

BornAgain - Refactoring #2011

PythonAPI: improve access to the simulation results

14 Mar 2018 17:44 - ganeva

Status:	Backlog	Start date:	14 Mar 2018
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:		Estimated time:	0.00 hour
Target version:			
Description			
Request: plot simulated and experimental data together in the same units, the same scale, with the same ROI and the same masks.			
Problems.			
1. If detector resolution is present, masked area looks noisy. To avoid that, I set the all masked bins to have zero signal:			
<pre>simulation.runSimulation() result = simulation.result().histogram2d(ba.AxesUnits.MM) for i in range(result.getTotalNumberOfBins()): if simulation.getInstrument().getDetectorMask().isMasked(i): result.setBinContent(i, 0)</pre>			
Better would be if simulation would return already correct result, so that this step will not be necessary any more.			
2. There is no way to apply the mask to the experimental data. The work around is:			
<pre>def apply_mask(from_data, to_data): for i in range(from_data.getTotalNumberOfBins()): if from_data.getBinContent(i) == 0: to_data.setBinContent(i, 0)</pre>			
to be continued			
Related issues:			
Related to BornAgain - Refactoring #2130: Core API: Reduce the number of poss...		Backlog	30 Jul 2018
Related to BornAgain - Refactoring #1918: Core API: review IHistogram class f...		Backlog	06 Dec 2017

History

#1 - 18 Sep 2020 18:38 - wuttke

- Subject changed from API changes to access the simulation results to PythonAPI: improve access to the simulation results
- Status changed from New to Backlog

#2 - 18 Sep 2020 22:33 - wuttke

- Related to Refactoring #2130: Core API: Reduce the number of possible ways to access data through SimulationResult added

#3 - 18 Sep 2020 22:34 - wuttke

- Related to Refactoring #1918: Core API: review IHistogram class family added