
Subject: Re: Calculating area of latitude-longitude quadrangle?

Posted by [David Fanning](#) on Tue, 23 Aug 2011 19:13:46 GMT

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Ashley Berg writes:

- > Is there any way to calculate the area of a latitude-longitude
- > quadrangle in IDL, or some formula I could use?
- > MATLAB can (using areaquad from the Mapping Toolbox, which can return
- > surface area in km^2 of a lat/lon box covering a part of Earth) but I
- > do not have access to MATLAB.

Wow! Really!?

I'm not sure I'd put a whole lot of trust in a number like that! :-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Calculating area of latitude-longitude quadrangle?

Posted by [Ashley Berg](#) on Tue, 23 Aug 2011 20:06:32 GMT

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Yes, I'm not sure exactly how MATLAB does it! But for my purposes I only need a rough estimate.

Subject: Re: Calculating area of latitude-longitude quadrangle?

Posted by [R.G.Stockwell](#) on Tue, 23 Aug 2011 20:37:29 GMT

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- >
- >
- > "Ashley Berg" wrote in message
- > news:7e751dd7-f940-4246-bb73-a68fad00140d@bl1g2000vbb.google groups.com...
- >

- > Is there any way to calculate the area of a latitude-longitude
- > quadrangle in IDL, or some formula I could use?
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- > do not have access to MATLAB.

actual surface area would be impossible, but just integrate the surface of a sphere and that could get you close enough.

cheers,
bob

Subject: Re: Calculating area of latitude-longitude quadrangle?
Posted by [Maxwell Peck](#) on Wed, 24 Aug 2011 07:54:59 GMT
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On Aug 24, 4:52 am, Ashley Berg <ashley.b...@gmail.com> wrote:

- > Is there any way to calculate the area of a latitude-longitude
- > quadrangle in IDL, or some formula I could use?
- > MATLAB can (using areaquad from the Mapping Toolbox, which can return
- > surface area in km² of a lat/lon box covering a part of Earth) but I
- > do not have access to MATLAB.

When I had to do something similar in Excel (don't ask!) I broke it up into two triangles, found the internal angles (google Aviation Formulas) and used Girard's theorem to find the area of each triangle and added them together.

Max
