can imagine having it look. So first, from an aesthetics (and ease-of-understanding) standpoint, which would be best?

1. The colorbar has one line for each color index, and is annotated using 6 evenly-spaced divisions, but the numbers marking those divisions are not evenly distributed.
2. The colorbar has one line for each color index, the annotations are evenly spaced in *value*, but are spaced unevenly along the color bar.
3. The colorbar is annotated using 6 evenly-spaced divisions that have evenly-spaced numbers, and the colors within the color bar vary (i.e. the mapping between row up the color bar and color index is no longer linear).

The second question is implementation. I can achieve #1 very easily using COLORBAR. I think that in order to do #2, I would need to essentially roll my own version of COLORBAR that changes the annotation locations - are there any shortcuts that would let me use the existing routine? To do #3, my best idea is to regenerate a new (non-linearly altered) color table, and then use the existing COLORBAR routine. Any caveats with that, or any easier ways to do it?

Alternatively, what other ideas do people have for conveying this kind of information?

-Jeremy.