BornAgain - Feature #120

Implement chisquared function that is filtered in frequency domain

31 Oct 2012 16:36 - herck

Status:	Archived	**Start date:**	31 Oct 2012
Priority:	Normal	**Due date:**	
Assignee:	herck	**% Done:**	0%
Category:		**Estimated time:**	0.00 hour
Target version:	Sprint 7		

Description

Under the assumption that the simulation model is able to capture all structural characteristics of the scattering image, one would expect that the difference image (simulation - real data) for the best fit contains relatively small low frequency components when transformed to the frequency domain.
One could implement this reasoning into the minimizer by creating a chi-squared function as follows:

1. Compute the Fourier transform of the difference map (OK)
2. Apply a filter to this image, thereby putting higher weight on the lower frequency components (only cutoff filter is implemented)
3. Finally, calculate a norm of this filtered map that will serve as the minimizing function

History

#1 - 31 Oct 2012 16:36 - herck

- Status changed from Backlog to Sprint

#2 - 31 Oct 2012 16:37 - herck

- Description updated

#3 - 31 Oct 2012 16:40 - herck

- Target version set to Sprint 7

#4 - 07 Nov 2012 16:28 - herck

- Description updated

- Status changed from Sprint to Resolved

#5 - 29 Nov 2012 12:39 - herck

- Status changed from Resolved to Archived