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**GANIL**

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Thèses GANIL : 4

Thèses relatives au GANIL :

# NUCLEAR PHYSICS

## PUBLICATIONS

### **Shell Model in the Complex Energy Plane**

N. Michel, W. Nazarewicz, M. Ploszajczak, T. Vertse

**Journal of Physics G: Nuclear and Particle Physics 36 (2009) 013101**

<http://hal.in2p3.fr/in2p3-00331689/en/>

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### **Absolute cross-sections from X – $\gamma$ coincidence measurements**

A. Lemasson, A. Shrivastava, A. Navin, M. Rejmund, V. Nanal, S. Bhattacharyya, A. Chatterjee, S. Kailas, K. Mahata, V.V. Parkar, R.G. Pillay, K. Ramachandran, P.C. Rout

**NIM A 598 (2009) 445-449**

<http://hal.in2p3.fr/in2p3-00348478/en/>

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### **Fragment properties of fragmenting heavy nuclei produced in central and semi-peripheral collisions.**

E. Bonnet, B. Borderie, N. Le Neindre, M.-F. Rivet, R. Bougault, A. Chbihi, R. Dayras, J.D. Frankland, E. Galichet, F. Gagnon-Moisan, D. Guinet, P. Lattes, J. Lukasik, D. Mercier, M. Pârlog, E. Rosato, R. Roy, C. Sfonti, M. Vigilante, J.P. Wieleczko, B. Zwieglinski, INDRA - ALADIN Collaborations

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### **Relevance of equilibrium in multifragmentation**

T. Furuta, A. Ono

**Physical Review C 79 (2009) 014608**

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### **Single-proton removal reaction study of $^{16}\text{B}$**

J.-L. Lecouey, N.A. Orr, F.M. Marqués, N.L. Achouri, J.-C. Angélique, B.A. Brown, F. Carstoiu, W.N. Catford, N.M. Clarke, M. Freer, B.R. Fulton, S. Grévy, F. Hanappe, K.L. Jones, M. Labiche, R.C. Lemmon, A. Ninane, E. Sauvan, K.M. Spohr, L. Stuttgé

**Physics Letters B 672 (2009) 6-11**

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### **The $^8\text{He}$ and $^{10}\text{He}$ spectra studied in the (t,p) reaction**

M.S. Golovkov, L.V. Grigorenko, G.M. Ter-Akopian, A.S. Fomichev, Yu.Ts. Oganessian, V.A. Gorshkov, S.A. Krupko, A.M. Rodin, S.I. Sidorchuk, R.S. Slepnev, S.V. Stepantsov, R. Wolski, D.Y. Pang, V. Chudoba, A.A. Korshennikov, E.A. Kuzmin, E.Yu. Nikolskii, B.G. Novatskii, D.N. Stepanov, P. Roussel-Chomaz, W. Mittig, A. Ninane, F. Hanappe, L. Stuttgé, A.A. Yukhimchuk, V.V. Perevozchikov, Yu.I. Vinogradov, S.K. Grishechkin, S.V. Zlatoustovskiy

**Physics Letters B 672 (2009) 22-29**

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### **Density matrix functional theory for the Lipkin model**

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### **Density matrix renormalization group approach to two-fluid open many-fermion systems**

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### **Spectroscopy of <sup>52,53</sup>Sc**

S. Bhattacharyya, M. Rejmund, A. Navin, E. Caurier, F. Nowacki, A. Poves, R. Chapman

D. O'Donnell, M. Gelin, A. Hodsdon, X. Liang, W. Mittig, G. Mukherjee F. Rejmund,

M. Rousseau, P. Roussel-Chomaz, K.-M. Spohr, Ch. Theisen

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### **Low-energy Coulomb excitation of neutron-rich zinc isotopes**

J. Van de Walle, F. Aksouh, T. Behrens, V. Bildstein, A. Blazhev, J. Cederkall, E. Clément,

T. E. Cocolios, T. Davinson, P. Delahaye, J. Eberth, A. Ekström, D. V. Fedorov,

V. N. Fedosseev, L. M. Fraile, S. Franchoo, R. Gernhauser, G. Georgiev, D. Habs, K. Heyde,

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### **One-body energy dissipation in fusion reactions from mean-field theory**

K. Washiyama, D. Lacroix, S. Ayik

**Physical Review C 79, 024609 (2009)**

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**Physical Review C 79, 024615 (2009)**

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**Nuclear Physics A 819 (2009) 11–26**

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**New digital techniques applied to A and Z identification using pulse shape discrimination of silicon detector signals**

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**Shell Erosion and Shape Coexistence in  $^{43}_{16}\text{S}_{27}$**

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**Partial Dynamical Symmetry in Quantum Hamiltonians with Higher-Order Terms**

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**Physical Review Letters 102 (2009) 112502**

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**Mass of  $^{11}\text{Li}$  from the  $^1\text{H}(^{11}\text{Li}, ^9\text{Li})^3\text{H}$  reaction**

T. Roger, H. Savajols, I. Tanihata, W. Mittig, M. Alcorta, D. Bandyopadhyay, R. Bieri, L. Buchmann, M. Caamano, B. Davids, N. Galinski, A. Gallant, D. Howell, R. Kanungo, W. Mills, S. Mythili, M. Notani, R. Openshaw, E. Padilla-Rodal, P. Roussel-Chomaz, G. Ruprecht, G. Savard, G. Sheffer, A. C. Shotter, M. Trinczek, P. Walden

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**EURISOL Design Study: Toward the Ultimate ISOL facility for Europe**

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**IBM-1 calculations towards the neutron-rich nucleus  $^{106}\text{Zr}$**

