Minutes of the PWA EVO Meeting 04.05.2010

Participants

Bertram Kopf, Marc Pelizäus, Matthias Steinke, (Bochum); Klaus Götzen (GSI); Miriam Fritsch, Mathias Michel (Mainz); Sebastian Neubert (München);

General

One proposal for the official name of the PANDA PWA software has been made so far, namely **PAWIAN** as an abbreviation for **PA**rtial **W**ave **I**nteractive **AN**alysis Software. We agreed upon to finally decide on the software name in one of the next EVO meetings. Ideas and suggestions are very welcome and should be posted to the PWA forum.

Status reports of the first software activities

Matthias and Bertram summarized the last two weeks software activities from the Bochum group:

- Matthias wrote already a parser for the particle table. With a test application it is possible to read in an input pdt-table and to create a particle table object which can be cloned and modified. In addition one can extract particles from it and ask for all individual properties. Matthias pointed out that the present input table still contains some dummy entries. A student from Bochum will take care of implementing the correct properties.

- Matthias is now developing the parser for the setup configuration. This work is still in progress and the first *official* code will be committed soon.

- The very first software code is embedded in a cmake build system. It consists of the qft++ tool and the package with the parser and its test application for the pdt-table. In addition there is an *Example* directory with an application which makes use of the qft++ tool. This application reads in phasespace distributed $\pi^0\pi^0\eta$ events, calculates the contributed amplitudes in the helicity formalism for the sequential decay chain $mother \rightarrow inter + \pi^0$ with $inter \rightarrow \pi^0 + \eta$ and creates histograms with the weighted invariant masses and angular distributions.

- The first *non-public* git repository has been set up and tested. Git seems to work properly and is easy to use for our day to day business.

Next software tasks

- In the next days, the Bochum group will set up the first official git repository containing the first rudimentary code and test applications. The external packages (boost, Minuit2, Geneva) will be provided as tar-files and can be downloaded via the Web.

- Before starting with the development of the event reader, we want to define the attributes and functionality of the event object. For that, we will initiate a discussion in the PWA forum. As a starting point Sebastian will post how the event is defined in the COMPASS PWA software.

- Mathias volunteered to take care of the minimizer. He will start to think about the design of the abstract interface for the usage of different kinds of minimizer (e.g. deepest decent minimizer *Minuit2* or generic minimizer *GenEvA*). Mathias will contact Rüdiger Berlich, the author of the GenEvA package, who is willing to help us in this regard.

PANDA PWA Wiki

Klaus has already set up the PANDA PWA Wiki with some basic structures. Sebastian put in the first helpful links to PWA physics resources and documentations to the external software tools are also available.
Until the next EVO meeting we will set up in the wiki with

- a skeleton for the documentation where the requirements, objectives and ideas for the PANDA PWA software should be summarized.

- how-to documentation with a description how one has to check out and install the software and how to start the test applications.

- more links to helpful PWA documentations. Everybody is welcome to add something on the page *Physics Resources*.

Next meeting

The next PWA EVO meeting will take place on May 18th, 2010 at 13h30.