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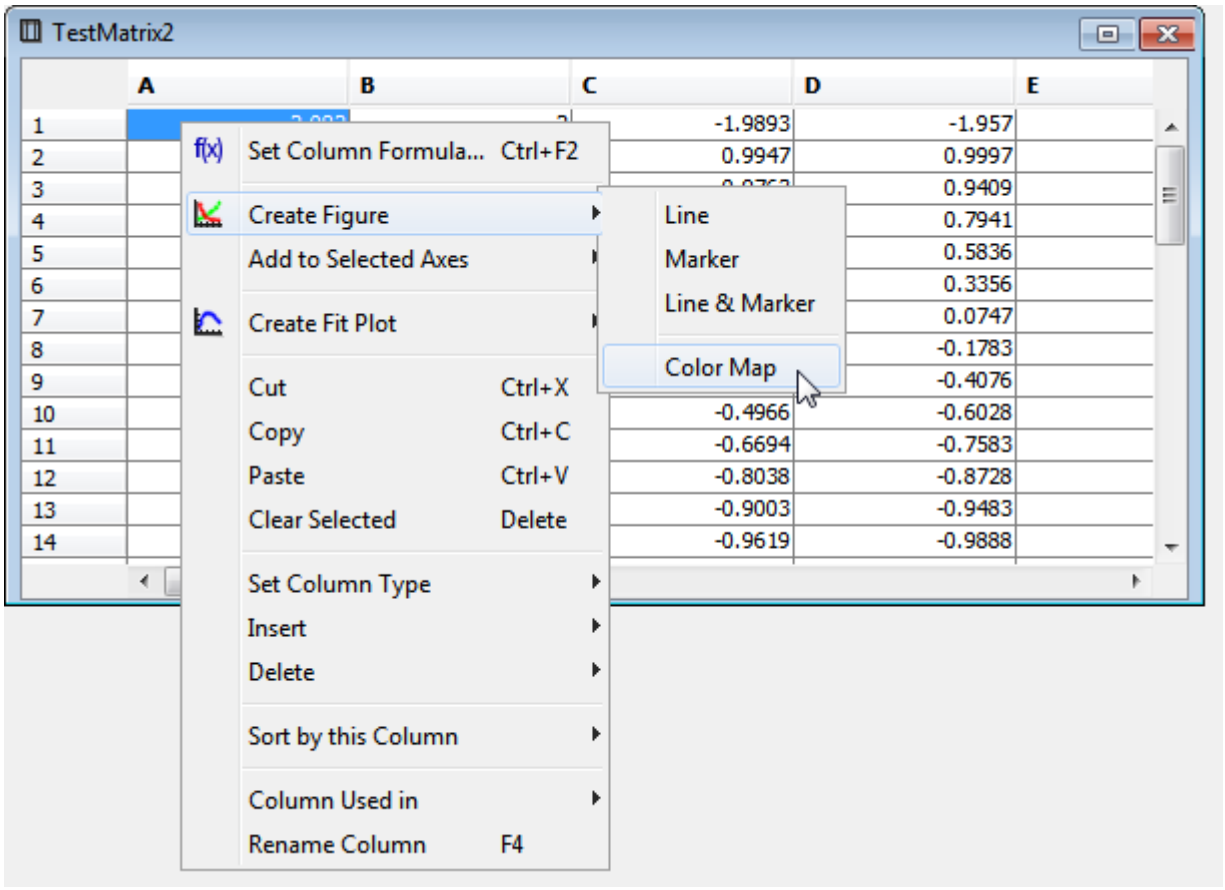
