Subject: Re: Get Lat/long equivalent based on NEASE grid value
Posted by David Fanning on Thu, 21 Oct 2010 18:39:42 GMT
View Forum Message <> Reply to Message

Snow53 writes:

> I have a file whose coordinate is in WGS-84 NEASE grid. I would like
> to determine the lat/long value for each input pixel location. I
> don't want to actually re-project the file, I just want that value. I
> have included NEASE in the ENVI map_proj.txt file.
>
> Any suggestions as to what might be the best way to do this?

What in the world is a NEASE grid? :-)

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.")

Subject: Re: Get Lat/long equivalent based on NEASE grid value
Posted by Snow53 on Thu, 21 Oct 2010 18:50:54 GMT
View Forum Message <> Reply to Message

On Oct 21, 12:39 pm, David Fanning <n...@dfanning.com> wrote:
> Snow53 writes:
>> I have a file whose coordinate is in WGS-84 NEASE grid. I would like
>> to determine the lat/long value for each input pixel location. I
>> don't want to actually re-project the file, I just want that value. I
>> have included NEASE in the ENVI map_proj.txt file.
>
>> Any suggestions as to what might be the best way to do this?
>
> What in the world is a NEASE grid? :-)
>
> 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.")

It's the polar version of the NSIDC (http://nsidc.org/data/ease/)
grid, based on the Lambert Azimuthal.

So I've tried to use MAP_PROJ_INIT to define my projection and then
feed it into MAP_PROJ_INVERSE to get my lat/long, but I haven't
figured out how to point to the NEASE parameters via MAP_PROJ_INIT
(AHHH!).
I'm assuming that there must be some relatively easy way to do so....

Subject: Re: Get Lat/long equivalent based on NEASE grid value
Posted by David Fanning on Thu, 21 Oct 2010 19:04:13 GMT
View Forum Message <> Reply to Message

Snow53 writes:

> It's the polar version of the NSIDC (http://nsidc.org/data/ease/)
> grid, based on the Lambert Azimuthal.
>
> So I've tried to use MAP_PROJ_INIT to define my projection and then
> feed it into MAP_PROJ_INVERSE to get my lat/long, but I haven't
> figured out how to point to the NEASE parameters via MAP_PROJ_INIT
> (AHHH!).
> I'm assuming that there must be some relatively easy way to do so....

OK, but the NSIDC EASE grid projections use a
spherical datum, not a WGS-84 datum. Are you
performing some kind of datum transformation before
you look for the lat/lon values?

It's relatively easy. You could get the EASE grid
lat/lon values, for example, from the NSIDC web page. :-)

And if I knew exactly what you are trying to do, I could
probably provide some code to do it. It would be quite
easy to do. But I am afraid of what you are going to do
with these Lambert Azimuthal, WGS-84 lat/lon values and
NSIDC EASE gridded data. :-)

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.")

Subject: Re: Get Lat/long equivalent based on NEASE grid value
Posted by Snow53 on Thu, 21 Oct 2010 19:18:05 GMT
View Forum Message <> Reply to Message

On Oct 21, 1:04 pm, David Fanning <n...@dfanning.com> wrote:
> Snow53 writes:
>> It's the polar version of the NSIDC (http://nsidc.org/data/ease/)
>> grid, based on the Lambert Azimuthal.
>
>> So I've tried to use MAP_PROJ_INIT to define my projection and then
>> feed it into MAP_PROJ_INVERSE to get my lat/long, but I haven't
>> figured out how to point to the NEASE parameters via MAP_PROJ_INIT
>> (AHHH!).
>> I'm assuming that there must be some relatively easy way to do so....
>
> OK, but the NSIDC EASE grid projections use a
> spherical datum, not a WGS-84 datum. Are you
> performing some kind of datum transformation before
> you look for the lat/lon values?
>
> It's relatively easy. You could get the EASE grid
> lat/lon values, for example, from the NSIDC web page. :-)
>
> And if I knew exactly what you are trying to do, I could
> probably provide some code to do it. It would be quite
> easy to do. But I am afraid of what you are going to do
> with these Lambert Azimuthal, WGS-84 lat/lon values and
> NSIDC EASE gridded data. :-)
>
> 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.")

