Subject: Re: Georeferencing Errors
Posted by K. Bowman on Tue, 02 Nov 2004 20:07:37 GMT
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In article <ce4903f3.0411021020.112e251f@posting.google.com>,
 will.mccarty@msfc.nasa.gov (Will McCarty) wrote:

> OK, I've posted on this before, and this time I'm using a bit of a
> more common dataset (GTOPO30 terrain elevation), but getting similar
> geolocation errors. Thus I'm interested in seeing what (if anything)
> you guys can come up with. I use the following code:
>
> --test_lat_lon.pro
> ulx = -99.99583333333334
> uly = 39.99583333333333
> dx = 0.00833333333333
> dy = 0.00833333333333
>
> lat = fltarr(4800,6000)
> lon = lat
> for i = 0, 4799 do begin
> for j = 0, 5999 do begin
> lat[i,j] = uly - dy*j
> lon[i,j] = ulx + dx*i
> endfor
> endfor

I don't have the data set, but you might try

ulx = -99.99583333333334D0
uly = 39.99583333333333D0
dx = 0.00833333333333D0
dy = 0.00833333333333D0

lat = DBLARR(4800,6000)

As it is, you are not getting the precision you think you are.

Or, it might be a pixel corner/center thing.

Ken Bowman

Subject: Re: Georeferencing Errors
Posted by mperrin+news on Tue, 02 Nov 2004 20:57:45 GMT
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Will McCarty <will.mccarty@msfc.nasa.gov> wrote:

> OK, I've posted on this before, and this time I'm using a bit of a
> more common dataset (GTOPO30 terrain elevation), but getting similar
> geolocation errors. Thus I'm interested in seeing what (if anything)
> you guys can come up with. I use the following code:
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> ulx = -99.99583333333334
> uly = 39.99583333333333
> dx = 0.00833333333333
> dy = 0.00833333333333

If you really care about that many significant figures, you need to
declare these as doubles, not floats:

```
IDL> dx = 0.00833333333333333333333333333333
IDL> print,dx,format="(F25.21)"
  0.008333333767950534821
IDL> dx = 0.00833333333333333333333333333333d
IDL> print,dx,format="(F25.21)"
  0.008333333333333333218
```

- Marshall

Subject: Re: Georeferencing Errors
Posted by David Fanning on Tue, 02 Nov 2004 21:06:18 GMT
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Will McCarty writes:

```
> lat = fltarr(4800,6000)
> lon = lat
> for i = 0, 4799 do begin
>     for j = 0, 5999 do begin
>         lat[i,j] = uly - dy*j
>         lon[i,j] = ulx + dx*i
>     endfor
> endfor
```

Those other guys probably solved your problems,
but I would have another look at the Dimension
Juggling Tutorial unless you *like* sitting
around for hours drinking coffee. :-)

http://www.dfanning.com/tips/rebin_magic.html

Cheers,

David
--
David W. Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http:/www.dfanning.com/
Phone: 970-221-0438, IDL Book Orders: 1-888-461-0155

Subject: Re: Georeferencing Errors
Posted by Kelly Dean on Thu, 04 Nov 2004 05:31:59 GMT
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The FOR FOR...ENDFOR ENDFOR will allow you to drink some coffee, but the MAP_PATCH operation with this image will allow you to get a tennis match in. IDL's PolyWarp and Poly_2D will get the remapping done in minutes.

Kelly Dean
Colorado State University
Fort Collins, Colorado

David Fanning wrote:

> Will McCarty writes:
>
>> lat = fltarr(4800,6000)
>> lon = lat
>> for i = 0, 4799 do begin
>> for j = 0, 5999 do begin
>> lat[i,j] = uly - dy*j
>> lon[i,j] = ulx + dx*i
>> endfor
>> endfor
>
> Those other guys probably solved your problems,
> but I would have another look at the Dimension
> Juggling Tutorial unless you *like* sitting
> around for hours drinking coffee. :-)
>
> http://www.dfanning.com/tips/rebin_magic.html
>
> Cheers,
>
> David
> --
> David W. Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming: http:/www.dfanning.com/

> Phone: 970-221-0438, IDL Book Orders: 1-888-461-0155