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Subject: Re: PLOT3D format input

Posted by [lucsmm](#) on Thu, 19 Mar 2015 23:24:50 GMT

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On Wednesday, March 18, 2015 at 12:38:53 PM UTC-7, Paul van Delst wrote:

> 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
```

Thank you  
Now I can plot it.  
Sometimes I don't understand how this formatting works...

-LMM

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