CURRICULUM VITAE

NAME AND SURNAME	**DELAUNAY FRANCK**
Home address	
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Nationality	French
Birth date	

Academic Position

Qualification/Title	**Senior Lecturer** (*Maître de Conférences*)
University	*Université de Caen Normandie*, France
Department	*Institut Universitaire de Technologie de Caen*
Academic Field	Physics
Academic Discipline	Nuclear Physics

Working experience

Dates	**From 1 September 2005 to Present**
Name and address of the Employer	*Université de Caen Normandie*, Esplanade de la Paix, 14032 Caen cedex, France
Position held	**Senior Lecturer** (*Maître de Conférences*) *Institut Universitaire de Technologie de Caen*
Main activities/responsibilities	**Teaching** • Teaching duty: 200 hours/year • Lectures, tutorials, practicals in Nuclear Physics and Radiation Protection, 1st and 2nd years of Bachelor's degree in Technology (250 students) • Management of all Nuclear Physics teaching • Management of Nuclear Physics laboratory • Radiation Safety Officer • Holder of authorisation from French Nuclear Safety Authority **Research** • *Laboratoire de Physique Corpusculaire de Caen* • Structure of light neutron-rich nuclei

Dates	**From November 2003 to August 2005**
Name and address of the Employer	*Michigan State University*, East Lansing, Michigan, USA
Position held	**Visiting Research Associate** (Post-doctoral Fellow) *National Superconducting Cyclotron Laboratory*
Main activities/responsibilities	Development of detectors for direct reactions with exotic beams

Dates	**From September 2000 to June 2002**
Name and address of the Employer	*Université Paris-Sud*, Orsay, France
Position held	**Teaching Assistant**
Main activities/responsibilities	• Tutorials and practicals in Mathematics and Computer Programming, 2nd year of Bachelor's degree in Mathematics • 88 hours of teaching total

Education and Training

Date	**6 October 2003**
Institution which issued the degree	*Université Paris 6*, Paris, France
Type of Degree awarded	**PhD**

Date	**June 2000**
Institution which issued the degree	*Université Paris 6*, Paris, France
Type of Degree awarded	**Master's degree in Physics**, 2nd year (*Diplome d'Etudes Approfondies*)

Date	**June 1999**
Institution which issued the degree	*Université de Nantes*, France
Type of Degree awarded	**Master's degree in Physics**, 1st year (*Maîtrise*)

Date	**June 1998**
Institution which issued the degree	*Université de Nantes*, France
Type of Degree awarded	**Bachelor's degree in Physics** (*Licence*)

1 Scientific activity

1.1 Main research interest

My main research interest is the exploration of the structure of exotic nuclei using radioactive ion beams, particularly in the light neutron-rich region of the nuclear chart where the modern techniques of radioactive beam production allow to reach the limit of nuclear binding (the so-called "dripline"). These exotic nuclei are probed mainly via complementary direct reactions:

- **Invariant mass spectroscopy of unbound states** in systems at and beyond the neutron dripline, produced by nucleon removal, breakup or inelastic scattering. Since 2012, I have been involved in an experimental program that uses the high-energy ($\approx$ 250 MeV/nucleon) radioactive beams of the RIKEN-RIBF facility (Japan), and the SAMURAI superconducting dipole magnet and associated detection systems. Before 2012, I participated in a similar experiment at lower energy (60 MeV/nucleon) on the RIKEN-RIPS facility.

  My involvement includes participation in the preparation and data taking of these experiments. In particular, since 2012, our group has been responsible for the on-line data control and analysis. Therefore, I was particularly involved in the preparation of the on-line analysis software. More recently, in one the last experiments performed in November 2016, I also participated in the tests and calibrations of the neutron detector walls.

  Results of these experiments are presented in publications [1, 2, 3, 4, 5]. Publication [6] is a comment on a similar experiment by another group, and reference [7] presents a nucleon removal study performed at lower energy at the GANIL facility (France), prior to starting the experimental program at the RIKEN facility.

