

# Curriculum Vitae

(As of January 6<sup>th</sup>, 2019)

Thomas Rauscher

## Contents

|          |  |           |
|----------|--|-----------|
| <b>1</b> | <b>Career and Experience</b>                               | <b>3</b>  |
| 1.1      | Academic Education . . . . .                               | 3         |
| 1.2      | Fellowships and Awards . . . . .                           | 3         |
| 1.3      | Professional Memberships . . . . .                         | 4         |
| 1.4      | General Research Interests . . . . .                       | 4         |
| 1.5      | International (Large Scale) Collaborations . . . . .       | 4         |
| 1.6      | Professional Experience . . . . .                          | 7         |
| 1.7      | Additional Professional Experience . . . . .               | 8         |
| 1.8      | Public Outreach Activities . . . . .                       | 9         |
| 1.9      | Additional Training (“Fortbildung”) . . . . .              | 10        |
| 1.10     | Language Skills . . . . .                                  | 10        |
| 1.11     | Teaching Experience . . . . .                              | 11        |
| 1.12     | Supervised Research Work . . . . .                         | 13        |
| 1.13     | Received Funding . . . . .                                 | 14        |
| <b>2</b> | <b>References</b>  | <b>17</b> |
| <b>3</b> | <b>Publications</b>  | <b>19</b> |
| 3.1      | Citation Analyses . . . . .                                | 19        |
| 3.1.1    | h-Index . . . . .  | 19        |
| 3.1.2    | Appearance in Essential Science Indicators . . . . .       | 19        |
| 3.1.3    | Web of Science Citation Analyses . . . . .                 | 20        |
| 3.2      | Full Publication Lists . . . . .                           | 23        |
| 3.2.1    | Publications in Journals . . . . .                         | 23        |
| 3.2.2    | Conference Proceedings (refereed and unrefereed) . . . . . | 49        |
| 3.2.3    | Invited Reviews in Books, Popular Articles . . . . .       | 71        |
| 3.2.4    | Books . . . . .  | 71        |
| 3.2.5    | Reports and Other Publications . . . . .                   | 71        |
| 3.3      | Electronic Material (WWW) and Computer Codes . . . . .     | 78        |
| <b>4</b> | <b>Invited Talks</b>                                       | <b>79</b> |

## 1 Career and Experience

### 1.1 Academic Education

- Study of Physics at the Technische Universität Wien (University of Technology Vienna), Austria, and Astronomy at the University of Vienna, Austria.
- Diplom-Ingenieur (Dipl.Ing.), December 1989 (Master in Physics),  
Technische Universität Wien  
Diploma Thesis: “One-Nucleon Transfer below the Coulomb Barrier”,  
Institut für Kernphysik (Dept. of Nuclear Physics)
- Dr. techn., December 1991 (PhD)  
Technische Universität Wien  
PhD thesis: “Reaction Rates for Primordial Nucleosynthesis”,  
Institut für Kernphysik (Dept. of Nuclear Physics)
- Privat-Dozent, Habilitation (venia docendi) in “Theoretical Physics”, June 1998  
University of Basel, Switzerland
- Assistenzprofessor (assistant professor), 1999  
University of Basel, Switzerland
- Reader (associate professor), 2013  
University of Hertfordshire, UK

### 1.2 Fellowships and Awards

- Erwin Schrödinger fellowship, Austrian National Science Foundation (1991)
- Alexander von Humboldt fellowship, Alexander von Humboldt Foundation, Germany (1993)
- APART fellowship (Austrian Program for Advanced Research and Technology), Austrian Academy of Sciences (1995)
- PROFIL professorship (PROFIL Förderungsprofessur), Swiss National Science Foundation (1999)
- Ludwig Boltzmann Prize for Theoretical Physics, Austrian Physical Society (1999)
- “Golden Chalk” award for best physics teaching, Univ. of Basel, Switzerland (2011)
- Distinguished Guest Professor Fellowship, Hungarian Academy of Sciences (2012)
- Fellow of the Institute of Physics (IOP), UK (2013)
- Outstand Reviewer Award, Institute of Physics (IOP), UK (2016)
- Outstanding Referee Award, American Physical Society (2017)

### 1.3 Professional Memberships

- Institute of Physics (IOP), UK (fellow)
- Fellow of the Royal Astronomical Society
- American Physical Society, member
- American Society for the Advancement of Science
- International Astronomical Union (IAU)
- Österreichische Physikalische Gesellschaft (Austrian Physical Society)

### 1.4 General Research Interests

- Nucleosynthesis; Nuclear Astrophysics; Astroparticle Physics; Cosmology;
- Stellar, Explosive and Big Bang Nucleosynthesis; Stellar Structure and Evolution, core-collapse Supernovae, X-Ray Bursts, Jets,  $\gamma$ -Ray Bursts;
- Hydrodynamical simulations, Computational Physics, Statistical Data Analysis.
- Nuclear reactions of astrophysical relevance: transfer and fusion reactions, radiative capture, fission;
- Nuclear structure of astrophysical relevance.

### 1.5 International (Large Scale) Collaborations

- Member of the UK Network for Bridging Disciplines of Galactic Chemical Evolution (BRIDGCE), United Kingdom, <http://www.astro.keele.ac.uk/bridgce>
- Named participant in the Advanced Grant GA 321263-FISH of the European Research Council: *Faint Supernovae and Hypernovae: Mechanism and Nucleosynthesis (FISH)* (2013-2016)
- Named participant in the Starting Grant 306901 of the European Research Council: *Stellar Hydrodynamics, Nucleosynthesis and Evolution (SHYNE)* (2012-2017)
- Member of the Basel University research focus on “Astroparticle Physics”
- Member of the THEXO (theory of exotic nuclei) group of the ENSAR (European Nuclear Science and Applications Research) project (within the 7th European Research Framework Program), since 2011
- Member of the EUROCORE program *EuroGENESIS*: Coordinated Research Project *MASCHE* (Massive Stars as Agents of Chemical Evolution), Coordinated Research Project *CoDustMas* (Cosmic Dust Grains as a Diagnostic for Massive Stars), 2010-2013

- Member of the *nTOF* (CERN PS 213), *EXL* (GSI FAIR), *ELISe* (GSI FAIR) collaborations, since 1999
- Convener of the astrophysics working group of the CERN-PS Neutron TOF Facility collaboration (1999/2000) and nTOF astrophysics advisor (since 1999)
- Associate to *JINA* (Joint Institute of Nuclear Astrophysics, between Univ. of Chicago, Michigan State Univ., and Univ. of Notre Dame), 2001-2010
- Participant in the USA DOE SciDAC (Scientific Discovery through Advanced Computing) program, Supernova Science Center, 2000-2010
- Associate Member of the *International Graduate School Basel–Tübingen–Graz* (Europäisches Graduiertenkolleg Basel–Tübingen–Graz), 2001-2010 (funded through the National Science Foundations of Germany, Austria, and Switzerland)
- Network partner of the *CARINA* network, 2005-2008 (funded through 6th European Research Framework Program)



## 1.6 Professional Experience

- 1983 to 1989  
part-time job as application programmer and commercial software developer at Philips Data Systems, Vienna, Austria
- June 1990 to February 1991  
Research Assistant  
Institut für Kernphysik, TU Wien (Dept. of Nuclear Physics, Univ. Techn. Vienna)
- March 1991 to March 1992  
Research Fellow  
Institut für Kernphysik, TU Wien (Dept. of Nuclear Physics, Univ. Techn. Vienna)
- April 1992 to September 1993  
Research Associate  
Harvard-Smithsonian Center for Astrophysics
- October 1993 to July 1995  
Alexander von Humboldt fellowship  
Institute for Nuclear Chemistry  
University of Mainz, Mainz, Germany
- August 1995 to July 1998  
APART (Austrian Program for Advanced Research and Technology)  
fellowship from the Austrian Academy of Sciences,  
Department of Physics and Astronomy,  
University of Basel, Basel, Switzerland
- August 1998 to July 1999  
Lecturer (Privat-Dozent)  
Department of Physics and Astronomy,  
University of Basel, Basel, Switzerland
- since August 1999  
Assistant Professor  
PROFIL professorship of the Swiss National Science Foundation  
(PROFIL Förderungsprofessur)  
Department of Physics and Astronomy, University of Basel, Switzerland
- October 1999 to September 2000  
Visiting Researcher  
Department of Astronomy and Astrophysics,  
University of California at Santa Cruz, CA, USA
- October 2000 to August 2012  
resumed position of a PROFIL Assistant Professor  
Department of Physics and Astronomy,  
University of Basel, Basel, Switzerland

- September 2012 to February 2013  
Sabbatical position as Distinguished Guest Professor  
(funded by the Hungarian Academy of Sciences)  
Institute of Nuclear Research (ATOMKI), Debrecen, Hungary
- January 2013 to September 2015  
Adjunct Professor  
Department of Physics,  
University of Basel, Basel, Switzerland
- January 2013 to September 2015  
Reader (Associate Professor)  
Centre for Astrophysical Research  
School of Physics, Astronomy and Mathematics,  
University of Hertfordshire, Hatfield, UK
- October 2015 to December 2016  
Assistant Professor (ERC)  
Department of Physics,  
University of Basel, Basel, Switzerland
- since January 2017  
Adjunct Lecturer (Privat-Dozent)  
Department of Physics,  
University of Basel, Basel, Switzerland
- since October 2015  
Patent expert  
Swiss Federal Institute for Intellectual Property,  
Berne, Switzerland
- since October 2015  
Visiting Research Fellow  
Centre for Astrophysical Research  
School of Physics, Astronomy and Mathematics,  
University of Hertfordshire, Hatfield, UK

## 1.7 Additional Professional Experience

- *Member* of the NP-PAC (Nuclear Physics Program Advisory Committee) for Nuclear Physics Experiments at the RIKEN RI Beam Factory, Japan (since 2015).
- *Module coordinator* for the teaching modules “Solar and Planetary Physics” and “Physics of Stars” in the School of Physics, Astronomy and Mathematics of the University of Hertfordshire, UK (since September 2013)
- *Referee for* The Astrophysical Journal, Astrophysical Journals Letters, Astronomy and Astrophysics, Nuclear Physics A, Physical Review Letters, Physical Review C/D, Journal of Physics G, Physics Letters B, Canadian Journal of Physics,



- Progress in Particle and Nuclear Physics, Nuclear Instruments and Methods A/B, Europhysics Letters, European Physical Journal A, Physica Scripta, New Journal of Physics, NASA Planetary Science and Cosmochemistry Program, PRACE (Partnership for Advanced Computing in Europe)
- *Member* of the NuPECC (Nuclear Physics European Collaboration Committee) working group on Nuclear Astrophysics for the 2010 Long Range Plan
  - *Member* of the International Advisory Committee of the JINA Reaction Rate Database for Astrophysics
  - *Member* of these International/Scientific Advisory Committees: Russbach Workshop on Nuclear Astrophysics (2003–2010), CGS14 conference (2011), Workshop on "Open problems and future directions in heavy element nucleosynthesis" (ATOMKI Debrecen, 2013), CGS15 conference (2014), Workshop on "Production of p-nuclei" (June 2015)
  - *Editorial Board Member* of The Open Astronomy Journal, The Open Nuclear and Particle Physics Journal
  - Active participation in experiments at CERN (ISOLDE, nTOF), Switzerland, GANIL, France, NSCL of Michigan State University, USA, Darmstadt and Stuttgart, Germany.
  - *Supervisor* (external moderator) for university qualifying exit examinations in physics and mathematics at the high school of Liestal, Switzerland (Externer Experte für die mündliche und schriftliche Physik- und Mathematik-Matur am Gymnasium Liestal)
  - Organisational Support for 1st Intl. Conference on Nuclear Astrophysics, "Nuclei in the Cosmos", Baden/Vienna 1990
  - Programming Languages and Tools: C, FORTRAN 90/95, JAVA, C++, PYTHON, MODULA-2, PASCAL, BASIC, VBA, R, MAPLE, MATLAB, TCL/TK, PHP, shell scripts
  - System Administration: Unix (Digital Unix), Linux, WWW administration, Beowulf cluster of the Basel Physics Department

## 1.8 Public Outreach Activities

- *Popular Science talks and presentations*: several public talks on stars and their nucleosynthesis (Switzerland, Austria, Germany); annual overview of the working group activities at the information day for high school students (University of Basel, Switzerland, since 1998); presentations and talks at the annual "open doors" event at the Univ. Basel (since 2005); information booth on astrophysical research at the Saturday Morning Physics event (U. Basel, 2007, 2009).
- *Popular Science publications*: articles and short contributions in german and austrian popular science magazines.

