
Subject: Re: constraining parameters in multi-Gaussian 1D fitting
Posted by [Craig Markwardt](#) on Tue, 06 Sep 2005 01:58:54 GMT
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"Jess" <jobrien@mso.anu.edu.au> writes:

- > Hi Craig (and everyone else),
- >
- > Thanks for clarifying the use of "tied". In that case I will have to
- > use limits. Perhaps I can re-fit a velocity profile altering my parinfo
- > limits, if the first multi-Gaussian fit of that profile doesnt yield
- > the right relationship between the peak fluxes of each Gaussian.
- >
- > Unfortunately I can't sequentially fit single Gaussians, as the
- > velcoity profile is a sum of overlapping Gaussians. Each profile
- > comprises emission from a line-of-sight through a edge-on galaxy disk
- > in cylindrical rotation $V(R)$, with gas distribution assumed to be
- > azimuthally symmetric, monotonically decreasing radial flux profile,
- > isothermal and with isotropic velocity dispersion.
- >
- > ... extensive description deleted ...
- >
- > What do you think Craig? Is the solution too degenerate to be solved
- > with curvefit algorithms like mpfit, despite the heavy constraints I am
- > trying to place on most of the parameters in the multi-gaussian curve
- > fit?

Sorry, I got a bit lost in that description.

If possible, I would try to fit the "new" peak while holding the other peaks absolutely constant, and then only after the "new" peak fit has converged, allow more of the parameters to vary. You want to be as close as possible to the optimal solution before you allow the most parameters to vary.

Happy fitting,
Craig

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Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
