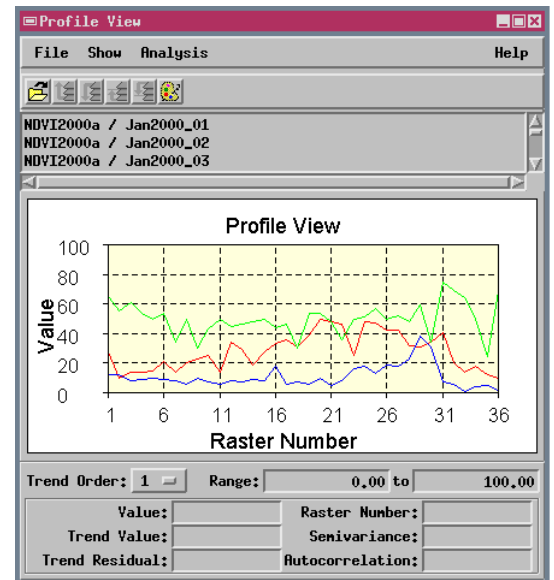


Graph Values from Multiple Rasters by Cell Location

The GeoToolbox Profile View allows you to create cell value plots from corresponding positions in multiple raster objects. These graphs, which plot raster cell value (y-axis) versus raster number in the series of selected rasters (x-axis), can have many applications. For example, you might have a time series of vegetation index rasters for the same area and want to plot variations in the index over time for one or more locations. Or you might want to make simple “spectral” plots for selected locations in broadband multispectral images, such as SPOT, Landsat, or QuickBird.

To make such graphs, use the Point measurement tool in the GeoToolbox in conjunction with the Profile View window. Left-click with the Point tool in the main View window to indicate the cell location(s) and generate the plot(s). The raster objects that you wish to graph do not need to be loaded for display; you select these directly in the Profile View window, so you need only display one reference object (such as an RGB image band combination or a raster or vector map) in the main View. Point positions in the profiled raster objects are computed independently from each object’s georeference information, so the objects need not match in projection, cell size, or geographic extent. You can also mix rasters of any integer or floating-point data type. The data for all currently-shown profiles can be saved in a comma-delimited text file for easy import into a spreadsheet or other software application.



Plots of variation in Normalized Difference Vegetation Index (NDVI, scaled from -100 to +100) from January through December 2000 for three locations in southeastern New Mexico, from a set of 36 AVHRR 10-day composites.

Simple “spectral” plots of six Landsat7 ETM bands in order of increasing wavelength (bands 1, 2, 3, 4, 5, and 7). You can make such plots without having to assign wavelength information to the bands. The plots above are shown with markers (“nodes”) for each raster value. You can also choose various combinations of filled plots, markers, and stair-step plots, as shown in the plot to the right.

