Subject: Re: cgmap_gshhs.pro minarea issue
Posted by David Fanning on Fri, 22 Nov 2013 16:22:32 GMT
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Takis.Velissariou@deep-c.org writes:

>
> On Thursday, November 21, 2013 7:09:28 PM UTC-5, pvelis...@fsu.edu wrote:
>> Apparently, in the recent versions (>= 2.2) of gshhs database
>>
>> the units of the header.area changed from 1/10 km^2 to 1/10 m^2.
>>
>> For cgmap_gshhs to work properly the line:
>>
>>   polygonArea = header.area * 0.1 (ok for gshhs < 2.2)
>>
>> should be changed to:
>>
>>   polygonArea = header.area * 1.0e-7 (for gshhs >= 2.2)
>
> David,
>
> I saw the modified code in gmap_gshhs.pro and I think that:
>   magnitude = ISHFT(f, -26) AND 1B
> should change to:
>   magnitude = ISHFT(f, -26) AND 255B
>

Well, here is the header I am using to figure this out:

  http://www.idlcoyote.com/misc/gshhs.h

I presume the magnitude is the 6th byte in the flag (not the 4th as the
documentation indicates. I see no evidence that we are to use a
negative magnitude power. My way of pulling out the flag value is
consistent with how I find the other byte values in the flag.

> also
>   polygonArea = header.area * 0.1 * 10^magnitude
> should change to:
>   polygonArea = header.area * 0.1 (for version lt 9)
> and
>   polygonArea = header.area * 10^(-magnitude) (for version gt 9)

Since I set magnitude=0 if magnitude is not found in the file, and 10^0
is 1, I think my way of doing this is equivalent to yours.

Do you have a polygon you KNOW the area of that we can test?

Cheers,

David
--
David Fanning, Ph.D.
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Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thue. ("Perhaps thou speakest truth.")