- *Interaction with schools*
  - *Teaching*: elective courses in Astronomy and Astrophysics at the NOVARTIS technical high school, Basel, Switzerland (1997-1999); TecDay workshop for high school students (Liestal, Switzerland, 2009).
  - *Others*: supervisor for university qualifying exit examinations (written and oral) in physics and mathematics at the high school of Liestal, Switzerland (since 2000).
- *Wikipedia*: frequent creation and correction of english and german articles concerning topics in physics, astrophysics, and astronomy.
- *Social Media*: dedicated *Nuclear Astrophysics* page on GOOGLE+, infrequent general science postings on personal GOOGLE+ page.

### 1.9 Additional Training (“Fortbildung”)

- Rhetorics, 1997
- Didactics and methods of presentation and teaching, 1997
- Conception and planning of media/internet-based teaching, 2001
- Examination techniques (oral vs. written), 2001
- Project Management, 2003
- Media and Science — Science and Media (science journalism), 2003
- Company Start-Up Seminar, 2003
- Practical Leadership (“Führungspraxis”), 2004
- Internship at a Patent Lawyer’s Office, 2006

### 1.10 Language Skills

- German: mother tongue
- English: fluent (spoken and written)
- French: advanced (niveau DELF 2)
- Italian: basic knowledge

### 1.11 Teaching Experience

- March 1989 to March 1992  
Teaching Assistant for undergraduates and graduate students at the Dept. of Nuclear Physics, Univ. of Technology, Vienna, Austria
- October 1993 to June 1995  
Lecture series on “Nuclear Astrophysics” and “The Early Universe” (Big Bang Nucleosynthesis), with Prof. Dr. K.-L. Kratz, Institute for Nuclear Chemistry, University of Mainz, Mainz, Germany
- December 1996  
Quantum Mechanics, core course  
(temporary replacement for Prof. Dr. F.-K. Thielemann)  
Department of Physics and Astronomy, University of Basel, Basel, Switzerland
- June 1997  
Electrodynamics, core course  
(temporary replacement for Prof. Dr. F.-K. Thielemann)  
Department of Physics and Astronomy, University of Basel, Basel, Switzerland
- Winter term 97/98 (October 1997 to March 1998)  
Quantum Mechanics, exercise course,  
Department of Physics and Astronomy  
University of Basel, Basel, Switzerland
- Winter term 97/98 (October 1997 to March 1998)  
Astronomy & Astrophysics for Technical College Students,  
Berufsschule NOVARTIS, Basel, Switzerland
- Winter term 98/99 (October 1998 to March 1999)  
Astronomy & Astrophysics for Technical College Students,  
Berufsschule NOVARTIS, Basel, Switzerland
- January 1999  
Classical Mechanics, core course,  
(temporary replacement for Prof. Dr. F.-K. Thielemann)  
Department of Physics and Astronomy, University of Basel, Basel, Switzerland
- Summer term 99 (March 1999 to June 1999)  
Introductory Nuclear Physics, exercise course,  
Department of Physics and Astronomy, University of Basel, Basel, Switzerland
- June 1999  
Electrodynamics, core course,  
(temporary replacement for Prof. Dr. F.-K. Thielemann)  
Department of Physics and Astronomy, University of Basel, Basel Switzerland
- Winter term 99/00 (October 1999 to March 2000)  
Computational Physics,  
Department of Physics and Astronomy, University of Basel, Basel, Switzerland

- Winter term 00/01 (October 2000 to March 2001)  
Nuclear Astrophysics,  
Department of Physics and Astronomy, University of Basel, Basel, Switzerland
- Summer term 01 (March 2001 to July 2001)  
Nuclear Astrophysics II,  
Department of Physics and Astronomy, University of Basel, Basel, Switzerland
- October 2001  
Introduction to Nuclear Astrophysics,  
(single-week condensed guest-lecture series)  
Department of Physics, University of Tübingen, Tübingen, Germany
- Summer term 05 (April 2005 to July 2005)  
The Standard Model in Particle Physics,  
Department of Physics and Astronomy, University of Basel, Basel, Switzerland
- Winter terms 01/02, 02/03, 03/04, 04/05, 05/06, 06/07 (October to March)  
Nuclear Astrophysics I,  
Department of Physics and Astronomy, University of Basel, Basel, Switzerland
- Summer terms 02, 03, 04, 05, 06, 07 (April to July)  
Nuclear Astrophysics II,  
Department of Physics and Astronomy, University of Basel, Basel, Switzerland
- Fall terms 2007, 2008, 2009, 2010, 2011  
Primordial Nucleosynthesis and Hydrostatic Burning Phases,  
Department of Physics, University of Basel, Basel, Switzerland
- Spring terms 2008, 2009, 2010, 2011, 2012  
Stellar Models, Supernovae, Explosive Nucleosynthesis,  
Department of Physics, University of Basel, Basel, Switzerland
- Fall term 2012  
Introduction to Stellar and Explosive Nucleosynthesis and Nuclear Astrophysics,  
condensed lecture weeks at ATOMKI Debrecen + University of Debrecen + Eötvös  
Loránd University Budapest, Hungary
- Spring term 2013  
School of Physics, Astronomy and Mathematics, University of Hertfordshire, UK
  - The Sun (full class as part of the second year module Solar System Physics)
  - Contemporary Physics Lab Course
- Academic Year 2013/14  
School of Physics, Astronomy and Mathematics, University of Hertfordshire, UK
  - Physics of Stars (2 semester course + module coordination)
  - Thermal Physics (2 semester course)

- Small Group Tutorials (2 semester course)
- The Sun (+ module coordination of Solar and Planetary Physics)
- Contemporary Physics Lab Course
- Investigations in Physics (undergraduate project), supervision of 2 students
- Academic Year 2014/15  
School of Physics, Astronomy and Mathematics, University of Hertfordshire, UK
  - Physics of Stars (2 semester course + module coordination)
  - Small Group Tutorials (2 semester course)
  - Thermal Physics (Statistical Mechanics)
  - Quantum Physics (Nuclear Physics)
  - The Sun (+ module coordination of Solar and Planetary Physics)
  - Contemporary Physics Lab Course
  - Investigations in Physics (undergraduate project), supervision of 3 students
  - Project in Physics (undergraduate 2-semester project), supervision of 1 student
- Fall term 2016  
Stellar Models, Supernovae, Explosive Nucleosynthesis,  
Department of Physics, University of Basel, Basel, Switzerland
- Fall terms 2017, 2018  
Primordial Nucleosynthesis and Hydrostatic Burning Phases,  
Department of Physics, University of Basel, Basel, Switzerland
- Spring term 2018  
Stellar Models, Supernovae, Explosive Nucleosynthesis,  
Department of Physics, University of Basel, Basel, Switzerland
- Spring term 2019  
Introduction to Astrophysics and Cosmology,  
Bachelor 2<sup>nd</sup> year course, Department of Physics, University of Basel, Basel, Switzerland

### 1.12 Supervised Research Work

- University of Technology, Vienna, Austria  
Co-supervision of 3 diploma theses, 1989–1992  
Co-supervision of 2 PhD students, 1991–1994
- University of Mainz, Germany  
Co-supervision of 1 PhD student, 1993–1995

- University of Basel, Switzerland  
Co-supervision of 3 diploma theses, 1997–1999, 2012/13  
Co-supervision of 3 PhD students, 1997–1999, 2012–2016 (2)  
Supervision of 6 diploma theses, 2000–’01, 2001–’02, 2004–’05, 2006, 2007/8, 2011/12  
Supervision of 5 PhD students, 2001–2005, 2002–2006, 2007–2011 (2)
- École Nationale Supérieure de Géologie  
et Institut Nationale Polytechnique de Lorraine, Nancy, France  
Examineur (thesis jury member) (candidate: Nicolas Dauphas), 2002
- Groupe de Recherche en Astronomie et Astrophysique (GRAAL),  
Univ. de Montpellier 2, Montpellier, France  
Examineur (thesis jury member) (candidate: Patrick Vonlanthen), 2009

### 1.13 Received Funding

- Austrian National Science Foundation: 1992, Erwin Schrödinger fellowship, US\$ 25’000.00/yr
- Alexander von Humboldt Foundation, Germany: 1993, Alexander von Humboldt fellowship, research area *Astrophysics*, DM 70’400.00 (22 months) + travel expenses
- Austrian Academy of Sciences: 1995, APART fellowship, ATS 620’000.00/yr (3 yrs) + travel expenses
- Swiss National Science Foundation: 1999, PROFIL professorship (PROFIL Förderungsprofessur), “*Nuclear aspects of stellar and explosive nucleosynthesis*”, project number 2124-055832.98: CHF 384’000.00 (3 yrs., renewable)
- Swiss National Science Foundation: 2000, research grant, project number 2000-061822.00: CHF 544’000.00 (2 yrs.)
- Swiss National Science Foundation: 2002, research grant “*Theoretical Astrophysics and Supporting Topics in Nuclear Physics*” (joint PI with F.-K. Thielemann), project number 2000-061031.02: CHF 540’000.00 (2 yrs., renewable)
- Swiss National Science Foundation: 2002, extension of PROFIL professorship (PROFIL Förderungsprofessur), project number 2024-067428: CHF 270’000.00 (2 yrs.)
- Swiss National Science Foundation: 2004, research grant (joint PI with F.-K. Thielemann), project number 2000-105328: CHF 550’000.00 (2 yrs., renewable)
- Swiss National Science Foundation: 2006, research grant “*Astrophysical processes, their simulation and related nuclear physics issues*” (joint PI with F.-K. Thielemann, M. Liebendörfer), project number 200020-113984: CHF 544’000.00 (2 yrs., renewable)
- Swiss National Science Foundation: 2008, research grant (joint PI with F.-K. Thielemann, M. Liebendörfer), project number 200020-122287: CHF 682’000.00 (2 yrs., renewable)

- Royal Society: 2009, International Joint Project, with Keele Univ., UK (R. Hirschi): GBP 10'530 (2 yrs.)
- Swiss National Science Foundation: 2010, research grant (joint PI with F.-K. Thielemann, M. Liebendörfer, M. Pignatari), project number 200020-132816: CHF 708'172.00 (2 yrs., renewable)
- Hungarian Academy of Sciences: 2012, Distinguished Researcher Fellowship, HUF 2'500'000 per month (6 months)
- Science & Technology Facilities Council, UK (astronomy panel): 2014, PI of STFC grant "*BRIDGCE: The Rise of the Chemical Elements*", GBP 303'902 (3 yrs.)





