Enough! Project Steps

We seem to have the correct tools for the task. But can we use them?

1. Can we see if we always have nice PDF’s? – **really** want to use the quadratic expansion around the maximum likelihood
2. Is the output (inverse) Hessian correct (how can we tell)
3. Compare this with sampling methods for robustness
4. How to get the time dependence in here?

1. and 2. We should make some data, possible handcrafted to make some parameters hard to estimate on purpose, e.g. thin enough that SLD and thickness are strongly correlated. Or SLD’s with very little contrast

Use same datasets for 3 too then compare results from L-BFGS-B and MCMC and nested sampling

4. Do these drop out easily (possibly for some parameters), use noise to simulate time dependence?

Investigate background and noise effects (background is effectively a nuisance parameter but could possibly be assumed constant)