Subject: Re: array convol optimizationv slow now
Posted by newerjazz on Tue, 14 Jul 2009 15:31:15 GMT
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Thanks Chris,

I will try hist_2d to see if it helps.

Dave, we know the x,y position down to subpixel resolution; so instead of say plotting particles on a 512x512 grid; we plot it on 5120x5120 grid (if our resolution is 1/10 of a pixel). In practice our resolution is down to 1/100th of a pixel. Depending on how many particles are packed into a pixel or a voxel since I actually have z resolution too; the image can look either sharp or blur.

cheers,
newerjazz

On Jul 13, 4:53 pm, Chris <beaum...@ifa.hawaii.edu> wrote:
> On Jul 13, 1:26 pm, David Fanning <n...@dfanning.com> wrote:
>
>
>
>> newerjazz writes:
>>> each particle is a single molecule of protein; we need to visualize
>>> all the proteins to get meaningful interpretation.
>
>> How does that work? If I put 100 million dots on my screen, things
>> get a little blurry. (Of course, my eyes aren't what they used to
>> be, admittedly.)
>
>>> do you have any suggestions of getting the x,y locations on the image
>>> w/ an array operation instead of a for loop?
>
>> No, I can't think of any way to do this an an array. :-(
>
>> Cheers,
>
>> David
>> --
>> David Fanning, Ph.D.
>> Coyote's Guide to IDL Programming (www.dfanning.com)
>> Sepore ma de ni thui. ("Perhaps thou speakest truth.")
>
> I've written a routine called densitymap which makes smoothed surface
> density maps based on the position of 2d sources. You might want to
> check it out (it has been moderately debugged)
>

> http://www.ifa.hawaii.edu/users/beaumont/code/
>
> It uses a different smoothing scheme (it uses the distance to each
> pixel's n-th nearest neighbor to estimate the surface density).
>
> If you use it, you should probably download the IDL astronomy user's
> library, as well ashttp://www.ifa.hawaii.edu/~beaumont/code/beaumont_library. tar
> to avoid dependency issues.
>
> Otherwise, you could use hist_2d to pixellate the locations of each
> point, and then convolve the histogram with a gaussian
>
> Chris