## 2 References

- Prof. Dr. Friedrich-Karl Thielemann  
Departement für Physik, Univ. Basel  
4056 Basel, Switzerland  
F-K.Thielemann@unibas.ch
- Prof. Dr. Michael Wiescher  
Department of Physics  
University of Notre Dame  
Notre Dame, IN 46556, USA  
wiescher.1@nd.edu
- Prof. Dr. Stanford E. Woosley  
Dep. of Astronomy and Astrophysics  
University of California at Santa Cruz  
Santa Cruz, CA 95064, USA  
woosley@ucolick.org
- Prof. Dr. Roberto Gallino  
Dipartimento di Fisica  
Univ. di Torino  
10125 Torino, Italy  
gallino@ph.unito.it
- Prof. Dr. John J. Cowan  
Dep. of Physics and Astronomy  
University of Oklahoma  
Norman, OK 73019, USA  
cowan@mail.nhn.ou.edu
- Prof. Dr. Klaus Blaum  
Max-Planck-Institut für Kernphysik  
and University of Heidelberg  
69117 Heidelberg  
klaus.blaum@mpi-hd.mpg.de
- Prof. Dr. Jacek Dobaczewski  
Institute of Theoretical Physics  
Warsaw University  
PL-00-681 Warsaw, Poland  
Jacek.Dobaczewski@fuw.edu.pl
- Dr. Zsolt Fülöp  
Director  
MTA Institute for Nuclear Research  
(ATOMKI)  
H-4026 Debrecen, Hungary  
zsolt.fulop@atomki.hu
- Prof. Dr. Hendrik Schatz  
NSCL  
Michigan State University  
East Lansing, MI 48824, USA  
schatz@nscl.msu.edu
- Prof. Dr. James W. Truran  
Dep. of Astronomy and Astrophysics  
University of Chicago  
Chicago, IL 60637, USA  
truran@nova.uchicago.edu
- Prof. Dr. Eva Grebel  
Astronomisches Recheninstitut  
Universität Heidelberg  
69120 Heidelberg, Germany  
grebel@ari.uni-heidelberg.de



## 3 Publications

Total number of publications listed here: 628, citations: over 10300.

(According to ISI Web of Science; it should be noted that the NASA ADS citations do not include all of the relevant journals!)

For a more update on-line list of publications with electronic links to preprints see <http://thomasrauscher.ch/pubs.html>.

### 3.1 Citation Analyses

#### 3.1.1 h-Index

Currently  $h=47$ ,  $m=1.84$  for *refereed citations* according to ISI Web of Science. <sup>1</sup>

Values from other sources:

- NASA ADS: more than 9668 citations, h-index 47;
- Google Scholar: more than 14500 citations, h-index 57, i10-index 203.

#### 3.1.2 Appearance in Essential Science Indicators

Papers quoted in the ISI Essential Science Indicators (based on the ISI Science Citation Index) are among the most cited papers in the field (top 1%).

- **Highly cited papers** (Top 1% in their fields over a number of years according to ESI!)
  - **Astrophysical Reaction Rates From Statistical Model Calculations**, T. Rauscher, F.-K. Thielemann; *At. Data Nucl. Data Tables* **75** (2000) 1.
  - **Nucleosynthesis in Massive Stars With Improved Nuclear and Stellar Physics**, T. Rauscher, A. Heger, R. D. Hoffman, S. E. Woosley; *Astrophys. J.* **576** (2002) 323.
  - **Neutron Cross Sections for Nucleosynthesis Studies**, Z. Y. Bao, H. Beer, F. Käppeler, F. Voss, K. Wisshak, T. Rauscher; *At. Data Nucl. Data Tables* **76** (2000) 70.
  - **Endpoint of the rp-Process on Accreting Neutron Stars**, H. Schatz, A. Aprahamian, V. Barnard, L. Bildsten, A. Cummings, M. Ouellette, T. Rauscher, F.-K. Thielemann, M. Wiescher; *Phys. Rev. Lett.* **86** (2001) 3471.

---

<sup>1</sup>The h-index is defined and discussed in “An index to quantify an individual's scientific research output” by J. E. Hirsch, *Proc. Nat. Acad. Sci.* **46** (2005) 16569 (arXiv:physics/0508025).

- Strangely, my currently sixth most cited paper (no. 20 in the list below) is not here. This may be due to the statistical weighting used in the ESI which emphasize the early citations a paper receives and the (somewhat arbitrary) division into different fields which penalizes scientists in interdisciplinary research. *Incidentally, it is the 4th most cited paper of all papers published in Physical Review C in 1997!*

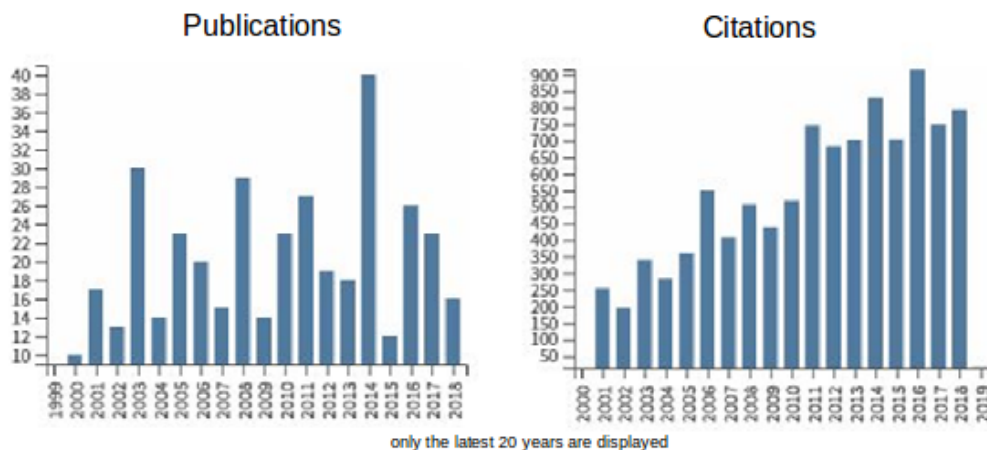
### 3.1.3 Web of Science Citation Analyses

ISI WEB OF KNOWLEDGE<sup>SM</sup> data retrieved January 6, 2019; my publication list below is more recent and more complete and therefore shows more publications.

|                           |       |
|---------------------------|-------|
| Publications              | 476   |
| Total Citations           | 10301 |
| Average Citation per Item | 24.18 |
| h-Index                   | 47    |

See also my ResearcherID page at <http://www.researcherid.com/rid/D-2086-2009> for updated statistics!

#### 3.1.3.1 Analysis by Year



(continued on next page)

## 3.1.3.2 Top 10 Publications by Citation

|   | 2015 | 2016 | 2017 | 2018 | 2019 | Total | Average Citations per Year |
|---|------|------|------|------|------|-------|----------------------------|
|   | 703  | 915  | 748  | 793  | 15   | 10301 | 381.52                     |
| 1. <a href="#">Nucleosynthesis in massive stars with improved nuclear and stellar physics</a><br>By: Rauscher, T; Heger, A; Hoffman, RD; et al.<br>ASTROPHYSICAL JOURNAL Volume: 576 Issue: 1 Pages: 323-348 Part: 1 Published: SEP 1 2002  | 41   | 52   | 23   | 48   | 1    | 635   | 35.28                      |
| 2. <a href="#">Astrophysical reaction rates from statistical model calculations</a><br>By: Rauscher, T; Thielemann, FK<br>ATOMIC DATA AND NUCLEAR DATA TABLES Volume: 75 Issue: 1-2 Pages: 1-351 Published: MAY-JUL 2000  | 33   | 34   | 33   | 32   | 0    | 598   | 29.90                      |
| 3. <a href="#">rp-process nucleosynthesis at extreme temperature and density conditions</a><br>By: Schatz, H; Aprahamian, A; Gorres, J; et al.<br>PHYSICS REPORTS-REVIEW SECTION OF PHYSICS LETTERS Volume: 294 Issue: 4 Pages: 167-263 Published: FEB 1998   | 17   | 31   | 24   | 19   | 1    | 542   | 24.64                      |
| 4. <a href="#">End point of the rp process on accreting neutron stars</a><br>By: Schatz, H; Aprahamian, A; Barnard, V; et al.<br>PHYSICAL REVIEW LETTERS Volume: 86 Issue: 16 Pages: 3471-3474 Published: APR 16 2001   | 15   | 20   | 20   | 20   | 0    | 387   | 20.37                      |
| 5. <a href="#">Neutron cross sections for nucleosynthesis studies</a><br>By: Bao, ZY; Beer, H; Kappeler, F; et al.<br>ATOMIC DATA AND NUCLEAR DATA TABLES Volume: 76 Issue: 1 Pages: 70-154 Published: SEP 2000   | 16   | 23   | 15   | 12   | 0    | 385   | 19.25                      |
| 6. <a href="#">THE JINA REACLIB DATABASE: ITS RECENT UPDATES AND IMPACT ON TYPE-I X-RAY BURSTS</a><br>By: Cyburt, Richard H.; Amthor, A. Matthew; Ferguson, Ryan; et al.<br>ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES Volume: 189 Issue: 1 Pages: 240-252 Published: JUL 2010   | 34   | 48   | 39   | 43   | 0    | 282   | 28.20                      |
| 7. <a href="#">Nuclear level density and the determination of thermonuclear rates for astrophysics</a><br>By: Rauscher, T; Thielemann, FK; Kratz, KL<br>PHYSICAL REVIEW C Volume: 56 Issue: 3 Pages: 1613-1625 Published: SEP 1997  | 13   | 8    | 9    | 9    | 0    | 274   | 11.91                      |
| 8. <a href="#">Models for Type I X-ray bursts with improved nuclear physics</a><br>By: Woosley, SE; Heger, A; Cumming, A; et al.<br>ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES Volume: 151 Issue: 1 Pages: 75-102 Published: MAR 2004  | 11   | 14   | 17   | 12   | 1    | 226   | 14.13                      |
| 9. <a href="#">Tables of nuclear cross sections and reaction rates: An addendum to the paper "Astrophysical reaction rates from statistical model calculations"</a><br>By: Rauscher, T; Thielemann, FK<br>ATOMIC DATA AND NUCLEAR DATA TABLES Volume: 79 Issue: 1 Pages: 47-64 Published: SEP 2001                                      | 16   | 10   | 7    | 8    | 0    | 221   | 11.63                      |
| 10. <a href="#">The astrophysical r-process: A comparison of calculations following adiabatic expansion with classical calculations based on neutron densities and temperatures</a><br>By: Freiburghaus, C; Rembges, JF; Rauscher, T; et al.<br>ASTROPHYSICAL JOURNAL Volume: 516 Issue: 1 Pages: 381-398 Part: 1 Published: MAY 1 1999 | 8    | 3    | 6    | 4    | 0    | 196   | 9.33                       |



