Subject: Problem with REFORM and HISTOGRAM
Posted by Mrunmayee on Fri, 08 Oct 2010 05:03:40 GMT
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My post did not get posted about 12 hours ago. I live in India and was hoping the post would be up for gurus in western timezones to possibly offer help. Now I will wait for yet another 24 hours! I always check the box to "Send copy to self" which I DID get. And I also notice a lot of spam has gone. I don't think my post contained anything 'hotter' than rebin/reform/histogram. So, dear moderator, may I ask how I offended this group? Anyway. Onto the problem:

1. I have 2 arrays of coordinates, x1arr of N1 size, x2arr of N2 size and same for y1arr, y2arr, z1arr, z2arr. These are coordinates along 2 different lines and I need all the distances between points on one line and points on another. I do it by:
x1arrReb = Rebin(x1arr, N1, N2)
x2arrReb = Rebin(Transpose(x2arr), N1, N2)
dx = x1arrReb - x2arrReb
Similarly obtain dy, dz. Then,
d = Sqrt(dx*dx + dy*dy + dz*dz)

2. I need to bin these distances for further computation.
dhist = Histogram(d, nbins=8, locations=bins, reverse_indices=ri)

3. Now I want to check, in each bin, which distance corresponds to which x1 and which x2 coordinate. From
above, I can do following:

x1arrRef = Reform(x1arrReb, N1*N2) & x2arrRef = Reform(x2arrReb, N1*N2)

Then use the Reverse_Indices and get coordinates. Right?

4. Alternatively, I was trying this:

```
for i = 0,nbins-1
 indices = ri[ ri[i]: ri[i+1]-1 ]
 rowID = indices/N1 ; This is to get i,j values from the 1D indices.
 colID = indices - rowID * N1
 x1coord = x1arr[rowID]   ; This is the original 1-d N1-element
x1arr.
 x2coord = x2arr[colID]    ; ------- ditto ------ x2arr.
endfor
```

Problem is, if this way, I get all the coordinates and re-calculate distances to see if I get the distances in the bin 'i' back, I don't!
And I don't know where my understanding is wrong here. So can someone please point out? Am I book-keeping indices wrong?