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Subject: Re: wavelength calibration

Posted by [Brian Wolven](#) on Tue, 01 Nov 2011 19:41:45 GMT

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The approach I've used is to perform a windowed cross-correlation of the observed spectrum with a synthetic spectrum, e.g., one generated from a line list. The exact window shape and size would depend on what your spectra look like; mine are essentially gaussians centered on the positions of the known strong emission lines. I then perform a low-order polynomial fit to the wavelength/spectral bin coordinate pairs obtained from the set of cross-correlations. In order for this approach to work well you need to have a pretty good handle on your instrument's line shape/PSF, as you'll probably want to convolve that shape with your synthetic line positions before doing the cross-correlation.

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