
EDUCATION

Ecole Polytechnique

2007 Ph. D. : thesis defended on May 11th (grade : “très honorable”)

J/Ψ → μ⁺μ⁻ production in Cu+Cu collisions at √_{sNN} = 200 GeV measured by PHENIX at RHIC, with F. Fleuret as supervisor, at Leprince Ringuet Laboratory.

D. Diderot University (Paris 7)

2004 Master of Science : quantum field theory, particle and hadronic/nuclear physics, astrophysics.
« DEA Champs-Particules-Matière » (grade : good).

RESEARCH ACTIVITIES AND EXPERIMENTAL PROJECTS

2006-2007 JIN : a Monte-Carlo model of cold nuclear effects on the J/Ψ production, work in progress in collaboration with E. G. Ferreira and F. Fleuret.

Glauber model description of ion collisions where each nucleon-nucleon interaction could lead to a J/Ψ production. Investigate shadowing and nuclear absorption effects in a Monte-Carlo model.

2004-2007 PHENIX experiment

J/Ψ → μ⁺μ⁻ production in Cu+Cu collisions at √_{sNN} = 200 GeV.

- *Determination of the acceptance and efficiency correction factors that were used for the preliminary results (Quark Matter’05 conference) and for the final results.*
- *Active member of the paper preparation group (PPG071) which is currently writing the article (Phys. Rev. Lett.) that will release the final results.*

J/Ψ → μ⁺μ⁻ production in Cu+Cu collisions at √_{sNN} = 62 GeV.

- *Contribution to the determination of the acceptance and efficiency correction factors that were used for the preliminary results (Quark Matter’05 conference).*

J/Ψ → μ⁺μ⁻ production in p+p collisions at √_{sNN} = 200 GeV.

- *Determination of the variations of the acceptance and efficiency correction factors throughout the data taking period.*

Shifts (3 weeks per year on average) :

- *Regular participation to the on-site data taking (Brookhaven National Laboratory, New-York), PHENIX Runs 5, 6 and 7 (Dec. 2004 to June 2007).*
- *Muon tracker on-call expert for Runs 5, 6 and 7 (2004 - 2007).*

2004 Master of Science « DEA CPM »

Experimental project (1 month) : study of cosmic muon decays at rest.

- *Lifetime measurement in the rest frame; result in agreement with the tabulated value.*
- *Design and set up of the data acquisition system (using NIM and CAMAC devices).*

TEACHING RESPONSIBILITIES

2004-2007 Assistant at Ecole Polytechnique (96h per year) : design of programmable logic circuits.

- *Supervise projects chosen by the students from the last (resp. first) year of the undergraduate (resp. graduate) studies, Master major : Computer Science or Optics, Matters and Plasmas.*
- *Examples of achieved projects : basic CPU, cellular automaton, audio filters.*

Ms. Andry M. RAKOTOZAFINDRABE

TALKS/CONFERENCES

- 2007 42^{ème} Rencontres de Moriond, QCD and hadronic interactions session (La Thuile, Italy)
A. Rakotozafindrabe (for the PHENIX collaboration), J/Ψ production in Cu+Cu and Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV measured by PHENIX at RHIC.
- 2007 ALICE Week (Münster, Germany)
Quarkonia at RHIC (invited overview talk).
- 2006 Journées QGP France (Etretat, France)
Heavy flavor and quarkonia at RHIC (invited overview talk).
- 2006 International Conference on Strangeness in Quark Matter (SQM'06, Los Angeles, USA)
A. Rakotozafindrabe (for the PHENIX collaboration), J/Ψ production in Cu+Cu and Au+Au collisions measured by PHENIX at RHIC, J. Phys. G : Nucl. Part. Phys. 32 (2006) S525-S528.
- 2005 Journées RHIC France (Etretat, France)
Pre-Quark Matter'05 analysis status of the Cu+Cu data at $\sqrt{s_{NN}} = 200$ GeV in the dimuon decay channel for the J/Ψ.
- 2005 Journées de Rencontre des Jeunes Chercheurs (JRJC, Aussois, France)
A. Rakotozafindrabe (PHENIX Collaboration), J/Ψ → μ⁺μ⁻ production in Cu+Cu collisions at $\sqrt{s_{NN}} = 200$ GeV measured by the PHENIX experiment.

