Subject: Re: the fastest way to find number of points in sphere(radius r)
Posted by Xavier Llobet on Tue, 22 Nov 2005 15:29:13 GMT
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In article <1132665267.676156.221240@g49g2000cwa.googlegroups.com>,
 "PYJ" <snfinder@naver.com> wrote:

> Thank you, Xavier Llobet~^^
>
> Actually, I expect a vectorizing method. (finding number of points
> about all centers at a time.)
>
> By the way,
> The points that I have are about 5*10^5.
> The number of centers is about 3*10^6.
> These are quite large.

In that case, use ix = lindgen(n_elements(X))

> Anyway, I can't understand your way exactly.
> Can you explain it more ?
>
> So sph(2,*) is the array of distances.
> -> distances? Whose distances?

The only obscure point is

>> ; Shift points' coordinates to the j-th sphere's center
>> blas_axpy, t1, -1, [XC(j), YC(j), ZC(j)], 1, [0,0], 2, ix

It is a fast way of doing X1 = X-XC(j), Y1 = Y-YC(j), Z1 = Z-ZC(j)

> ***I need a number of points. ***
> Do I use a where function about every centers again?

Quoting myself:
>> ; Histogram it, or treat as you please.

> I want to avoid loops if possible.

Well, given that you have 5E5 points and 3E6 centers, you have 1.5E12
distances to consider. It might be difficult to do it without loops...

--
_xavier
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Only one "o" in my e-mail address

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A: Because it messes up the order in which people normally read text.
Q: Why is top-posting such a bad thing?
A: Top-posting.
Q: What is the most annoying thing on usenet and in e-mail?