Hey,

I'm not doing any sort of transformation on the data (WGS-84 was
defined at the datum in the data hdr file I got with these data).

What I want to do is a quick geographic-based masking of these files ,
i.e. anything <50 deg N gets masked as -9999. The way the spherical
NEASE coordinates are set up makes this more difficult to do, so I had
this idea that I would just get the lat/long equivalent and use that
to define the mask criteria (but no easy lunch, right? :)).

Subject: Re: Get Lat/long equivalent based on NEASE grid value
Posted by David Fanning on Thu, 21 Oct 2010 19:28:40 GMT
View Forum Message <> Reply to Message

Snow53 writes:

> I'm not doing any sort of transformation on the data (WGS-84 was
> defined at the datum in the data hdr file I got with these data).
>
> What I want to do is a quick geographic-based masking of these files ,
> i.e. anything <50 deg N gets masked as -9999. The way the spherical
> NEASE coordinates are set up makes this more difficult to do, so I had
> this idea that I would just get the lat/long equivalent and use that
> to define the mask criteria (but no easy lunch, right? :)).

Well out of the realm of my expertise now. :-)

You can probably locate the files you need here:

  http://nsidc.org/data/ease/tools.html

The errors you introduce with a WGS-84 datum are small
compared to what you want to use it for. :-)

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.")

Subject: Re: Get Lat/long equivalent based on NEASE grid value
Posted by Snow53 on Thu, 21 Oct 2010 19:33:14 GMT

On Oct 21, 1:28 pm, David Fanning <n...@dfanning.com> wrote:
> Snow53 writes:
>> I'm not doing any sort of transformation on the data (WGS-84 was
>> defined at the datum in the data hdr file I got with these data).
>
>> What I want to do is a quick geographic-based masking of these files ,
>> i.e. anything <50 deg N gets masked as -9999. The way the spherical
>> NEASE coordinates are set up makes this more difficult to do, so I had
>> this idea that I would just get the lat/long equivalent and use that
>> to define the mask criteria (but no easy lunch, right? :)).
>
> Well out of the realm of my expertise now. :-)
>
> You can probably locate the files you need here:
>
> http://nsidc.org/data/ease/tools.html
>
> The errors you introduce with a WGS-84 datum are small
> compared to what you want to use it for. :-)
>
> 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.")

Thanks David.

Subject: Re: Get Lat/long equivalent based on NEASE grid value
Posted by David Fanning on Thu, 21 Oct 2010 19:46:26 GMT

Snow53 writes:

> It's the polar version of the NSIDC (http://nsidc.org/data/ease/)
> grid, based on the Lambert Azimuthal.
>
> So I've tried to use MAP_PROJ_INIT to define my projection and then
> feed it into MAP_PROJ_INVERSE to get my lat/long, but I haven't
> figured out how to point to the NEASE parameters via MAP_PROJ_INIT
> (AHHH!).

> I'm assuming that there must be some relatively easy way to do so....

By the way, I was going to write in one of my answers that
you can't use MAP_PROJ_INIT to create a Lambert Azimuthal
Equal Area (EASE grid) with a WGS-84 datum anyway, since
you can't use non-spherical axes to define your datum with
this projection. But, of course, I looked at the IDL on-line
help before I posted this, which is part of my strategy to
avoid looking the fool.

It said you could! That confused me, so I looked at the IDL
7 on-line help just now. That said you couldn't!

So, hooray! Something I really need is FIXED in IDL 8.0!!
I *knew* there was a reason I was spending all that money
to upgrade. ;-)

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.")
