
Subject: Making array out of sinc

Posted by [sirvival](#) on Fri, 27 Aug 2010 11:00:40 GMT

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Hi,

I want to create an array out of two sinc function.

My code looks like this right now:

```
;sinc psf
  x=findgen(201)-100
  psfx3=DBLARR(N_ELEMENTS(X))
  for i=0, n_elements(x)-1 do begin
    if x(i) eq 0 then begin
      psfx3(i)=1
    endif else begin
      psfx3(i)=sin(x(i))/(x(i))
    endelse
  endfor
  y=findgen(81)-40
  psfy3=DBLARR(N_ELEMENTS(y))

  for i=0, n_elements(y)-1 do begin
    if y(i) eq 0 then begin
      psfy3(i)=1
    endif else begin
      psfy3(i)=sin(y(i))/(y(i))
    endelse
  endfor
  psf3=psfx3#psfy3
  psf3=psf3/total(psf3)

  plot,psfx3
  stop
  plot,psfy3
  stop
  shade_surf,psf3
end
```

The result is not what I am looking for.

I want something that looks like when raindrop hits water.

So when I do a contour plot it looks like elipsis.

How can I do this?

Thanks

PS: I use IDL 7.1. Not sure when IT will upgrade to 8.0

Subject: Re: Making array out of sinc
Posted by [Wout De Nolf](#) on Sun, 29 Aug 2010 16:56:11 GMT
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On Sat, 28 Aug 2010 04:42:43 -0700 (PDT), sirvival
<fpfeifer@hs.uni-hamburg.de> wrote:

```
> On 27 Aug., 13:32, Wox <s...@nomail.com> wrote:
>> On Fri, 27 Aug 2010 04:00:40 -0700 (PDT), sirvival
>>
>> <fpfei...@hs.uni-hamburg.de> wrote:
>>> I want something that looks like when raindrop hits water.
>>> So when I do a contour plot it looks like elipsis.
>>> How can I do this?
>>
>> nx=201
>> ny=81
>> ratio=1.
>> x=rebin(findgen(nx)-nx/2,nx,ny,/sample)
>> y=rebin(findgen(1,ny)-ny/2,nx,ny,/sample)*ratio
>> r=sqrt(x*x+y*y)
>> psf3=sin(r)/r
>>
>> This gives circles as contours. Change the "ratio" to make ellipses.
>> Btw, this is not a 2D sinc function. That would be sin(x)sin(y)/xy.
>
> Hi,
> thanks alot.
> Thats what I am looking for.
>
> PS: Is my psf3=psfx3#psfy3 not equal to your sin(x)sin(y)/xy?
```

Yes it is, I didn't pay attention :-). My point was that if you need a 2D-sinc function, $\sin(x)\sin(y)/xy$ is it, not the "raindrop function" you ask for.

Subject: Re: Making array out of sinc
Posted by [sirvival](#) on Tue, 07 Sep 2010 15:21:43 GMT
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On Aug 29, 6:56 pm, Wox <s...@nomail.com> wrote:
> On Sat, 28 Aug 2010 04:42:43 -0700 (PDT), sirvival
>
>
>
> <fpfei...@hs.uni-hamburg.de> wrote:
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> Yes it is, I didn't pay attention :-). My point was that if you need a
> 2D-sinc function, sin(x)sin(y)/xy is it, not the "raindrop function"
> you ask for.

```

Hi,
 I confused myself when I did try out your solution at home.
 I took a closer look today and its not what I was looking for (so yes
 I am not looking for a raindrop).

I dont know how to describe it.
 I want two sincs. One is in x direction one is in y direction.
 Now I want to move 2D.
 Like a rotating sinc but not circular since x and y direction are
 different.

I got an idea in my head and will try it out.

Thanks
