DifferentMarke	MarkerNumber	MarkerSizes
0		
1.12358	16	5
-0.670571	16	5
0.696167	16	5
-0.48165	19	5
-0.888855	19	7
-1.81002	19	7
0.883285	19	10
-0.854401	18	10
-0.908264	18	10
-0.682166	18	4
-0.979681	18	4
1.90386	17	4
1.79543	17	4
1.20602	60	4
1.28203	60	4
2.13408	60	5
1.78677	60	5
1.04066	29	5
3.2046	29	6
2.31871	29	6
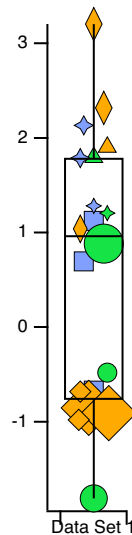
Marker sizes can range from 0 to 200. See **Markers** on page II-291 for a table of marker styles and the associated marker numbers.

The marker colors, marker sizes and marker styles set by these waves override whatever other settings have been made. So if you have selected a particular marker for box plot outliers, for instance, but an outlier data point has a marker set via a marker wave, the marker is taken from the wave.

The marker color, marker size and marker style waves are not required to have the same number of rows as the dataset wave. If there are extra rows the extras are ignored. If there are too few rows, the extra data points take their color, size, color and style from the normal color, size and style settings.

# Combining Box Plots and Violin Plots

One problem with a box plot is that it hides the true distribution of your data. If your data is bimodal, it still shows you only a box with a median line and whiskers. But a violin plot lacks the statistical information contained in a box plot. A common solution is to combine the two—put a box plot in the middle of a violin plot.

To do this in Igor, first create a violin plot using Windows→New→New Violin Plot. We did this with the Run1 dataset from the violin plot example:
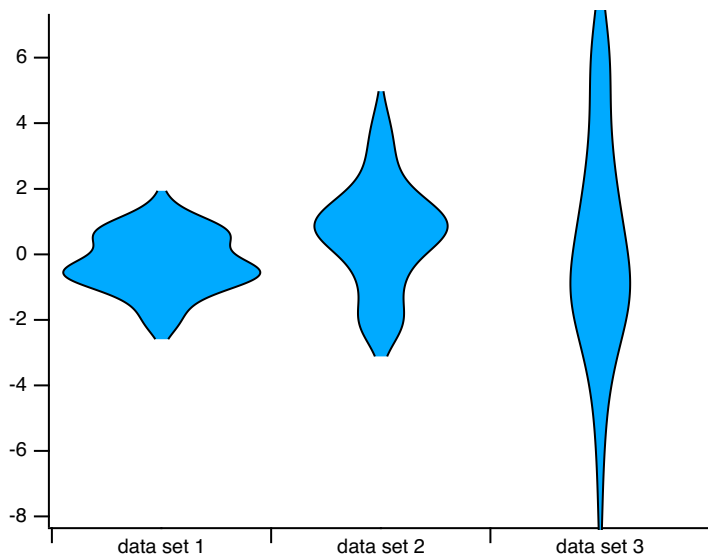
We have chosen a fill color and we are not showing the data points.

Now add a box plot by choosing Graph→Append→Box Plot. Because we are using a category X axis, the plots are side-by-side. Double-click the violin plot trace and select Keep With Next as the grouping mode:
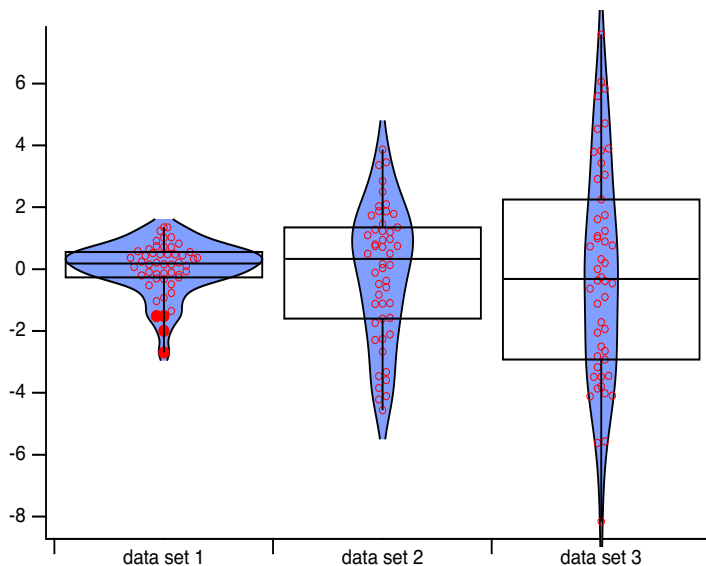
For best appearance, you should make the box plot narrower, and most likely fill the box with contrasting color. Here we set the box width to 0.1 and chose to fill the box with white. We don't show the data points, but if you wish to, it is best to show the data points using the box plot trace so that fills don't obscure the data points.