- **Transfer reactions** at intermediate energies ($\approx$ 5–30 MeV/nucleon) to investigate the shell structure of exotic nuclei. For the last fifteen years, I have been involved in transfer experiments mainly at the GANIL facility (France) with the MUST, MUST2 and TIARA silicon-strip detector arrays, and at TRIUMF (Canada) with the SHARC silicon-strip detector array.

  I participated in the preparation and running of these experiments, and for one of them, as detailed below, I also participated in the interpretation of the results.

  Results of the analysis of these experiments are presented in publications [8, 9, 10, 11, 12, 13, 14].

1.2 Three important outcomes/results

The three following publications illustrate the study of exotic nuclear structure via direct reactions, with the examples of three different reactions applied to neutron-rich oxygen isotopes, respectively proton-removal at high-energy, single-neutron transfer at intermediate energy, and proton scattering at intermediate energy.

1. **N=14 Shell Closure in ^{22}O Viewed through a Neutron Sensitive Probe**,

   E. Becheva, Y. Blumenfeld, E. Khan, D. Beaumel, J. M. Daugas, F. Delaunay et al.,

   Phys. Rev. Lett. 96, 012501 (2006)

   `http://dx.doi.org/10.1103/PhysRevLett.96.012501`

   42 citations

2. **Emergence of the $N = 16$ shell gap in ^{21}O**,

   B. Fernández-Domínguez, J. S. Thomas, W. N. Catford, F. Delaunay et al.,

   Phys. Rev. C 84, 011301(R) (2011)

   http://dx.doi.org/10.1103/PhysRevC.84.011301

   17 citations

3. **Nucleus ^{26}O: A Barely Unbound System beyond the Drip Line**,

   Y. Kondo, T. Nakamura, R. Tanaka, R. Minakata, S. Ogoshi, N.A. Orr, N. L. Achouri, T. Aumann, H. Baba, F. Delaunay et al.,

   Phys. Rev. Lett. 116, 102503 (2016)

   http://doi.org/10.1103/PhysRevLett.116.102503

   9 citations

In particular, these works show the modifications of the nucleon numbers corresponding to shell-closures (the so-called "magic numbers") as one moves away from the line of β-stability to the neutron dripline. For example, the classical neutron magic number $N = 20$ disappears and new shell-closures appear for neutron numbers $N = 14$ and $N = 16$. Strong experimental evidence for these changes was brought by the three papers presented here: appearance of $N = 14$ shell-closure in ^{22}O (paper 1), associated to the appearance of $N = 16$ shell-gap in ^{21}O (paper 2), the latter contributing to making ^{24}O (which has $N = 16$) the last bound oxygen isotope. Based on the classical magic numbers, with 8 protons and 20 neutrons ^{28}O was predicted to be doubly magic by many theoretical models, whereas it is in fact unbound. The third paper presents the first precise measurement of the energies of the ^{26}O ground and first excited states. With an energy above the decay threshold of only 18 keV the ground state is very slightly unbound. The excitation energy of the first excited state, 1.26 MeV, is lower than in any other even-even neutron-rich oxygen isotope. In addition to confirming the magic character of the $N = 16$ neutron number in exotic nuclei, these last results provide crucial measurements to test modern-day nuclear models.

I participated in the preparation and data taking of the experiments presented in these publications. In the case of the study of ^{21}O using the ^{20}O(d, p) reaction, I was also strongly involved in the interpretation of the results, for which I performed theoretical cross-section calculations necessary to extract information on the states populated in ^{21}O: spin and parity quantum numbers, and spectroscopic factors measuring the amplitudes of single-particle configurations in the wave functions. A measurement of the $N = 16$ gap was given by the energy difference between the $1s_{1/2}$ and $0d_{3/2}$ single-neutron orbitals obtained by combining the results of the ^{20}O(d, p) analysis with those from ^{20}O(d, t) data taken during the same experimental run [11]. The large energy difference of 5.1 MeV indicates the appearance of a gap at $N = 16$ in neutron-rich oxygen isotopes.