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**Physical Review C 79, 044318 (2009)**

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**Particle-number restoration within the energy density functional formalism: Nonviability of terms depending on noninteger powers of the density matrices**

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W.H. Trzaska, G. Tyurin, L. Cousin  
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**The interacting boson model for exotic nuclei**  
P. Van Isacker  
**Rivista del Nuovo Cimento 32 (2009) 71-104**  
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**Physical Review C 79 (2009) 054606**  
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**Physical Review C (2009) 014307**

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**The use of EXOGAM for in-beam spectroscopy of proton drip-line nuclei with radioactive ion beams**

M. Petri, E.S. Paul, P.J. Nolan, A.J. Boston, H.C. Boston, R.J. Cooper, M.R. Dimmock, S. Gros, B.M. McGuirk, G. Turk, D. Guinet, Ph. Lattes, M. Meyer, N. Redon, B. Rossé, Ch. Schmitt, O. Stézowski, S. Bhattacharyya, G. De France, G. Mukherjee, et al.

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**Physical Review Letters 103 (2009) 042701**

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I. Matea, N. Adimi, B. Blank, G. Canchel, J. Giovinazzo, M.J.G. Borge, R. Domínguez-Reyes, O. Tengblad, J.-C. Thomas

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**Physical Review Letters 103 (2009) 072701**

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**Journal of Statistical Mechanics : Theory and Experiment (2009) L07001**

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N. Patronis, H. De Witte, M. Gorska, M. Huyse, K. Kruglov, D., Pauwels, K. Van de Vel, P. Van Duppen, J. Van Roosbroeck, J.-C. Thomas, S. Franchoo, J. Cederkall, V.N. Fedoseyev, H. Fynbo, U. Georg, O. Jonsson, U. Koster, T. Materna, L. Mathieu, O. Serot, L. Weissman and W.F. Mueller, V.I. Mishin, D. Fedorov

**Physical Review C 80 (2009) 034307**

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**Physical Review C 80 (2009) 034619**

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**Science in China Series G-Physics Mechanics & Astronomy 52 (10) (2009)1458-1463**

<http://hal.in2p3.fr/in2p3-00399270>

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**Physical Review C 80 (2009) 034302**

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**Physical Review Letters 103 (2009) 152503**

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L.V. Grigorenko, M.S. Golovkov, G.M. Ter-Akopian, A.S. Fomichev, Yu.Ts. Oganessian, V. A. Gorshkov, S. A. Krupko, A. M. Rodin, S. I. Sidorchuk, R. S. Slepnev, S. V. Stepantsov, R. Wolski, D. Y. Pang, V. Chudoba, A.A. Korshennikov, E. A. Kuzmin, E.Yu. Nikolskii, B.G. Novatskii, D.N. Stepanov, P. Roussel-Chomaz, W. Mittig, A. Ninane, F. Hanappe, L. Stuttgé, A.A. Yukhimchuk, V.V. Perevozchikov, Yu.I. Vinogradov, S. K. Grishechkin, S.V. Zlatoustovskiy

**Physics of Particles and Nuclei Letters 6 (2009) 118-125**

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### **Bimodality - a general feature of heavy ion reactions**

A. Le Fevre, J. Aichelin, C. Hartnack, J. Lukasik, W. F.J. Mueller, H. Orth, C. Schwarz, C. Sienti, W. Trautmann, K. Turzo, B. Zwieglinski, A. Chbihi, J. D. Frankland, J. P. Wieleczko, M. Vigilante, ALADIN, INDRA Collaboration(s)

**Physical Review C 80 (2009) 044615**

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B. L. Goldblum, S. R. Stroberg, J. M. Allmond, C. Angell, L. A. Bernstein, D. L. Bleuel, J. T. Burke, J. Gibelin, L. Phair, N.D. Scielzo, E. Swanberg, M. Wiedeking, E.B. Norman

**Physical Review C 80 (2009) 044610**

<http://hal.in2p3.fr/in2p3-00431896>

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### **Proton decay from the isoscalar giant dipole resonance in $^{58}\text{Ni}$**

M. Hunyadi, H. Hashimoto, T. Li, H. Akimune, H. Fujimura, M. Fujiwara, Z. Gacsi, U. Garg, K. Hara, M.N. Harakeh, J. Hoffman, M. Itoh, T. Murakami, K. Nakanishi, B. K. Nayak, S. Okumura, H. Sakaguchi, S. Terashima, M. Uchida, Y. Yasuda, and M. Yosoi

**Physical Review C 80 (2009) 044317**

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**Nuclear Data Sheets 110 (2009) 2815-2944**

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### **Shell corrections to a liquid-drop description of nuclear masses and radii**

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**The European Physical Journal A 42 (2009) 269-279**

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J. Okolowicz, M. Ploszajczak

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### **N/Z influence on disintegration modes of compound nuclei**

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09 32 A

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M. Lewitowicz

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### **Low-Energy Spectra of $^8\text{He}$ and $^{10}\text{He}$ Studied in (t,p) Type Reactions in Inverse Kinematics**

V. Chudoba, A.S. Fomichev, M.S. Golovkov, V.A. Gorshkov, S.A. Krupko et al

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### **Influence of the N/Z ratio on disintegration modes of compound nuclei**

