
Subject: Re: particle detection - a way to speed up things?
Posted by [Ingo von Borstel](#) on Fri, 30 Nov 2007 08:22:47 GMT
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Hi,
>

> If I'm reading your program correctly, you have a big image consisting
> (presumably) of
> a lot of empty space and numerous particles that you have identified
> in some way.

Yes, correct. Black image with an arbitrary amount (≤ 1000) of small blobs with a value different than zero; those blobs numbered using either `label_region` or `watershed`.

> My guess is that the main reason your program is slow is that for each
> particle you
> are summing over the entire image.

Probably. Half the time is consumed by the determination of the position for each particle in the overall image.

> I can see two ways to speed things up:
> 1) Create subsets of the image for each particle and only sum only
> over the subset containing the particle.

In order to calculate the absolute position of a particle, I need to know where on an image it resides. I think I'll lose this information with this approach.

> 2) Use something like HISTOGRAM or a multi-dimensional histogram with
> the `REVERSE_INDICES` keyword (or equivalent)
> to get the indices associated with each particle and sum over those.
> The histogram command would be applied to your
> `particle_image` field with a binsize of 1 and starting at 0. See
> http://www.dfanning.com/tips/histogram_tutorial.html
> for ideas on how to approach this problem using histograms.

The latter might have potential. I'll give it a try and report back then.

Thanks a lot for your input.

Cheers,
Ingo

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If you need an urgent reply, replace newsgroups by vgap.
