selected highlights on the previous BESIII Collaboration meeting

Data taking plan (2018-2019)

As discussed and approved at the September P&S workshop 2018: about 7 months runtime

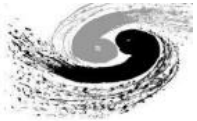
- Finish J/ψ data taking (4 B, ~2.5 months)
- Continue XYZ scan (~3.9fb^{-1}), fill up remaining time

https://indico.ihep.ac.cn/event/8569/session/0/contribution/10/material/slides/0.pptx

Next Plan

- Scientific Linux 7 will be the main OS for BESIII
- Machine room upgrade
  - More space, more power challenge
- New resources will be ac
  - 1200 cpu cores
  - 1P Storage
- More HPC Support
- More remote sites suppo

Support Scientific Linux 5 via Container



- lxslc5.ihep.ac.cn: Retired in August
  - Quite old :
    - hardware: lxslc5.ihep.ac.cn had been running for 7+ years
    - Software:
      - No support from official site: no driver for new hardware
      - Security bug exist
  - Necessary for some physics analysis
- Container: Operating-system-level virtualization
  - Less overhead than virtual machine
  - Easy to be deployed
- Container is adapted to provide Scientific Linux 5 for BESIII user
  - Keeps almost the same environment as that of lxslc5

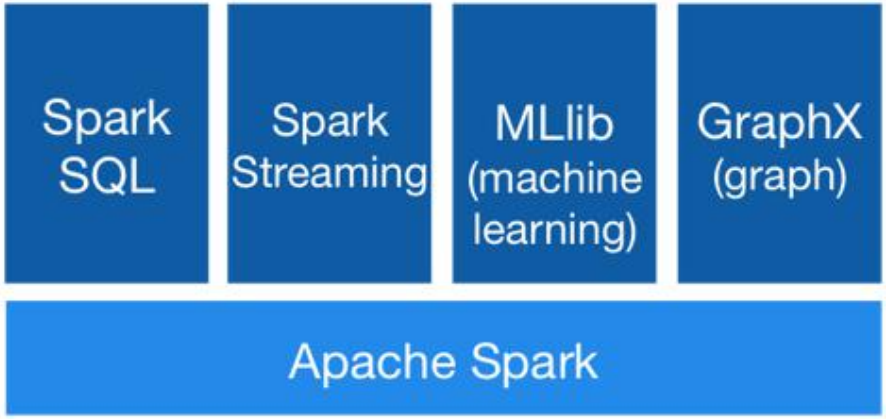
https://indico.ihep.ac.cn/event/8569/session/1/contribution/79/material/slides/0.pdf

machine learning/big data techniques on BESIII

Partial Wave Analysis Based on Spark – A Distributed In-Memory Computing Platform

Introduction to Spark

- What is Spark?
  - A lightning-fast open-source unified analytics engine
  - Widely used by many IT companies to deal with big data on the Internet: Facebook, IBM, Uber, PayPal, Alibaba, JD.com
  - Also widely used in many scientific fields: hydrology, biology, health and life, remote sensing, and high energy physics



