Subject: Re: How to plot the magnetic field vector along the trajectory
Posted by lasse on Wed, 12 Mar 2008 14:23:17 GMT
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On 12 Mar, 14:26, David Fanning <n...@dfanning.com> wrote:
> Lasse Clausen writes:
>> I found the question perfectly straight forward already from the first
>> post. Maybe it's to do with the fact that I fiddle with spacecraft
>> trajectories and magnetic fields every day. Or maybe I'm just in a
>> better mood than David...
>
> No question I was in a bad mood after wasting most of the
> afternoon looking for vestiges of earlier IDL installations
> on my computer, but it seems to me that how you go about
> adding magnetic vectors depends *entirely* on how you go
> about plotting the trajectory.
>
> In the proposed solution, I see we are just throwing
> out the Z component of both the trajectory and the vector
> field. Certainly this is the easiest way to proceed.
> I just wonder if it is accurate though. :-)
>
> 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.")

We are not throwing away anything, we are merely projecting into the
XY plane... ;-) You have to project somewhere as the computer screen
is not capable of displaying 3D - nor is paper, incidentally. And the
usual way to do this kind of thing is to provide three plots, one in
the XY plane, one in XZ and one in YZ. You then have to assemble the
3D picture in your head.

Alternatively, you can do the whole thing in "3D", using SURFACE to
establish the coordinate system and then

PLOTS, posx[i]+bx[i], posy[i]+by[i], posz[i]+bz[i], /T3D

to plot the lines.

Cheers
Lasse Clausen