Subject: Re: PLOT3D format input
Posted by Paul Van Delst[1] on Wed, 18 Mar 2015 19:38:51 GMT
View Forum Message <> Reply to Message

Hello,

On 03/17/15 22:49, Matthew Argall wrote:
>> t=FINDGEN(5,200)
>> x = t(1,*)
>> y = t(2,*)
>> z = t(3,*)
>>
>> p = PLOT3D(x, y, z,'o')
>
>
> I have found that function graphics are particularly picky about
> whether you pass them a column vector or row vector. Problems arise when
> you pass data in as a row vector (a 1xN array, as you are doing above).
> The solution is to reform your data into a column vector (Nx1 array),
> like so
>
> x = reform(t[1,*])
> y = reform(t[2,*])
> z = reform(t[3,*])
>
> p = plot3d(x, y, z, 'o')

Matthew's suggestion is a good one, but being the memory-layout-worrier
that I am (preferring t[*,0] over t[0,*]), I would simply transpose the
"t" array directly after reading it in from wherever it was created,

The original data...

```
IDL> t = findgen(5,200)
IDL> help, t
T               FLOAT     = Array[5, 200]
IDL> print, t[0,*]
      0.00000
      5.00000
      10.0000
      15.0000
      20.0000
      25.0000
      30.0000
      35.0000
      40.0000
      45.0000
      .....
```

Transpose it for all subsequent use:

```
IDL> t = transpose(t)
IDL> help, t
T               FLOAT     = Array[200, 5]
IDL> print, t[*,0]
      0.00000      5.00000      10.0000      15.0000      20.0000
      25.0000      30.0000      35.0000      40.0000      45.0000
      ....
```

When the trailing dimension is the degenerate one, IDL happily ignores it....

```
IDL> x = COS(t) * (1 + t / 10)
IDL> help, x
X               FLOAT     = Array[200, 5]
IDL> p = PLOT3D(x[*,0], x[*,1], x[*,2],'o')
```

cheers,

paulv
