Prior to Igor Pro 8.00, variable names were limited to 31 bytes. If you use long variable names, your experiments will require Igor Pro 8.00 or later.

Variable names must be standard names, not liberal names. See **Object Names** on page III-501 for details.

Variable names must not conflict with the names of other Igor objects, functions or operations.

You can rename a variable using the Rename operation, or the Rename Objects dialog via the Misc menu.

System Variables

System variables are built in to Igor. They are mainly provided for compatibility with older versions of Igor and are not recommended for general use. You can see a list of system variables and their values by choosing the Object Status item in the Misc menu.

There are 20 system variables named K0,K1...K19 and one named veclen. The K variables are used by the curve fitting operations.

System variables can be used only from the normal "main thread", not from premptive theads. For more about preemptive threads, see **ThreadSafe Functions and Multitasking** on page IV-329 and **Thread Data Environment** on page IV-330.

The `veclen` variable is present for compatibility reasons. In previous versions of Igor, it contained the default number of points for waves created by the Make operation. This is no longer the case. Make will always create waves with 128 points unless you explicitly specify otherwise using the /N=(<number of points>) flag.

Although the CurveFit operation stores results in the K variables, it does so only for compatibility reasons and it also creates user variables and waves to store the same results.

However, the CurveFit operation does use system variables for the purpose of setting up initial parameter guesses if you specify manual guess mode. You can also use a wave for this purpose if you use the kwCWave keyword. See the **CurveFit** operation on page V-124.

It is best to not rely on system variables unless necessary. Since Igor writes to them at various times, they may change when you don't expect it.

The Data Browser does not display system variables.

System variables are stored on disk as single precision values so that they can be read by older versions of Igor. Thus, you should store values that you want to keep indefinitely in your own global variables.

User Variables

You can create your own global variables by using the `Variable/G` (see **Numeric Variables** on page II-104) and `String/G` operations (see **String Variables** on page II-105). Variables that you create are called "user variables" whether they be numeric or string. You can browse the global user variables by choosing the Object Status item in the Misc menu. You can also use the Data Browser window (Data menu) to view your variables.

Global user variables are mainly used to contain persistent settings used by your procedures.

Special User Variables

In the course of some operations, Igor automatically creates special user variables. For example, the CurveFit operation creates the user variable `V_chisq` and others to store various results generated by the curve fit. The names of these variables always start with the characters "`V_`" for numeric variables or "`S_`" for string variables. The meaning of these variables is documented along with the operations that generate them in Chapter V-1, **Igor Reference**.

In addition, Igor sometimes checks for `V_` variables that you can create to modify the default operation of certain routines. For example, if you create a variable with the name V_FitOptions, Igor will use that to