## 3.2 Full Publication Lists

### 3.2.1 Publications in Journals

1. **Cross Sections for the d+d Fusion Reactions**, K. Grün, H. Krauss, T. Rauscher, H. Oberhummer, G. Raimann, K. Langanke, T. Warmann; *Muon Catalysed Fusion* **5/6** (1991) 505.
2. **Direct Nuclear Reactions in Cosmic Nucleosynthesis**, G. Raimann, H. Abele, G. Staudt, B. Bach, K. Grün, H. Herndl, H. Krauss, H. Oberhummer, T. Rauscher; *Annales Geophysicae* **9** (1991) C369.
3. **Analyses of  $^8\text{Li}(\alpha, n)^{11}\text{B}$  below the Coulomb Barrier in the Potential Model**, T. Rauscher, K. Grün, H. Krauss, H. Oberhummer, E. Kwaśniewicz; *Phys. Rev. C* **45** (1992) 1996.
4. **Calculation of the  $^3\text{He}(^3\text{He}, 2p)^4\text{He}$  and  $^3\text{H}(^3\text{H}, 2n)^4\text{He}$  Astrophysical S-Factor at Low Energies**, S. Winkler, H. Krauss, K. Grün, T. Rauscher, H. Oberhummer, H. Abele, G. Staudt; *J. Phys. G* **18** (1992) L147.
5. **The Astrophysical S-Factor of the Reaction  $^7\text{Be}(p, \gamma)^8\text{B}$  in the Direct Capture Model**, H. Krauss, K. Grün, T. Rauscher, H. Oberhummer; *Ann. Phys.* **505** (1993) 258.
6. **Reaction Mechanisms for Astrophysically Relevant Nuclear Processes**, H. Oberhummer, T. Rauscher; *Sov. Journ. of Physics* **56** (1993) 106.
7. **Production of Heavy Elements in Inhomogeneous Cosmologies**, T. Rauscher, J.H. Applegate, J.J. Cowan, F.-K. Thielemann, M. Wiescher; *Ap. J.* **429** (1994) 499.
8. **Alpha Clustering and the Stellar Nucleosynthesis of Carbon**, H. Oberhummer, H. Krauss, K. Grün, T. Rauscher, H. Abele, P. Mohr, G. Staudt; *Z. Phys. A* **349** (1994) 241.
9. **Astrophysics and Nuclei far from Stability**, F.-K. Thielemann, K.-L. Kratz, B. Pfeiffer, T. Rauscher, L. van Wormer, M. Wiescher; *Nucl. Phys.* **A570** (1994) 329.
10. **Study of Short-Lived Silver Isotopes with a Laser Ion Source**, V.N. Fedoseyev, Y. Jading, O.C. Jonsson, R. Kirchner, K.-L. Kratz, M. Krieg, E. Kugler, J. Lettry, T. Mehren, V.I. Mishin, T. Rauscher, H.L. Ravn, F. Scheerer, O. Tengblad, P. Van Duppen, A. Wöhr, and the ISOLDE Collaboration; *Z. Phys. A* **353** (1995) 9.
11. **Reaction Rates for  $^{146}\text{Sm}$  Production in Supernovae**, T. Rauscher, F.-K. Thielemann, H. Oberhummer; *Ap. J. Lett.* **451** (1995) L37.
12. **Direct Neutron Capture for Magic-Shell Nuclei**, E. Kraussmann, W. Balogh, H. Oberhummer, T. Rauscher, K.-L. Kratz, W. Ziegert; *Phys. Rev. C* **53** (1996) 469.

13. **Astrophysical Reaction Rates for  $^{10}\text{B}(\text{p},\alpha)^7\text{Be}$  and  $^{11}\text{B}(\text{p},\alpha)^8\text{Be}$  From A Direct Model**, T. Rauscher, G. Raimann; *Phys. Rev. C* **53** (1996) 2496.
14. **Neutron-Induced Nucleosynthesis**, H. Oberhummer, H. Herndl, T. Rauscher, H. Beer; *Surveys in Geophysics* **17** (1996) 665.
15.  **$^{70}\text{Ge}(\alpha,\gamma)^{74}\text{Se}$  cross section measurements at energies of astrophysical interest**, Zs. Fülöp, A.Z. Kiss, E. Somorjai, C.E. Rolfs, H.P. Trautvetter, T. Rauscher, H. Oberhummer; *Z. Phys. A* **355** (1996) 203.
16. **The Nuclear Level Density and the Determination of Thermonuclear Rates for Astrophysics**, T. Rauscher, F.-K. Thielemann, K.-L. Kratz; *Memorie Della Società Astronomica Italiana* **67** (1996) 851.
17. **Neutron-rich Isotopes  $^{54-57}\text{Ti}$** , T. Dörfler, W.-D. Schmidt-Ott, T. Hild, T. Mehren, W. Böhmer, P. Möller, B. Pfeiffer, T. Rauscher, K.-L. Kratz, O. Sorlin, V. Borrel, S. Grévy, D. Guillemaud-Mueller, A.C. Mueller, F. Pougheon, R. Anne, M. Lewitowicz, A. Ostrowsky, M. Robinson, M.G. Saint-Laurent; *Phys. Rev. C* **54** (1996) 2894.
18. **Uncertainties in Direct Neutron Capture Calculations Due to Nuclear Structure Models**, T. Rauscher, K.-L. Kratz, H. Oberhummer, J. Dobaczewski, P. Möller, M.M. Sharma; *Nucl. Phys.* **A621** (1997) 327c.
19. **Applicability of the Hauser-Feshbach Approach for the Determination of Astrophysical Reaction Rates**, T. Rauscher, F.-K. Thielemann, K.-L. Kratz; *Nucl. Phys.* **A621** (1997) 331c.
20. **Nuclear Level Density and the Determination of Thermonuclear Rates for Astrophysics**, T. Rauscher, F.-K. Thielemann, K.-L. Kratz; *Phys. Rev. C* **56** (1997) 1613.
21. **The Endpoint of the rp-Process**, H. Schatz, A. Aprahamian, B.A. Brown, J. Görres, H. Herndl, K.-L. Kratz, P. Möller, B. Pfeiffer, T. Rauscher, J.F. Rembges, F.-K. Thielemann, M. Wiescher, L. van Wormer; *Nucl. Phys.* **A621** (1997) 417c.
22.  **$^{144}\text{Sm}-\alpha$  Optical Potential at Astrophysically Relevant Energies Derived From  $^{144}\text{Sm}(\alpha,\alpha)^{144}\text{Sm}$  Elastic Scattering**, P. Mohr, T. Rauscher, H. Oberhummer, Z. Maté, Zs. Fülöp, E. Somorjai, M. Jaeger, G. Staudt; *Phys. Rev. C* **55** (1997) 1523.
23. **An Approximation For The rp-Process**, F. Rembges, C. Freiburghaus, T. Rauscher, F.-K. Thielemann, H. Schatz, M. Wiescher; *Ap. J.* **484** (1997) 412.
24. **The r-Process in the High Entropy Bubble**, C. Freiburghaus, T. Rauscher, F.-K. Thielemann, K.-L. Kratz, B. Pfeiffer; *Nucl. Phys.* **A621** (1997) 405c.
25. **rp-Process Nucleosynthesis at Extreme Temperature and Density Conditions**, H. Schatz, A. Aprahamian, J. Görres, M. Wiescher, T. Rauscher, J.F. Rembges, F.-K. Thielemann, B. Pfeiffer, P. Möller, K.-L. Kratz, H. Herndl, B.A. Brown, H. Rebel; *Phys. Rep.* **294** (1998) 167.



26. **Dependence of Direct Neutron Capture on Nuclear Structure Models**, T. Rauscher, R. Bieber, H. Oberhummer, K.-L. Kratz, J. Dobaczewski, P. Möller, M.M. Sharma; *Phys. Rev. C* **57** (1998) 2031.
27. **Experimental Cross Sections of  $^{144}\text{Sm}(\alpha,\gamma)^{148}\text{Gd}$  and Implications For The p-Process**, E. Somorjai, Zs. Fülöp, A.Z. Kiss, C.E. Rolfs, H.P. Trautvetter, U. Greife, M. Junker, S. Goriely, M. Arnould, M. Rayet, T. Rauscher, H. Oberhummer; *Astron. Astrophys.* **333** (1998) 1112.
28. **First  $\beta$ -Decay Studies of the Neutron-Rich Isotopes  $^{53-55}\text{Sc}$  and  $^{56-59}\text{V}$** , O. Sorlin, V. Borrel, S. Grévy, D. Guillemaud-Mueller, A.C. Mueller, F. Pougheon, W. Böhmer, K.-L. Kratz, T. Mehren, P. Möller, B. Pfeiffer, T. Rauscher, M.G. Saint-Laurent, R. Anne, M. Lewitowicz, A. Ostrowski, T. Dörfler, W.-D. Schmidt-Ott; *Nucl. Phys.* **A632** (1998) 205.
29. **Proton Capture Cross Sections of Ruthenium Isotopes**, J. Bork, H. Schatz, F. Käppeler, T. Rauscher; *Phys. Rev. C* **58** (1998) 524.
30. **Neutron Capture Cross Section of  $^{44}\text{Ti}$** , R. Ejnisman, I.D. Goldman, K.S. Krane, P. Mohr, Y. Nakazawa, E.B. Norman, T. Rauscher, J. Reel; *Phys. Rev. C* **58** (1998) 2531.
31. **Explosive Nucleosynthesis Close to the Drip Lines**, F.-K. Thielemann, C. Freiburghaus, T. Rauscher, F. Rembgas, S. Rosswog, B. Pfeiffer, K.-L. Kratz, H. Schatz, M. Wiescher; *Acta Physica Polonica* **B 29** (1998) 3503.
32. **The Astrophysical r-Process: A Comparison of Calculations Following Adiabatic Expansions with Calculations Based on Neutron Densities and Temperatures**, C. Freiburghaus, F. Rembgas, T. Rauscher, E. Kolbe, F.-K. Thielemann, K.-L. Kratz, B. Pfeiffer, J.J. Cowan; *Ap. J.* **516** (1999) 381.
33. **Stellar Neutron Capture Cross Sections of Pr and Dy Isotopes**, F. Voss, K. Wisshak, C. Arlandini, F. Käppeler, L. Kazakov, T. Rauscher; *Phys. Rev. C* **59** (1999) 1154.
34. **Reaction Rate Sensitivity of Nucleosynthesis in Type II Supernovae**, R.D. Hoffman, S.E. Woosley, T.A. Weaver, T. Rauscher, F.-K. Thielemann; *Ap. J.* **521** (1999) 735.
35. **Measurements of Proton Radiative Capture Cross Sections Relevant to the Astrophysical rp- and  $\gamma$ -Processes**, F.R. Chloupek, A.St J. Murphy, R.N. Boyd, A.L. Cole, J. Görres, R.T. Guray, G. Raimann, J.J. Zach, T. Rauscher, J.V. Schwarzenberg, P. Tischhauser, M.C. Wiescher; *Nucl. Phys.* **A652** (1999) 391.
36. **Astrophysical Reaction Rates From Statistical Model Calculations**, T. Rauscher, F.-K. Thielemann; *At. Data Nucl. Data Tabl.* **75** (2000) 1.
37. **Neutron Cross Sections for Nucleosynthesis Studies**, Z.Y. Bao, H. Beer, F. Käppeler, F. Voss, K. Wisshak, T. Rauscher; *At. Data Nucl. Data Tabl.* **76** (2000) 70.

