Subject: Re: Display radar data?

Posted by pariais on Wed, 08 Oct 2008 15:33:26 GMT

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pgri...@gmail.com wrote:

- > David Fanning wrote:
- >> Dave writes:

>>

- I have some weather radar data, whose coordinates are distances >>>
- >>> (kilometers) and angles to the radar station. So how can I convert
- >>> these local coordinates to longitude/latitude cordinates? Please give
- >>> any clue.

>>

- >> Set up a map projection of the area of interest with MAP\_SET
- >> or MAP\_PROJ\_INIT. Then use CV\_COORD to convert your data
- >> from polar coordinates to rectangular coordinates (which
- >> will be the data or lat/lon coordinates, in this case).

>

- > While I am sure that this strategy would work, that will be depriving
- > the original
- > poster of the joy of figuring out how to convert polar coordinates in
- > a plane tangent
- > to a sphere at a given point to spherical coordinates. Now, that's a
- > beautiful
- > geometry problem, isn't it? Furthermore, if high-precision is not
- > important.
- > the problem may be simplified a bit by making the assumption that the
- > earth is
- > locally flat at the radar position, thus reducing the problem to
- > converting plane
- > coordinates from polar to cartesian...

In the latter approximation, a back of the envelope computation yielded (you may want to double check this before actually using it)

lon=lon0+r/R\*sin(alpha)\*!radeg lat=lat0+r/R\*cos(alpha)/cos(lat0)\*!radeg

Cheers. Paolo

- > Ciao.
- > Paolo
- >
- >>

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