Subject: Re: map_image and latmin/latmax, lonmin/lonmax - edges or centres?
Posted by David Fanning on Thu, 26 Sep 2013 16:49:26 GMT

AMS writes:

> Almost, but not quite. Now, all the grid cells are the same size. But, it only puts 4x4 cells in there (instead of 5x5). It looks like the left column and bottom row are being cut off the image correctly.

I have to wave my hands a little bit here, but let me try to explain why
I think this might be the correct result.

We have five pixels covering a range of, say, 47 to 52 degrees. If we
assume the first pixel value represents the bottom edge of the image and
the fifth pixel value represents the top edge of the image, then, in
fact, we have only four values that can go into that range. Remember, we
are interpolating the data into this space. Think of a vertical color
bar. How many horizontal lines would you have to draw to separate four
colors. The answer is five. One at the bottom, three to separate colors,
and one at the top.

I think that is what is happening here. The five values of our image are
analogous to the locations of five vertical lines that we are using to
"separate" the colors. We can only separate them into four colors with
five lines. So, I think this is just the way interpolation works.

This example is a bit contrived, of course. With these kinds of map
projections and this image there would be no need to do any
interpolation at all. But, in general, I think the interpolation is
being done correctly by Map_Proj_Image.

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thue. ("Perhaps thou speakest truth.")