POSTER/CONFERENCE

- 2005 Quark Matter'05 conference (Budapest, Hungary)
A. Rakotozafindrabe (for the PHENIX collaboration), J/Ψ → μ⁺μ⁻ measurement in Cu+Cu collision at $\sqrt{s_{NN}} = 200$ GeV: rapidity dependence.

INTERNAL PHENIX MEETINGS

- 2006-2007 PPG071 meeting
Participation to the paper preparation group meetings for the forthcoming article where the final results on J/Ψ production in Cu+Cu collisions at $\sqrt{s_{NN}} = 200$ GeV will be published.
- 2005-2007 Heavy/Light Quarks Working Group meeting
Regular report on the analysis status, for the team working on J/Ψ → μ⁺μ⁻ measurement in Cu+Cu collisions at $\sqrt{s_{NN}} = 200$ GeV.

PUBLICATIONS*

- 2007 J/Ψ production in Cu+Cu collisions at $\sqrt{s} = 200$ GeV, PHENIX Collaboration, article in preparation (intended journal Phys. Rev. Lett.)**
- 2006 J/Ψ production in p+p collisions at $\sqrt{s} = 200$ GeV, PHENIX Collaboration, hep-ex/0611020 (submitted to Phys. Rev. Lett.)**
- A. Rakotozafindrabe (for the PHENIX collaboration), J/Ψ production in Cu+Cu and Au+Au collisions measured by PHENIX at RHIC, J. Phys. G : Nucl. Part. Phys. 32 (2006) S525-S528.**
- J/Ψ Production vs Centrality, Transverse Momentum, and Rapidity in Au+Au Collisions at $\sqrt{s} = 200$ GeV, nucl-ex/0611020 (submitted to Phys. Rev. Lett.)
- System Size and Energy Dependence of Jet-Induced Hadron Pair Correlation Shapes in Cu+Cu and Au+Au Collisions at $\sqrt{s} = 200$ GeV and 62.4 GeV, PHENIX Collaboration, nucl-ex/0611019 (submitted to Phys. Rev. Lett.)
- Energy Loss and Flow of Heavy Quarks in Au+Au Collisions at $\sqrt{s} = 200$ GeV, PHENIX Collaboration, nucl-ex/0611018 (submitted to Phys. Rev. Lett.)

* In bold face are indicated the articles where I contributed to the analysis and/or to the writing.

Correlated Production of p and anti-p in Au+Au Collisions at $\sqrt{s} = 200$ GeV, PHENIX Collaboration, nucl-ex/0611016 (submitted to Physics Letters B)

Measurement of high- p_T single electrons from heavy-flavor decays in p+p collisions at $\sqrt{s} = 200$ GeV, PHENIX Collaboration, Phys.Rev.Lett.97:252002,2006

Scaling properties of azimuthal anisotropy in Au+Au and Cu+Cu collisions at $\sqrt{s} = 200$ GeV, PHENIX Collaboration, nucl-ex/0608033 (submitted to Phys. Rev. Lett.)

INTERNAL PHENIX NOTES

- 2007 A. Bickey et al., Measurement of forward rapidity $J/\Psi \rightarrow \mu^+\mu^-$ production in Run5 $\sqrt{s_{NN}} = 200$ GeV Cu+Cu collisions (in preparation).
- 2007 A. Rakotozafindrabe, H. Pereira Da Costa and D. Silvermyr, Acceptance \times Efficiency determination for the forward rapidity $J/\Psi \rightarrow \mu^+\mu^-$ production in Run5 $\sqrt{s_{NN}} = 200$ GeV Cu+Cu collisions (in preparation).
- 2006 A. Bickey et al., Forward rapidity $J/\Psi \rightarrow \mu^+\mu^-$ production in Run5 200 GeV p+p collisions.
- 2005 A. Bickey et al., Preliminary measurement of forward rapidity $J/\Psi \rightarrow \mu^+\mu^-$ production in Run5 $\sqrt{s_{NN}} = 200$ GeV Cu+Cu collisions (AN406).
- 2005 A. Bickey et al., First look at $J/\Psi \rightarrow \mu^+\mu^-$ production in Run5 $\sqrt{s_{NN}} = 62.4$ GeV Cu+Cu collisions (AN409).