1.3 Transfer reactions and related work

In addition to the experiments presented above, my most recent involvements in the study of transfer reactions include, from 2013 to 2016, the supervision of a PhD student who analyzed the data from an experiment performed at the GANIL facility on the ^{16}C$(d, p)^{17}$C reaction using the TIARA silicon strip array, in order to extend our investigation of the evolution of shell-structure to the neutron-rich carbon isotopes. This student was co-supervised by our collaborator B. Fernández-Domínguez from the University of Santiago de Compostela in Spain. The analysis is being finalized. This work was presented at the "Colloque GANIL" conference in 2015 in Anglet (France), and at the "Direct Reactions with Exotic Beams" workshop in 2016 in Halifax (Canada), and I will present it at the "Colloque GANIL" conference in October 2017 in Amboise (France).

Publications [15, 16] describe theoretical predictions performed for nuclei located beyond the proton dripline (the limit of nuclear binding on the proton-rich side of the nuclear chart). These

predictions use the relationship between the width of a proton resonance in a proton-rich nucleus and the neutron Asymptotic Normalization Coefficient (ANC) in its neutron-rich mirror analog. Mirror nuclei are two isobars for which the neutron number of one nucleus is the proton number of the other one, and vice versa. The ANCs of the neutron-rich mirror analogs of ^{25}P and ^{21}Al, respectively ^{25}Ne and ^{21}O, were obtained from the analysis of single-neutron transfer reactions ^{24}Ne(d,p) and ^{20}O(d,p) studied by the TIARA collaboration. In this work, I performed theoretical cross-sections calculations necessary for the extraction of these ANCs.

During my work as a postdoctoral fellow, I performed a systematic study of effects not included in the formalism usually employed to analyse the data from (d,p) and (p,d) single-neutron transfer reactions [17]. The ^{12}C(d,p) and ^{13}C(p,d) reactions over a wide range of energies were chosen for this study. The effects addressed in this work included two-step transfer through excited states of the target or residual nucleus, higher-order transfers, and more realistic transfer interactions. We found that, depending on the incident energy, these effects can change significantly the peak cross-sections (more than 10 %).

I was also involved in a reanalysis of angular distributions from (d,p) and (p,d) reactions on calcium isotopes [20]. The proposed method constrains the geometry of the nucleon-nucleus potentials used in the analysis with microscopic mean-field calculations. The resulting spectroscopic factors are found to be suppressed by some 30 % with respect to values given by configuration-mixing shell-model calculations, and are therefore in agreement with the spectroscopic factors obtained from nucleon knockout and $(e,e'p)$ reactions.

1.4 β-delayed neutron emission

In addition to direct reactions, other processes can populate unbound systems. For example, owing to large Q values and low separation energies in the daughter nuclei, β-decay of exotic nuclei can often produce unbound states, which then decay by emitting one or more particles, the so-called "β-delayed" particles. In 2014 I was the spokesperson of an experiment at the CERN-ISOLDE facility on the study of multi-neutron emission in the β-decay of ^{11}Li (`isolde.web.cern.ch/is525`). This nuclide, which is the last bound lithium isotope, has one of the largest emission probabilities of two β-delayed neutrons ($P_{2n} \approx 4$ %). The aim of this experiment was to explore the feasibility of the investigation of correlations between these two delayed neutrons. Such correlations have been investigated between β-delayed protons emitted following the decay of proton-rich isotopes, such as ^{31}Ar, but have never been addressed for β-delayed neutrons. The data from this experiment are currently being analyzed.

1.5 Detector development

Publications [18, 19] describe the detectors for radioactive beam experiments in the development of which I was involved as a postdoctoral fellow: the silicon-strip detector array HiRA [18] and beam-tracking detectors based on multichannel plates [19].

