

LArSoft - Task #17947

Milestone # 17920 (Assigned): Vectorization of LArSoft Code

Profiling LArSoft

10/18/2017 11:12 AM - Guilherme Lima

Status:	Assigned	Start date:	10/18/2017
Priority:	Normal	Due date:	
Assignee:	Guilherme Lima	% Done:	0%
Category:	Architecture	Estimated time:	0.00 hour
Target version:	2017-4-quarter	Spent time:	0.00 hour
Description			
Check with Gianluca and Soon on how to profile LArSoft			

History

#1 - 03/08/2018 11:29 AM - Guilherme Lima

Since Soon has posted LArSoft profiling results [here](http://g4cpt.fnal.gov/LArSoft.html), I could use those as baseline, if comparing to same LArSoft version.

In particular, the profiling of [detsim jobs](https://g4cpt.fnal.gov/larsoft/dunetpc_v06_57_00/hpctoolkit/proton-6GeV/lar-protoDune-proton-6GeV-detsim-cpu.html) show significant exclusive CPU time spent as shown below:

- 9.9% IdealAdcSimulator::count()
- 9.8% Legacy35tZeroSuppressService::filter()
- 6.7% ExponentialChannelNoiseService::addNoise()
- 5.8% SimWireDUNE::produce()
- 4.1% AdcCodeHelper::subtract()

These are the first candidates to be investigated for vectorization opportunities.