Status of the SPD software project

Alexey Zhemchugov

08.04.2020

Software repository

- Current repo: private Artur's git repository
- Nearest actions:
  - migrate [back] to ***https://git.jinr.ru/nica/spdroot***
  - sw branches and release policy
  - tests
  - automatic tests (CI/CD)
  - documentation wiki

Branches

- **master**
  - checkout release version
  - deploy for production
- **development**
  - merge commits
  - testing
- **individual developments** in private forks

We need to define permissions to modify the core framework

I want to develop the SPD code. What should I do?

- Register at http://git.jinr.ru (Standard)
- Submit access request to NICA/spdroot
- Fork the repository NICA/spdroot
- Clone your own version of spdroot
- Make your changes
- Test!
- Commit your changes and push to gitlab
- Submit a merge request to *spdroot/development* branch

Tests

- We need tests to make sure the software is still operational
  - simple tests can be/should run automatically
- We need more tests to make sure the physics content (simu+reco) of SpdRoot is still correct
  - no automation
- To develop these tests some effort is needed and we are short of manpower

Proposal

- **Simple test:**
  - simple simulation+reconstruction+analysis chain
  - Which process to simulate?

    Pythia8: $pp \rightarrow J/\psi$, $J/\psi \rightarrow \mu\mu$; Plot $M_{\mu\mu}$??
- **Advanced tests:**
  - produce reference plots for each system (~1 test per system) and for general simu/reco (in future)
  - please give some ideas (or better macros!)
- **Support the following OSs:**
  - Centos7 or SL6 or both?
  - Ubuntu 18.04.4 LTS

Good development infrastructure is the necessary, but not suffucient condition for the efficient implementation of the project.

We need a realistic and physics-driven software development plan to move on.

Any input from your side?