
Subject: Feature identification and measurement

Posted by [wlandsman](#) on Mon, 01 Nov 2010 19:21:29 GMT

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I am working on testing an optical system in which several features (circles, crosses, lines, a "ladder") are imaged onto a CCD. We use these fiducials to monitor changes in the optical path (each fiducial can shift independently), and so are interested in measuring their relative positions.

My first thought was that this might be a case to take advantage of all those IDL remote sensing tools that astronomers mostly ignore. I started to read about shapefiles, but there seemed to be a lot of overhead just to get started.

Right now I am using the Canny function to detect edges, and then LABEL_REGION to isolate the different features, and fitting each fiducial separately (eg. the lines with LINFIT(), the circles with mpfitellipse) to get their position. But Canny + Label_region doesn't work perfectly -- either the fiducial is not entirely within one LABEL_REGION value, or it includes pixels that I don't want to measure. So I spend a lot of time interactively changing pixel values or selecting points to fit. I'd welcome any advice on tools that might help with these measurements. Thanks, --Wayne