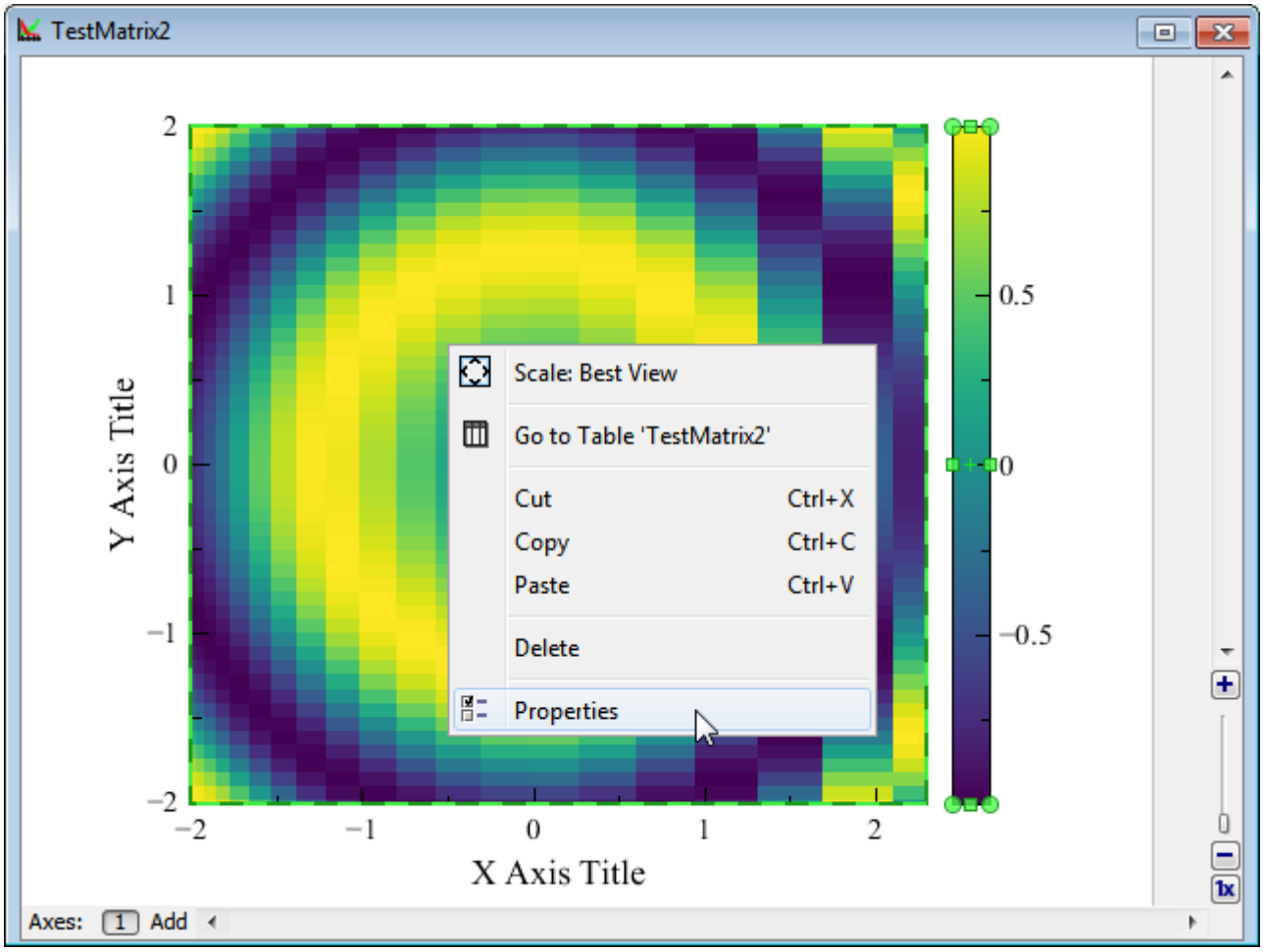
Color Map Plots

