PandaRoot Computing Workshop
Torino (Italy)

18-22 June 2012
2-6 July 2012
9-13 July 2012
23-27 July 2012

?

from Monday @ 14:00 to Friday @ 12:00

Coffee breaks, social dinner

Fee 50/100€

The 6th Computing Workshop in Frascati
November/December 2006

time	**Monday** 27th	**Tuesday** 28th	**Wednesday** 29th	**Thursday** 30th	**Friday** 1st
09.15		**Introduction to PANDARoot (1)** M. Al-Turany/D. Bertini A-34, A-1	**Working out a detector implementation (2)** Aula B. Touschek	**Simulation of physics channels in PANDARoot** Aula B. Touschek	**Hands-on tutorial on event filtering and reconstruction (1)** A-34, B-1
10.45		*coffee break*			
11.15		**Introduction to PANDARoot (2)** A-34, A-1	**Eventgenerators** S. Spataro Aula B. Touschek	**Subgroup Formation** Aula B. Touschek	**Hands-on tutorial on event filtering and reconstruction (2)** A-34, B-1
13.15	***Registration*** T-75	*lunch break* *ENEA canteen*			*12.30 end of the workshop*
14.30	15.00 **Welcome** 15.30 **Introduction to ROOT (1)** A. Fontana/P. Genova A-34, A-1	**Detector Implementation in PANDARoot** R. Castelijns A-34, A-1	14.15 *train to Rome*	**PANDARoot on the AliEn^2 GRID** D. Protopopescu A-34, B-1	
16.15	*coffee break*			*coffee break*	
16.45	**Introduction to ROOT (2)** A-34, A-1	**Working out a detector implementation (1)** A-34, A-1		**Overview of Beta Analysis** M. Pelizaeus A-34, B-1	
18.15		Steering Group Meeting A-1			
20.00	*Welcome Pizza* *Hotel Villa Mercede*			*Social Dinner* *Ristorante "Cacciani", Frascati*	

Computing workshop
January 21-25, 2008, KVI

Program

Date/Time	Monday	Tuesday	Wednesday	Thursday	Friday
09:30 - 11:00		**G3 vs G4** (all, Susanna)	**global tracking&PID** TMVA (Joerg/Andreas)	**Fairroot** (EVO with CBM)	**Computing model** (9:00)
11:00 - 11:30		*Break*	*Break*	**Fairroot** (EVO with CBM)	*Break* (10:30)
11:30 - 12:30		**Event displays** (Mohammad)	**global tracking&PID** GenFit tutorial (Sebastian) Kalman filter (Andrea)	**Fairroot** (EVO with CBM)	**Computing model**
12:30 - 14:00		*Lunch*	*Lunch* (12:00)	*Lunch*	*Lunch*
14:00 - 15:30	15:00 **Opening** (Johan)	**Coding conventions** (all)	**PandaRoot V3** (Soeren) 13:30	**Migration BFRoot tools**	**Computing model committee** (closed)
15:30 - 16:00	**Fast simulations&rho framework** (tutorial, Klaus)	*Break*	*Break*	*Break*	*Break*
16:00 - 17:30	**Fast simulations&rho framework** (tutorial, Klaus)	**Coding conventions** (all)	**PandaRoot V3** discussion & planning	**Migration BFRoot tools**	**Computing model committee** (closed)
Evening			*Workshop diner*		

Agenda ?

Topics to address

Available people who can prepare seminars

Basic Introduction to PandaRoot and FairRoot

- What we can do with ROOT
- What we can do with fairroot
- What we can do with pandaroot
- What is in and what is out

Full reconstruction chain

- How to launch simulation, digitalization, reconstrution, pid
- How to modify the simulation, detectors, field
- VMC params (G3,G4, physics lists, cuts, SetMinPoints)
- how to load and save parameters
- persistance and verbosity
- data structure
- how to browse data, tree, Tree::Draw
- how to plot geometry, check overlaps

- how to write a macro looping inside data

Event Generation

- primary generator, vertex smearing
- box generator, cosTheta
- evtgen, pbarpSystem, evt.pdl, how to write a dec file, how to write a model
- DPM, elastic on/off, normalization issues
- pythia6/8, wildcards
- fluka?
- other generators

EMC

- emc data structure
- Clusterization
- Bump splitting
- Shower shape parameters
- digitization in simulation
- energy corrections
- g3/g4 comparison
- emc-track correlation

Tracking

- tracking data structure
- PndTrack & PndTrackCand
- kalman & genfit
- Reco hits
- seed params, particle hyp, back propagation
- ideal tracking

PID

- track correlation
- implemented detectors
- bayes methid
- Bayes algorithms
- mva
- mva algorythms and training
- how to get and merge pid information

Analysis

- candidate and list
- PndAnalysis and PndEventReader
- ideal mc lists
- Combinations, masses, candidate rejection from list
- mass fitter
- kine fitter
- Vtx fitter
- how to retrieve mc vertex, mother particle, and so on

Time based simulation

- basic concept
- implementation at the digi level
- how to coope with reconstruction
- example (mvd?)

How to write decent code!

- how to write a task
- how to write a parameter
- how to write a data object
- Proper inizialization
- shadowing
- how to free memory
- debugging
- gdb
- valgrind
- comments in the code

Collaborative tools

- dashboard, how to install it, how to check it
- wiki, where to find things
- forum, ticket, how to write messages (i.e. logs)

Event Display