
Subject: plot3D and IDL cookbook

Posted by [morisset](#) on Wed, 05 Nov 1997 08:00:00 GMT

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Helo,

Here follows a visualising tool for 3 or 4D datas in format
of 3 (or 4) vectors x, y, z (and intensity for each point optionnaly).
Hope it could help.

Let's have a look at my IDL CookBook and send me comments,
suggestions and others. It's at:
<http://www.iagusp.usp.br/~morisset/idl/index.html>

C. Morisset.

```
-----  
  
pro plot3d,xx,yy,zz,intens,dax=dax,daz=daz,_extra = e  
;+  
; ROUTINE: plot3d  
;.  
; PURPOSE: plot a 3-D array and rotate plot interactively  
;.  
; USAGE: plot3d,xx,yy,zz,[intens],[plot parameters]  
;.  
; INPUT:  
; xx,yy,zz  
; coordinates of the points  
;.  
; OPTIONAL INPUT:  
; intens : intensity, will be related to the color.  
;.  
; KEYWORD INPUT:  
;.  
; dax,daz: delta_angles (deg). Default = 1.  
; every extra keyword will be passed to plot (psym for ex.)  
;.  
; OUTPUT:  
;.  
; DISCUSSION:  
;.  
; LIMITATIONS:  
;.  
; COMMON BLOCKS:  
;.  
; SIDE EFFECTS:  
;.
```

```

; EXAMPLE:
;
; x=randf(30,3)
; y=randf(30,3)
; z=randf(30,3)
;
; plot3d,x,y,z
;
;
;
;
; AUTHOR: C.Morisset 1997 morisset@iagusp.usp.br
;
; REVISIONS:
;
; -
;
;

if n_params() eq 4 then COLOR = BYTSCL(intens, TOP=!D.N_COLORS-1) $
else color = !D.N_COLORS-1

if not keyword_set(dax) then dax = 1
if not keyword_set(daz) then daz = 1

zmn=min(zz,max=zmx)
xmn=min(xx,max=xmx)
ymn=min(yy,max=ymx)

z=[[zmn,zmx],[zmn,zmx]]
x=[[xmn,xmx],[xmn,xmx]]
y=[[ymn,ymn],[ymx,ymx]]

az = 45.
ax = 45.

surface,z,x,y,/nodata,/save,az=az,ax=ax
plots,xx,yy,zz,/t3d,psym=6,color=color,_extra=e

!mouse.button = 1

while (!mouse.button ne 4) do begin
  cursor,x_tmp,y_tmp
  if !mouse.button eq 1 then ax = ax + dax $
  else if !mouse.button eq 2 then az = az + daz
  surface,z,x,y,/nodata,/save,az=az,ax=ax
  plots,xx,yy,zz,/t3d,psym=6,color=color,_extra=e
endwhile

```

end

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