To create color map plot, open table with matrix data, open context menu and select `Create Figure` → `Color Map` or use `Create Figure` button on toolbar. Selection in table is ignored, the whole table is used for plotting.



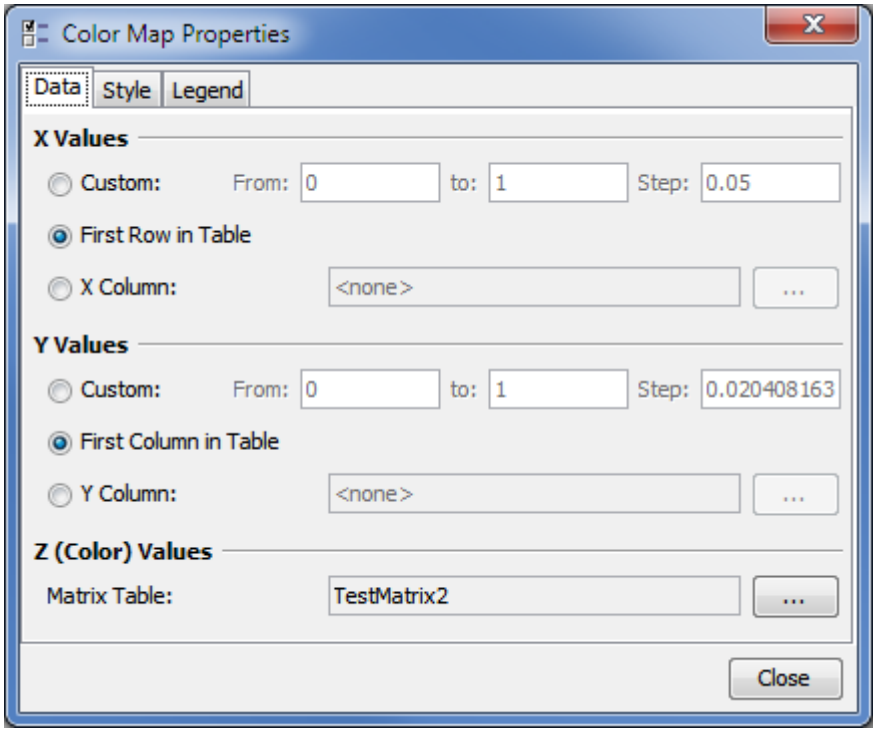
Color Map can be configured in Properties dialog which can be opened by double click of using context menu.