Novel Software Techniques on BESIII

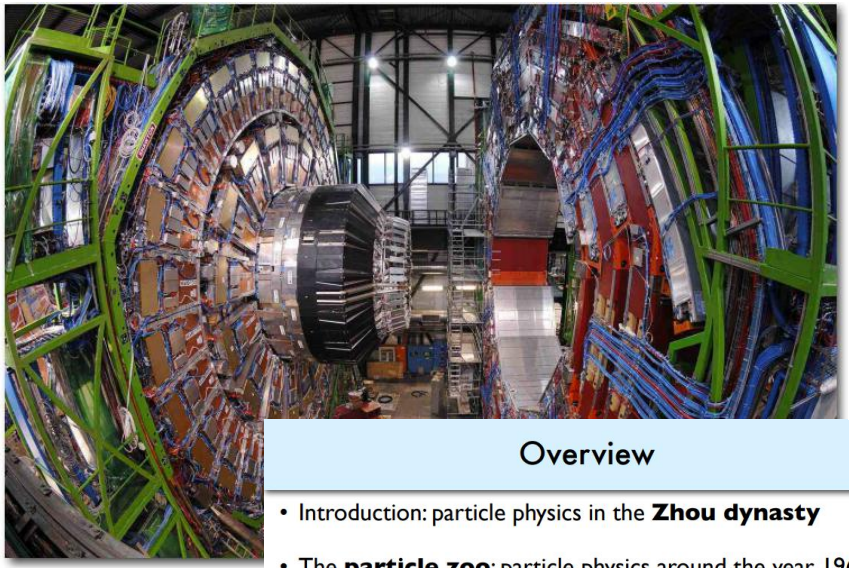
Yao ZHANG

on behalf of BESIII offline software group

- How to improve the software performance, depress the systematic error
  - Further research of traditional algorithm
  - Machine/deep learning
- How to speed up data processing and physical analysis
  - GPU algorithms
  - Parallel simulation
  - HPC, (commercial) Cloud
  - Python ecosystem analysis

https://indico.ihep.ac.cn/event/8569/session/1/contribution/84/material/slides/0.pdf

Public lectures



Particle Phy

Wolfgang Kuehn, Ju

Overview

- Introduction: particle physics in the **Zhou dynasty**
- The **particle zoo**: particle physics around the year 1966
- The **quark model**
- Today: the **Standard Model** (SM) of particle physics
  - Particles and forces
- **Experimental aspects**
- Summary

北京谱仪实验的昨天、今天和明天

李海波

中国科学院高能物理研究所

Wolfgangk. H. Panofsky）
（1919—2007）

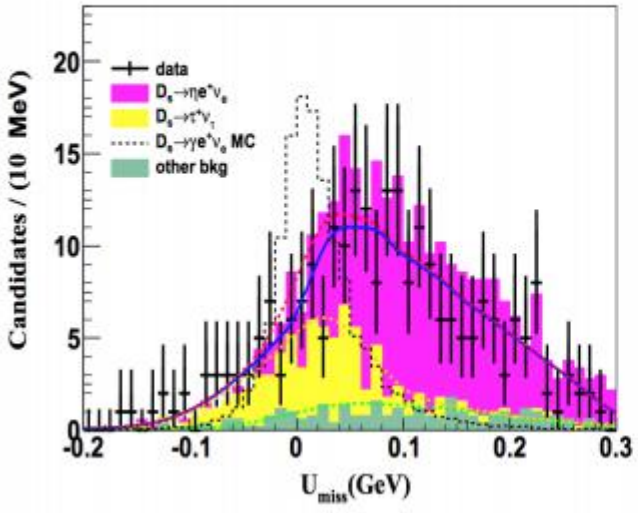
李政道先生和SLAC的潘诺夫斯基教授对中国高能物理的发展起到至关重要的作用

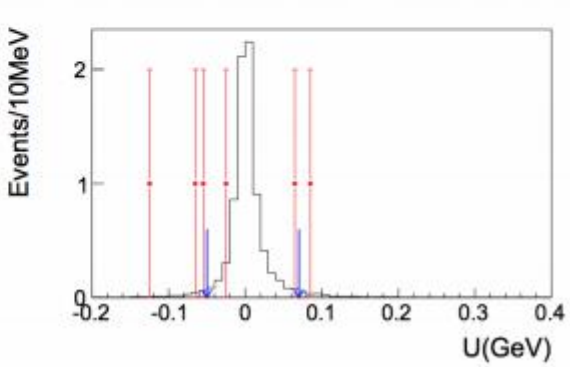
Introduction of Setting Upper Limits

Limin Gu[1], Lvcheng Xie[2]
[1]Nanjing University, [2]Peking University

BESIII Collaboration Meeting
Wuhan University, November 2018

- How should we deal with the situations below ? And Why?





BESIII white paper

- Goal:
  - Identify the most important physics in the future
  - The competitions
  - Priority of data taking?
  - finish in 2018
- Full document was ready on Nov. 13, 2018 (176 pages)
  - Internal review from reading groups on going
  - EB review (not much progress)
- International review some time next spring
- Submit for publication after review