Subject: Re: random slice through a volume of catscan data
Posted by Sergey Koposov on Thu, 01 May 2003 18:32:48 GMT
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Hello, Jeff,
I think , if your data volume is presented as 3-dimensinal array (i.e.
your data is uniformly spaced), you can use the EXTRACT_SLICE function.

Otherwise , (if your data is presented , for example, as 1-dimensional
array with x,y & z coordinates) you can
1) define the function distance(x,y,z) , which will compute the distance
from the point to the plane
function distance,x,y,z
common plane ,A,B,C,D ; on the assumption that A*x+B*y+C*z+D=0 return
,(A*x+B*y+C*z+D)/sqrt(A^2+B^2+C^2) ;define the plane
end
2) Select the points for the slice by using WHERE
indices=WHERE(dist(X,Y,Z) lt 1) ;where X,Y,Z are 1-d arrays of x,y,z
coordinates
3) Image the necessary characteristics for X[indices],Y[indices],Z[..]
with some interpolation (if you need of image , not of plot of points)
(for example the function GRID_TPS,and others (other functions are in
the IDL Online Help , "gridding and interpolation"))

You can also make the interpolation for slicing in the beginning by
means the GRID3 function (see also IDL Online Help , gridding and
interpolation) . And after that , you will can directly perform the
imaging.

I hope my considerations will be useful. But I don't insist that my
methods are optimal :)
Cheers,
Sergey

Jeff Nettles wrote:
> Hi All,
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> through. (BTW, these are scans of meteorites, not people, in case you're
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> Thanks for your time (and hopefully your help!),
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Subject: Re: random slice through a volume of catscan data
Posted by Chris[1] on Thu, 01 May 2003 21:29:21 GMT
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"Sergey Koposov" <astro@mccme.ru> wrote in message
news:b8rp8hkje1@news.rol.ru...
> Hello, Jeff,
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Sergey - I'm not Jeff but thanks for the post, I happened to be puzzling over a similar problem (slicing up temperature distributions on the Scotian Shelf) when I saw your post. Saved me a good deal of aspirin :)

Chris

Subject: Re: random slice through a volume of catscan data
Posted by Jeff Nettles on Fri, 02 May 2003 15:45:26 GMT
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Sergey,

Thanks so much for the reply. I did indeed learn about the EXTRACT_SLICE function and am going through it now.
I think that you can actually use the ANISOTROPY keyword and use data that isn't uniformly spaced (mine isn't). But if not, your strategy makes sense to me.

So again, thanks so much!
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Posted by Sergey Koposov on Fri, 02 May 2003 18:36:19 GMT
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Jeff ,
the keyword ANISOTROPY allow to get the slice for GRID with different
steps for X,Y & Z axes , but I talked about method ,which allow to get
the slice for the more general situation - the situation with completely
scattered points.

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