Specifying X/Y Data of Color Map Plot

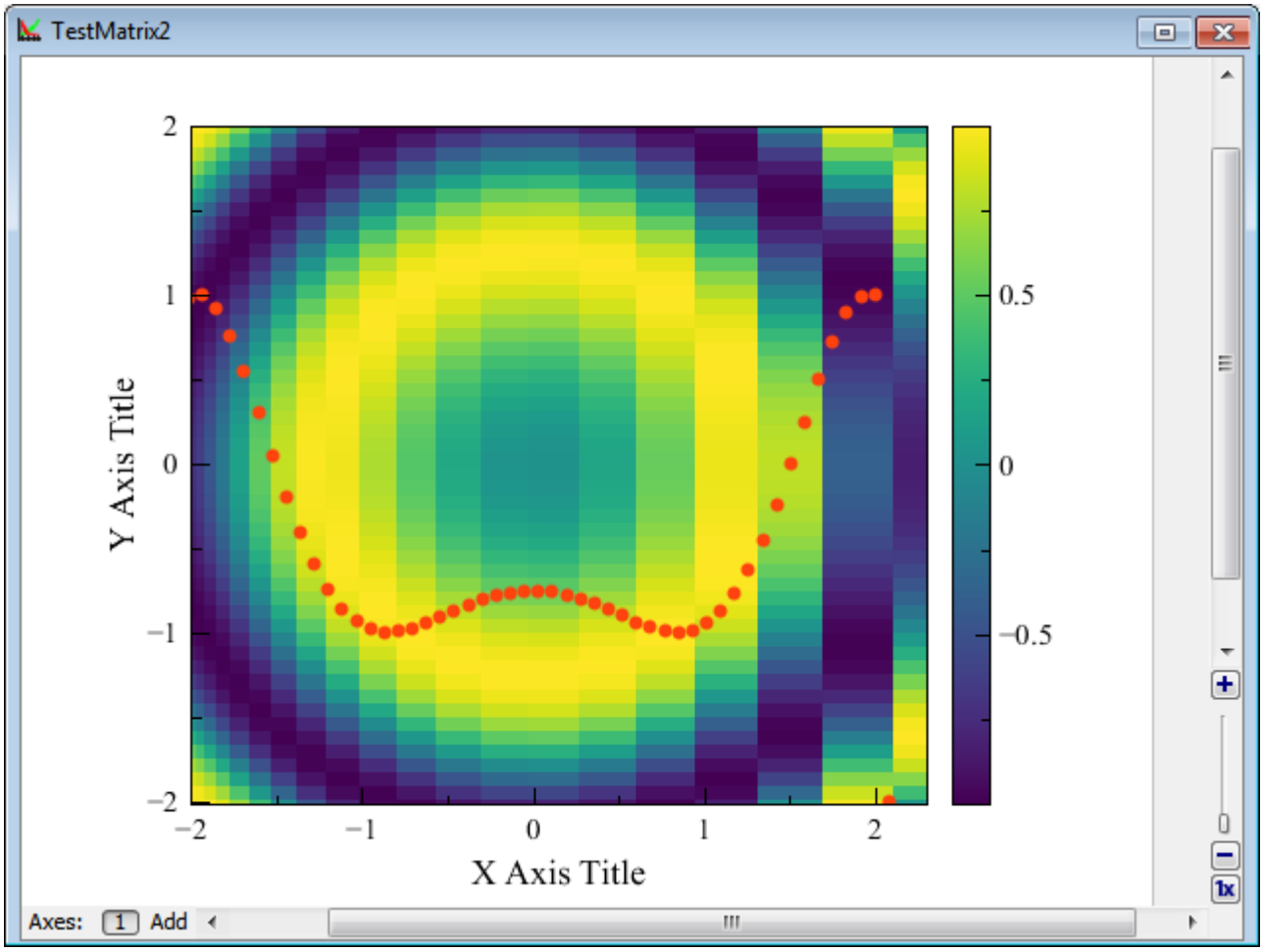
MagicPlot supports 3 alternatives for X and Y data for plotting matrix:

1. Manual range
2. Values from first row and column
3. Columns from another table



Color Map Plots and other Curves

In MagicPlot Color Map Plot is treated as generalized 'curve', so it can be combined on one plot with other curves in one Axes box. Color Map Plot is shown in 'Components' list in Figure properties dialog. The drawing sequence can be changed in this list. You can copy and paste Color Map Plots between Figures and Axes boxes.


TestMatrix2
2
1
0
−1
−2
Y Axis Title
−2
−1
0
1
2
X Axis Title
0.5
0
−0.5
Axes: 1 Add

