



Contribution ID: 68

Type: Poster

## Service Oriented Tracking: A Package For CLAS12 Reconstruction Using Clara Framework

*Thursday, May 24, 2012 1:30 PM (4h 45m)*

In the advent of the 12 GeV upgrade at CEBAF, it becomes necessary to create new detectors to accommodate the more powerful beam-line. It follows that new software is needed for tracking, simulation and event display. In the case of CLAS12, the new detector to be installed in Hall B, development has proceeded on new analysis frameworks and runtime environments, such as the Clara (CLAS12 Reconstruction and Analysis) framework. Our goal is to create a tracking program for the forward components of the CLAS12 which takes advantage of the service oriented architecture provided by the Clara framework. The tracking program must group together hits from the detector that were caused by the same particle, determine which type of particle it was (particle identification), and estimate its vector momentum and a point on its trajectory. We have an additional requirement of timing: the program must be fast enough that the reconstruction rate is comparable to the data acquisition rate. Also, due to the complexity of these sorts of programs, modularity is necessary. The purpose of our study is to create a program that meets all of the requirements of a tracking program, while using a service oriented architecture to enhance timing as well as flexibility (software agility and scaling).

**Student? Enter 'yes'. See <http://goo.gl/MVv53>**

yes

**Author:** PAUL, Sebouh (Jefferson Lab)

**Co-author:** GYURJYAN, Vardan (JEFFERSON LAB)

**Presenter:** PAUL, Sebouh (Jefferson Lab)

**Session Classification:** Poster Session

**Track Classification:** Event Processing (track 2)