Subject: How to extract a scalar from a vector?
Posted by Balt on Tue, 04 Jan 2011 23:13:46 GMT
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Hi,

I have an array with doubles (calibration factors for some data):

CAL_DATA DOUBLE = Array[24, 4]

I have a channel and unit number which is used to extract the proper gain and offset from the cal_data array. So to obtain gain a and offset b from this array, I extract it as follows:

For channel=1, unit=3:

sel_cal_data = WHERE(cal_data[*,0] EQ 3 AND cal_data[*,1] EQ 1, count)

Which works fine, as this illustrates:

```
IDL> PRINT, "A:", cal_data[sel_cal_data,2], "B:",
cal_data[sel_cal_data,3]
A:       96.859805
B:
     -304.81185
IDL>
```

These are the values I want (verified manually).

Now for the problem: I now need to convert the voltages in the array u3_C165 into temperatures, again, simple:

```
u3_T165 = cal_data[sel_cal_data,2] * u3_C165 - cal_data[sel_cal_data,
3]
```

So, u3_C165 contains 1570 measurements:

```
IDL> help,u3_C165
U3_C165         DOUBLE    = Array[1570]
```

Now u3_T165 should contain 1570 datapoints of temperature. Except, it doesn't! For some reason, this is what's in there now:

```
IDL> help,u3_T165
U3_T165         DOUBLE    = Array[1]
IDL>
```

I think the problem is that IDL thinks that cal_data[sel_cal_data,2] and cal_data[sel_cal_data,3] are vectors of dimension 1, when they

should be scalars.

See this:
IDL> help,cal_data[sel_cal_data,
3]
<Expression>   DOUBLE   = Array[1]

How on earth can I make cal_data[sel_cal_data,2] and
cal_data[sel_cal_data,3] into a scalar? I tried this:

IDL> x = DOUBLE(cal_data[sel_cal_data,3])
IDL> help,x
X   DOUBLE   = Array[1]

obviously to no avail.

Any help greatly appreciated!

Thanks

- Balt
