

MAUS - Bug #1951

LiH Geometry Bug

22 January 2018 11:44 - Rogers, Chris

Status:	Open	Start date:	22 January 2018
Priority:	Normal	Due date:	
Assignee:	Rajaram, Durga	% Done:	0%
Category:	Geometry	Estimated time:	0.00 hour
Target version:	Future MAUS release		
Workflow:	New Issue		

Description

I did some digging on the LiH geometry...

- Absorber vacuum windows are in place which should not be I think. If they were installed (I guess check with Colin), then use a polycone not the tessellated solid as implemented, to fix the weirdness. The offending geometries are in AFC.gdml as AlAlloy6061_Element_Step_24 and AlAlloy6061_Element_Step_25.
- The LiH absorber has a ~ 60 mrad misalignment. This seems rather a lot (around 20 mm between one side of the absorber and the other). I rather suspect this is a bug?

History

#1 - 22 January 2018 11:59 - Rogers, Chris

- File *materials.png* added

Note the windows are also on the "empty" geometry

#2 - 22 January 2018 12:06 - Rajaram, Durga

I agree I doubt they were installed for the lih running.
How about I take those elements out of the LiH & empty-LiH geometries?
And then if Colin says they should be there, do a correct implementation?

& can you post the script you use to make the pretty plot?

#3 - 22 January 2018 13:12 - Rogers, Chris

- File *check_geometry.py* added

...attached...

#4 - 22 January 2018 15:39 - Rajaram, Durga

- File *materials-EmptyLiH-10299.png* added

- File *materials-LiH-10476.png* added

Took the Al window physical volumes out of the AFC gdml.

I think the misalignment might be stemming from the issue you found earlier with the LH2 geometry where there was a rotation put in.
I have taken that out for the LiH geometries (Nov/Dec 2017 periods)

For the empty LiH, I've left the Mylar foil in there -- not sure if that belongs.

The geometries are in preprod

LiH-Empty:

```
python bin/utilities/download_geometry.py -geometry_download_run_number 10299 -geometry_download_directory geo-10299 -cdb_download_url "http://preprodcdb.mice.rl.ac.uk/cdb/"
```

LiH:

```
python bin/utilities/download_geometry.py -geometry_download_run_number 10476 -geometry_download_directory geo
```

-10476 -cdb_download_url "http://preprodcdb.mice.rl.ac.uk/cdb/"

Will push to prod if you OK it

#5 - 30 January 2018 11:26 - Rogers, Chris

I checked by eye and the geometries look okay to me now - thanks!

Files

LiH_in_materials.png	23.6 KB	22 January 2018	Rogers, Chris
materials.png	19.5 KB	22 January 2018	Rogers, Chris
check_geometry.py	3.46 KB	22 January 2018	Rogers, Chris
materials-EmptyLiH-10299.png	19.4 KB	22 January 2018	Rajaram, Durga
materials-LiH-10476.png	22.6 KB	22 January 2018	Rajaram, Durga