Subject: Re: problem in using function ll_to_utm.pro
Posted by ben.bighair on Wed, 21 May 2008 01:01:15 GMT
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On May 20, 8:19 pm, Baikal <royou...@cnu.ac.kr> wrote:
> To all,
>
> I am a physical oceanographer who needs to use your idl program in my
> model output post-processing.
>
> While utilizing your utm conversion program (ll_to_utm.pro) in my
> research work, I have a problem due to zone change so that I encounter
> a discontinuity problems as follows;
>
> test_lon=[125.999,126.000] ; define test lon & lat
> test_lat=[36.000,36.000]
> ; test output
> for i=0,1 do
> print,i,test_lon(i),test_lat(i),ll_to_utm(test_lon(i),test_l at(i))
> 0 125.999 36.0000 770330.54 3988106.3
> 1 126.000 36.0000 229579.34 3988109.1
>
> I undrestand this is due to zone change from 51 to 52.
> I wonder how I can avoid this trouble in map drawing where my
> coastline data points lie over 125 to 127 E longitude.
>
> I appreciate your helps.

Hi,

I think I might have prepared that routine. To my understanding, you don't want to work across UTM zones. My memory is a little rusty, but I recall that the warping is minimized along central meridian of any zone. I take that to mean that distortion is maximized along the edges.

On the other hand, I suppose it is possible to offset the values in one zone against the central meridian of the other - after all, the origin of any UTM zone is some arbitrary value. You would have to dive into the Snyder work referenced in the code. In any event, I wonder why you are not mapping with your lat lon values directly. Why bother going to UTM coords?

While we are at it, I have posted an update to that collection files - in particular to UTM_ZONE so that it behaves a little better with vectors of inputs. See ...

http://www.tidewater.net/~pemaquid/geo.zip

Cheers,
Ben