

MAUS - Bug #1056

Problem with Wedge volume

20 July 2012 09:54 - Rogers, Chris

Status:	Rejected	Start date:	20 July 2012
Priority:	Normal	Due date:	
Assignee:	Rogers, Chris	% Done:	0%
Category:	Simulation	Estimated time:	0.00 hour
Target version:	Future MAUS release		
Workflow:	New Issue		
Description			
Looks like the Wedge volume geometry check is failing somehow - looks like it finds a negative number when it should be positive.			

History

#1 - 20 July 2012 09:55 - Rogers, Chris

Description of issue email from Pavel

Hi Chris,

I've been trying to revive the old g4mice simulation of Step IV with a wedge. Had some issues with the Boolean volume describing the intersection of a triangular prism and a cylinder, went back to using a simple wedge instead of a Boolean volume, and that's where the problem is:

1) Stage4-Wedge.dat is using a Wedge/LiHalfWedge.dat module which determines the wedge:

```
=====  
Module LiHWedgeHalf  
{  
  Volume Wedge  
  Dimensions 1000 2000 2000.0 mm //x, y, z  
  PropertyDouble BlueColour 0.5  
}
```

2) When I run a simulation I get the following output:

```
=====  
Traceback (most recent call last):  
  File "/home/snopok/maus/src/common_py/ErrorHandler.py", line 159, in  
HandleCppException  
    raise(CppError(error_message))  
ErrorHandler.CppError: Dimension x in module  
Stage4-Wedge.dat/LiWedgeHalf.dat out of range at MiceModToG4Solid::checkDim  
Traceback (most recent call last):  
  File "./bin/simulate_mice.py", line 54, in <module>  
    run()  
  File "./bin/simulate_mice.py", line 51, in run  
    MAUS.Go(my_input, my_map, MAUS.ReducePyDoNothing(), my_output,  
datacards)  
  File "/home/snopok/maus/src/common_py/Go.py", line 121, in __init__  
    executor.execute()  
  File "/home/snopok/maus/src/common_py/framework/single_thread.py", line  
65, in execute  
    assert(self.transformer.birth(self.json_config_doc) == True)  
AssertionError  
=====
```

What is wrong here? The world seems to be large enough to fit this wedge:

```
=====  
Configuration Stage4  
{  
  Dimensions 1500.0 1000.0 5000.0 cm  
  PropertyString Material Galactic
```

```
PropertyDouble G4StepMax 100. mm
ScaleFactor 1.
Module Wedge/LiWedgeHalf.dat
{
  Position 0.0 0.0 0.0 mm // horz wedge
  Rotation 0.0 0.0 0.0 degree // horz wedge
}
=====
```

but even if I make the wedge tiny (10. 20. 20. mm) I still get the same error. With the Boolean volume nothing of a sort happens, but I hoped I would be able to look at just the wedge. Any ideas?

Pavel

#2 - 20 July 2012 10:18 - Rogers, Chris

- Status changed from Open to Rejected

Module Wedge/LiWedgeHalf.dat

Should be

```
Module Wedge/LiHWedgeHalf.dat
      ^
      Note typo
```

Note that MAUS does issue a warning when it fails to load a Module, but it is suppressed in debugging output (set verbose_level 0).

Files

stageIVwedge.zip	1.78 KB	20 July 2012	Rogers, Chris
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