1.6 Selected publications

[1] **Single-neutron knockout from ^{20}C and the structure of ^{19}C**, J. W. Hwang, S. Kim, Y. Satou, N. A. Orr, Y. Kondo, T. Nakamura, J. Gibelin, N. L. Achouri, T. Aumann, H. Baba, F. Delaunay et al., *Phys. Lett. B 769 (2017) 503.*
`http://dx.doi.org/10.1016/j.physletb.2017.04.019`

[2] **Interaction cross section study of the two-neutron halo nucleus ^{22}C**, Y. Togano, T. Nakamura, Y. Kondo, J.A. Tostevin, A.T. Saito, J. Gibelin, N.A. Orr, N.L. Achouri, T. Aumann, H. Baba, F. Delaunay et al., *Phys. Lett. B 761 (2016) 412.*
`http://dx.doi.org/10.1016/j.physletb.2016.08.062`

[3] **Nucleus ^{26}O: A Barely Unbound System beyond the Drip Line**, Y. Kondo, T. Nakamura, R. Tanaka, R. Minakata, S. Ogoshi, N.A. Orr, N. L. Achouri, T. Aumann, H. Baba, F. Delaunay et al., *Phys. Rev. Lett. 116, 102503 (2016).*
http://doi.org/10.1103/PhysRevLett.116.102503

[4] **Neutron occupancy of the $0d_{5/2}$ orbital and the $N = 16$ shell closure in ^{24}O**, K. Tshoo, Y. Satou, C.A. Bertulani, H. Bhang, S. Choi, T. Nakamura, Y. Kondo, S. Deguchi, Y. Kawada, Y. Nakayama, K.N. Tanaka, N. Tanaka, Y. Togano, N. Kobayashi, N. Aoi, M. Ishihara, T. Motobayashi, H. Otsu, H. Sakurai, S. Takeuchi, K. Yoneda, F. Delaunay et al., *Phys. Lett. B 739 (2014) 19.*
http://dx.doi.org/10.1016/j.physletb.2014.10.033

[5] **$N = 16$ Spherical Shell Closure in ^{24}O**, K. Tshoo, Y. Satou, H. Bhang, S. Choi, T. Nakamura, Y. Kondo, S. Deguchi, Y. Kawada, N. Kobayashi, Y. Nakayama, K. N. Tanaka, N. Tanaka, N. Aoi, M. Ishihara, T. Motobayashi, H. Otsu, H. Sakurai, S. Takeuchi, Y. Togano, K. Yoneda, Z. H. Li, F. Delaunay et al., *Phys. Rev. Lett. 109, 022501 (2012).*
http://dx.doi.org/10.1103/PhysRevLett.109.022501

[6] **Comment on "First Observation of Ground State Dineutron Decay: ^{16}Be"**, F. M. Marqués, N. A. Orr, N. L. Achouri, F. Delaunay, and J. Gibelin, *Phys. Rev. Lett, 109, 239201 (2012).*
http://dx.doi.org/10.1103/PhysRevLett.109.239201

[7] **Structure of ^{13}Be probed via secondary-beam reactions**, G. Randisi, A. Leprince, H. Al Falou, N. A. Orr, F. M. Marqués, N. L. Achouri, J.-C. Angélique, N. Ashwood, B. Bastin, T. Bloxham, B. A. Brown, W. N. Catford, N. Curtis, F. Delaunay et al., *Phys. Rev. C 89, 034320 (2014).*
http://dx.doi.org/10.1103/PhysRevC.89.034320

[8] **New findings on structure and production of ^{10}He from ^{11}Li with the (d,^{3}He) reaction**, A. Matta, D. Beaumel, H. Otsu, V. Lapoux, N. T. Timofeyuk, N. Aoi, M. Assié, H. Baba, S. Boissinot, R. J. Chen, F. Delaunay et al., *Phys. Rev. C 92, 041302(R) (2015).*
http://dx.doi.org/10.1103/PhysRevC.92.041302

[9] **Low-lying neutron fp-shell intruder states in ^{27}Ne**, S. M. Brown, W. N. Catford, J. S. Thomas, B. Fernández-Domínguez, N. A. Orr, M. Labiche, M. Rejmund, N. L. Achouri, H. Al Falou, N. I. Ashwood, D. Beaumel, Y. Blumenfeld, B. A. Brown, R. Chapman, M. Chartier, N. Curtis, G. de France, N. de Séréville, F. Delaunay et al., *Phys. Rev. C 85, 011302(R) (2012).*
http://dx.doi.org/10.1103/PhysRevC.85.011302

