Subject: What's HISTOGRAM doing now?
Posted by Mrunmayee on Fri, 22 Oct 2010 09:36:34 GMT
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I just wanted logarithmic bins and opted to histogram the log of data.
Since that gave me some discrepancy, I wrote a tester code:

```
PRO Loghist_Test

data = 1. + Randomu(seed,1000)

nbins = 10
Max = 2.
Min = 1.

;Linear:
binsize = (Max - Min)/(Nbins-1)
datahist = Histogram(data, Min=Min, Max=Max, locations=bins,
binsize=binsize, omax=omax)
Print, "Binsize = ",binsize
Print, "Bins used: ", bins
Print, "Max value used = ", omax

;Logarithmic
binsize = (Alog10(Max) - Alog10(Min))/(Nbins-1)
datahistlog = Histogram(Alog10(data), Min=0, Max=Alog10(Max),
locations=bins, binsize=binsize, omax=omax)
Print, "Binsize = ",binsize
Print, "Bins used: ", bins
Print, "Max value used = ", omax
END
```

I ran this code, here is the output:

```
IDL> loghist_test
Binsize =      0.111111
Bins used:       1.00000      1.11111      1.22222      1.33333
1.44444      1.55556      1.66667      1.77778      1.88889
Max value used =       2.00000
Binsize =     0.0334478
Bins used:       0.00000    0.0334478    0.0668956     0.100343
0.133791     0.167239     0.200687     0.234134     0.267582
Max value used =      0.301030
```

Instead, if I do this directly from command line, i.e. for linear
bins,

```
IDL> datahist =  histogram(data, min=1, max=2, binsize=0.111111,
locations=bins,omax=omax)
IDL> print,bins
```

1.00000 1.11111 1.22222 1.33333 1.44444
1.55555 1.66667 1.77778 1.88889 2.00000

Why are bins different? Output is unchaged for log bins when I am histo-ing alog10(data) with corresponding log bins. Also, instead of using BINSIZE, if I use NBINS in program, things work as they should. So what's histogram upto NOW? Where am I missing something?
