Recent developments on ILCroot

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Outline

- **New ILCroot release**

- **Makefiles**

- **StdHep interface**

- **MARS2ILCroot interfaces**

- **Geometry**

- **Config.C**

- **Conclusions**

New ILCroot release v2.9

- **ILCroot v2.9 available on ilcsim @ FNAL**

- **Source code on:**

  /grid/fermiapp/ILCroot/sw/ILCroot/ILCrootMuXDetV2.9_source.tar.gz

- **To use it on ilcsim and grid:**

  source /grid/fermiapp/ILCroot/sw/ILCroot/setup_ILCrootMuXDetV2.9.sh

- **How to install and use, read documentation in:**

  /grid/fermiapp/ILCroot/sw/doc/

StdHep interface

- **StdHep interface update**

  - There are SUSY particles like neutralino that Phytia flag to be tracked, but Montecarlo don't recognize them. Those particles are filtered out.

Makefiles

- **Updated Makefiles made compatible with:**
  - SLF4, SLF5 and SLF6 32 and 64 bit
  - MacOS X 32 and 64 bit (tested by LHeC users)
  - ILCroot can run also on:
    - Fedora >= 8
    - RHEL >= 4 and derivative GNU/Linux distribution
    - Other GNU/Linux distribution with gcc >= 3

MARS2ILCroot interfaces

- **New MARS2ILCroot interfaces**
  - IlcGenReaderMARSv1: to handle beam background within 25 m provided by MARS
    - It can split particles taking into account particles weight using the azimuthal symmetry
  - IlcGenReaderMARSv2: to handle beam background beyond 25 m provided by MARS
    - This takes care that particles weight << 1 there is no symmetry
  - Macros MARS2ROOT25V1.C and MARS2ROOT250V1.C convert MARS output in ROOT format used by ILCroot Thanks to N. Terentiev, who rearranged and added several comments in the original macro to make it more user-friendly

Geometry

- **Geometry updated to the new MDI setup**

    - Pipe/Nozzle updated to fit the new MDI setup
       the so called 10 degree nozzle

    - Some of those changes were worked out with N. Terentiev

Config.C

- **Config.C file updated to handle the new features**

  - Default geometry includes the new nozzle

  - Added new MARS2ILCroot interfaces in the available list of event generators

Conclusion

- **New features are in development**
  - **Pre-shower**

- **ILCroot is very flexible towards changes and improvements to fit new requirements**

- **Feedbacks are very welcome**