
Subject: Re: hist_2d, contour
Posted by [David Fanning](#) on Wed, 27 May 2009 11:51:50 GMT
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Nicolas Aunai writes:

> I have a problem trying to contour the return value of HIST_2D.
> my code is the following :

I think the first thing I would try would be setting
the MIN and MAX keywords in HIST_2D. My experience with
IDL is that when you let it decide what to do, unexpected
results are the rule. :-)

Cheers,

David

--

David Fanning, Ph.D.
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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: hist_2d, contour
Posted by [Nicolas Aunai](#) on Wed, 27 May 2009 12:13:46 GMT
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David Fanning wrote:

> Nicolas Aunai writes:
>
>> I have a problem trying to contour the return value of HIST_2D.
>> my code is the following :
>
> I think the first thing I would try would be setting
> the MIN and MAX keywords in HIST_2D. My experience with
> IDL is that when you let it decide what to do, unexpected
> results are the rule. :-)
>
> Cheers,
>
> David

OH !

the following code does what I want :

```
tstudy = 8.0
!p.multi = [0,1,1,0]
window,2,retain=2

bin = 0.05
eci = MIN(ec(*,0)) + bin*lindgen(1+(max(ec(*,0))-min(ec(*,0)))/bin)
ecf = MIN(ec(*,tstudy)) +
bin*lindgen(1+(max(ec(*,tstudy))-min(ec(*,tstudy)))/bin)
;distr = HIST_2D(ec(*,0) , ec(*,tstudy), bin1=bin, bin2=bin)
```

```
distr = HIST_2D(ec(*,0) , ec(*,tstudy), bin1=bin, bin2=bin,
min1=min(ec(*,0)), max1=max(ec(*,0)), min2=min(ec(*,tstudy)), $
max2=max(ec(*,tstudy)))
```

just like you said I have just set the min1,min2,max1,max2 values... to what I thought were the DEFAULT values (this is what the help says...)

I get :

```
IDL> help,eci,ecf,distr
ECI      FLOAT   = Array[132]
ECF      FLOAT   = Array[135]
DISTR    LONG    = Array[132, 135]
```

while the previous code :

```
IDL> tstudy = 8.0
IDL> !p.multi = [0,1,1,0]
IDL> window,2,retain=2
IDL>
IDL> bin = 0.05
IDL> eci = MIN(ec(*,0)) + bin*lindgen(1+(max(ec(*,0))-min(ec(*,0)))/bin)
IDL> ecf = MIN(ec(*,tstudy)) +
bin*lindgen(1+(max(ec(*,tstudy))-min(ec(*,tstudy)))/bin)
IDL> distr = HIST_2D(ec(*,0) , ec(*,tstudy), bin1=bin, bin2=bin)
```

gives :

```
ECI      FLOAT  = Array[132]
ECF      FLOAT  = Array[135]
DISTR    LONG   = Array[132, 137]
```

so the help is wrong ? :-)

last question :

should I do :

```
eci = MIN(ec(*,0)) + bin*lindgen(ceil((max(ec(*,0))-min(ec(*,0)))/bin))
```

or

```
eci = MIN(ec(*,0)) + bin*lindgen(1+(max(ec(*,0))-min(ec(*,0)))/bin)
```

??

thx a lot for your help

Subject: Re: hist_2d, contour
Posted by [David Fanning](#) on Wed, 27 May 2009 12:39:11 GMT
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Nicolas Aunai writes:

> so the help is wrong ? :-)

Not wrong so much as, well, let's just say a jokester.
I think it was written by a cousin of Coyote's. :-)

> last question :

```
>
> should I do :
>
> eci = MIN(ec(*,0)) + bin*lindgen(ceil((max(ec(*,0))-min(ec(*,0)))/bin))
>
> or
>
>
> eci = MIN(ec(*,0)) + bin*lindgen(1+(max(ec(*,0))-min(ec(*,0)))/bin)
```

I don't know. I always use Scale_Vector for this:

```
dist = Hist_2d(xdata, ydata...)
s = Size(dist, /DIMENSIONS)
x = Scale_Vector(Indgen(s[0]), Min(xdata), Max(xdata))
y = Scale_Vector(Indgen(s[1]), Min(ydata), Max(ydata))
```

Scale_Vector is a Coyote Library file.

Cheers,

David

--

David Fanning, Ph.D.

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Subject: Re: hist_2d, contour

Posted by [David Fanning](#) on Wed, 27 May 2009 12:58:05 GMT

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David Fanning writes:

```
> I don't know. I always use Scale_Vector for this:
>
> dist = Hist_2d(xdata, ydata...)
> s = Size(dist, /DIMENSIONS)
> x = Scale_Vector(Indgen(s[0]), Min(xdata), Max(xdata))
> y = Scale_Vector(Indgen(s[1]), Min(ydata), Max(ydata))
```

Yikes, should be "Findgen", not "Indgen"!

Cheers,

David

--

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