Subject: Re: Measuring sphericity of a set of voxels.
Posted by cgguido on Fri, 28 Aug 2009 15:46:40 GMT
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Thanks for your reply pp!

> Though spherical distributions have 3 equal moments of inertia, it
> also happens for other shapes.

yeah, that is what i meant when I said there would be a better way.

>
> You could calculate the density as a function of spherical
> coordinates, and them see how constant the density is for a given
> radius (or the integrated mass under some radius), as a function of
> the two angles. The first thing I would do is to make a plot of those
> quantities to see how flat the curves are, then start looking for
> measures of it (the standard deviation being the simplest one). It
> seems to me that the tricky part to calculate those things may be
> resolution issues, if the number of points you have is not very large.

Indeed it could be a problem since my blobs are about 3 or 4 pixels in diameter...

What about calculating the correlation between the blob brightness and the brightness of an ideal sphere "imaged" with no voxel noise? Could even do this twice: once for a solid sphere and once for a sphere with a gaussian distribution of brightness....

What do you think?

Thanks,
Gianguido