
Subject: Re: North American Regional Reanalysis (NARR) projection

Posted by [MarioIncandenza](#) on Tue, 05 Jul 2011 23:57:03 GMT

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On Jul 5, 3:07 pm, Ed Hyer <ejh...@gmail.com> wrote:

> Has anyone succeeded in transforming the NARR data to a real
> rectangular coordinate system for matching to other data?

OK, after some intense Googling and trial and error, we found the information on the spheroid used by NARR, which is not the IDL default. We arrived at a solution, shown here for posterity:

```
narr_proj=map_proj_init('Lambert Conformal  
Conic',standard_par1=50,standard_par2=50,center_lat=50,cente  
r_lon=-107,semimajor_axis=6371200,  
semiminor_axis=6371200)
```

We calculated a rectangular grid and checked it like so:

```
narr_gridxy=map_proj_forward(narr_lons,narr_lats,map=narr_pr oj)  
gridbinx=percentiles(narr_gridxy[0,*]-shift((narr_gridxy[0,* ]),  
1),val=0.5); median grid spacing  
gridbiny=percentiles(narr_gridxy[1,*]-shift((narr_gridxy[1,* ]),  
1),val=0.5); median grid spacing  
narr_grid_newx=(findgen(349)*gridbinx)+min(narr_gridxy[0,*]) +(gridbinx/  
2.0)  
narr_grid_newy=(findgen(277)*gridbiny)+min(narr_gridxy[1,*]) +(gridbiny/  
2.0)  
narr_grid_new_latlon=map_proj_inverse(rebin(narr_grid_newx,  
349,277),rebin(transpose(narr_grid_newy,349,277),map=narr_pr oj)
```

Those values match very closely (within about 3m in projected space).

--Edward H.
