
Subject: Resampling large satellite (AVHRR) images to a grid

Posted by [Liam Gumley](#) on Tue, 09 Jul 1996 07:00:00 GMT

[View Forum Message](#) <> [Reply to Message](#)

Hi folks,

I have the following data in 1-D arrays for an AVHRR scene:

latitude

longitude

brightness temperature

I can display the data as an image in satellite coordinates with no problems (just REFORM the brightness temperature array).

However, I don't know of an efficient way to resample the image to a lat/lon grid (say equidistant cylindrical). TRIANGULATE and REGRID are far too slow (and are probably overkill) when used on every lat/lon point. I have tried a few things with POLYWARP and POLY_2D but have not come up with a satisfactory method yet.

Has anyone done something like this? I am looking for a *fast* algorithm that will handle large AVHRR scenes (say 2048x208 pixels).

Cheers.

Liam.

Subject: Re: Resampling large satellite (AVHRR) images to a grid

Posted by [Hermann Mannstein](#) on Thu, 11 Jul 1996 07:00:00 GMT

[View Forum Message](#) <> [Reply to Message](#)

Liam Gumley wrote:

>

> Hi folks,

>

> I have the following data in 1-D arrays for an AVHRR scene:

>

> latitude

> longitude

> brightness temperature

>

> I can display the data as an image in satellite coordinates with

> no problems (just REFORM the brightness temperature array).

>

> However, I don't know of an efficient way to resample the image to

> a lat/lon grid (say equidistant cylindrical). TRIANGULATE and REGRID

> are far too slow (and are probably overkill) when used on every lat/lon

> point. I have tried a few things with POLYWARP and POLY_2D but have
> not come up with a satisfactory method yet.
>
> Has anyone done something like this? I am looking for a *fast* algorithm
> that will handle large AVHRR scenes (say 2048x208 pixels).

Hallo Liam,
try to use the 'convert_coord' routine. Set your map and then
p = convert_coord(lon, lat, /data, /to_device)
image=fltarr(!d.x_size, !d.y_size)
and then
image(ps(0,*),ps(1,*)) = brightness_temperature

to fill holes use the dilate operator.

--

Regards,

~~~~~

~~~~~

Hermann Mannstein Tel.: +49 8153 28-2503
Institut fuer Physik der Atmosphaere or -2558
DLR - Oberpfaffenhofen Fax.: +49 8153 28-1841
Postfach 1116 \ mailto:H.Mannstein@dlr.de
D-82230 Wessling \ 0 http://www.op.dlr.de/~pa64
Germany \V|_____

~~~~~`-----\-----'~~~~~

\