Subject: Re: Vertical profiles
Posted by knipp on Mon, 07 Mar 1994 08:22:58 GMT
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In article 9403041804@sgsscsc2, sgsmatpa@reading.ac.uk (sgsmatpa) writes:
>
> Hello!
> Another plea for help here.
>
> I have some oceangraphic data that I would like to display
> using Pvwave but I'm not having much success. The data basically
> consists of a series of almost parallel, vertical slices
> through the ocean :-
>
>   ____ ____ ___   y (long)
>   /| /| /| /| /| | /
>   / |/ |/ |/ |/ | | /
>   / |/ |/ |/ |/ | | /
>   / /___/ /___/ | | --------------> x(lat)
> | | | | | | | | |
> | | | | | | | | |
> | | | | | | |__| |
> | | | | | | / |
> | /| | /| | / |
> |/ | |/ | |/ z(depth)
> |/ |___|/ |___|/
>
...
>
> thanks
> Tricia Matthews
> University of Reading
> England
> sgsmatpa@uk.ac.reading

Hi

I guess there's a routine existing in PvWave called PLOT3D
(..../lib/user/plot3d.pro).

It may be the solution to your problem.

Karl

_____

```
 _____
  __ ____  __
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```

Subject: Re: Vertical profiles
Posted by dogru on Tue, 08 Mar 1994 04:35:19 GMT
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In <19574.9403041804@sgsscsc2> sgsmatpa@reading.ac.uk (sgsmatpa) writes:

> Hello!
> Another plea for help here.

> I have some oceangraphic data that I would like to display
> using Pvwave but I'm not having much success. The data basically
> consists of a series of almost parallel, vertical slices
> through the ocean :-

> ... [picture deleted.]

> Data is in the form of x, y, z, temperature. I want to be able to display
> the 3D data and roatate it around the z axis to look from different angles
> and to contour or shade the surface with the temperature values. Later
> on I want to interpolate the data to give a full 3D volume but thats a
> different problem!

> SHADE_SURF doesnt seem to be able to cope with this kind of 'vertical'
> surface. I can cheat and map longditude to z and depth to y but this
> means I can't rotate the data around the depth axis.

> Any suggestions as to alternative ways of displaying it? Can I convert it
> to a volume and make most of the volume transparent except where I have
> data points? And if I do that can I still display axis etc?

 I faced this same problem a short while ago. The trick lies in
 using the IDL routines TRIANGULATE and TRIGRID. The first routine
 converts the given points to a set of triangles in the space.
 The second routine then takes this set and maps them to a volume.
 If, for example, x, y, and z are each vectors of size N, you can
 obtain the (equivalent) 3xN set of triangles by

 TRIANGULATE, x, y, triangles

The variable 'triangles' will hold the set of triangles, which you
can use in TRIGRID to obtain a volume (or, a 2D array accepted by
SURFACE and SHADE_SURF) of 51x51, which is the default:

vol=TRIGRID(x, y, z, triangles)
SHADE_SURF, vol

> Also is there a 'null' value for data points (e.g. -9999.000) ?

Yes, one of the above routines accepts a keyword that lets you
change the default for the missing values. Usually, zero works
much better, however, if you later wish to plot the graph.

A couple minor annoyances: Even replacing the null values with
zeros resulted in graphs that the users did not want to see.
And second, after the above transformations, you lose the actual
axis ranges of your data. Mail me or post if you want more info.

Sait Dogru
dogru@cs.umn.edu

> Help! All advice very welcome.

> thanks
> Tricia Matthews
> University of Reading
> England
> sgsmatpa@uk.ac.reading

Subject: Re: Vertical profiles
Posted by roe on Tue, 08 Mar 1994 07:53:29 GMT
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Hello!

I'm analysing a couple of SAR images from the ERS-1 satellite and am wondering if anybody has
IDL routines for speckle filtering.

Thanks a lot.

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