Plan of MC Production

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18 October 2010

StdHep files

- Status of generator samples: My observation
  - Parameters for 200, 250, 350, 500, 1000 GeV are released.
  - 200, 250, 350, 500 will be the final, but 1000 GeV may be revised
  - Luminosity function for 1000 GeV were prepared. But StdHep files are not prepared yet. Those for 200, 250, and 350 GeV are not revised yet.
  - Update of Whizard interface have not completed yet.
    - Remaining work : Color flow/Spin info, generate multi-final processes at once. ➔ Hope to complete soon

- In summary
  - StdHep files for DBD study is not ready yet.
    - 200, 250, 350, 500 GeV: Will be ready soon, depending on demands
    - 1000 GeV: Can start a temporal production

Production for SB2009 studies

- 350 GeV with ILD_00 : Essentially done except,
  - ◆ We may need to increase 4f statistics. Aimed 50 fb^{-1}, but there are some with ~10fb^{-1}.
  - ◆ No REC files and only DST files are stored. Need to run Marlin again, if REC are necessary. I hope not.
- Merging DST files. Typical DST file sizes are 1~5 MB/file.
  - ◆ Two options
    - (1) To 2f, 4f, …
    - (2) Same process ID into one file, but not mix different proc. ID

- File management.
  - ◆ All files are placed in /grid/ilc/users/miyamoto/CDS/. It would be better to put them in a directory like, /grid/ilc/mc-2010/

- Any more request, I don't know.

Tools for MC production

- DESY : Jan's tool using MySQL data base.

- CERN : DIRAC

- KEK uses Akiya's own tool ➔ For the moment, easy to maintain for AM.
    - ◆ Binaries:
        - 350 GeV production: ilcsoft-v01-06, installed on VO_ILC_SW_DIR by Jan
        - Pair backgrounds: binaries built at KEK ➔ v01-09 binraries built by Jan.
    - ◆ Production tools: difference from Jan's tools
        - Do not use srm for file access. Use lcg-cp
        - Monitors only trivial error message.
        - Run only Mokka and Marlin. No physics quality check.

Possible plan for coming month

- Autumn 2010 to Spring 2011 is a period to
  - Develop reconstruction tools
  - Detector optimization studies
  - SB2009 studies

- Possible needs of MC production
  - Calibration samples
  - Samples for SB2009 studies ? (How much ?)
  - Develop a scheme of studies with background ?
  - 1 TeV production as a test of
    - New
    - Production tools
    - First look of 1 TeV performance: Only signal samples ? Typical background sample ?

Proposal

- **Once ILD_01(or ILD_01_pre) is ready, produce**
    - ◆ Common calibration samples
        - ● 100 k of qqbar events at 91, 200, 500, 1000 GeV
        - ● 50 k of single particle samples
            - – $e^{\pm}$, gamma, k0_L : 1, 5, 10, 20, 50 GeV, isotropic
            - – $mu^{\pm}$, $pi^{\pm}$: 1, 5, 10, 20, 50, 100, 200 GeV, isotropic

    - ◆ Produce small physics samples as a test.
        - ● 500GeV, 1 TeV, $1fb^{-1}$ of $\mu\mu$, $\tau\tau$, qq, qqqq (q not top)
            - – 500 GeV : LOI StdHep files.
            - – 1 TeV : New StdHep files.

- **This production will also test new GRID tools and see readiness for DBD production.**
    - ◆ GRID sites for this test are DESY, CC-IN2P3, KEK, ……