
Subject: Re: PLOT3D format input

Posted by [Paul Van Delst\[1\]](#) on Wed, 18 Mar 2015 19:38:51 GMT

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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