[10] **Emergence of the $N = 16$ shell gap in ^{21}O**, B. Fernández-Domínguez, J. S. Thomas, W. N. Catford, F. Delaunay et al., *Phys. Rev. C 84, 011301(R) (2011).*
http://dx.doi.org/10.1103/PhysRevC.84.011301

[11] **Study of the ^{20}O(d,t) reaction with the TIARA-MUST2-VAMOS-EXOGAM 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 et al., *Int. J. Mod. Phys. E 18, 2056 (2009).*
http://dx.doi.org/10.1142/S0218301309014287

[12] **Probing the ^{8}He ground state via the ^{8}He(p,t)^{6}He reaction**, N. Keeley, F. Skaza, V. Lapoux, N. Alamanos, F. Auger, D. Beaumel, E. Becheva, Y. Blumenfeld, F. Delaunay et al., *Phys. Lett. B 646 (2007) 222.*
http://dx.doi.org/10.1016/j.physletb.2007.01.035

[13] **Experimental evidence for subshell closure in ^{8}He and indication of a resonant state in ^{7}He below 1 MeV**, F. Skaza, V. Lapoux, N. Keeley, N. Alamanos, E. C. Pollacco, F. Auger, A. Drouart, A. Gillibert, D. Beaumel, E. Becheva, Y. Blumenfeld, F. Delaunay et al., *Phys. Rev. C 73, 044301 (2006).*
http://dx.doi.org/10.1103/PhysRevC.73.044301

[14] **Important pickup coupling effect on ^{8}He(p,p) elastic scattering**, F. Skaza, N. Keeley, V. Lapoux, N. Alamanos, F. Auger, D. Beaumel, E. Becheva, Y. Blumenfeld, F. Delaunay et al. *Phys. Lett. B 619 (2005) 82.*
http://dx.doi.org/10.1016/j.physletb.2005.05.061

[15] **Spectroscopic study of the exotic nucleus ^{25}P**, B. Fernández-Domínguez, X. Pereira-Lopez, N. K. Timofeyuk, P. Descouvemont, W. N. Catford, and F. Delaunay, *Phys. Rev. C 91, 024307 (2015).*
http://dx.doi.org/10.1103/PhysRevC.91.024307

[16] **Core excitations and narrow states beyond the proton dripline: The exotic nucleus ^{21}Al**, N. K. Timofeyuk, B. Fernández-Domínguez, P. Descouvemont, W. N. Catford, F. Delaunay, and J. S. Thomas, *Phys. Rev. C 86, 034305 (2012).*
http://dx.doi.org/10.1103/PhysRevC.86.034305

[17] **Coupling and higher-order effects in the ^{12}C(d,p)^{13}C and ^{13}C(p,d)^{12}C reactions**, F. Delaunay, F. M. Nunes, W. G. Lynch, and M. B. Tsang, *Phys. Rev. C 72, 014610 (2005).*
http://dx.doi.org/10.1103/PhysRevC.72.014610

[18] **The high resolution array (HiRA) for rare isotope beam experiments**, M.S. Wallace, M.A. Famiano, M.-J. van Goethem, A.M. Rogers, W.G. Lynch, J. Clifford, F. Delaunay et al., *Nucl. Instr. Meth. Phys. Res. A 583 (2007) 302.*
http://dx.doi.org/10.1016/j.nima.2007.08.248

[19] **Tracking rare-isotope beams with microchannel plates**, A.M. Rogers, A. Sanetullaev, W.G. Lynch, M.B. Tsang, J. Lee, D. Bazin, D. Coupland, V. Henzl, D. Henzlova, M. Kilburn, M.S. Wallace, M. Youngs, F. Delaunay et al., *Nucl. Instr. Meth. Phys. Res. A 795 (2015) 325.*
http://dx.doi.org/10.1016/j.nima.2015.05.070

[20] **Reduced neutron spectroscopic factors when using potential geometries constrained by Hartree-Fock calculations**, Jenny Lee, J. A. Tostevin, B. A. Brown, F. Delaunay, W. G. Lynch, M. J. Saelim, and M. B. Tsang, *Phys. Rev. C 73, 044608 (2006).*
http://dx.doi.org/10.1103/PhysRevC.73.044608

