Subject: Re: Histogram indeterminate results
Posted by K. Bowman on Thu, 12 Dec 2002 23:12:14 GMT
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In article <ataqhbprr1@skates.gsfc.nasa.gov>,
 thompson@orpheus.nascom.nasa.gov (William Thompson) wrote:

> I think the problem is that NBINS should be
>
> nbins = nx*ny*nz + 1
>
> to accommodate points which fall on exactly the maxima, i.e. points with
> x=360, y=1, and z=1000, or so close that round-off error makes it look that
> way. I would change your code to read

That is plausible, but the actual values of the input to histogram at
the time the error occurred are clearly not out of the range [0, nbins]

>> IDL> n = nx*ny*LONG((z0 - z_min)/dz) + $
>> IDL> nx*LONG((y0 - y_min)/dy) + $
>> IDL> LONG((x0 - x_min)/dx)
>> IDL> print, min(n), max(n), nbins
>>
>>
>> 30 143991 144000

> P.S. I would also check that there isn't some problem with the way the
> keyword
> SINE_LAT is handled.

I was worried about round-off error, in that calculation in particular,
but as the diagnosis shows, 0 is LE n and LT nbins.

The really disturbing thing is that running the same program repeatedly
on the same data generates errors in different places.

Ken