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E. De Filippo, F. Amorini, A. Anzalone, L. Auditore, V. Baran, I. Berceanu, J. Blicharska, B. Borderie<sup>1</sup>, R. Bougault, M. Bruno, J. Brzychczyk, G. Cardella, S. Cavallaro, M.B. Chatterjee, A. Chbihi, M. Colonna, M. D'Agostino, R. Dayras, M. Di Toro, U. Emanuele, J. Frankland, E. Galichet, W. Gawlikowicz, E. Geraci, F. Giustolisi, L. Grassi, A. Grzeszczuk, P. Guazzoni, D. Guinet, S. Kowalski, E. La Guidara, G. Lanzalone, G. Lanzañ, N. Le Neindre, I. Lombardo, C. Maiolino, Z. Majka, A. Pagano, M. Papa, M. Petrovici, E. Piasecki, S. Pirrone, R. Płaneta, G. Politi, A. Pop, F. Porto, M.F. Rivet<sup>1</sup>, E. Rosato, F. Rizzo, P. Russotto, K. Schmidt, K. Siwek-Wilczyńska, I. Skwira, A. Sochocka, A. Trifirñ, M. Trimarchi, G. Verde, M. Vigilante, J.P. Wieleczko, J. Wilczyński, L. Zetta, W. Zipper

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Y. Abe, C. Shen, D. Boilley, B.G. Giraud, G. Kosenko

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**Probing High-Velocity Transient-Field Strength Using Heavy-ions Traversing Fe and Gd**

E. Fiori, G. Georgiev, A. E. Stuchbery, A. Jungclaus, D.L. Balabanski et al

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09 100 A

**Energy Functional Based on Natural Orbitals and Occupancies for Static Properties of Nuclei**

D. Lacroix

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09 101 T

**ACTAR : the New Generation of ACTIVE Targets**

R. Raabe

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M. Hunyadi, H. Hashimoto, T. Li, H. Akimune, H. Fujimura, M. Fujiwara, Z. Gacsi, U. Garg, K. Hara, M.N. Harakeh, J. Hoffman, M. Itoh T. Murakami, K. Nakanishi, B. K. Nayak, S. Okumura, H. Sakaguchi, S. Terashima, M. Uchida, Y. Yasuda, and M. Yosoi

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**Isotopic resolution of fission fragments from  $^{238}\text{U}+^{12}\text{C}$  transfer and fusion reactions**

M. Caamaño, F. Rejmund, X. Derkx, K.-H. Schmidt, L. Andouin, C.-O. Bacri,

G. Barreau, J. Benlliure, E. Casarejos, B. Fernández-Domínguez, L. Gaudefroy,

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09 118 A



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M. Caamaño, F. Rejmund, and K.-H. Schmidt

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09 119 A

### **Tailoring fission dynamics using fragmentation of radioactive heavy ion beams**

C. Schmitt, A. Kelic, K.-H. Schmidt, A. Heinz, B. Jurado, P.N. Nadtochy

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09 120 A

### **Isospin effects in projectile-like dynamical fission for $^{112,124}\text{Sn}+^{58,64}\text{Ni}$ reactions at 35 AMeV**

P. Russotto, E. De Filippo, A. Pagano, E. Piasecki, F. Amorini, A. Anzalone, L. Auditore, V. Baran, I. Berceanu, J. Blicharsk, B. Borderie, R. Bougault, M. Bruno, J. Brzychczyk, G. Cardella, S. Cavallaro, M. B. Chatterjee, A. Chbihi, M. Colonna, M. D'Agostino, R. Dayras, M. Di Toro, J. Frankland, E. Galichet, W. Gawlikowicz, E. Geraci, F. Giustolisi, A. Grzeszczuk, P. Guazzoni, D. Guinet, S. Kowalski, E. La Guidara, G. Lanzalone, G. Lanzaò,,I N. Le Neindre, C. Maiolino, Z. Majka, M. Papa, M. Petrovici, S. Pirrone, R. Planeta, G. Politi, A. Pop, F. Porto, M. F. Rivet, E. Rosato, F. Rizzo, K. Schmidt, K. Siwek-Wilczynsk, I. Skwira-Chalot, A. Sochocka,I L. Swiderski, A. Trifirò, M. Trimarchi, M. Vigilante, J. P. Wieleczko, J. Wilczynski, L. Zetta, W. Zipper

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G. Papadimitriou, N. Michel, W. Nazarewicz, M. Ploszajczak, J. Rotureau

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### **The SPIRAL2 Project**

P. Roussel-Chomaz

#### **International Journal of Modern Physics E Vol. 18 (2009) 1951-1956**

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09 131 A

### **EURISOL design study : towards an ultimate ISOL facility for Europe**

Y. Blumenfeld, P. Butler, J. Cornell, G. Fortuna, M. Lindroos

#### **International Journal of Modern Physics E Vol. 18 (2009) 1960-1964**

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09 132 A

### **Active target as a tool for nuclear spectroscopy and réactions**

P. Roussel-Chomaz, H. Savajols

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09 133 A

### **Bubbles in exotic nuclei**

M. Grasso, E. Khan, J. Margueron, N. Van Giai, L. Gaudefroy, T. Niksic, D. Vretenar, J. Piekarewicz, O. Sorlin

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J. Dukelsky, J. Okolowicz, M. Ploszajczak

**International Journal of Modern Physics E Vol. 18 (2009) 2056-2060**

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### **Study of the $^{20}\text{O}(\text{d},\text{t})$ reaction with the TIARA-MUST2-VAMOS-EXO-GAM setup**

A. Ramus, N. L. Achouri, H. Al Falou, N. I. Ashwood, D. Beaumel, Y. Blumenfeld, S. M. Brown, W. N. Catford, R. Chapman, M. Chartier, N. Curtis, F. Delaunay, B. Fernandez-Dominguez, C. Force, G. De France, S. Franchoo, J. Guillot, D. Gupta<sup>1</sup>, P. Haigh, F. Hammache, M. Labiche, V. Lapoux, R. C. Lemmon, F. Marechal, B. Martin, X. Mougeot, B. Mougnot, L. Nalpas, A. Navin, N. A. Orr, N. Patterson, B. Pietras, E. C. Pollacco, A. Le Prince, M. Rejmund, J. A. Scarpaci, N. De Sereville, I. Stefan, O. Sorlin, J. S. Thomas, G. L. Wilson

