
Subject: create oval shape

Posted by [g.nacarts](#) on Tue, 18 Aug 2015 16:41:09 GMT

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Hi

I want to create two oval shapes where the enclosed pixels have fixed values. I tried the following but are rectangles, as expected of course.

```
Im = fltarr(300,300)
```

```
A[19:68,40:115] = 2.
```

```
A[40:55,62:82] = 1.
```

Can anyone help with this? Instead of rectangles creating oval shapes with fixed values.

Subject: Re: create oval shape

Posted by [Jeremy Bailin](#) on Tue, 18 Aug 2015 17:11:16 GMT

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On Tuesday, August 18, 2015 at 11:41:13 AM UTC-5, g.na...@gmail.com wrote:

> Hi

>

> I want to create two oval shapes where the enclosed pixels have fixed values. I tried the following but are rectangles, as expected of course.

>

> Im = fltarr(300,300)

>

> A[19:68,40:115] = 2.

> A[40:55,62:82] = 1.

>

> Can anyone help with this? Instead of rectangles creating oval shapes with fixed values.

I would use DIST_ELLIPSE from the idl astronomy library to get the distances from the center of the ellipse to each point in the image, and then use that distance to decide whether to set it or not.

I.e. to fill in an ellipse with an axis ratio of 2:1 centered at (x_center, y_center) with a semi-major axis length of length "radius":

```
dist_ellipse, ellipse_distances, [300,300], x_center, y_center, 2.0
```

```
A = ellipse_distances le radius
```

-Jeremy.

Subject: Re: create oval shape

Posted by [g.nacarts](#) on Tue, 18 Aug 2015 18:35:17 GMT

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I am using an old version of IDL and I can't use the DIST_ELLIPSE function

Subject: Re: create oval shape

Posted by [wlandsman](#) on Tue, 18 Aug 2015 19:40:54 GMT

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I am certain that having an old version of IDL has nothing to do with not being able to run the DIST_ELLIPSE function (it was written in 1992 and runs fine in IDL 5.0). But you do have to download it (it is not included with IDL).

http://idlastro.gsfc.nasa.gov/ftp/pro/image/dist_ellipse.pro

On Tuesday, August 18, 2015 at 2:35:20 PM UTC-4, g.na...@gmail.com wrote:

> I am using an old version of IDL and I can't use the DIST_ELLIPSE function

Subject: Re: create oval shape

Posted by [g.nacarts](#) on Tue, 18 Aug 2015 20:12:51 GMT

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Yes yes, I've already found it. Thanks.

Subject: Re: create oval shape

Posted by [g.nacarts](#) on Tue, 18 Aug 2015 20:45:43 GMT

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I didn't understand how to use the DIST_ELLIPSE though.

I typed

> IDL dist_ellipse, ellipse_distances, [300,300], x_center, y_center, 2.0

And I got the following:

Syntax - DIST_ELLIPSE, im, n, xc, yc, ratio, pos_ang, /DOUBLE

im - output elliptical mask image array

n - size of output image mask, scalar or 2 element vector

xc,yc - coordinates of ellipse center, scalars

ratio - ratio of major to minor axis of ellipse, scalar

pos_ang - position angle, counterclockwise from up

I didn't see how I'll get the distances from center using this function.

Subject: Re: create oval shape

Posted by [Jeremy Bailin](#) on Wed, 19 Aug 2015 03:10:34 GMT

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On Tuesday, August 18, 2015 at 3:45:46 PM UTC-5, g.na...@gmail.com wrote:

> I didn't understand how to use the DIST_ELLIPSE though.

>

> I typed

>> IDL dist_ellipse, ellipse_distances, [300,300], x_center, y_center, 2.0

>

> And I got the following:

>

> Syntax - DIST_ELLIPSE, im, n, xc, yc, ratio, pos_ang, /DOUBLE

> im - output elliptical mask image array

> n - size of output image mask, scalar or 2 element vector

> xc,yc - coordinates of ellipse center, scalars

> ratio - ratio of major to minor axis of ellipse, scalar

> pos_ang - position angle, counterclockwise from up

>

> I didn't see how I'll get the distances from center using this function.

It looks like the pos_ang parameter is required (Wayne: the documentation says it is optional), so use 0 for that to align the axes of the ellipse with the x and y axes.

What you will get after running it is a 300x300 array where the value of each element is the semi-major axis of the ellipse that goes through that element and is centered at (x_center, y_center).

-Jeremy.
