

LArSoft - Feature #10088

Introducing IDs for photon detector geometry

09/08/2015 07:10 PM - Gleb Sinev

Status:	Assigned	Start date:	09/08/2015
Priority:	Normal	Due date:	
Assignee:	Gleb Sinev	% Done:	0%
Category:	Geometry	Estimated time:	0.00 hour
Target version:		Spent time:	0.00 hour
Experiment:	LArSoft	Co-Assignees:	
Description			
I would like to request standardized IDs for OpChannels and OpDets analogous to what the TPC geometry elements have (WireID, ChannelID, etc.).			
It would be nice to standardize everything else in the optical detector code as well (use ADC_counts, ticks, and so on everywhere instead of shorts, unsigned ints, etc.), but that is probably a separate issue.			

History

#1 - 09/15/2015 10:25 AM - Lynn Garren

- Status changed from New to Accepted

We would be happy to accept contributions in the form of feature branches addressing these issues. Channel ID optimization, particularly, must be coordinated with the experiments.

#2 - 09/01/2016 02:50 PM - Katherine Lato

- Category set to Geometry

- Status changed from Accepted to Feedback

- Experiment LArSoft added

- Experiment deleted (-)

Gleb,
Would you be willing to come up with a proposal on how to do this?
Katherine & Gianluca

#3 - 09/02/2016 04:43 PM - Gleb Sinev

Hi Katherine and Gianluca,

I think I need to look at how Gianluca implemented this for different TPC geometry elements, and do something similar here. Unfortunately, I'm not sure when I will get time to do this.

Gleb

#4 - 09/02/2016 04:58 PM - Gianluca Petrillo

The hierarchy of IDs for TPC geometry is in [larcoreobj:source:larcoreobj/SimpleTypesAndConstants/geo_types.h: geo::WireID](#) is the most derived object, that encapsulates the others. [geo::CryostatID](#) is basically an integer.

The presence of the boolean isValid is something I would not recommend, since it wastes bytes, it is almost never set by users and if it were really needed it could be implemented as a member function valid() checking against a magic value of the ID (e.g. std::numeric_limits<unsigned short int>::max()). Using unsigned short instead of int is not a bad idea either, since the total structure made of two IDs would well fit in 4 bytes.

#5 - 09/08/2016 01:39 PM - Katherine Lato

- Status changed from Feedback to Assigned

- Assignee set to Gleb Sinev

Gleb,
When you get to it ...