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09 136 A

### **Fermionic molecular dynamics for nuclear dynamics and thermodynamics**

K.H.O. Hasnaoui, Ph Chomaz, F. Gulminelli

**International Journal of Modern Physics E Vol. 18 (2009) 2061-2065**

Japanese French Symposium - New paradigms in Nuclear Physics, Paris : France (2008)

<http://hal.in2p3.fr/in2p3-00344889/fr/>

09 137 T

### **Relevance of equilibrium In multifragmentation**

T. Furuta , A. Ono

**International Journal of Modern Physics E Vol. 18 (2009) 2066-2070**

Japanese French Symposium - New paradigms in Nuclear Physics, Paris : France (2008)

<http://hal.in2p3.fr/in2p3-00338034/fr/>

09 138 T

### **Configuration mixing within the energy density functional formalism: pathologies and cures**

D. Lacroix, M. Bender, T. Duguet

**International Journal of Modern Physics E Vol. 18 (2009) 2108-2113**

Japanese French Symposium - New paradigms in Nuclear Physics, Paris : France (2008)

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09 139 T

**Energy dissipation in fusion reactions from dynamical mean-field theory**

K. Washiyama, D. Lacroix

**International Journal of Modern Physics E Vol. 18 (2009) 2114-2118**

Japanese French Symposium - New paradigms in Nuclear Physics, Paris : France (2008)

<http://hal.in2p3.fr/in2p3-00444296/fr/>

09 140 T

**Nuclear weak response from the combined study of  $\beta$ -decay and charge-exchange reaction**

Y. Fujita, B. Rubio, W. Gelletly, B. Blank, T. Adachi, A. Algora, P. Ascher, R.B. Cakirli, G. De France, J. Giovinazzo, S. Grévy, H. Fujita, L. Kucuk, M. Marques, F. Molina, Y. Oktem,

F. De Oliveira Santos, L. Perrot, R. Raabe, P.C. Srivastava, G. Susoy, A. Tamii, J.-C. Thomas

**International Journal of Modern Physics E Vol. 18 (2009) 2134-2139**

Japanese French Symposium - New paradigms in Nuclear Physics, Paris : France (2008)

<http://hal.in2p3.fr/in2p3-00444302/fr/>

09 141 A

**Resonant elastic and inelastic scattering. Astrophysical applications. New paradigm beyond drip-lines?**

F. De Oliveira Santos, I. Stefan, J.-C. Dalouzy

**International Journal of Modern Physics E Vol. 18 (2009) 2134-2139**

Japanese French Symposium - New paradigms in Nuclear Physics, Paris : France (2008)

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09 142 A

**Fragmentation of radioactive beams for tailoring fission transients**

C. Schmitt, A. Kelic, K.-H. Schmidt, A. Heinz, B. Jurado, P.N. Nadtochy

**International Journal of Modern Physics E Vol. 18 (2009) 2150-2154**

Japanese French Symposium - New paradigms in Nuclear Physics, Paris : France (2008)

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09 143 A

**Super separator spectrometer for the LINAG heavy ion beams**

A. Drouart, J.A. Nolen, H. Savajols

**International Journal of Modern Physics E Vol. 18 (2009) 2160-2168**

Japanese French Symposium - New paradigms in Nuclear Physics, Paris : France (2008)

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09 144 A

**From di-nucleus to mono-nucleus- Neck evolution in fusion of massive systems –**

Y. Abe, C. Shen, D. Boilley, B. G. Giraud

**International Journal of Modern Physics E Vol. 18 (2009) 2169-2174**

Japanese French Symposium - New paradigms in Nuclear Physics, Paris : France (2008)

09 145 T

<http://hal.in2p3.fr/in2p3-00349923/fr/>

### **Electric quadrupole moment of the neutron-rich $^{33}\text{Al}$**

T. Nagatomo, K. Shimada, K. Asahi, D. L. Balabanski, J. M. Daugas, M. Depuydt, M. De Rydt, L. Gaudefroy, S. Grévy, Y. Hasama, Y. Ichikawa, D. Kameda, P. Morel, L. Perrot, C. Stödel, J. C. Thomas, W. Vanderheijden, N. Vermeulen, P. Vingerhoets, A. Yoshimi, G. Neyens, H. Ueno

**The European Physical Journal A 42 (2009) 383-385**

The Fifth International Conference on Exotic Nuclei and Atomic Masses ENAM'08, 7 – 13 september 2008, Ryn, Poland

<http://hal.in2p3.fr/in2p3-00429231/fr/>

09 146 A

### **Geant4 Monte Carlo simulations for the LPCTrap setup**

D. Rodriguez, G. Ban, D. Durand, F. Duval, X. Fléchar, E. Liénard, F. Mauger, A. Méry, O. Naviliat-Cuncic, J.-C. Thomas, and Ph. Velten

**Eur. Phys. J. A 42 (2009) 397-400**

The Fifth International Conference on Exotic Nuclei and Atomic Masses ENAM'08, 7 – 13 september 2008, Ryn, Poland

