
Subject: Re: Need help reconstructing flat-field. Minimization problem.

Posted by [Tal](#) on Wed, 24 Oct 2007 08:46:41 GMT

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>> Apart from the fact that it returned junk, the algorithm seemed OK.

sounds familiar.

:-)

Hi Jonathan,

If i got all this right then there is one thing missing here: Dark current images. Take image for the same location of your light images 1,2,3 but with the shutter closed. You will record in fact the noise of your camera. an integration of heat, electronics, inter-CCD variabilities in response etc.

now all you need to do is generally: (light_image - dark_image) and continue from there as usual. since your CCD camera is a 2D CCD array, following your notation the ratio is now:

$\text{img}' = (\text{img} - \text{dark})$
 $\text{img}'1[x1,y1] / \text{img}'2[x2,y2] = R'[x1,y1,x2,y2]$

where R' is the dark-corrected Ratio image R.

to be on the safe side, repeat your light measurements and dark measurements again if possible, since dark-current images are variable in time according to conditions during acquisition.

hope this helps,
Tal
