

BornAgain - Envelope task #2314

Requirements from ESS instrument scientists for reflectometry in BornAgain

04 Mar 2019 13:01 - dmitry

Status:	In Progress	Start date:	04 Mar 2019
Priority:	High	Due date:	
Assignee:		% Done:	0%
Category:	Reflectometry	Estimated time:	0.00 hour
Target version:			
Description			
<p>Here I will enumerate the requirements to the BornAgain GUI voiced at the meeting in Lund. Parenthesis denotes the items which were either not pronounced loudly, but will presumably be required at next meeting, or were pronounced by myself as planned for the nearest future.</p> <ol style="list-style-type: none">1. Simpler layer definition for reflectometry (see attached file). It should also feature some intuitive mechanism of adding several interchanging layers at once.2. Creating instrument/loading experimental data from a NEXUS file. The button should be available from the welcome view.3. Current defaults are good only if one wants to do GISAS (e.g. having GISAS instrument created by default in instrument view). I assume that it would be nice to have some preset defaults for reflectometry case and allow user to select at the first launch what he intends to use the code for.4. Selection of instrument in instrument view is not intuitive. It would be nice to see all available instrument types at once and choose the appropriate one.5. Instrument configurations for ESS (and other widely used) instruments.6. Q-defined reflectometry as the default layout of instrument.7. RQ⁴ and log fitting metrics (one of them should be defaulted?) and corresponding graph representations.(8). Handling intensity uncertainties during fit9. Scattering vectors in inverse angstroms everywhere.10. Uncertainty analysis and Bayesian treatment of uncertainties.(11). Handling pointwise resolution in GUI.12. Co-refinement mechanism for different contrasts and polarizations13. Batch processing for in-situ measurements.14. Creating custom fitting parameters / applying restrictions on fitted parameters.15. 1d data import:<ol style="list-style-type: none">(a). Loading pointwise resolutionsb. Loading intensity uncertaintiesc. Sorting and automatic exclusion of repeated values in coordinated. automatic handling of commented lines (e.g. starting with # or ! etc.)(e). importing several datasets simultaneously16. Changing workflow from welcome view -> instrument view -> import data -> simulation/fit to welcome view -> import data -> instrument view -> fit/simulation(17). Material library			

History

#1 - 04 Mar 2019 13:17 - dmitry

- Description updated

#2 - 05 Mar 2019 11:44 - dmitry

- Description updated

#3 - 16 Apr 2019 18:04 - wuttke

- Priority changed from Normal to High

Discussion continues on ESS confluence page: <https://confluence.esss.lu.se/display/DAM/BornAgain+requirements+for+reflectometry>

Files

LayerEditor_layout.png	448 KB	04 Mar 2019	dmitry
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