38. **Capture of  $\alpha$  Particles by Isospin-Symmetric Nuclei**, T. Rauscher, F.-K. Thielemann, J. Görres, M. Wiescher; *Nucl. Phys.* **A675** (2000) 695.
39. **Experimental Simulation Of A Stellar Photon Bath By Bremsstrahlung**, P. Mohr, K. Vogt, M. Babilon, J. Enders, T. Hartmann, C. Hutter, T. Rauscher, S. Volz, A. Zilges; *Phys. Lett. B* **488** (2000) 127.
40.  **$^{147}\text{Sm}(n,\alpha)$  cross section measurements from 3 eV to 500 keV: Implications for explosive nucleosynthesis reaction rates**, Yu.M. Gledenov, P.E. Koehler, J. Andrzejewski, K.H. Guber, T. Rauscher; *Phys. Rev. C* **62** (2000) 042801(R).
41. **High resolution neutron capture and transmission measurements and the stellar neutron capture cross section of  $^{88}\text{Sr}$** , P.E. Koehler, R.R. Winters, K.H. Guber, T. Rauscher, J.A. Harvey, S. Raman, R.R. Spencer, J.C. Blackmon, D.C. Larson, D.W. Bardayan, T.A. Lewis; *Phys. Rev. C* **62** (2000) 055803.
42. **Endpoint of the rp Process on Accreting Neutron Stars**, H. Schatz, A. Aprahamian, V. Barnard, L. Bildsten, A. Cummings, M. Ouellette, T. Rauscher, F.-K. Thielemann, M. Wiescher; *Phys. Rev. Lett.* **86** (2001) 3471.
43. **Improving Explosive Nucleosynthesis Models Via  $(n,\alpha)$  Measurements**, P.E. Koehler, Yu.M. Gledenov, J. Andrzejewski, K.H. Guber, T. Rauscher; *Nucl. Phys.* **A688** (2001) 86.
44. **Proton Capture Cross Section of Sr Isotopes**, Gy. Gyürky, E. Somorjai, T. Rauscher, S. Harissopoulos; *Nucl. Phys.* **A688** (2001) 90.
45. **The Endpoint of the rp Process on Accreting Neutron Stars**, H. Schatz, A. Aprahamian, V. Barnard, L. Bildsten, A. Cummings, M. Ouellette, T. Rauscher, F.-K. Thielemann, M. Wiescher; *Nucl. Phys.* **A688** (2001) 150.
46. **Nucleosynthesis in Massive Stars Revisited**, T. Rauscher, A. Heger, R.D. Hoffman, S. E. Woosley *Nucl. Phys.* **A688** (2001) 193.
47.  **$\alpha$ - and neutron-induced reactions on ruthenium**, W. Rapp, H.-J. Brede, R. Heil, D. Hentschel, F. Käppeler, H. Klein, R. Reifarth, T. Rauscher; *Nucl. Phys.* **A688** (2001) 427.
48. **Measurement of the  $(\gamma,\alpha)$  reaction rates of the nuclides  $^{190}\text{Pt}$ ,  $^{192}\text{Pt}$ , and  $^{198}\text{Pt}$  in the astrophysical  $\gamma$ -process**, K. Vogt, P. Mohr, M. Babilon, J. Enders, T. Hartmann, C. Hutter, T. Rauscher, S. Volz, A. Zilges; *Phys. Rev. C* **63** (2001) 055802.
49. **Element Synthesis in Stars**, F.-K. Thielemann, F. Brachwitz, C. Freiburghaus, E. Kolbe, G. Martinez-Pinedo, T. Rauscher, F. Rembges, W.R. Hix, M. Liebendörfer, A. Mezzacappa, K.-L. Kratz, B. Pfeiffer, K. Langanke, K. Nomoto, S. Rosswog, H. Schatz, M. Wiescher; *Prog. Part. Nucl. Phys.* **46** (2001) 5.

50. **s-Process Branchings at  $^{151}\text{Sm}$ ,  $^{154}\text{Eu}$ , and  $^{163}\text{Dy}$** , J. Best, H. Stoll, C. Arlandini, S. Jaag, F. Käppeler, K. Wisshak, A. Mengoni, G. Reffo, T. Rauscher; *Phys. Rev. C* **64** (2001) 015801.
51. **Erratum: High-resolution neutron capture and transmission measurements, and the stellar neutron-capture cross section of  $^{88}\text{Sr}$** , P.E. Koehler, R.R. Winters, K.H. Guber, T. Rauscher, J.A. Harvey, S. Raman, R.R. Spencer, J.C. Blackmon, D.C. Larson, D.W. Bardayan, T.A. Lewis; *Phys. Rev. C* **64** (2001) 049901.
52. **Cross Section Measurements of the  $^{93}\text{Nb}(p,\gamma)^{94}\text{Mo}$  Reaction at  $E_p = 1.4 - 4.9$  MeV Relevant to the Nucleosynthetic p-Process**, S. Harissopulos, E. Skreti, P. Tsagari, G. Souliotis, P. Demetriou, T. Paradellis, J.W. Hammer, R. Kunz, C. Angulo, S. Goriely, T. Rauscher; *Phys. Rev. C* **64** (2001) 055804.
53. **Tables of Cross Sections and Reaction Rates: an Addendum to “Astrophysical Reaction Rates From Statistical Model Calculations”**, T. Rauscher, F.-K. Thielemann; *At. Data Nucl. Data Tabl.* **79** (2001) 47.
54. **Proton Capture Cross Section of Sr Isotopes And Their Importance for Nucleosynthesis of Proton-Rich Nuclides**, Gy. Gyürky, E. Somorjai, Zs. Fülöp, S. Harissopulos, P. Demetriou, T. Rauscher; *Phys. Rev. C* **64** (2001) 065803.
55.  **$^{92}\text{Mo}(\alpha,\alpha)^{92}\text{Mo}$  scattering, the  $^{92}\text{Mo}-\alpha$  optical potential, and the  $^{96}\text{Ru}(\gamma,\alpha)^{92}\text{Mo}$  reaction rate at astrophysically relevant energies**, Zs. Fülöp, Gy. Gyürky, Z. Máté, E. Somorjai, L. Zolnai, D. Galaviz, M. Babilon, P. Mohr, A. Zilges, T. Rauscher, H. Oberhummer, G. Staudt; *Phys. Rev. C* **64** (2001) 065805.
56. **Nuclear Astrophysics**, T. Rauscher, F.-K. Thielemann; *Europhysics News* **32** (2001) 224.
57. **On the Origin of the Ca-Ti-Cr Isotopic Anomalies in the Inclusion EK-1-4-1 of the Allende Meteorite**, K.-L. Kratz, W. Böhmer, C. Freiburghaus, P. Möller, B. Pfeiffer, T. Rauscher, F.-K. Thielemann; *Mem. Soc. Astron. It.* **72** No.2 (2001).
58. **New Maxwellian Average Neutron Capture Cross Sections for  $^{35,37}\text{Cl}$** , K.H. Guber, R.O. Sayer, T.E. Valentine, L.C. Leal, R.R. Spencer, P.E. Koehler, J.A. Harvey, T. Rauscher; *Phys. Rev. C* **65** (2002) 058801.
59. **Heavy Elements and Age Determinations**, F.-K. Thielemann, P. Hauser, E. Kolbe, G. Martinez-Pinedo, T. Rauscher, K.-L. Kratz, B. Pfeiffer, S. Rosswog, M. Liebendörfer, A. Mezzacappa; *Space Science Rev.* **100** (2002) 277.
60. **Nucleosynthesis and Stellar Evolution**, F.-K. Thielemann, D. Argast, F. Brachwitz, G. Martinez-Pinedo, T. Rauscher, M. Liebendörfer, A. Mezzacappa, P. Höflich, K. Nomoto; *Astrophys. Space Sci.* **281** (2002) 25.
61. **Massive Star Evolution: Nucleosynthesis and Nuclear Reaction Rate Uncertainties**, A. Heger, S.E. Woosley, T. Rauscher, R.D. Hoffman, M.M. Boyes; *New Astronomy Reviews* **46** (2002) 463.

62. **The  $^{45}\text{V}(p,\gamma)$  thermonuclear reaction rate relevant to  $^{44}\text{Ti}$  production in core-collapse supernovae: general estimates and shell model analyses**, M. Horoi, R. Jora, V. Zelevinsky, A.St J. Murphy, R.N. Boyd, T. Rauscher, *Phys. Rev. C* **66** (2002) 015801.
63. **Alpha and Neutron Induced Reactions on Ruthenium Isotopes**, W. Rapp, H.J. Brede, M. Heil, D. Hentschel, F. Käppeler, H. Klein, R. Reifarh, T. Rauscher; *Phys. Rev. C* **66** (2002) 015803.
64. **Direct neutron capture cross sections of  $^{62}\text{Ni}$  in the  $s$ -process energy range**, T. Rauscher, K. H. Guber; *Phys. Rev. C* **66** (2002) 028802.
65. **Measurement of the  $(\gamma,n)$  cross section of the nucleus  $^{197}\text{Au}$  close above the reaction threshold**, K. Vogt, P. Mohr, M. Babilon, W. Bayer, T. Hartmann, C. Hutter, T. Rauscher, K. Sonnabend, S. Volz, A. Zilges; *Nucl. Phys.* **A707** (2002) 241.
66. **Nucleosynthesis in Massive Stars With Improved Nuclear and Stellar Physics**, T. Rauscher, A. Heger, R. D. Hoffman, S. E. Woosley; *Ap. J.* **576** (2002) 323.
67. **Neutron Capture of  $^{30}\text{Si}$** , H. Beer, P. V. Sedyshev, W. Rochow, T. Rauscher, P. Mohr; *Nucl. Phys.* **A709** (2002) 453.
68. **Neutron-Induced Fission Cross-Section Measurements Between 1 eV and 250 MeV**, C. Stephan, L. Ferrant, B. Berthier, S. David, L. Tassan-Got, C. O. Bacri, F. Rejmund, C. Moreau, and The n\_TOF Collaboration; *J. Nucl. Sci. Techn. (Suppl.)* **2** (2002) 276.
69. **New Results on Nucleosynthesis in Massive Stars; Nuclear Data Needs for Nucleosynthesis**, R. Hoffman, T. Rauscher, A. Heger, S. Woosley; *J. Nucl. Sci. Techn. (Suppl.)* **2** (2002) 512.
70. **Cross Section Measurements of  $^{102}\text{Pd}(p,\gamma)^{103}\text{Ag}$ ,  $^{116}\text{Sn}(p,\gamma)^{117}\text{Sb}$ , and  $^{112}\text{Sn}(\alpha,\gamma)^{116}\text{Te}$  Relevant to the Astrophysical  $rp$ - and  $\gamma$ -Processes**, N. özkan, A.StJ. Murphy, R.N. Boyd, A.L. Cole, R. deHaan, M. Famiano, J. Görres, R.T. Güray, M. Howard, M.S. Islam, T. Rauscher, L. Sahin, M.C. Wiescher, J.J. Zach; *Nucl. Phys.* **A710** (2002) 469.
71. **Stellar Neutron Capture on Promethium – Implications for the  $s$ -Process Neutron Density**, R. Reifarh, C. Arlandini, M. Heil, F. Käppeler, P. V. Sedyshev, A. Mengoni, M. Herman, T. Rauscher, R. Gallino, C. Travaglio; *Ap. J.* **582** (2003) 1251.
72. **The  $s$ -process branchings at  $^{185}\text{W}$** , K. Sonnabend, P. Mohr, K. Vogt, A. Zilges, A. Mengoni, T. Rauscher, H. Beer, F. Käppeler, R. Gallino; *Ap. J.* **583** (2003) 506.
73. **Astrophysical Reaction Rate for the  $^8\text{Li}(n,\gamma)^9\text{Li}$  Reaction**, H. Kobayashi, K. Ieki, A. Horvath, A. Galonsky, N. Carlin, F. Deak, T. Gomi, V. Guimaraes, Y. Higurashi, Y. Iwata, A. Kiss, J.J. Kolata, T. Rauscher, H. Schelin, Z. Seres, R. Warner; *Phys. Rev. C* **67** (2003) 015806.

