Subject: Re: More Map Projection Madness
Posted by David Fanning on Tue, 01 Nov 2011 17:32:30 GMT

David Fanning writes:

> But, this contradicts what I learned this morning
> about the WGS84 datum, because here is behaves
> perfectly.

OK. To clarify my clarification. (I guess I'm not
the only person confused by map projections this
morning.)

First, apparently, the UTM projection is the
only projection affected by the WGS84 bug,
contrary to what I heard this morning.

Second, there is ambiguity when you set the map
projection to the name "Albers Equal Area". In
fact, Map_Proj_Init will silently select the
"Albers Equal Area Conic" map projection for
you and ignore the value selected with the
DATUM keyword (more below). You get around
this by setting the GCTP keyword to Map_Proj_Init.

The "Albers Equal Area Conic" projection is
the "same as" the "Albers Equal Area" projection,
as far as I can tell from several sources this
morning, but I do note that the old Map_Set
"Albers Equal Area Conic" projection can only
use a spherical datum. Presumably that is the
reason for the different output when these two
different values are used to select the map
projection.

I also note that there would be less confusion
if this selection and the ignoring of the DATUM keyword
were flagged for the user. You don't typically
see the "Albers Equal Area Conic" selection if you
are using on-line help to look for projections to use
with Map_Proj_Init. And you certainly wouldn't
be aware that they produce different results.
In fact, you probably will only learn this when your
paper with the incorrect results has gone to print. :-(

Cheers,

David

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Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")