Subject: Re: Irregular Satellite data plotting
Posted by Craig Markwardt on Fri, 05 Dec 2008 02:09:58 GMT
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On Dec 4, 8:22 pm, greer.katel...@gmail.com wrote:
> I have some satellite temperature measurements that are taken at
> regular latitude intervals but irregular longitude intervals.
> Eventually, I will interpolate everything, but first I would like to
> make a plot with a square indicating the location of the measurement
> (longitude and latitude) that is colored to indicate the relative
> temperature. Does anyone know how to do this? It seems simple to me
> in concept, but have been unable to come up with a solution. (I keep
> getting advice about how to do this in matlab with pcolor, but I need
> to stay in idl with this one) Thanks in advance for any advice you
> might have!

I'm sure that something like this,
```
  for i = 0, n_points-1 do begin
    oplot, [lon[i]], [lat[i]], psym=6, color=(temp[i]-MINTEMP)/
(MAXTEMP-MINTEMP)*255
  endfor
```
will be a good place to start. You will have to play around with how
the color is calculated.

Craig

P.S. David, I used [] array notation against my better judgement.

Subject: Re: Irregular Satellite data plotting
Posted by David Fanning on Fri, 05 Dec 2008 02:21:51 GMT
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Craig Markwardt writes:

> P.S. David, I used [] array notation against my better judgement.

And I noticed that *immediately*. ;-)

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: Irregular Satellite data plotting
Posted by MarioIncandenza on Fri, 05 Dec 2008 18:24:25 GMT
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Katie,

OPLOT bizarrely doesn't allow this, but fortunately someone stepped up
and wrote the OPLOTS routine that will get the job done:
 http://groups.google.com/group/comp.lang.idl-pvwave/browse_t
hread/thread/e11a9c983151e0f3/2bbaddec12f5b8d5?hl=en&lnk
=gst&q=oplots#2bbaddec12f5b8d5

If you don't like the selection of symbols available natively, there
is also SYMCAT, which will give you just about anything:
http://www.dfanning.com/programs/symcat.pro

So you'd end up with

OPLOTS,lons,lats,psym=SYMCAT(15),color=BYTSCL(temperature)

A little dickering with the SYMSIZE and THICK keywords, and you can
probably get what you want.

--Edward H.

Subject: Re: Irregular Satellite data plotting
Posted by Chris[6] on Fri, 05 Dec 2008 21:47:41 GMT
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On Dec 5, 8:24 am, Ed Hyer <ejh...@gmail.com> wrote:
> Katie,
>
> OPLOT bizarrely doesn't allow this, but fortunately someone stepped up
> and wrote the OPLOTS routine that will get the job
done:http://groups.google.com/group/comp.lang.idl-pvwave/bro wse_thread/thr...
>
> If you don't like the selection of symbols available natively, there
> is also SYMCAT, which will give you just about
anything:http://www.dfanning.com/programs/symcat.pro
>
> So you'd end up with
>
> OPLOTS,lons,lats,psym=SYMCAT(15),color=BYTSCL(temperature)
>
> A little dickering with the SYMSIZE and THICK keywords, and you can
> probably get what you want.
>

> --Edward H.

I have been working on something similar, but for astronomical
purposes. You may find this code useful:

http://www.ifa.hawaii.edu/users/beaumont/code/raw/smoothmap. pro

It creates a smoothed map from a set of measurements on a spherical
surface. The code is still being refined, but has been behaving for me
lately.

Chris

Subject: Re: Irregular Satellite data plotting
Posted by Chris[6] on Fri, 05 Dec 2008 21:53:22 GMT
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> I have been working on something similar, but for astronomical
> purposes. You may find this code useful:
>
> http://www.ifa.hawaii.edu/users/beaumont/code/raw/smoothmap. pro
>

I should mention that, since I use it for astronomy purposes, it
outputs files in the FITS image format. Also, it uses routines form
the IDL astronomy user's library

chris
