Subject: Re: DIST Function - 3D
Posted by d.rowenhorst@gmail.co on Wed, 27 Jan 2016 15:33:52 GMT
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On Tuesday, January 26, 2016 at 10:06:18 AM UTC-5, g.na...@gmail.com wrote:
> Hi
>
> I wanted to create a 3D array [x,y,t] that when display it I'll see something not simple black images. I found the DIST() function but unfortunately I cannot use it to make a 3D array.
>
> Can anyone help with this?
>
> Thanks!

```
FUNCTION Dist_3d,n,m,l , calib=calib ;Return a 3d array in which each pixel = euclidian
  ;distance from the origin.
  COMPILE_OPT idl2

  On_error,2              ;Return to caller if an error occurs

  IF Keyword_set(calib) NE 1 THEN calib = [1,1,1.]
  IF N_elements(calib) NE 3 THEN cailb=[1,1,1.]

  c0 = calib[0]*calib[0]
  c1 = calib[1]*calib[1]
  c2 = calib[2]*calib[2]

  n1 = n[0]
  m1 = (N_elements(m) LE 0) ? n1 : m[0]
  l1 = (N_elements(m) LE 0) ? n1 : l[0]
  x=Findgen(n1)  ;Make a row
  x = ((x < (n1-x)) ^ 2)*c0 ;column squares

  a = Reform(Fltarr(n1,m1,l1,/NOZERO),n1,m1,l1) ;Make array

  FOR i=0L, m1/2 DO BEGIN ;Row loop
    y = (x + (i^2.)*c1) ;Euclidian distance
    a[*,i,0] = y ;Insert the row
    IF i NE 0 THEN a[*, m1-i, 0] = y ;Symmetrical
  ENDFOR

  x = a[*,*,0]

  FOR i=0L, l1/2 DO BEGIN ;Stack loop
    z = (x + (i^2.)*c2) ;Euclidian distance
    a[*,*,i] = z ;Insert the row
    IF i NE 0 THEN a[*, *,l1-i] = z ;Symmetrical
  ENDFOR
```

```
  a = Sqrt(Temporary(a))

  Return,a
END
```