<http://hal.in2p3.fr/in2p3-00374805/fr/>

09 147 A

### **Neutron correlations in $^6\text{He}$ viewed through nuclear break-up**

M. Assié, J. A. Scarpaci, D. Lacroix, J. C. Angélique, D. Bazin, D. Beaumel, Y. Blumenfeld, W. N. Catford, M. Chabot, A. Chatterjee, M. Fallot, H. Iwasaki, F. Maréchal, D. Mengoni, C. Monrozeau, J. Nyberg, C. Petrache, F. Skaza and T. Tuna

**Eur. Phys. Journal A 42 (2009) 441-446**

The Fifth International Conference on Exotic Nuclei and Atomic Masses ENAM'08, 7 – 13 september 2008, Ryn, Poland

<http://hal.in2p3.fr/in2p3-00384235/fr/>

09 148 A

### **Radioactive ion beam experiments with active targets**

P. Roussel-Chomaz and On behalf of the MAYA and ACTAR Collaborations,

The Fifth International Conference on Exotic Nuclei and Atomic Masses ENAM'08, 7 – 13 september 2008, Ryn, Poland

**Eur. Phys. J. A 42 (2009) 447-451**

<http://hal.in2p3.fr/in2p3-00384200/fr/>

09 149 A

### **Properties of very n -rich He isotopes**

A. S. Fomichev, L. V. Grigorenko, M. S. Golovkov, G. M. Ter-Akopian, Yu. Ts. Oganessian, V. A. Gorshkov, S. A. Krupko, A. M. Rodin, S. I. Sidorchuk, R. S. Slepnev, S. V. Stepantsov, R. Wolski, V. Chudoba, A. A. Korshennikov, E. A. Kuzmin, E. Yu. Nikolskii, B. G. Novatskii, D. N. Stepanov, P. Roussel-Chomaz, W. Mittig, D. Pang, A. Ninane, F. Hanappe, L. Stuttge, A. A. Yukhimchuk, V. V. Perevozchikov, Yu. I. Vinogradov, S. K. Grishechkin and S. V. Zlatoustovskiy

**Eur. Phys. Journal A 42 (2009) 397-400**

The Fifth International Conference on Exotic Nuclei and Atomic Masses ENAM'08, 7 – 13 september 2008, Ryn, Poland

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09 150 A

**Production cross-sections of neutron-rich Pb and Bi isotopes in the fragmentation of <sup>238</sup>U**

H. Alvarez-Pol, J. Benlliure, E. Casarejos, L. Audouin, D. Cortina-Gil, T. Enqvist, B. Fernandez, A.R. Junghans, B. Jurado, P. Napolitani, J. Pereira, F. Rejmund, K.-H. Schmidt, O. Yordanov

**The European Physical Journal A 42 (2009) 485-488**

The Fifth International Conference on Exotic Nuclei and Atomic Masses ENAM'08, 7 – 13 september 2008, Ryn, Poland

<http://hal.in2p3.fr/in2p3-00412579/fr/>

09 151 A

**Production of Cs and Fr isotopes from a high-density UC targets with different grain dimensions**

V.N. Panteleev, O. Alyakirskiy, M. Barbui, A.E. Barzakh, D.V. Fedorov, V.S. Ivanov, G.

Lhersonneau, K.A. Mezilev, P.L. Molkanov, F.V. Moroz, S.Yu. Orlov, L. Stroe, L.B. Tecchio, M.

Tonezzer, Yu.M. Volkov

**The European Physical Journal A 42 (2009) 485-488**

The Fifth International Conference on Exotic Nuclei and Atomic Masses ENAM'08, 7 – 13 september 2008, Ryn, Poland

<http://hal.in2p3.fr/in2p3-00401530>

09 152 A

## INTERDISCIPLINARY

### PUBLICATIONS

**Mechanical properties of cubic zirconia irradiated with swift heavy ions**

V. Menvie Bekale, G. Sattonnay, C. Legros, A.M. Huntz, S. Poissonnet, L. Thomé

**Journal of Nuclear Materials 384 (2009) 70–76**

<http://hal.in2p3.fr/in2p3-00357527/en/>

09 09 N

**Damages induced by heavy ions in titanium silicon carbide: Effects of nuclear and electronic interactions at room temperature**

J.C. Nappé, Ph. Grosseau, F. Audubert, B. Guilhot, M. Beauvy, M. Benabdesselam, I. Monnet

**Journal of Nuclear Materials 385 (2009) 304-307**

09 27 N

**Ionization and fragmentation of water clusters by fast highly charged ions**

L Adoui, A Cassimi, B Gervais, J-P Grandin, L Guillaume,

R Maisonny, S Legendre,, M Tarisien, P Lopez-Tarifa, M-F Politis,

M-A Hervé du Penhoat, R Vuilleumier, M-PGageot, I Tavernelli,

M. Alcamí, F Martin

**J. Phys. B: At. Mol. Opt. Phys. 42 (2009) 075101 (5pp)**

<http://hal.in2p3.fr/in2p3-00373737/en/>

09 47 N

**2E1 Ar<sup>17+</sup> decay and conventional radioactive sources to determine efficiency of semiconductor detectors**

E. Lamour, C. Prigent, B. Eberhardt, J.P. Rozet, D. Vernhet

**Review of Scientific Instruments 80, (2009) 023103**

09 48 N

**Ionisation and fragmentation of tetraphenyl iron (III) porphyrin chloride induced by slow multiply charged ion impact**

V. Bernigaud, B. Manil, L. Maunoury, J. Rangama, B.A. Huber

**Eur. Phys. J. D 51, 125–130 (2009)**

09 49 N

**Different Mechanisms of Cell Death in Radiosensitive and Radioresistant P53 Mutated Head and Neck Squamous Cell Carcinoma Cell Lines Exposed to Carbon Ions and X-Rays**

