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 loose this information with this approach.

- > 2) Use something like HISTOGRAM or a multi-dimensional historgam 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.