Subject: Distinguishing between point-like and curve-like features
Posted by on Tue, 15 Jan 2013 16:46:08 GMT
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I'm making image masks that are supposed to take out certain small point-like features. These features are usually just a few pixels wide but sometimes as much as about ten or fifteen pixels wide. Because there are other, more large-scale variations in the image, I base the mask on a unsharp masked version of the image, to make the features I'm interested in stand out more. Then I clean the mask with a morph_open operation to get rid of some raggedness of the edges of the "holes" in the mask.

This has worked fine, but I now have some images that have, in addition to the small features that I want to take out, also some high-amplitude curved fringes with similar width that I do _not_ want the mask to take out.

I'm wondering if anyone can suggest a strategy for automatically (and reasonably fast) distinguishing between the point-like and the curve-like features. The masks I'm making either take both out or none, depending on the choice of parameters.

I'm not looking for code here, but maybe some good ideas.

(If you want the background, I'm trying to make bad-pixel masks for some CCD cameras based on flat fields that have significant interference fringes. The small features I want to mask out are clusters of bad pixels, both from the detector itself and due to near-focus dust particles. The purpose of the mask is to identify pixels with no information, where I have to interpolate to get useful values in the science images. Useful in the sense that those pixels do not cause ringing artifacts when I do deconvolution.)