M. Maalouf, G. Alphonse, A. Colliaux, M. Beuve, S. Trajkovic-Bodennec, Pr. Battiston-Montagne, I. Testard, O. Chapet, M. Bajard, G. Taucher-Scholz, C. Fournier, C. Rodriguez-Lafrasse

**International J. of Radiation Oncology\*Biolog\*Physics, Vol. 74, Issue 1, (2009), 200-209**

<http://hal.in2p3.fr/in2p3-00382723/en/>

09 50 N

**Scanning probe microscopy investigation of nanostructured surfaces induced by swift heavy ions**

S. Akcöltekin, E. Akcöltekin, M. Schleberger, H. Lebius

**J. Vac. Sci. Technol. B 27 (2009) 944-947**

09 68 N

**Anisotropic ion emission in the fragmentation of small molecules by highly charged ion impact**

Z. Juhász, B. Sulik, F. Frémont, A. Hajaji, J.-Y. Chesnel

**NIM B 267 (2009) 326-329**

09 81 N

**Enhanced susceptibility of CaF<sub>2</sub>(1 1 1) to adsorption due to ion irradiation**

S. Akcöltekin, T. Roll, E. Akcöltekin, M. Klusmann, H. Lebius, M. Schleberger

**NIM B 267 (2009) 683-686**

09 82 N

**Micro-structural evolution of cubic zirconia irradiated with swift heavy ions**

S. Moll, L. Thomé, G. Sattonnay, F. Garrido, L. Vincent, J. Jagielski, T. Thomé

**Vacuum, Volume 83, Supplement 1, (2009), S61-S64**

09 83 N

**EPR analysis of the effects of accelerated carbon ion and fast neutron irradiations on table sugar**

M. Mikou, S. Benzina, P. Bischoff, J.M. Denis, J. Gueulette

**Applied Radiation and Isotopes, Volume 67 (2009) 1738-1741**

09 85 N

**Monte-Carlo based prediction of radiochromic film response for hadrontherapy dosimetry**

T. Frisson, N. Zahra, P. Lautesse, D. Sarrut

**NIM A 606 (2009) 749-754**

09 88 N

**Heavy ion irradiation of condensed CO<sub>2</sub>: sputtering and molecule formation**

E. Seperuelo Duarte, P. Boduch, H. Rothard, T. Been, E. Dartois, L. S. Farenzena, E. F. da Silveira

**Astronomy & Astrophysics 502 (2009) 599-603**

09 95 N

**Ion engineering of embedded nanostructures: From spherical to faceted nanoparticles**

G. Rizza, E. A. Dawi, A. M. Vredenberg, I. Monnet

**Applied Physics Letters 95 (2009) 043105**

09 97 N

**Nanodesign of superhydrophobic surfaces**

S. M.M. Ramos, B. Canut, A. Benyagoub

**Journal of Applied Physics 106 (2009) 024305**

09 98 N

**Neuroimmune response and sleep studies after whole body irradiation with high-LET particles**

C. Marquette, J. Mathieu, J.-M. Bertho, M. Galonnier, J. Wysoki, C. Maubert, E. Balanzat, R. Gerbin, J. Aigueperse, D. Clarençon

**Advances in Space Research 44 (2009) 934–941**

09 99 N

**Mechanism of the swift heavy ion induced epitaxial recrystallization in predamaged silicon carbide**

A. Benyagoub, A. Audren

**Journal of Applied Physics 106 (2009) 083516**

09 116 N

**Field periodic magnetoresistance oscillations in thin graphite single crystals with columnar defects**

Yu. I. Latyshev, A. Yu. Latyshev, A. P. Orlov, A. A. Shchekin, V. A. Bykov, P. Monceau, K. van der Becke, M. Kontsikovskii, and I. Monnet

**JETP Letters 90 (2009) 480-484**

09 127 A

**CONFERENCE PROCEEDINGS**

**Young-type interferences using single-electron sources and an atomic-size two-center interferometer: Dependence with interferometer parameters**

F. Frémont, S. Suarez, R.O. Barrachina, A. Hajaji, N. Sisourat, A. Dubois, J.-Y. Chesnel

**Nuclear Instruments and Methods in Physics Research B 267 (2009) 206–210**

Fourth International Conference on Elementary Processes in Atomic Systems (CEPAS-2008), Cluj-Napoca, Romania, 18-20 June 2008, Edited by Károly Tökési

09 07 N

**Anisotropic ion emission in the fragmentation of small molecules by highly charged ion impact**

Z. Juhász, B. Sulik, F. Frémont, A. Hajaji, J.-Y. Chesnel

**Nuclear Instruments and Methods in Physics Research B 267 (2009) 326-329**

Fourth International Conference on Elementary Processes in Atomic Systems (CEPAS-2008), Cluj-Napoca, Romania, 18-20 June 2008, Edited by Károly Tökési

09 08 N

**AODO: Secondary ion emission and surface modification**

S. Akcöltekin, I. Alzaher, B. Ban d'Etat, T. Been, P. Boduch, A. Cassimi, H. Hijazi, H. Lebius,

B. Manil, J.M. Ramillon, H. Rothard, M. Schleberger, E.F. da Silveira  
Nuclear Instruments and Methods in Physics Research B 267 (2009) 649–651  
17th International Workshop on Inelastic Ion-Surface Collisions (IISC-17), Porquerolles, France, 21–  
26 September 2008  
09 21 N

**Imaging dynamics of charge-auto-organisation in glass capillaries**

A. Cassimi, L. Maunoury, T. Muranaka, B. Huber, K.R. Dey, H. Lebius, D. Lelièvre,  
J.M. Ramillon, T. Been, T. Ikeda, Y. Kanai, T.M. Kojima, Y. Iwai, Y. Yamazaki, H. Khemliche,  
N. Bundaleski, P. Roncin

