
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 calib=[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

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a = Sqrt(Temporary(a))
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Return,a
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END
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