

BornAgain - Bug #1294

Feature # 1287 (Rejected): == Particle form factors ==

provide substantial unit tests for factor computations

02 Feb 2016 14:27 - wuttke

Status:	Archived	Start date:	02 Feb 2016
Priority:	Normal	Due date:	
Assignee:	wuttke	% Done:	100%
Category:		Estimated time:	0.00 hour
Target version:	Sprint 31		
Description			
Current UnitTests/TestCore/FormFactorTest.h tests mostly trivalities (does get<Param> return <Param> as set in the constructor). The only substantial test is whether F(0) agrees with the volume. We need more substantial tests of the form factor computation:			
<ul style="list-style-type: none">• is F(q) continuous at/near the singularities?• does F(q) along high-symmetry axes agree with analytical values?			

History

#1 - 21 Apr 2016 17:59 - wuttke

- Status changed from New to Sprint
- Assignee set to wuttke

first, repair broken tests related to parameter pool

#2 - 25 Apr 2016 15:03 - wuttke

- % Done changed from 0 to 20

Specialization tests implemented.
More tests needed.

#3 - 26 Apr 2016 12:46 - wuttke

- Status changed from Sprint to Resolved
- Target version set to Sprint 31
- % Done changed from 20 to 100

Done in 6b09bc4.

We are now testing:

- whether $F(0)=V$
- continuity (comparing $F(q)$ for small q with $F(0)$)
- symmetry under reflections and rotations (selectively, not for all shapes)
- specialization (e.g. whether a pyramid with $\alpha=\pi/2$ behaves like a prism)

And indeed, some inaccuracies and errors were found (tests outcommented, tagged "TODO"). See separate issues.

#4 - 04 Jul 2016 11:23 - herck

- Status changed from Resolved to Archived