Hints & Suggestions

When Plot3D starts up, a sample plot of a decaying sine wave will be displayed. If you're using a black and white only machine, you may want to change the colors to something more visible: To to this, bring up the color panel (tools menu), and drag a dark gray into the leftmost color well in the data inspector. Then drag white into the next color well. Turn off the other 3 color wells (by clicking on the buttons directly below them. When everything is set, press "OK" to reflect these changes on your display.

Switching to "lines" mode when doing a lot of zooming and rotating can speed things up a lot.

Q&A

Q: I told the program to print my plot, but nothing is coming out of the printer, and nothing is in the print queue. What's going on?

A: When you print a renderman picture, the data is first sent to the photorealistic renderer to generate a high quality image for printing. The image won't appear in the print queue until rendering is complete. Small, simple plots won't take more than a minute or two to render, but large, high-resolution plots can take as much as 20-30 minutes to print.

Q: I'm trying to overlay my contour plot on the surface I'm displaying, but I don't see anything!

A: Contour (and other) overlays are supported ONLY in photorealistic rendering. The quick-renderman is not capable of displaying these features. To see your plot with overlays you'll either have to print, generate a photorealistic TIFF, or save a RIB file and use /usr/prman/prman to render it.

Q: I read the last question, and my PRINTED plots still don't show any contours.

A: You must be using the "Contour Surf" option. This option uses a custom renderman shader to produce contours. This shader must be installed in $HOME/Library/Shaders or /LocalLibrary/Shaders for this feature to work. The shader is part of the plot3d release and is called contour.slo.

Q: The contours and axis labels on my printed plots are messed up!

A: There are several possible causes for this. Plot3d writes several TIFF files in the /tmp directory which are then mapped to the surface. If you print a second plot before the 1st one has come out of the printer, these tiff images will be overwritten and the 1st plot will be messed up. The other possibility is that someone else using plot3d has left protected files in the /tmp directory which you can't overwrite, so you're seeing the overlays from their plot. The solution to this is to rename or remove all /tmp/plot3d* files, then try printing again.

Q: I've printed my final plot, but the text and other features appear fuzzy.

A: When the rendering selector appears in printing the default resolution is 72 dpi. This isn't sufficient for high quality text. Try 200 DPI. The only disadvantage is that 200 DPI takes 8X longer to render. I would suggest doing this ONLY on your final output as it can take as much as 10-20 minutes for a single plot to be rendered at such high resolutions.

Q: I have an equation in mathematica that I want to use in plot3d. Is this possible?

A: Yes and no. Plot3d obviously doesn't support all of the functions supported in mathematica. However, to make things easier, plot3d will accept square brackets and is case-insensitive. So, if plot3d supports the functions in your mathematica (or C) expression, you should be able to just paste it into the equation inspector.

Q: The ticks and scale labels on my spherical plots don't seem right.

A: True. These functions aren't properly supported in spherical plots. There is no solution at the moment.

Q: Sometimes the axes appear off-center in my spherical plots. How can I prevent this?

A: Plot3d looks at the 1st data set/equation to decide where to put the axes. If you have the 1st data set "off" and the second data set contains your spherical plot, the axes will be drawn where they would for non-spherical plots. The answer is, of course, to leave equation 1 turned "on".