Subject: Re: Map parameters for Eta/NAM model
Posted by James Kuyper on Thu, 12 Oct 2006 21:29:08 GMT
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Kenneth Bowman wrote:
> This is an obscure question that I am sure will be of interest only to the
> weather weenies out there.
>
> I am trying to plot some gridded data from the NCEP Eta/NAM high-resolution
> model. This model uses WMO grid 218, which is defined on a Lambert conformal
> map projection by the following:
>
> --
> VALUE - 218 (B)[B]
>
> GRID DESCRIPTIONS - Grid over the Contiguous United States (used by the 12-km
> Eta Model) (Lambert Conformal)
>
> Nx   614
> Ny   428
> La1   12.190N
> Lo1   226.514E = 133.459W
> Res. & Comp. Flag   0 0 0 0 1 0 0 0
> Lov   265.000E = 95.000W
> Dx   12.19058 km
> Dy   12.19058 km
> Projection Flag (bit 1)   0 (not bipolar)
> Scanning Mode (bits 1 2 3)   0 1 0
>
> Lat/lon values of the corners of the grid
> (1,1)   12.190N, 133.459W
> (1,428)   54.564N, 152.878W
> (614,428)   57.328N, 49.420W
> (614,1)   14.342N, 65.127W
>
> Pole point
> (I,J)   (347.668, 1190.097)
>
> The Dx, Dy grid increment (at 25 deg north) was selected so that the grid

The fact that the Dx, Dy increment listed above applies at 25 deg north
implies that 25N was used as one of the standard parallels.

> spacing would be exactly 12.000 km at 35 deg north; the intersection of 35N &

The fact that those Dx, Dy increments are not the same as the scale at
35N implies that 35N is not one of the standard parallels,

> 95W falls on point (347.668, 160.999)
> ---
>
> If the map projection is set correctly, the four corners in the table above
> should define a rectangle on the map. Using my best guess, I get something that
> is close, but not quite right.
>
>
> PRO NAM_CONIC
>
> MAP_SET, /CONIC, 35.0, -95.0, STANDARD = [35.0], /GRID, /USA, /CONT, SCALE =
> 5.0E7
>
> x = [-133.459, -152.878, -49.420, -65.127]
> y = [12.190,   54.464, 57.328, 14.342]
>
> PLOTS, [x, x[0]], [y, y[0]]

Assuming that there is only one standard parallel, I tried
STANDARD=[25]. It came out as a rectangle.