2 Coordination of research

- Supervision of 2 PhD thesis:
  - 2013-2016: X. Pereira-López, *Study of transfer reactions induced by a ^{16}C beam*, co-supervision with B. Fernández-Domínguez (*University of Santiago de Compostela*, Spain).
  - 2011-2014: M. Sénoville, *Development of a neutron multi-detector.*
- Spokesperson of an experiment at CERN/ISOLDE: *Study of multi-neutron emission in the β-decay of ^{11}Li* (`isolde.web.cern.ch/is525`). Run in October 2014.

3 National and international reputation and professional activity for the scientific community

- Introductory lesson and tutorship (Invited), "Rewriting Nuclear Physics Textbooks" Summer School, Pisa, Italy, 24-28 July 2017.
- Member of a PhD thesis committee, University Paris-Saclay, France, 3 October 2017

4 Teaching activity

- 2005-Present:
  - Teaching in 1st and 2nd years of Bachelor's Degree in Technology, *Institut Universitaire de Technologie de Caen*, *Université de Caen*, France
  - Teaching duty: 200 hours/year
  - 250 students
  - Lectures, tutorials and practicals in Nuclear Physics and Radiation Protection
  - Tutor for 3-4 internships/year in companies or laboratories
  - Management of all Nuclear Physics teaching (team of 10 lecturers and teaching assistants)
  - Management of the Nuclear Physics laboratory (planning, equipment, radioactive sources)
- 2009-2012: Course on Particle Detectors, 2nd year of Master's Degree in Physics, *Université de Caen*, France

5 Institutional offices and roles in Italian and foreign Universities

- 2006-Present: Radiation Safety Officer and holder of authorisation from French Nuclear Safety Authority, *Institut Universitaire de Technologie de Caen*, *Université de Caen*, France
- 2008: Member of selection committees for Lecturer positions in Nuclear Physics at *Université de Caen* and *ENSICAEN* Engineering School, Caen, France

Place and date: Caen, 4 October 2017

Publications in international peer-reviewed journals

Numbers of citations exclude self-citations.

P1. **Single-neutron knockout from ^{20}C and the structure of ^{19}C**, J. W. Hwang, S. Kim, Y. Satou, N. A. Orr, Y. Kondo, T. Nakamura, J. Gibelin, N. L. Achouri, T. Aumann, H. Baba, F. Delaunay et al., *Phys. Lett. B 769 (2017) 503*, 0 citation.
http://dx.doi.org/10.1016/j.physletb.2017.04.019

P2. **Experimental study of high-lying states in ^{28}Mg using the resonant elastic scattering of α particles**, J. Walshe, M. Freer, C. Wheldon, A. Soylu, N. L. Achouri, N. I. Ashwood, W. N. Catford, I. C. Celik, N. Curtis, F. Delaunay, B. Fernández-Domínguez, L. Grassi, Tz. Kokalova, F. M. Marqués, N. A. Orr, L. Prepolec, V. Scuderi, N. Soić, and V. Tokić, *Phys. Rev. C 94, 054304 (2016)*, 0 citation.
http://dx.doi.org/10.1103/PhysRevC.94.054304

P3. **Interaction cross section study of the two-neutron halo nucleus ^{22}C**, Y. Togano, T. Nakamura, Y. Kondo, J.A. Tostevin, A.T. Saito, J. Gibelin, N.A. Orr, N.L. Achouri, T. Aumann, H. Baba, F. Delaunay et al., *Phys. Lett. B 761 (2016) 412*, 3 citations.
http://dx.doi.org/10.1016/j.physletb.2016.08.062

P4. **Nucleus ^{26}O: A Barely Unbound System beyond the Drip Line**, Y. Kondo, T. Nakamura, R. Tanaka, R. Minakata, S. Ogoshi, N.A. Orr, N. L. Achouri, T. Aumann, H. Baba, F. Delaunay et al., *Phys. Rev. Lett. 116, 102503 (2016)*, 9 citations.
http://doi.org/10.1103/PhysRevLett.116.102503

