## **SIMDET Development**

## June 5, 2002:

Simdet V401 released (original release)

#### Septenber 20, 2002:

New release (revision) Rel-4-0-2 of the CVS module Simdet

#### October 9, 2002:

The configure script is modified to check for gmake 3.79 or greater. A bug has been corrected (the vecsub library is now created if --with-vecs is used).

#### October 29, 2002:

A bug has been corrected in the Simdet Fortran routine sistor. F. Now the event history of the PYTHIA record is stored (if 'HIST 1' is used)

#### November 11, 2002:

Simdet now is able to read generator input in StdHep format (StdHep v5 01).

#### November 12, 2002:

Fortran interface to gzip package modified (several I/O streams)

Small correction in Makefile.bin.in using "MAKE=gmake" to be consistent with the configure script.

#### January 21, 2003:

Small bug corrected in gzclose (reset lun table entry if closed successfully)

# configure --help

Usage: configure [options]

Options: [defaults in brackets after descriptions]

Configuration:

--help print this message

--nosimu only all stable particles without detector response

[detector response]

--nocov no full covariance matrix [full covariance matrix]

--clic the CLIC linear collider option [no]

Directory and file names:

--prefix=PREFIX install in PREFIX

[./build]

Features and packages:

--with-circe enable pythia event generator with circe [no]

--with-bkgr enable pythia event generator with background [no]

--with-vecs include utility package vecsub [no]

--without-gzio no zipped output files [zipped files possible]

--with-stdhep include StdHep library for reading HepEvt format [no]

## vecsub

```
C*
            VECSUB - DELPHI
C*
   Authors: A. Peterson, Guy WORMSER, Patrick ROUDEAU, Yves SACOUIN,
          Paul DAUNCEY, Pierre Antilogus, Markus Elsing
C*
C*
C*
C* Version adapted to CLIC Physics Studies M. Battaglia, Sept. 2000
C*
C* Modified to double precision common blocks for use with PYTHIA-6
         - CALL LUXXXX -> CALL PYXXXX
C*
         - set MTRACK to 1500
         - set the size of VECP to 2*MTRACK
         - Allow up to 500 tracks/event in all clustering methods.
           (PUYCLU, PUDCLU and PUJET4 have now a limit at 500 tracks) *
C*
C*
C* Modified to Simdet Version 4, H. Vogt, June 2002
C*
______
 VECSUB is a useful package for vector handling and provides an interface
  to all the LUND physics analysis routine such as sphericity and thrust
  computations, cluster finding, and so on.
 All the LUND physics routines which are used are those of the standard JETSET library,
 as described in the LUND manual.
```

# **Tagging Improvement**

## **Proposal by Thorsten Kuhl**

Use helix instead of linear interpolation for the decay point for charged decaying tracks.

Introduction of a tail factor to take into account bad track fits (Brahms)

Schedule: End of May 2003