

In anul 2010 principalele activitati au fost urmatoarele:

The main activities in 2010:

Completarea bazei de date cuprinzand detalii legate de camerele TRD realizate in cadrul DFH si rezultatele testarii acestora cu surse de raze X

completion of TRD data base with the information collected during construction and tests

realizarea de experimente cu fascicul folosind detectorul ALICE (p + p si Pb + Pb)

Cosmic rays and in beam data taking using ALICE experiment and p+p and Pb+Pb collisions

calibrarea TRD folosind datele obtinute in masuratori in fascicul si raze cosmice

TRD chambers calibration using cosmic rays and collision data

operarea si monitorizarea activitatii GRID-NIHAM la ALICE

Operation and monitoring of NIHAM Data Centre in the ALICE GRID

analiza si interpretarea primelor date experimentale pentru ciocniri proton –proton la 900 GeV obtinute cu detectorul ALICE.

Analysis and interpretation of experimental information obtained in p+p collisions at 900 GeV

dezvoltarea Centrului de date NIHAM: componenta NAF. Operarea si monitorizarea activitatii

GRID-NIHAM la ALICE

Up-grade of NIHAM Data Centre – NAF (NIHAM Analysis Facility). Operation and monitoring of NIHAM activities in ALICE GRID

pachet de programe de analiza si interpretare a datelor de la experimentul ALICE

Software package for analysis and interpretation of experimental data from ALICE experiment

implementarea in experimentul ALICE a noi supermodule ale TRD

Implementation of new SM (Super Modules) within ALICE experiment

Fig.1 este o reprezentare a traiectoriilor particulelor incarcate rezultate din ciocnirea Pb+Pb la energia de 2,76 TeV care ajung in supermodulele TRD implementate in aranjamentul experimental.

Fig.2 prezinta saltul in performanta de discriminare electron-pion folosind informatia de la TRD. O contributie esentiala in calibrarea si reconstructia traiectoriilor in TRD este adusa de colectivul nostru.

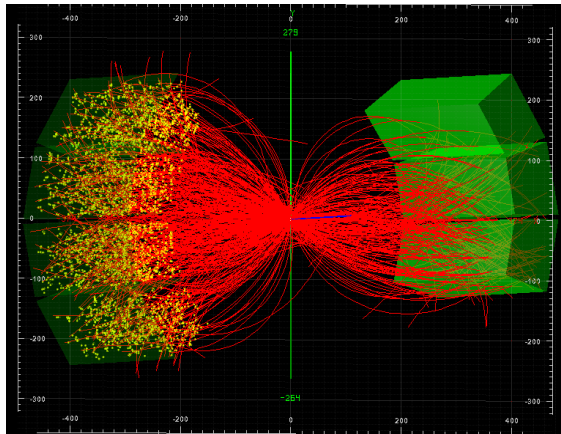


Fig. 1

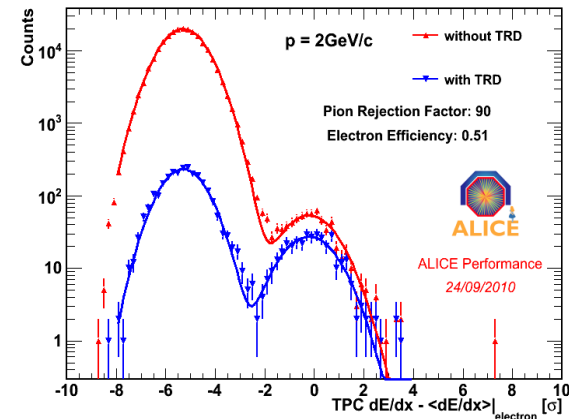


Fig. 2

Rezultatele obtinute in 2010 au fost publicate in reviste de specialitate ISI si prezentate la conferinte internationale. Membrii colectivului nostru s-au impus in cadrul Colaborarii ALICE printr-un subiect propriu de fizica si anume studiul fenomenelor colective in ciocnirile ultra violente p + p la energia de 7 TeV, rezultatele fiind prezentate in cadrul unor workshopuri internationale si ALICE bucurandu-se de aprecieri deosebite.

Alignment of the ALICE Inner Tracking System with cosmic-ray tracks

ALICE Collaboration

J. Instrum. 5, P03003, March 2010

Charged-particle multiplicity density at mid-rapidity in central Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV

ALICE Collaboration

Phys. Rev. Lett. 105, 252301(2010)

Charged-particle multiplicity measurement in proton-proton collisions at $\sqrt{s}=0.9$ and 2.36 TeV with ALICE at LHC

ALICE Collaboration

Eur. Phys. J. C (2010) 68: 89-108

Charged-particle multiplicity measurement in proton-proton collisions at $\sqrt{s}=7$ TeV with ALICE at LHC

ALICE Collaboration

Eur. Phys. J. C (2010) 68: 345-354

Elliptic flow of charged particles in Pb-Pb collisions at 2.76 TeV

ALICE Collaboration

Phys. Rev. Lett., 105, 252302 (2010)

First proton-proton collisions at the LHC as observed with the ALICE detector: measurement of the charged-particle pseudorapidity density at $\sqrt{s}=900$ GeV

ALICE Collaboration

Eur. Phys. J. C (2010) 65: 111-125

Midrapidity Antiproton-to-Proton Ratio in pp Collisions at $\sqrt{s}=0.9$ and 7 TeV Measured by the ALICE Experiment

ALICE Collaboration

Phys Rev Lett Vol.105, No.7, (2010)

In 2011 ne propunem urmatoarele activitati:

Foreseen activities for 2011

- asamblarea, instalarea si testarea supermodulelor TRD folosind raze cosmice si masuratori in fascicul
 - Assembling, installing and tests of new TRD-SMs using cosmic rays and collision data
 - realizarea de experimente la ALICE
 - Data taking using ALICE experiment
 - calibrarea, analiza si interpretarea datelor experimentale si simulate Monte Carlo in ciocniri p+p la 7 TeV
 - Experimental and MC data calibration and analysis from p+p collisions at LHC energies, i.e. 2.76 TeV and 7 TEV
 - dezvoltarea si imbunatatirea de module software pentru monitorizarea si contabilizarea resurselor de calcul si stocare specifice ALICE in infrastructurile GRID bazate pe gLite dezvoltarea sistemului de monitorizare si control al Centrului de date al grupului NIHAM
- upgrade of software package for monitoring and computing and storage resource evaluation specific for ALICE within GRID infrastructures based on gLite, upgrade of monitoring and control system of NIHAM Data Centre