View Forum Message <> Reply to Message On Friday, May 9, 2014 12:44:12 PM UTC-4, David Fanning wrote: > kiwh writes: > > >> I was hoping someone could help me figure out how to calculate the size of a pixel from a given map projection. For example, I use the following MAP_SET command to create a global 4096x2048 equidistant map. In theory (if I understand it correctly), the pixel sizes should all be the same since it is an equidistant map. > >> MAP_SET, /CYLINDRICAL, 0, 0, ISOTROPIC = 1, POSITION=[0.0, 0.0, 1.0, 1.0],/NOBORDER > >> > >> Conversely, this map should have pixel areas of varying sizes. >> MAP SET, /MOLLWEIDE, 0, 0, ISOTROPIC = 1, POSITION=[0.0, 0.0, 1.0, 1.0],/NOBORDER > >> >> So, what I would like to do is determine the area of each pixel based on the given map projection. I have tried MAP_2POINTS, but I think this gives me the actual distance from point A to point B based on the coordinates on a globe and not the projected pixel, which has been distorted because of the map projection. > >> > >> I apologize if I am not explaining my question very well, but hopefully someone understands mapping well enough to help me figure this out. > > > I understand map projections well enough to understand that if you want > a projected XY grid of known resolution (which is what I *think* you > > want), Map_Set is about the *last* IDL routine you want to be fooling > > around with. :-) > > I would seriously investigate Map Proj Init. (Or, if you want something

Subject: Re: Map pixel areas

Posted by khyde on Tue, 13 May 2014 14:14:27 GMT

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  easier to use, the cgMap object from the Coyote Library.)
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  Do you have a map projected image you are trying to establish a map
>
  projection for? I think it is odd (and probably not that useful) to want
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>
  to know the area of a pixel.
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>
  Cheers,
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>
  David
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>
  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.")
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Hello David,

The reason I am trying to figure out the pixel areas is I need to know the difference between a the "projected" area of a specified region of interest and the "true" area of the ROI. I have several dozen maps that have been created using MAP_SET and are used to remap satellite derived data. I have never used MAP_PROJ_INIT and will look into it more, but if I can figure out how to do this with the maps I already have that would be great.

The main thing I am trying to do is determine the areal production within a subsetted area of the map. Because we are using the sum of the pixels in the ROI, I need to know both the "projected" size and the "actual" size (which I already know), to get an accurate areal estimate. Again, I am not sure I am explaining this very well, but I do appreciate any suggestions.

Thank you, Kim