Subject: Re: change in histogram
Posted by thompson on Wed, 29 Jul 1998 07:00:00 GMT
View Forum Message <> Reply to Message

Actually, all these behaviors also exist in IDL/v4.0.1, so they're not new.

By the way, the statement

> IDL> help,histogram(findgen(100),binsize=0.5)
> <Expression>   LONG   = Array[199]

does exactly what you'd expect it to. The histogram values bounce between 1
and 0. If the array was 200 bins long, the last bin would be 0, because it
would represent the value 99.5, which isn't in the input array.

William Thompson

 ==========
==========
Vap User <vapuser@haifung.jpl.nasa.gov> writes:

> Has there been a change to histogram in IDl 5.1? The documentation
> says that the array is searched for the min/max values if min=/max=
> keyword are missing. However, consider the following...
>
> IDL> help,histogram(bindgen(100))
> <Expression>   LONG   = Array[256]
>
>   which suggests it sets max to the top value possible for a byte array.
>
> IDL> help,histogram(indgen(100))
> <Expression>   LONG   = Array[100]
>
>   As desired.
>
>
> IDL> help,histogram(bindgen(100) + 2)
> <Expression>   LONG   = Array[100]
>
>   Also as desired. But stranger still, since this is effectively the case above.
>
>
> Am I missing something here?
>

> Also...
>

> Here's another oddity.
>
> IDL> help,histogram(lindgen(100),binsize=0.5)
> % HISTOGRAM: Illegal binsize or max/min.
> % Execution halted at: $MAIN$
>
> IDL> help,histogram(lindgen(100),binsize=1.5)
> <Expression>   LONG   = Array[100]
>
> IDL> help,histogram(findgen(100),binsize=0.5)
> <Expression>   LONG   = Array[199]
>
> Why can't I specify a binsize of 1/2 with a interger type array? I can
> specify one of 1.5. And I can specify one of 0.5 for a floating point
> array having the same values as the integer type array.
>
> I don't recall these restriction in IDl 4.x.

Subject: Re: change in histogram
Posted by Liam Gumley on Wed, 29 Jul 1998 07:00:00 GMT
View Forum Message <> Reply to Message

Vap User wrote:
> Has there been a change to histogram in IDl 5.1? The documentation
> says that the array is searched for the min/max values if min=/max=
> keyword are missing. However, consider the following...
[snipped some code examples]

Converting the HISTOGRAM array argument to FLOAT has helped me deal with
some strange behavior I've seen when dealing with INTEGER arguments in
IDL 5.1.

Here's what I do:

;- Get image minimum and maximum

MinValue = MIN(Image, Max = MaxValue)

;- Check image range

IF MinValue LT MaxValue THEN MESSAGE, 'Image values are all the same'

;- Define number of points used in constructing histogram

Points = 100

;- Compute histogram

```
HistData = HISTOGRAM( FLOAT( Image ), MIN = MinValue, MAX = MaxValue, $
  BINSIZE = FLOAT( MaxValue - MinValue ) / FLOAT( Points - 1 ) )
```

Cheers,
Liam.