74. **Nuclear Data Needs for the Study of Nucleosynthesis in Massive Stars**, S.E. Woosley, A. Heger, T. Rauscher, R.D. Hoffman; *Nucl. Phys.* **A718** (2003) 3.
75. **Nuclear cross sections, nuclear structure, and stellar nucleosynthesis**, F.-K. Thielemann, D. Argast, F. Brachwitz, W. R. Hix, P. Höflich, M. Liebendörfer, G. Martinez-Pinedo, A. Mezzacappa, I. Panov, T. Rauscher; *Nucl. Phys.* **A718** (2003) 139.
76. **Nucleosynthesis of Heavy Elements in Massive Stars**, A. Heger, S. E. Woosley, K. Langanke, E. Kolbe, T. Rauscher, R.D. Hoffman; *Nucl. Phys.* **A718** (2003) 159.
77. **Photoreactions in Nuclear Astrophysics**, P. Mohr, T. Rauscher, K. Sonnabend, K. Vogt, A. Zilges; *Nucl. Phys.* **A718** (2003) 243.
78. **Prediction of Astrophysical Reaction Rates as a Challenge to Nuclear Physics**, T. Rauscher, K.H. Guber, C. Fröhlich; *Nucl. Phys.* **A718** (2003) 347.
79. **Hydrostatic and Explosive Nucleosynthesis in Massive Stars Using Improved Nuclear and Stellar Physics**, T. Rauscher, A. Heger, R.D. Hoffman, S.E. Woosley; *Nucl. Phys.* **A718** (2003) 463.
80. **The  $^{45}\text{V}(p,\gamma)$  thermonuclear reaction rate relevant to  $^{44}\text{Ti}$  production rates in core-collapse supernovae: a shell-model analysis**, M. Horoi, R. Jora, V. Zelevinsky, A.St.J. Murphy, R.N. Boyd, T. Rauscher; *Nucl. Phys.* **A718** (2003) 502.
81. **The  $^{208}\text{Pb}(n,\gamma)$  Cross Section**, H. Beer, W. Rochow, F. Käppeler, T. Rauscher; *Nucl. Phys.* **A718** (2003) 518.
82. **Determination of the  $(n,\gamma)$  reaction rate of unstable  $^{185}\text{W}$  in the astrophysical-process via its inverse reaction**, K. Sonnabend, A. Mengoni, P. Mohr, T. Rauscher, K. Vogt, A. Zilges; *Nucl. Phys.* **A718** (2003) 533.
83. **Determination of  $(\gamma,n)$  reaction rates for the astrophysical  $\gamma$ -process**, K. Vogt, P. Mohr, T. Rauscher, K. Sonnabend, A. Zilges; *Nucl. Phys.* **A718** (2003) 575.
84.  **$\alpha$ -Nucleus Potentials and Photon-Induced Nucleosynthesis**, D. Galaviz, M. Babilon, Zs. Fülöp, Gy. Gyürky, Z. Mate, P. Mohr, T. Rauscher, E. Somorjai, A. Zilges, L. Zolnai; *Nucl. Phys.* **A718** (2003) 578.
85. **Se( $p,\gamma$ ) Cross Section Measurements for  $p$ -Process Studies**, Gy. Gyürky, Zs. Fülöp, E. Somorjai, Z. Elekis, M. Kokkoris, S. Galanopoulos, P. Demetriou, S. Harissopoulos, S. Goriely, T. Rauscher; *Nucl. Phys.* **A718** (2003) 599.
86. **Influence of Parity Dependence in the Nuclear Level Density on the Prediction of Astrophysical Reaction Rates**, D. Mocalj, T. Rauscher, G. Martinez-Pinedo, Y. Alhassid; *Nucl. Phys.* **A718** (2003) 650.
87. **Measurements of Astrophysical Neutron Capture Cross Sections via the Inverse Reaction**, A. Horvath, A. Galonsky, N. Carlin, F. Deak, T. Gomi, V.

- Guimaraes, Y. Higurashi, K. Hiroshi, K. Ieki, Y. Iwata, A. Kiss, J. Kolata, T. Rauscher, H. Schelin, J. von Schwarzenberg, Z. Seres, S. Takeuchi, S. Typel, R. Warner, J. Weiner; *Nucl. Phys.* **A719** (2003) 9.
88. **Evolution and Nucleosynthesis of Massive Stars and Related Nuclear Uncertainties**, T. Rauscher; *Nucl. Phys.* **A719** (2003) 73.
89. **Determination of  $\alpha$ -Nucleus Potentials by  $\alpha$ -Elastic Scattering and its Implications for the  $\gamma$ -Process**, D. Galaviz, M. Babilon, Zs. Fülöp, Gy. Gyürky, Z. Maté, R. Hillier, P. Mohr, T. Rauscher, E. Somorjai, A. Zilges, L. Zolnai; *Nucl. Phys.* **A719** (2003) 111.
90. **Determination of  $(n,\gamma)$  Reaction Rates at  $s$ -Process Branchings Points via Their Inverse Reactions**, K. Sonnabend, A. Mengoni, P. Mohr, T. Rauscher, K. Vogt, A. Zilges; *Nucl. Phys.* **A719** (2003) 123.
91. **Short-Lived  $p$ -Nuclides in the Early Solar System and Implications on the Nucleosynthetic Role of X-Ray Binaries**, N. Dauphas, T. Rauscher, B. Marty, L. Reisberg; *Nucl. Phys.* **A719** (2003) 287.
92. **The Origin of the Ca-Ti-Cr-Fe-Ni Isotopic Anomalies in the Inclusion EK-1-4-1 of the Allende Meteorite**, O. Sorlin, L. Gaudefroy, K.-L. Kratz, T. Rauscher; *C. R. Physique* **4** (2003) 541.
93. **Neutron Capture Reaction Rates for Silicon and Their Impact on the Origin of Presolar Mainstream SiC Grains**, K. H. Guber, P. E. Koehler, H. Derrien, T. E. Valentine, L. C. Leal, R. O. Sayer, T. Rauscher; *Phys. Rev. C* **67** (2003) 062802(R).
94. **Nuclear Partition Functions at Temperatures Beyond  $10^{10}$  K**, T. Rauscher; *Ap. J. Suppl.* **147** (2003) 403.
95. **Erratum to: Evolution and Nucleosynthesis of Massive Stars and Related Nuclear Uncertainties**, T. Rauscher; *Nucl. Phys.* **A725** (2003) 295.
96. **Observing Nucleon Decay in Lead Perchlorate**, R. N. Boyd, T. Rauscher, S. D. Reitzner, P. Vogel; *Phys. Rev. D* **68** (2003) 074014.
97. **Proton-Induced Reaction Cross Section Measurements on Se Isotopes for the Astrophysical  $p$ -Process**, Gy. Gyürky, Zs. Fülöp, E. Somorjai, I. Borbely-Kiss, M. Kokkoris, S. Galanopoulos, P. Demetriou, S. Harissopoulos, T. Rauscher, S. Goriely; *Phys. Rev. C* **68** (2003) 055803.
98. **Neutron cross-section measurements in the Th-U cycle by the activation method**, D. Karamanis, et al., and The n\_TOF Collaboration; *Nucl. Instr. Meth. A* **505** (2003) 381.
99. **Resonance Analysis of  $^{147}\text{Sm}(n,\alpha)$  Cross Sections: Comparison to Optical Model Calculations and Indications of Non-Statistical Effects**, P. E. Koehler, Yu. M. Gledenov, T. Rauscher, C. Fröhlich; *Phys. Rev. C* **69** (2004) 015803.

100. **Modelling the Nucleosynthesis of Massive Stars**, T. Rauscher; *New Astron. Rev.* **48** (2004) 3.
101. **Models for Type I X-Ray Bursts With Improved Nuclear Physics**, S. E. Woosley, A. Heger, A. Cumming, R. D. Hoffman, J. Pruet, T. Rauscher, J. Fisker, H. Schatz, B. A. Brown, M. Wiescher; *Ap. J. Suppl.* **151** (2004) 75.
102. **New Experimental Validation of the Pulse Height Weighting Technique for Capture Cross-Section Measurements**, U. Abbondanno, et al. (The n\_TOF Collaboration); *Nucl. Instrum. Meth. A* **521** (2004) 454.
103. **Sensitivity of C and O Production on the 3- $\alpha$  Rate**, H. Schlattl, A. Heger, H. Oberhummer, T. Rauscher, A. Csoto; *Astrophys. Space Sci.* **291** (2004) 27.
104. **A low background neutron flux monitor for the n\_TOF facility at CERN**, S. Marrone, et al., and The n\_TOF Collaboration; *Nucl. Instr. Meth. A* **517** (2004) 389.
105. **Neutron cross-section measurements at the n\_TOF facility at CERN**, N. Colonna and The n\_TOF Collaboration; *Nucl. Instr. Meth. B* **213** (2004) 49.
106. **A low-mass neutron flux monitor for the n\_TOF facility at CERN**, P. F. Mastino and The n\_TOF Collaboration; *Braz. J. Phys.* **34** (2004) 914.
107. **Predicted cross sections for photon-induced particle emission**, T. Rauscher, F.-K. Thielemann; *Atomic Data Nucl. Data Tables* **88** (2004) 1.
108. **Neutron Capture Cross Section Measurement of  $^{151}\text{Sm}$  at the CERN Neutron Time of Flight Facility (n\_TOF)**, U. Abbondanno, et al. (The n\_TOF Collaboration); *Phys. Rev. Lett.* **93** (2004) 161103.
109. **Time-energy relation of the n\_TOF neutron beam: energy standards revisited**, G. Lorusso and The n\_TOF Collaboration; *Nucl. Instr. Meth. A* **532** (2004) 622.
110. **Calculations of fission rates for r-process nucleosynthesis**, I. V. Panov, E. Kolbe, B. Pfeiffer, T. Rauscher, K.-L. Kratz, F.-K. Thielemann; *Nucl. Phys.* **A747** (2005) 633.
111. **The data acquisition system of the neutron time of flight facility n\_TOF at CERN**, U. Abbondanno, et al. (The n\_TOF Collaboration); *Nucl. Instr. Meth. A* **538** (2005) 692.
112. **Nuclear Physics: A Key Ingredient in Astrophysical Modeling**, F.-K. Thielemann, D. Argast, F. Brachwitz, J. L. Fisker, C. Fröhlich, R. Hirschi, E. Kolbe, D. Mocerlj, T. Rauscher; *Nucl. Phys.* **A751** (2005) 301.
113. **Erratum: Direct neutron capture cross sections of  $^{62}\text{Ni}$  in the s-process energy range [Phys. Rev. C **66**, 028802 (2002)]**, T. Rauscher, K. H. Guber; *Phys. Rev. C* **71** (2005) 059903.