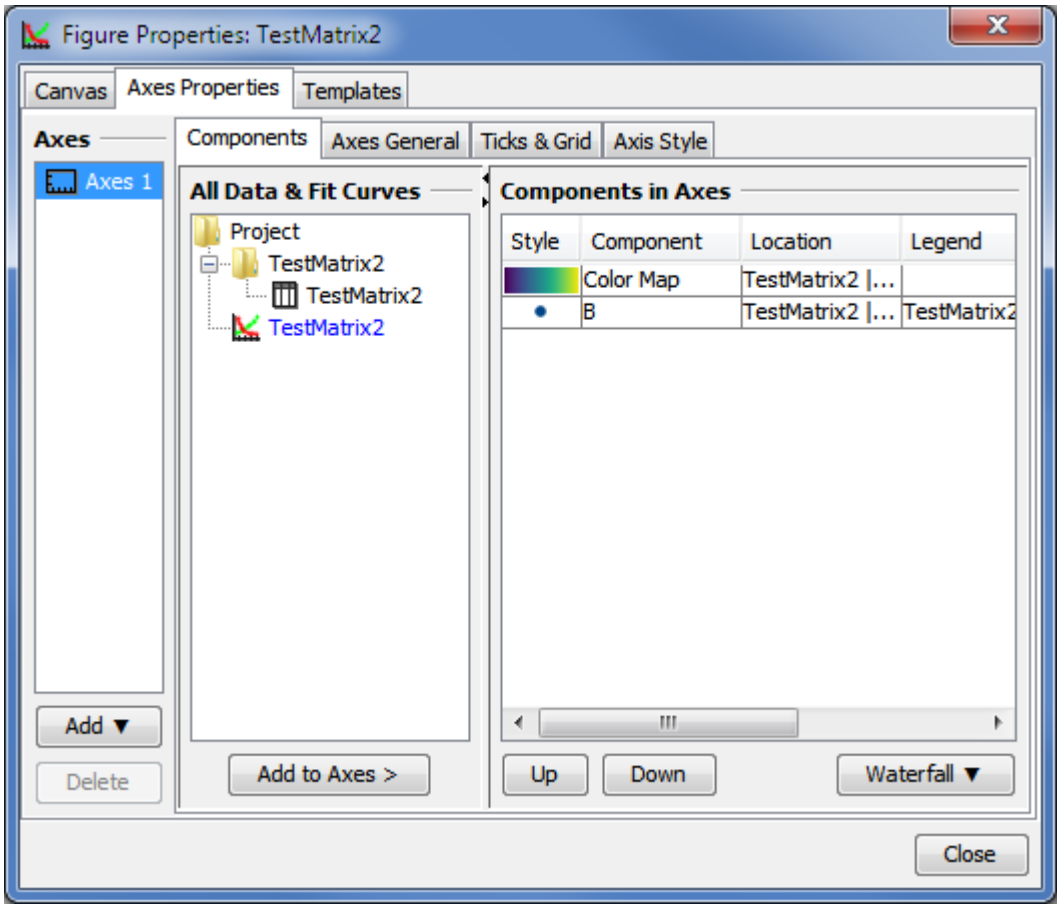
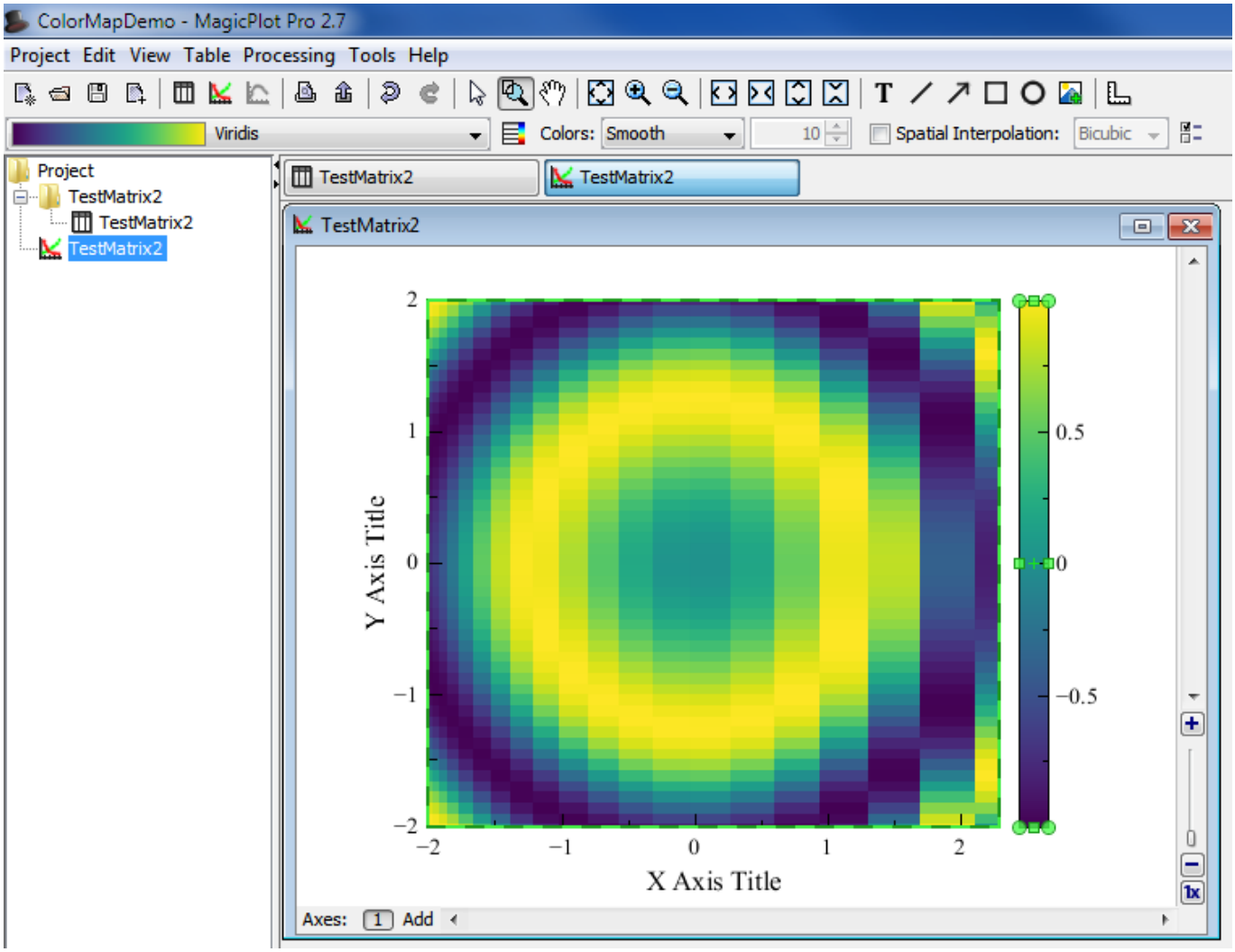