P5. **Observation of isoscalar multipole strengths in exotic doubly-magic ^{56}Ni in inelastic α scattering in inverse kinematics**, S. Bagchi, J. Gibelin, M. N. Harakeh, N. Kalantar-Nayestanaki, N. L. Achouri, H. Akimune, B. Bastin, K. Boretzky, H. Bouzomita, M. Caamaño, L. Caceres, S. Damoy, F. Delaunay et al., *Phys. Lett. B 751 (2015) 371*, 1 citation.
http://dx.doi.org/10.1016/j.physletb.2015.10.060

P6. **New findings on structure and production of ^{10}He from ^{11}Li with the (d,^{3}He) reaction**, A. Matta, D. Beaumel, H. Otsu, V. Lapoux, N. T. Timofeyuk, N. Aoi, M. Assié, H. Baba, S. Boissinot, R. J. Chen, F. Delaunay et al., *Phys. Rev. C 92, 041302(R) (2015)*, 1 citation.
http://dx.doi.org/10.1103/PhysRevC.92.041302

P7. **Tracking rare-isotope beams with microchannel plates**, A.M. Rogers, A. Sanetullaev, W.G. Lynch, M.B. Tsang, J. Lee, D. Bazin, D. Coupland, V. Henzl, D. Henzlova, M. Kilburn, M.S. Wallace, M. Youngs, F. Delaunay et al., *Nucl. Instr. Meth. Phys. Res. A 795 (2015) 325*, 1 citation.
http://dx.doi.org/10.1016/j.nima.2015.05.070

P8. **Isoscalar response of ^{68}Ni to α-particle and deuteron probes**, M. Vandebrouck, J. Gibelin, E. Khan, N. L. Achouri, H. Baba, D. Beaumel, Y. Blumenfeld, M. Caamaño, L. Càceres, G. Colò, F. Delaunay et al., *Phys. Rev. C 92, 024316 (2015)*, 0 citation.
http://dx.doi.org/10.1103/PhysRevC.92.024316

P9. **Spectroscopic study of the exotic nucleus ^{25}P**, B. Fernández-Domínguez, X. Pereira-Lopez, N. K. Timofeyuk, P. Descouvemont, W. N. Catford, and F. Delaunay, *Phys. Rev. C 91, 024307 (2015)*, 0 citation.
http://dx.doi.org/10.1103/PhysRevC.91.024307

P10. **Onset of quenching of the giant dipole resonance at high excitation energies**, D. Santonocito, Y. Blumenfeld, C. Agodi, R. Alba, G. Bellia, R. Coniglione, F. Delaunay et al., *Phys. Rev. C 90, 054603 (2014)*, 4 citations.
http://dx.doi.org/10.1103/PhysRevC.90.054603

P11. **Neutron occupancy of the $0d_{5/2}$ orbital and the $N = 16$ shell closure in ^{24}O**, K. Tshoo, Y. Satou, C.A. Bertulani, H. Bhang, S. Choi, T. Nakamura, Y. Kondo, S. Deguchi, Y. Kawada, Y. Nakayama, K.N. Tanaka, N. Tanaka, Y. Togano, N. Kobayashi, N. Aoi, M. Ishihara, T. Motobayashi, H. Otsu, H. Sakurai, S. Takeuchi, K. Yoneda, F. Delaunay et al., *Phys. Lett. B 739 (2014) 19*, 3 citations.
http://dx.doi.org/10.1016/j.physletb.2014.10.033

P12. **Structure of ^{13}Be probed via secondary-beam reactions**, G. Randisi, A. Leprince, H. Al Falou, N. A. Orr, F. M. Marqués, N. L. Achouri, J.-C. Angélique, N. Ashwood, B. Bastin, T. Bloxham, B. A. Brown, W. N. Catford, N. Curtis, F. Delaunay et al., *Phys. Rev. C 89, 034320 (2014)*, 10 citations.
http://dx.doi.org/10.1103/PhysRevC.89.034320

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