Subject: Re: Match Histogram Binsize with Data Type
Posted by Fabzi on Tue, 05 Mar 2013 18:37:43 GMT
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Hi David,

Regardless of the probably wrong things that have been published and
will be published in the future, I don't see the point of using a .5
binsize with integer data, and I don't think the behaviour of histogram
is defined in this case.

Following code is doing ok for example:

```
d = Fix(Scale_Vector(RandomU(-3L, 1000), 0, 360))
h1 = Histogram(d, Min=0, Max=360, BINSIZE=22.)
h2 = Histogram(Float(d), Min=0.0, Max=360.0, BINSIZE=22)
cgPlot, h1
cgPlot, h2, Color='red', /overplot
```

Cheers,

Fabien

On 03/05/2013 05:57 PM, David Fanning wrote:
> Folks,
>
> I just spent an uncomfortable and depressing couple of hours either (1)
> thinking I was going crazy or (2) convinced the IDL Histogram command
> had a bug of such monumental proportions that any thinking person would
> ..., etc.
>
> Boiled down, it amounted to me using a floating point binsize with
> integer data. A BIG no-no when using the Histogram command. (I was
> actually using HIST_2D, which provides no such warning in its
> documentation.)
>
> I can't stress this enough. You get INCORRECT values if you mismatch the
> binsize and the data type. Let me say it again, you get INCORRECT
> answers!
>
> I'm just guessing, but it wouldn't surprise me to learn that the
> Histogram command produces incorrect values 50% of the time, simply
> because people don't realize the consequences of their thoughtless use
> of the command. (Guess arrived at by personal experience.)
>
> Wouldn't it be nice if there could be a warning about this somewhere?
> Like, say, in the Histogram command itself.
>

> Here is what I mean:
>
> d = Fix(Scale_Vector(RandomU(-3L, 1000), 0, 360))
> h1 = Histogram(d, Min=0, Max=360, BINSIZE=22.5)
> h2 = Histogram(Float(d), Min=0.0, Max=360.0, BINSIZE=22.5)
> cgPlot, h1
> cgPlot, h2, Color='red', /overplot
>
> Cheers,
>
> David
>