114. **Parity Dependence in the Nuclear Level Density**, D. Mocolj, T. Rauscher, K. Langanke, G. Martinez-Pinedo, L. Pacearescu, A. Fässler, F.-K. Thielemann; *Nucl. Phys.* **A758** (2005) 154.
115. **Neutron Capture Cross Section Measurements For Nuclear Astrophysics at CERN n\_TOF**, U. Abbondanno, et al. (The n\_TOF Collaboration); *Nucl. Phys.* **A758** (2005) 501.
116. **The  $(n,\gamma)$  Cross Sections of the p-Process Nuclei  $^{74}\text{Se}$  and  $^{84}\text{Sr}$  at  $kT=25$  keV**, I. Dillmann, M. Heil, F. Käppeler, N. Winckler, T. Rauscher, F.-K. Thielemann; *Nucl. Phys.* **A758** (2005) 513.
117. **A Comprehensive Study of the  $^{106}\text{Cd}(\alpha,\gamma)^{110}\text{Sn}$  Reaction at Energies Relevant to the p-Process**, Gy. Gyürky, Zs. Fülöp, G. Kiss, Z. Mate, E. Somorjai, J. Görres, A. Palumbo, M. Wiescher, D. Galaviz, A. Kretschmer, K. Sonnabend, A. Zilges, T. Rauscher; *Nucl. Phys.* **A758** (2005) 517.
118. **Measurement of the  $^{151}\text{Sm}(n,\gamma)$  Cross Section at n\_TOF**, S. Marrone, et al. (The n\_TOF Collaboration); *Nucl. Phys.* **A758** (2005) 533.
119. **Reaction Rate Sensitivity of the  $\gamma$ -Process Path**, T. Rauscher; *Nucl. Phys.* **A758** (2005) 549.
120. **Measurements of the  $^{90,91,92,94,96}\text{Zr}$  Cross Sections at n\_TOF**, G. Tagliente, et al. (The n\_TOF Collaboration); *Nucl. Phys.* **A758** (2005) 573.
121. **Astrophysical Conditions for an r-Process in the High Entropy Wind Scenario of SNII**, K. Farouqi, C. Freiburghaus, K.-L. Kratz, B. Pfeiffer, T. Rauscher, F.-K. Thielemann; *Nucl. Phys.* **A758** (2005) 631.
122. **Neutron Captures in the r-Process – Do We Know Them and Does It Make Any Difference?** T.Rauscher, *Nucl. Phys.* **A758** (2005) 655.
123. **Elastic  $\alpha$ -Scattering on  $^{112}\text{Sn}$  and  $^{124}\text{Sn}$  at Astrophysically Relevant Energies**, D. Galaviz, Zs. Fülöp, Gy. Gyürky, Z. Maté, P. Mohr, T. Rauscher, E. Somorjai, A. Zilges; *Phys. Rev. C* **71** (2005) 065802.
124. **Towards a parity-dependent level density for astrophysics**, D. Mocolj, T. Rauscher, F.-K. Thielemann, G. Martinez-Pinedo, K. Langanke, L. Pacearescu, A. Fässler; *J. Phys. G* **31** (2005) S1927.
125. **Experimental  $(n,\gamma)$  cross sections of the p-process nuclei  $^{74}\text{Se}$  and  $^{84}\text{Sr}$** , I. Dillmann, M. Heil, F. Käppeler, T. Rauscher, F.-K. Thielemann; *Phys. Rev. C* **73** (2006) 015803.
126. **Branchings in the  $\gamma$ -process path revisited**, T. Rauscher; *Phys. Rev. C* **73** (2006) 015804.
127.  **$(n,\gamma)$  cross sections of light p nuclei - Towards an updated database for the p process**, I. Dillmann, M. Heil, F. Käppeler, R. Plag, T. Rauscher, F.-K. Thielemann; *European Phys. J. A* **27** (2006) s1.129.



128. **Study of the N=28 shell closure in the Ar isotopic chain**, L. Gaudefroy, et al.; *European Phys. J. A* **27** (2006) s1.309.
129. **Measurement of the  $^{151}\text{Sm}(n,\gamma)$  Cross Section at the n\_TOF Facility**, S. Marrone, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **73** (2006) 034604.
130. **R-Matrix Analysis of Cl Neutron Cross Sections up to 1.2 MeV**, R. O. Sayer, K. H. Guber, L. C. Neal, N. M. Larson, T. Rauscher; *Phys. Rev. C* **73** (2006) 044603.
131. **The neutron capture cross section of  $^{232}\text{Th}$  measured at the n\_TOF facility at CERN in the unresolved resonance region up to 1 MeV**, G. Aerts, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **73** (2006) 054610.
132. **Comment on “ $^{187}\text{Re}(\gamma,n)$  cross section close to and above the neutron threshold”**, T. Rauscher; *Phys. Rev. C* **74** (2006) 019801.
133.  **$\alpha$ -Induced cross section of  $^{106}\text{Cd}$  for the astrophysical p-process**, Gy. Gyürky, G. G. Kiss, Z. Elekes, Zs. Fülöp, E. Somorjai, A. Palumbo, J. Görres, H. Y. Lee, W. Rapp, M. Wiescher, N. Özkan, R. T. Güray, G. Efe, T. Rauscher; *Phys. Rev. C* **74** (2006) 025805.
134. **Cross section predictions for hydrostatic and explosive burning**, P. Descouvemont, T. Rauscher; *Nucl. Phys. A* **777** (2006) 137.
135. **New measurement of neutron capture resonances of  $^{209}\text{Bi}$** , C. Domingo-Pardo, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **74** (2006) 025807.
136. **Resonance capture cross section of  $^{207}\text{Pb}$** , C. Domingo-Pardo, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **74** (2006) 055802.
137. **Measurement of the neutron capture cross section of the s-only isotope  $^{204}\text{Pb}$  from 1 eV to 440 keV**, C. Domingo-Pardo, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **75** (2007) 015806.
138. **Comment on “Heavy element production in inhomogeneous big bang nucleosynthesis”**, T. Rauscher; *Phys. Rev. D* **75** (2007) 068301.
139. **Measurement of  $^{139}\text{La}(n,\gamma)$  at n\_TOF**, R. Terlizzi, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **75** (2007) 035807.
140. **Study of the  $^{241}\text{Am}(n,2n)^{240}\text{Am}$  Reaction Cross Section in the Energy Range  $E_n=8.8-11.1$  MeV**, G. Perdikakis, et al. (The n\_TOF Collaboration); *J. Radioanalyt. Nucl. Chem.* **272** (2007) 223.
141. **Proton capture cross section of  $^{106,108}\text{Cd}$  for the astrophysical p-process**, Gy. Gyürky, G. G. Kiss, Z. Elekes, Zs. Fülöp, E. Somorjai, T. Rauscher; *J. Phys. G* **34** (2007) 817.
142. **Large-scale prediction of the parity distribution in the nuclear level density and application to astrophysical reaction rates**, D. Mocalj, T. Rauscher, G. Martinez-Pinedo, K. Langanke, L. Pacearescu, A. Fässler, F.-K. Thielemann; *Phys. Rev. C* **75** (2007) 045805.

143. **Production of Intermediate-Mass and Heavy Nuclei**, F.-K. Thielemann, C. Fröhlich, R. Hirschi, M. Liebendörfer, I. Dillmann, D. Mocolj, T. Rauscher, G. Martinez-Pinedo, K. Langanke, K. Farouqi, K.-L. Kratz, B. Pfeiffer, I. Panov, D. K. Nadyozhin, S. Blinnikov, E. Bravo, W. R. Hix, P. Höflich, N. T. Zinner; *Prog. Part. Nucl. Phys.* **59** (2007) 74.
144. **Neutron reactions and nuclear cosmo-chronology**, M. Mosconi, et al. (The n\_TOF Collaboration); *Prog. Part. Nucl. Phys.* **59** (2007) 165.
145. **The Role of Fission in the r-Process**, G. Martinez-Pinedo, D. Mocolj, N. T. Zinner, A. Kelić, K. Langanke, I. Panov, B. Pfeiffer, T. Rauscher, K.-H. Schmidt, F.-K. Thielemann; *Prog. Part. Nucl. Phys.* **59** (2007) 199.
146. **The r-process: Supernovae and other sources of the heaviest elements**, F.-K. Thielemann, D. Mocolj, I. Panov, E. Kolbe, T. Rauscher, K.-L. Kratz, K. Farouqi, B. Pfeiffer, G. Martinez-Pinedo, A. Kelic, K. Langanke, K.-H. Schmidt, N. Zinner; *Int. J. Mod. Phys. E* **16** (2007) 1149.
147. **Status and Outlook of the Neutron Time-Of-Flight Facility**, F. Gunsing, et al. (The n\_TOF Collaboration); *Nucl. Instr. Meth. B* **261** (2007) 925.
148. **Measurement of the radiative neutron capture cross section of  $^{206}\text{Pb}$  and its astrophysical implications**, C. Domingo-Pardo, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **76** (2007) 045805.
149.  **$^{70}\text{Ge}(p,\gamma)^{71}\text{As}$  and  $^{76}\text{Ge}(p,n)^{76}\text{As}$  cross sections for the astrophysical p process: sensitivity of the optical proton potential at low energies**, G. G. Kiss, Gy. Gyürky, Z. Elekes, Zs. Fülöp, E. Somorjai, T. Rauscher, M. Wiescher; *Phys. Rev. C* **76** (2007) 055807.
150. **n\_TOF experiment: Neutron beam profile and fast neutron background determination, using CR-39 passive neutron detector**, I. Savvidis, et al. (The n\_TOF Collaboration); *Radiation Measurements* **42** (2007) 1492.
151. **Nuclear Physics for the Re/Os clock**, M. Mosconi, et al. (The n\_TOF Collaboration); *J. Phys. G* **35** (2008) 014015.
152. **Measurement of the  $^{206}\text{Pb}(n,\gamma)$  cross section and stellar implications**, C. Domingo-Pardo, et al. (The n\_TOF Collaboration); *J. Phys. G* **35** (2008) 014020.
153. **Crucial inputs to nucleosynthesis calculations**, T. Rauscher; *J. Phys. G* **35** (2008) 014026.
154. **p-Process simulations with a modified reaction library**, I. Dillmann, U. Giesen, M. Heil, F. Käppeler, W. Rapp, T. Rauscher, F.-K. Thielemann; *J. Phys. G* **35** (2008) 014029.
155. **Investigation of proton-induced reactions on Germanium isotopes**, G. G. Kiss, Gy. Gyürky, Z. Elekes, Zs. Fülöp, E. Somorjai, T. Rauscher, M. Wiescher; *J. Phys. G* **35** (2008) 014032.

156.  **$^{176}\text{Lu}/^{176}\text{Hf}$ : A Sensitive Test of s-Process Temperature and Neutron Density in AGB Stars**, M. Heil, N. Winckler, S. Dababneh, F. Käppeler, K. Wisshak, S. Bisterzo, R. Gallino, A. M. Davis, T. Rauscher; *Ap. J.* **673** (2008) 434.
157. **Neutron capture cross section of  $^{90}\text{Zr}$ : Bottleneck in the s-process reaction flow**, G. Tagliente, et al (The n\_TOF Collaboration); *Phys. Rev. C* **77** (2008) 035802.
158. **Complete inclusion of parity-dependent level densities in the statistical description of astrophysical capture reactions**, H. P. Loens, K. Langanke, G. Martinez-Pinedo, T. Rauscher, F.-K. Thielemann; *Phys. Lett. B* **666** (2008) 395.
159. **Cross section measurements of  $\alpha$ -induced reactions on  $^{92,94}\text{Mo}$  and  $^{112}\text{Sn}$  for p-process studies**, W. Rapp, I. Dillmann, F. Käppeler, U. Giesen, H. Klein, T. Rauscher, D. Hentschel, S. Hilpp; *Phys. Rev. C* **78** (2008) 025804.
160. **A fast ionization chamber for fission cross-section measurements at n\_TOF**, M. Calviani, et al (The n\_TOF Collaboration); *Nucl. Instr. Meth. Phys. Res. A* **594** (2008) 220.
161. **Astrophysical relevance of  $\gamma$  transition energies**, T. Rauscher, *Phys. Rev. C* **78** (2008) 032801(R).
162. **Iron-60 evidence for early injection and efficient mixing of stellar debris in the protosolar nebula**, N. Dauphas, D. L. Cook, A. Sacarabany, C. Fröhlich, A. M. Davies, M. Wadhwa, A. Pourmand, T. Rauscher, R. Gallino; *Ap. J.* **686** (2008) 560.
163. **Study of the  $^{91}\text{Zr}(n,\gamma)$  reaction up to 26 keV**, G. Tagliente, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **78** (2008) 045804.
164. **Coulomb suppression of the stellar enhancement factors**, G. G. Kiss, T. Rauscher, Gy. Gyürky, A. Simon, Zs. Fülöp, E. Somorjai; *Phys. Rev. Lett.* **101** (2008) 191101.
165. **Mass measurements in the vicinity of the rp-process and the  $\nu\text{p}$ -process paths with JYFLTRAP and SHIPTRAP**, C. Weber, V.-V. Elomaa, R. Ferrer, C. Fröhlich, D. Ackermann, J. Äystö, G. Audi, L. Batist, K. Blaum, M. Block, A. Chaudhuri, M. Dworschak, S. Eliseev, T. Eronen, U. Hager, J. Hakala, F. Herfurth, F.P. Heßberger, S. Hofmann, A. Jokinen, A. Kankainen, H.-J. Kluge, K. Langanke, A. Martín, G. Martínez-Pinedo, M. Mazzocco, I.D. Moore, J.B. Neumayr, Yu.N. Novikov, H. Penttilä, W.R. Plaß, A.V. Popov, S. Rahaman, T. Rauscher, C. Rauth, J. Rissanen, D. Rodríguez, A. Saastamoinen, C. Scheidenberger, L. Schweikhard, D.M. Seliverstov, T. Sonoda, F.-K. Thielemann, P.G. Thirolf, G.K. Vorobjev; *Phys. Rev. C* **78** (2008) 054310.
166. **Iron-60 evidence for early injection and efficient mixing of stellar debris in the protosolar nebula [erratum]**, N. Dauphas, D. L. Cook, A. Sacarabany,

