

## LArSoft - Feature #13276

### PhotonVisibilityService should be factorised

07/18/2016 03:17 PM - Gianluca Petrillo

<b>Status:</b>	Accepted	<b>Start date:</b>	07/18/2016
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>		<b>% Done:</b>	80%
<b>Category:</b>	Simulation	<b>Estimated time:</b>	16.00 hours
<b>Target version:</b>		<b>Spent time:</b>	8.50 hours
<b>Experiment:</b>	LArSoft	<b>Co-Assignees:</b>	
<b>Description</b>			
The service PhotonVisibilityService is currently not factorised.			
Factorisation is needed for use in external algorithms like LArLite's flash matching.			

#### History

##### #1 - 07/18/2016 03:24 PM - Gianluca Petrillo

- Status changed from New to Assigned
- Assignee set to Gianluca Petrillo
- Estimated time set to 16.00 h
- Experiment LArSoft added
- Experiment deleted (-)

A preliminary reading confirms that the factorisation is both needed and feasible.

There are two options:

1. **breaking change:** the *art* service interface will lose the ability to provide the functionalities and will only deliver the service provider (as LArPropertiesService)
2. **non-breaking change:** the *art* service interface will retain the ability to provide the functionalities and will also expose the service provider interface (as Geometry)

My preference is decidedly for the breaking change.

I expect the breakage to be fixable in single line changes, with some automation possible (although not foolproof), similarly with what happened for LArProperties and the other core services.

##### #2 - 08/30/2016 06:02 PM - Gianluca Petrillo

- % Done changed from 0 to 80

I have split the code so that framework dependencies are confined into a *art* service and the new service provider is shareable. I have also added a unit test that should move with the service provider.

There may be additional work to do, though.

The branch is feature/gp\_Issue13276 in lardata. It is updated to LArSoft v06\_04\_01.

##### #3 - 02/20/2017 03:12 PM - Katherine Lato

LArSoft will finish the integration of the new factorized code to replace the old code (which was in a feature branch). This requires running a few scripts to update the branch, test it, etc.

There was another issue to move the code so that it doesn't depend on art so LArLite can use it. That piece is the responsibility of LArLite and isn't being tracked here.

##### #4 - 11/10/2017 12:11 PM - Gianluca Petrillo

Work is being done on PhotonVisibilityService by Christopher Backhouse, which may help this factorisation.

##### #5 - 03/29/2018 01:43 PM - Katherine Lato

- Status changed from Assigned to Accepted

- Assignee deleted (*Gianluca Petrillo*)

Note, we are putting this back to the accepted state because we have no staff to work on this. We asked Jason Stock, who has ideas, but not the time since his emphasis is on analysis for the DUNE calibration effort and his thesis.