**Nuclear Instruments and Methods in Physics Research B 267 (2009) 674–677**

17th International Workshop on Inelastic Ion-Surface Collisions (IISC-17), Porquerolles, France, 21–  
26 September 2008  
09 22 N

**Enhanced susceptibility of CaF<sub>2</sub>(111) to adsorption due to ion irradiation**

S. Akcöltekin, T. Roll, E. Akcöltekin, M. Klusmann, H. Lebius, M. Schleberger

**Nuclear Instruments and Methods in Physics Research B 267 (2009) 683–686**

17th International Workshop on Inelastic Ion-Surface Collisions (IISC-17), Porquerolles, France, 21–  
26 September 2008  
09 23 N

**Study of ion emission from a germanium crystal surface under impact of fast Pb ions in channeling conditions**

A. L'Hoir, C. Koumeir, S. Della Negra, P. Boduch, P. Roussel-Chomaz, A. Cassimi, M. Chevallier,  
C. Cohen, D. Dauvergne, M. Fallavier, D. Jacquet, B. Manil, J.-C. Poizat,  
C. Ray, H. Rothard, D. Schmaus, M. Toulemonde

**Nuclear Instruments and Methods in Physics Research B 267 (2009) 876-880**

Seventh International Symposium on Swift Heavy Ions in Matter, Lyon, France, 02-05 Juin 2008  
<http://hal-cea.archives-ouvertes.fr/cea-00376042/en/>

09 37 N

**Atom probe tomography of swift ion irradiated multilayers**

J. Juraszek, A. Grenier, J. Teillet, E. Cadel, N. Tiercelin, I. Monnet, M. Toulemonde

**Nuclear Instruments and Methods in Physics Research B 267 (2009) 912-916**

Seventh International Symposium on Swift Heavy Ions in Matter, Lyon, France, 02-05 Juin 2008  
09 38 N

**Swelling and optical properties of Si<sub>3</sub>N<sub>4</sub> films irradiated in the electronic regime**

B. Canut, A. Ayari, J. Dupuis, M. Lemiti, A. Fave, S. Ramos

**Nuclear Instruments and Methods in Physics Research B 267 (2009) 917-920**

Seventh International Symposium on Swift Heavy Ions in Matter, Lyon, France, 02-05 Juin 2008  
09 39 N

**Dislocation mobility study of heavy ion induced track damage in LiF crystals**

I. Manika, J. Maniks, M. Toulemonde, K. Schwartz

**Nuclear Instruments and Methods in Physics Research B 267 (2009) 949-952**

Seventh International Symposium on Swift Heavy Ions in Matter, Lyon, France, 02-05 Juin 2008  
09 40 N

**Defects creation in sapphire by swift heavy ions: A fluence depending process**

A. Kabir, A. Meftah, J.P. Stoquert, M. Toulemonde, I. Monnet



**Nuclear Instruments and Methods in Physics Research B 267 (2009) 957-959**

Seventh International Symposium on Swift Heavy Ions in Matter, Lyon, France, 02-05 Juin 2008  
09 41 N

**Effects of electronic and nuclear interactions in SiC**

A. Audren, I. Monnet, D. Gosset, Y. Leconte, X. Portier, L. Thomé, F. Garrido, A. Benyagoub, M. Levalois, N. Herlin-Boime, C. Reynaud

**Nuclear Instruments and Methods in Physics Research B 267 (2009) 976-979**

Seventh International Symposium on Swift Heavy Ions in Matter, Lyon, France, 02-05 Juin 2008  
<http://hal.archives-ouvertes.fr/hal-00404425/en/>

09 42 N

**Amorphisation of ZnAl<sub>2</sub>O<sub>4</sub> spinel under heavy ion irradiation**

A. Quentin, I. Monnet, D. Gosset, B. Lefrançois, S. Bouffard

**Nuclear Instruments and Methods in Physics Research B 267 (2009) 980-982**

Seventh International Symposium on Swift Heavy Ions in Matter, Lyon, France, 02-05 Juin 2008  
09 43 N

**Dose profile monitoring with carbon ions by means of prompt-gamma measurements**

E. Testa, M. Bajard, M. Chevallier, D. Dauvergne, F. Le Foulher, N. Freud, J.M. Létang, J.C. Poizat, C. Ray, M. Testa

**Nuclear Instruments and Methods in Physics Research B 267 (2009) 993-996**

Seventh International Symposium on Swift Heavy Ions in Matter, Lyon, France, 02-05 Juin 2008  
09 44 N

**Optimization of nanopores obtained by chemical etching on swift-ion irradiated lithium niobate**

M.L. Crespillo, M. Otto, A. Munoz-Martin, J. Olivares, F. Agulló-López, M. Seibt, M. Toulemonde, C. Trautmann

**Nuclear Instruments and Methods in Physics Research B 267 (2009) 1035-1038**

Seventh International Symposium on Swift Heavy Ions in Matter, Lyon, France, 02-05 Juin 2008  
09 45 N

**Investigation of initial stage of chemical etching of ion tracks in polycarbonate**

N. Sertova, E. Balanzat, M. Toulemonde, C. Trautmann

**Nuclear Instruments and Methods in Physics Research B 267 (2009) 1039-1044**

Seventh International Symposium on Swift Heavy Ions in Matter, Lyon, France, 02-05 Juin 2008  
09 46 N

**Study of the damage produced in silicon carbide by high energy heavy ions**

A. Benyagoub, A. Audren

**Nuclear Instruments and Methods in Physics Research B 267 (2009) 1255-1258**

16th International Conference on Ion Beam Modification of Materials, Dresden, Germany, 31 August–5 September 2008  
09 60 N

