
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

$$eci = \text{MIN}(ec(*,0)) + bin * \text{lindgen}(1 + (\text{max}(ec(*,0)) - \text{min}(ec(*,0))) / bin)$$

??

thx a lot for your help
