
Subject: find a plane in a 3D plot

Posted by [Nicola](#) on Fri, 12 Sep 2008 09:54:09 GMT

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Dear folks,

I'm facing a problem which I do not have any idea how to solve.

Imagine that you have a 3 dimensional field as a function of time, say the three component of a magnetic field for example. They are stored in a `fltarr(nsample,3)`.

If plotted in a 3D box (by using for example `plot_3dbox`) they describe a closed orbit. I do know that they actually describe an ellipse (or something similar considering the fact that we are dealing with experimental data which not always correspond to theory!) and that this ellipse (or closed path) lies on a plane which have a certain inclination with respect to the three magnetic axis. I have to find a way to identify this plane and the direction perpendicular to this plane in the more accurate way as possible.

Do you have any idea how to proceed? Any suggestion will be very very appreciated

Thank you very much

nicola

Subject: Re: find a plane in a 3D plot

Posted by [Wox](#) on Mon, 22 Sep 2008 14:33:23 GMT

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On Mon, 22 Sep 2008 11:15:45 +0200, Wox <nomail@hotmail.com> wrote:

> 3. Find all intersections between the box-lines and the plane:

> $t = [n \cdot (p_0 - p_1)] / [n \cdot (p_2 - p_1)]$

> $\Rightarrow$ (numerator eq 0) AND (denominator eq 0) $\Rightarrow$ line in plane $\Rightarrow t=1$

It should be $t=0$ AND $t=1$ (i.e. two intersection points for this line)
