Subject: Re: Is there a simple way to plot field lines?
Posted by so on Wed, 28 May 2003 20:36:53 GMT
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David Fanning <david@dfanning.com> wrote in message
news:<MPG.193e67c621b7edc6989bb4@news.frii.com>...
> Steve (so@cp.dias.ie) writes:
>
>> Ouch. Well I guess I should have been more explicit to. I mean field
>> lines which are everywhere tangent to a vector field (2d is fine
>> thanks), also known as streamlines for velocity fields. I don't want
>> arrows anywhere. Or cows.
>
> Oh, well then. STREAMLINE might do the trick. :-)
>
> Cheers,
>
> David

There is a script called streamline.pro on
http://www.metvis.com.au/graphics.html with nice examples of its
output. It uses particle_trace and by commenting out the arrow
commands and judiciously tweaking the number of seedpoints, step size,
and max iterations it produces perfectly acceptable field line plots.

I am plotting dipole fields which look a bit iron-filing like I guess
because of the 1/r3 dependence but I am guessing if the seed points
were chosen over a central sphere with uniform angular separation it
would be smoother.

Hope this helps somebody else sometime.

Cheers, Stephen