
Subject: Re: cylindrical mapping
Posted by [Mirko Vukovic](#) on Thu, 28 Oct 1999 07:00:00 GMT
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In article <3817F983.57B1F428@physics.usyd.edu.au>,
Chris Rennie <rennie@physics.usyd.edu.au> wrote:
> Can anyone suggest a shortcut for plotting a timeseries in
> cylindrical coordinates? I would like to plot a phase angle
> as a function of time (which is to be the axial coordinate),
> and would like to try this representation.
>
> TIA
> Chris

I did not quite understand what is plotted vs. what and
in what coordinate system. Can you elaborate?

Mirko

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Subject: Re: cylindrical mapping
Posted by [Mirko Vukovic](#) on Fri, 29 Oct 1999 07:00:00 GMT
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In article <38192F61.44A514D2@physics.usyd.edu.au>,
Chris Rennie <rennie@physics.usyd.edu.au> wrote:

> Sure.
> I have a phase angle ($-\pi$.. $+\pi$) as a function of time.
> A flat 2D plot is somewhat unsatisfactory if the data
> frequently 'wraps around' from $-\pi$ and $+\pi$, and so I
> was curious to see the data mapped onto a cylinder.
>
> I can create a 3D version of the time series from Times[]
> and Phase[] by:
> Phase3d[0,*]=Times
> Phase3d[1,*]=sin(Phase)
> Phase3d[2,*]=cos(Phase)
>
> and view the result from various angles. But I am hoping
> that someone out there has done the harder work of supplying
> axes, hidden line removal, or imaginative shading etc. Such
> plots are hard to visualize without additional depth cues.
> If you have any ideas, please let me know...

> Chris
>

I don't have much experience in 3d plotting, and the little I had did not provide easy to understand plots. How about unwrapping the phase so it goes from 0 to $n \cdot 2\pi$ and plotting in 2D. Does that make any sense? What is changing from one 2π interval to the next?

Mirko

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