Agenda SICb Session

- Status of SICb software migration F.Ranjard
- Status of Monte Carlo production E. van Herwijnen
- Proposal for event size reduction on DST1 I.Korolko
- The data quality check procedure A. Jacholkowska
- Plan for next SICb release v233 A. Jacholkowska

Status of SICB migration

- **outline**
  - **September proposal**
    - **SICBMC**
    - **SICBDST**
  - **March status**
    - **SICBMC v231, SICBDST v231, database v225**
  - **April status**
    - **SICBDST v232**
    - **database v226**
  - **Next Releases**
    - **SICBMC v232, SICBDST v233, database v227**
  - **Near Future**
    - **SICBMC , Brunel , Galileo**

September proposal

- **In September it was proposed to migrate the reconstruction part of SICB to Brunel (reconstruction program in Gaudi framework) in order to:**
  - **give input to the C++ tracking package,**
  - **use the C++ tracking output in the RICH reconstruction,**
  - **replace existing Fortran algorithms with new C++ ones.**
- **First step:**
  - **Creates 2 programs SICBMC and SICBDST**

September proposal(2)

- **SICBMC is linked with Geant321, Pythia6134, ….**
  - Creates raw hits which do not need Geant321 to be understood
  - reads geometry from data base (cdf and ddf files)
- **SICBDST is not linked with Geant321**
  - Creates DST1, DST2,..
  - Analyses DST1, DST2,..
  - Geometry is read from the input file header
- **First versions v230 ready in February**

March status

- **SICBMC v231 has been released**
  - **it is based on SICB v223**
  - **it reads dbase v225**
  - **It produces rawHit banks**
- **SICBDST v231 has been released**
  - **it is based on SICB v223**
  - **It reads rawHit banks and produces DST1**
    - **not capable to produce DST2 because the new pileup mechanism does not work yet**

April status

- **SICBDST v232 will be released this week**
  - it contains calorimeters improvements:
    - geometry update
    - 2x2 trigger
    - pi0 calibration revisited
    - realistic energy computation in HCAL
  - it contains some bug fixes in kalman package
  - it reads dbase v226
  - *if accepted* it will contain a proposal to reduce the DST event size (see Ivan's talk)
  - if bug is fixed in pileup it could create DST2,...

Next Release

- **Contents of next SICBMC and SICBDST will be defined during this meeting**
- **I have already received changes in**
  - **simgeom, simvdet**
    - **to put VELO in magnetic field**
  - **simmubg**
    - **new background parametrisation**
  - **trimuon**
    - **use uniform z definition of the hit pads. Always at the center of the muon chamber.**
  - **digmuon**
    - **mupd_z set to the station centre rather than the entry or exit z of the layer within the station**

Next Release (2)

- **trivert**
  - **please fill the release notes**
- **trit0v**
  - **in addition to the changes of every routines add some words to explain the purpose of the change.**

Near Future

- **RawHits simulation will stay in Fortran as long as a simulation program based on Geant4 is not ready.**
- **Digitization, Reconstruction = production of DSTs will be done in Brunel**
  - **All SICBDST packages are wrapped inside Brunel**
  - **They can be replaced with C++ packages one at a time.**
    - **Time scale: as soon as possible**
- **Analysis could be done in:**
  - **the FortranAlgorithm GaudiExamples**
  - **Galileo : A new program in the Gaudi framework capable to run C++ analysis algorithms as well as Fortran ones.**
    - **Time scale: not yet defined**

SICBMC

- **SICBMC is the event generation (simulation) program**
  - **it is linked with event generator (Pythia, QQ, …) and Geant3**
    - **it produces Geant3 hit banks**
- **Create a RawHit step**
- **Remove steps:**
  - **digitization, trigger, reconstruction, analysis**

SICBDST

- **SICBDST is the part independent from Geant3 which could be moved to Gaudi**
  - digitization
    - create digitizing banks from rawhit banks
  - apply trigger
    - create trigger banks from digitizing banks
  - reconstruction
    - create DST banks from digitizing banks
  - analysis
- **modules do not make any reference to Geant3**
- **The initialization of various parts is not yet split.**

Status

- **SICBMC v230**
  - RawHit step is created:
  - Output files can be read in by Gaudi linked without Geant3.
- **SICBDST v230**
  - can read SICBMC rawHit files and run digitization, trigger, reconstruction and analysis steps.
  - Can read SICB DST1 or DST2 files and run analysis:
    - digitization must be skipped.
- **Physicists should check SICBMC and SICBDST**

Physicists should check

- **A proposal**
  - run 1000(?) events from a MC file through SICB_dst program
  - run the same set of events through SICBMC to get rawHits
  - run rawHits file through SICBDST
  - compare SICB_dst output with SICBDST output