**Patterning of insulating surfaces by electronic excitation**

S. Akcöltekin, E. Akcöltekin, T. Roll, H. Lebius, M. Schleberger

**Nuclear Instruments and Methods in Physics Research B 267 (2009) 1386-1389**

16th International Conference on Ion Beam Modification of Materials, Dresden, Germany, 31 August–5 September 2008  
09 61 N

### **Radiation tolerance of fluorite-structured oxides subjected to swift heavy ion irradiation**

F. Garrido, S. Moll, G. Sattonnay, L. Thomé, L. Vincent

**Nuclear Instruments and Methods in Physics Research B 267 (2009) 1451-1455**

16th International Conference on Ion Beam Modification of Materials, Dresden, Germany, 31 August–5 September 2008

<http://hal.in2p3.fr/in2p3-00379415/en/>

09 62 N

### **Radiation effects in cubic zirconia: A model system for ceramic oxides**

L. Thomé, S. Moll, G. Sattonnay, L. Vincent, F. Garrido, J. Jagielski

**Journal of Nuclear Materials 389 (2009) 297–302**

Particle Beam Induced Radiation Effects in Materials, New Orleans : États-Unis d'Amérique (2008)

<http://hal.in2p3.fr/in2p3-00379450/en/>

09 63 N

### **X-ray spectroscopy characterization of Ar<sup>17+</sup> produced by an ECRIS in the afterglow mode**

C. Prigent, E. Lamour, L. Maunoury, F. Noury, J.-Y. Pacquet, J. M. Ramillon, J. -P. Rozet, D. Vernhet, M. Trassinelli

**Journal of Physics : Conferences Series 163 (2009) 012111**

14th International Conférence on the Physics of Highly Charged Ions (HCI 2008), 1-5 septembre 2008, Tokyo (JPN)

<http://hal.archives-ouvertes.fr/hal-00425366/fr/>

09 114 N

## **ACCELERATOR PHYSICS**

### **PUBLICATIONS**

#### **Studies of the ECR plasma using the TrapCAD code**

L Maunoury, C Pierret, S Biri, J Y Pacquet

**Plasma Sources Sci. Technol. 18 (2009) 015019 (7pp)**

<http://hal-cea.archives-ouvertes.fr/cea-00359144/en/>

09 15 C

### **CONFERENCE PROCEEDINGS**

#### **Solid state RF amplifiers for accelerator applications**

M. Di Giacomo

**Proceedings of the Particle Accelerator Conférence (PAC09), Vancouver (Canada) 4-8 mai 2009, 1-5**

<http://hal.in2p3.fr/in2p3-00382152/en/>

09 69 C

#### **SPIRAL 2 injector diagnostics**

P. Ausset, T.A. Andre, C. Doutressoules, B. Ducoudret, C. Jamet, W. Le Coz, F. Lpoittevin, E. Swartvagher, J.L. Vignet, C. Maazouzi, C. Olivetto, C. Ruescas

**Proceedings of DIPAC09 (2009) 1-3**

9th European Workshop on Beam Diagnostics and Instrumentation for Particle Accelerators (DIPAC 2009), Basel : Suisse (2009)

<http://hal.in2p3.fr/in2p3-00397621/en/>

09 77 C

### **Beam Diagnostics for SPIRAL2 RNB**

P. Anger, T. A. Andre, A. Delannoy, J.M. Fontbonne, E. Gueroult, B. Jacquot, C. Jamet, G. Ledu, N. Orr, A. Savalle, F. Varenne, J. L. Vignet

#### **Proceedings of DIPAC09 (2009)**

9th European Workshop on Beam Diagnostics and Instrumentation for Particle Accelerators (DIPAC 2009), Basel : Suisse (2009)

<http://hal.in2p3.fr/in2p3-00397625/en/>

09 78 C

### **Phase and amplitude measurement for the SPIRAL2 accelerator**

C. Jamet, W. Le Coz, C. Doutressoulles, T. Andre, E. Swartvagher

#### **Proceedings of DIPAC09 (2009) 1-3**

9th European Workshop on Beam Diagnostics and Instrumentation for Particle Accelerators (DIPAC 2009), Basel : Suisse (2009)

<http://hal.in2p3.fr/in2p3-00397625/en/>

09 79 C

## **THESES –THESIS**

### **A la recherche d'une signature de la formation et décroissance du système géant "Z=184"**

Cedric Golabek

#### **GANIL T 09 01**

Soutenue le 8 juillet 2009

<http://tel.archives-ouvertes.fr/tel-00416431/fr/>

### **Study of reactions induced by the halo nucleus $^{11}\text{Li}$ with the active target MAYA**

Thomas Roger

#### **GANIL T 09 02**

Soutenue le 25 Septembre 2009

<http://tel.archives-ouvertes.fr/tel-00424010/fr/>

#### **GANIL T 09 03**

### **Etude de la structure du $^{44}\text{S}$ par sa décroissance isomérique**

C. Force

16 October 2009

<http://tel.archives-ouvertes.fr/tel-00430125/fr/>

#### **GANIL T 09 04**

### **Premiers états du $^{15}\text{F}$ étudiés par diffusion élastique résonante**

F. de Grancey

Soutenue le 19 octobre 2009

## RAPPORTS - REPORTS

**GANIL2015**

**Evaluation de l'extension de la ligne LISE2000**

L. Perrot, S. Grévy, F. Chautard, R. Hue, O. Kamalou

<http://hal.in2p3.fr/in2p3-00370151/en/>