

## LArSoft - Task #14282

Milestone # 17338 (Accepted): Phase 3 Tracking Data Product

### Design an interface for access of reconstructed particle hierarchy ("particle flow") information

10/26/2016 10:39 AM - Gianluca Petrillo

<b>Status:</b>	Accepted	<b>Start date:</b>	10/26/2016
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>		<b>% Done:</b>	0%
<b>Category:</b>	Architecture	<b>Estimated time:</b>	60.00 hours
<b>Target version:</b>	2019-1-quarter	<b>Spent time:</b>	0.00 hour
<b>Description</b>			
Similarly as for clusters (issue <a href="#">#14265</a> ) and tracks (issue <a href="#">#14281</a> ), add an interface providing access to particle hierarchy information:			
<ul style="list-style-type: none"><li>• providing access to all the pre-computed information currently available (recob::PFParticle)</li><li>• no less-than-trivial computation is performed</li><li>• access to lower level associated objects and navigation to other particles in the flow; possibly incomplete list:<ul style="list-style-type: none"><li>◦ clusters (ideally via view::Cluster)</li><li>◦ tracks (ideally via view::Track)</li><li>◦ hits</li><li>◦ vertices (of different categories, if supported)</li><li>◦ trajectory points ("space points")</li><li>◦ track seeds</li><li>◦ daughter and parent particles</li></ul></li><li>• access to truth information needs to be considered both in principle and in practice</li></ul>			
This interface object, with the candidate name of view::PFParticle, is bound to a main reconstruction action. Additional information (for example, associated optical flashes) is not reached through this interface. This other information should be provided by a higher level abstraction (see issue <a href="#">#14061</a> ).			

#### History

##### #1 - 10/27/2016 12:53 PM - Katherine Lato

- Status changed from New to Assigned

##### #2 - 12/08/2016 11:32 AM - Gianluca Petrillo

- Estimated time set to 60.00 h

The starting step should be a thorough discussion with the users.

##### #3 - 08/02/2017 04:28 PM - Katherine Lato

- Status changed from Assigned to Accepted

- Assignee deleted (Gianluca Petrillo)

- Parent task changed from #14060 to #17338

Moving this to phase 3 of the track data product work.

##### #4 - 08/02/2017 04:32 PM - Katherine Lato

- Subject changed from Provide an interface for access of reconstructed particle hierarchy ("particle flow") information to Design an interface for access of reconstructed particle hierarchy ("particle flow") information

##### #5 - 01/09/2018 02:53 PM - Katherine Lato

- Target version set to 2019-1-quarter