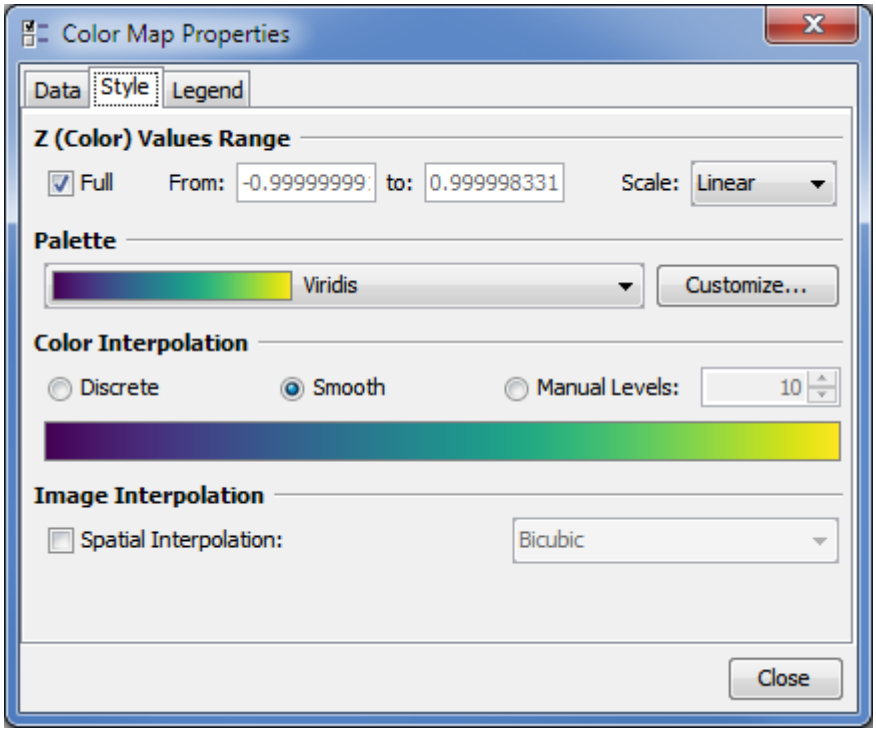
Figure Properties: TestMatrix2
Canvas
Axes Properties
Templates
Axes
Components
Axes General
Ticks & Grid
Axis Style
Axes 1
All Data & Fit Curves
Project
TestMatrix2
TestMatrix2
TestMatrix2
Components in Axes
Style
Component
Location
Legend
Color Map
TestMatrix2 |...
B
TestMatrix2 |...
TestMatrix2
Add ▼
Delete
Add to Axes >
Up
Down
Waterfall ▼
Close

