
Subject: Need GOES Image Expert

Posted by [David Fanning](#) on Mon, 17 Mar 2008 20:32:29 GMT

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Folks,

A quick question for a GOES image expert. Are the GOES satellite images, such as can be found here:

<http://goes.gsfc.nasa.gov/goeseast-lzw/peru/>

in some kind of map projection? Where can I learn about these images? The GOES folks don't seem to be making this information obvious. :-(

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: Need GOES Image Expert

Posted by [David Fanning](#) on Tue, 18 Mar 2008 20:39:22 GMT

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Kenneth P. Bowman writes:

> There goes my chance for fame. :-(

Well, hang on. There's still trouble in River City, and it rhymes with "p", and it stands for "projection".

I got a little too excited before. :-)

It's pretty good. Not bad. But not bang on right, either.

If I open a GeoTIFF file like this AVHRR file here:

http://www.dfanning.com/map_tips/tiffoverlay.html

Then I can find the UV bounding box by using the tie-points, the scales, and the size of the image:

s = Size(image, /Dimensions)

```
xscale = geotag.ModelPixelScaleTag[0]
yscale = geotag.ModelPixelScaleTag[1]
tp      = geotag.ModelTiePointTag[3:4]
```

```
xOrigin = tp[0]
yOrigin = tp[1] - (yscale * s[1])
xEnd = xOrigin + (xscale * s[0])
uv_box = [xOrigin, yOrigin, xEnd, yEnd]
```

This assumes that the image is "squared-up" with the UV coordinate system.

Unfortunately, my image is NOT "squared-up" with the UV coordinate system. It is tilted a little bit. Here are the four corners of my warped image in UV space, after I warped the lat and lon arrays and converted the corner points to UV space. (Starts in lower-left and goes clockwise.)

```
-2361218.9   -1869566.0
-2373277.4    1841973.4
 2360269.4    1842014.4
 2348276.6   -1869524.8
```

Thus, when I try to treat it as if it were the AVHRR image above, I *almost* get it right, but not quite. I think I need some way to "square up" this image with the UV coordinate system. Unfortunately, it is not a simple rotation, because the image itself is not a rectangle in this warped space. It's a squarish blob. :-(

I'm looking for drugs or ideas, either one will do.

Cheers,

David

--

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Subject: Re: Need GOES Image Expert

Posted by [David Fanning](#) on Tue, 18 Mar 2008 20:47:01 GMT

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David Fanning writes:

> I'm looking for drugs or ideas, either one will do.

I think the final solution might be smaller IDL graphics windows. I'm beginning to see the wisdom of wanting to enclose IDL graphics windows inside the confines of the IDL Workbench.

Cheers,

David

--

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Subject: Re: Need GOES Image Expert

Posted by [David Fanning](#) on Fri, 21 Mar 2008 04:30:56 GMT

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Mark Conner writes:

> Bottom line is that it's not an easy solution.

I'm going to file this article under the category of "Too Much Information". Goodness!

But I do appreciate knowing where to put my hands on it when it comes to either this or joining the penitente monks down in New Mexico.

I did manage to get the MAP_PATCH solution working well enough for my purposes, but I would *love* to resurrect Kelly Dean's TRIGRID, POLY2D and POLYWARP solutions. (Odd that so much religious imagery is coming to mind, but I guess Easter is almost here.)

Kelly, do you think anyone has old copies of those web pages? Some Goggle Archive somewhere? Could we piece it together over lunch sometime?

Cheers,

David

--

David Fanning, Ph.D.
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Subject: Re: Need GOES Image Expert
Posted by [Bruce Bowler](#) on Fri, 21 Mar 2008 12:28:31 GMT
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On Thu, 20 Mar 2008 22:30:56 -0600, David Fanning wrote:

> do you think anyone has old copies of those web pages? Some
> Goggle Archive somewhere? Could we piece it together over lunch
> sometime?

Have you tried the "wayback machine"?

<http://www.archive.org/web/web.php>

Subject: Re: Need GOES Image Expert
Posted by [KRDean](#) on Fri, 28 Mar 2008 15:21:13 GMT
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On Mar 21, 6:28 am, Bruce Bowler <bbow...@bigelow.org> wrote:

> On Thu, 20 Mar 2008 22:30:56 -0600, David Fanning wrote:
>> do you think anyone has old copies of those web pages? Some
>> Goggle Archive somewhere? Could we piece it together over lunch
>> sometime?
>
> Have you tried the "wayback machine"?
>
> <http://www.archive.org/web/web.php>

Those were the days.....

<http://web.archive.org/web/20040113130116/http://www.cira.colostate.edu/special/csuidl/IDLremap0.htm>

Kelly Dean
Fort Collins, CO