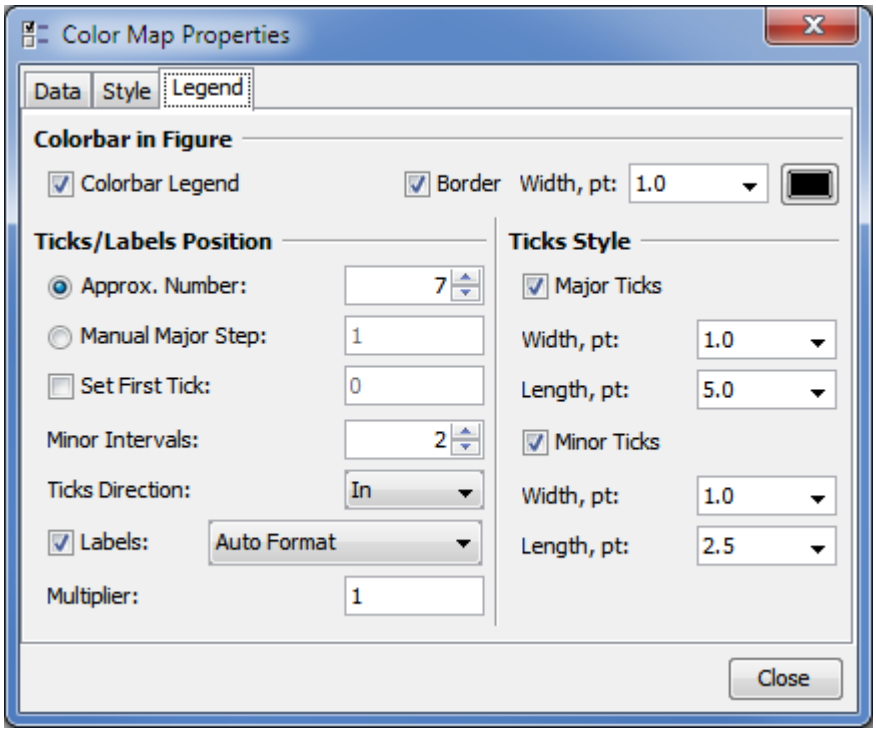
Customizing Color Map Plot

The most often used properties of Color Map Plot can be changed on Inspector toolbar (second row of main window toolbar). The full settings list is available in Properties dialog which can be opened by double click on Color Map or from context menu.



Color Map style and legend color bar style can be edited in Color Map Properties dialog:





Exporting of Vector Image

MagicPlot renders color map plots as a high-resolution raster image with is included into vector image file (eps, pdf, svg, emf). Therefore file size does not depend on data matrix dimensions. The resolution of color map image is set by DPI value in Canvas tab of Figure properties dialog.

Color Interpolation

MagicPlot interpolates colors in sRGB color space.

Spatial Image Interpolation

MagicPlot supports 3 color map interpolation modes: nearest neighbor (off), bilinear and bicubic.

Bicubic Interpolation Algorithm

MagicPlot performs bicubic interpolation of data using cubic Hermite spline which supports non-uniform data. For uniform (equally spaced) x and y values this method is equal to the conventional bicubic interpolation algorithm (which is widely used for image resizing) with coefficient `a=-0.5`.

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