- C. Fröhlich, A. M. Davis, M. Wadhwa, A. Pourmand, T. Rauscher, R. Gallino; *Ap. J.* **691** (2009) 1943.
167. **Impact of Uncertainties in Reaction Q-values on Nucleosynthesis in Type I X-ray bursts**, A. Parikh, J. José, F. Moreno, C. Iliadis, T. Rauscher; *Phys. Rev. C* **79** (2009) 045802.
168. **Low-lying dipole response in the Relativistic Quasiparticle Time Blocking Approximation and its influence on neutron capture cross sections**, E. Litvinova, H. P. Loens, K. Langanke, G. Martínez-Pinedo, T. Rauscher, P. Ring, F.-K. Thielemann, V. Tselyaev; *Nucl. Phys.* **A823** (2009) 26.
169. **Odd p-Isotope  $^{113}\text{In}$ : Measurement of alpha-induced reactions**, C. Yalçın, R. T. Güray, N. Özkan, S. Kutlu, Gy. Gyürky, J. Farkas, G. G. Kiss, Zs. Fülöp, A. Simon, E. Somorjai, T. Rauscher; *Phys. Rev. C* **79** (2009) 065801.
170. **Chemistry of the elements in the Dark Ages**, P. Vonlanthen, T. Rauscher, C. Winteler, D. Puy, M. Signore, V. Dubrovich; *Astron. Astrophys.* **503** (2009) 47.
171. **The n\_TOF Total Absorption Calorimeter for neutron capture measurements at CERN**, C. Guerrero, et al. (The n\_TOF Collaboration); *Nucl. Instr. Meth. Phys. Res. A* **608** (2009) 424.
172. **Suppression of the stellar enhancement factor and the reaction  $^{85}\text{Rb}(p,n)^{85}\text{Sr}$** , T. Rauscher, G. G. Kiss, Gy. Gyürky, A. Simon, Zs. Fülöp, E. Somorjai; *Phys. Rev. C* **80** (2009) 035801.
173. **High-accuracy  $^{233}\text{U}(n,f)$  cross section measurement at the white-neutron source n\_TOF from near-thermal to 1 MeV neutron energy**, M. Calviani, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **80** (2009) 044604.
174. **Comprehensive study of stellar  $(n,\gamma)$  cross sections of p-process isotopes, Part 1:  $^{102}\text{Pd}$ ,  $^{120}\text{Te}$ ,  $^{130,132}\text{Ba}$ ,  $^{156}\text{Dy}$** , I. Dillmann, C. Domingo-Pardo, M. Heil, F. Käppeler, S. Walter, S. Dababneh, T. Rauscher; *Phys. Rev. C* **81** (2010) 015801.
175. **Astrophysical Rates for Explosive Nucleosynthesis: Stellar and Laboratory Rates for Exotic Nuclei**, T. Rauscher; *Nucl. Phys.* **A834** (2010) 635.
176. **Charged-particle and neutron-capture processes in the high-entropy wind of type II supernovae**, K. Farouqi, K.-L. Kratz, B. Pfeiffer, T. Rauscher, F.-K. Thielemann, J. W. Truran; *Astrophys. J.* **712** (2010) 1359.
177. **Neutron cross-sections for next generation reactors: New data from n\_TOF**, N. Colonna, et al. (The n\_TOF Collaboration); *Applied Radiation and Isotopes* **68** (2010) 643.
178. **Neutron-induced astrophysical reaction rates for translead nuclei**, I. V. Panov, I. Yu. Korneev, T. Rauscher, A. Kelić, G. Martínez-Pinedo, N. T. Zinner, F.-K. Thielemann; *Astron. Astrophys.* **513** (2010) A61.

179.  **$^{197}\text{Au}(n,\gamma)$  cross section in the resonance region**, C. Massimi, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **81** (2010) 044616.
180. **Relevant energy ranges for astrophysical reaction rates**, T. Rauscher; *Phys. Rev. C* **81** (2010) 045807.
181. **The  $^{92}\text{Zr}(n,\gamma)$  reaction and its implications on stellar nucleosynthesis**, G. Tagliente, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **81** (2010) 055801.
182. **Reaction rate sensitivity of the  $^{44}\text{Ti}$  production in massive stars and implications of a thick target measurement of the  $^{40}\text{Ca}(\alpha,\gamma)^{44}\text{Ti}$  rate**, R. D. Hoffman, S. A. Sheets, J. T. Burke, N. D. Scielzo, T. Rauscher, E. B. Norman, L. Phair, D. Bleuel, J. L. Fisker, A. M. Hurst, S. Tumey, T. A. Brown, P. G. Grant, M. A. Stoyer, T. Wooddy; *Astrophys. J.* **715** (2010) 1383.
183. **The JINA REACLIB Database, its Recent Updates, and Impact on Type-I X-ray Bursts**, R. H. Cyburt, A. M. Amthor, R. Ferguson, Z. Meisel, K. Smith, S. Warren, A. Heger, R. D. Hoffman, T. Rauscher, A. Sakharuk, H. Schatz, F.-K. Thielemann, M. Wiescher, S. E. Woosley; *Astrophys. J. Suppl.* **189** (2010) 240.
184. **Neutron physics of the Re/Os clock. I. Measurement of the  $(n,\gamma)$  cross sections of  $^{186,187,188}\text{Os}$  at CERN n\_TOF**, M. Mosconi, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **82** (2010) 015802.
185. **Neutron physics of the Re/Os clock. III. Resonance analyses and stellar  $(n,\gamma)$  cross sections of  $^{186,187,188}\text{Os}$** , K. Fujii, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **82** (2010) 015804.
186. **Neutron induced fission cross section of  $^{234}\text{U}$  and  $^{237}\text{Np}$  measured at the CERN Neutron Time-of-Flight (n\_TOF) facility**, C. Paradela, et al. (The n\_TOF Collaboration); *Phys. Rev. C.* **82** (2010) 034601.
187. **Alpha-induced reaction cross section measurements on  $^{151}\text{Eu}$  for the astrophysical  $\gamma$ -process**, Gy. Gyürky, Z. Elekes, J. Farkas, Zs. Fülöp, Z. Halász, G. G. Kiss, E. Somorjai, T. Szücs, R. T. Güray, N. Özkan, C. Yalçın, T. Rauscher; *J. Phys. G* **37** (2010) 115201.
188. **Constraints on rotational mixing from surface evolution of light elements in massive stars**, U. Frischknecht, R. Hirschi, G. Meynet, S. Ekström, C. Georgy, T. Rauscher, C. Winteler, F.-K. Thielemann; *Astron. Astrophys.* **522** (2010) A39.
189. **Determining reaction cross sections via characteristic X-ray emission:  $\alpha$ -induced reactions on  $^{169}\text{Tm}$  for the astrophysical  $\gamma$ -process**, G. G. Kiss, T. Rauscher, T. Szücs, Zs. Kertész, Zs. Fülöp, C. Fröhlich, J. Farkas, Z. Elekes, Gy. Gyürky, E. Somorjai; *Phys. Lett. B* **695** (2011) 419.
190. **Nuclear Reactions**, M. Wiescher, T. Rauscher; *Lect. Notes in Physics* **812** (2011) 461.

191. **Neutron-induced fission cross section of  $^{233}\text{U}$  in the energy range  $0.5 < E_n < 20$  MeV**, P. Milazzo, et al. (The n\_TOF Collaboration); *Europ. Phys. J. A* **47** (2011) 2.
192. **The  $^{197}\text{Au}(n,\gamma)$  cross section in the unresolved resonance region**, C. Lederer, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **83** (2011) 034608.
193. **What are the Astrophysical Sites for the r-Process and the Production of Heavy Elements?**, F.-K. Thielemann, A. Arcones, R. Käppeli, M. Liebendörfer, T. Rauscher, C. Winteler, C. Fröhlich, I. Dillmann, T. Fischer, G. Martínez-Pinedo, K. Langanke, K. Farouqi, K.-L. Kratz, I. Panov, I. K. Korneev; *Prog. Part. Nucl. Phys.* **66** (2011) 346.
194. **The Electron-Ion Scattering experiment ELISe at the International Facility for Antiproton and Ion Research (FAIR) - a conceptual design study**, A. N. Antonov, et al. (The ELISe Collaboration); *Nuclear Instr. Meth. A* **637** (2011) 60.
195. **Mass measurements of very neutron-deficient Mo and Tc isotopes and their impact on rp-process nucleosynthesis**, E. Haettner, et al; *Phys. Rev. Lett.* **106** (2011) 122501.
196. **Neutron-Induced Reaction Rates for the r-Process**, I. V. Panov, I. Yu. Korneev, T. Rauscher, F.-K. Thielemann; *Bulletin of the Russian Academy of Sciences: Physics* **75** (2011) 520.
197. **Neutron-induced fission cross-section of Pb-nat and Bi-209 from threshold to 1 GeV: A new parameterization**, D. Tarrío, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **83** (2011) 044620.
198. **Core-collapse supernova explosions triggered by a quark-hadron phase transition during the early post-bounce phase**, T. Fischer, I. Sagert, G. Pagliara, M. Hempel, J. Schaffner-Bielich, T. Rauscher, F.-K. Thielemann, R. Käppeli, G. Martínez-Pinedo, M. Liebendörfer; *Ap. J. Suppl.* **194** (2011) 39.
199. **The Path to Improved Reaction Rates for Astrophysics**, T. Rauscher; *Int. J. Mod. Phys. E* **20** (2011) 1071.
200. **Neutron capture on  $^{94}\text{Zr}$ : Resonance parameters and Maxwellian-averaged cross sections**, G. Tagliente, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **84** (2011) 015801.
201. **Cross sections for proton-induced reactions on Pd isotopes at energies relevant for the  $\gamma$  process**, I. Dillmann, L. Coquard, C. Domingo-Pardo, F. Käppeler, J. Marganec, E. Uberseder, U. Giesen, A. Heiske, G. Feinberg, D. Hentschel, S. Hilpp, H. Leiste, T. Rauscher, F.-K. Thielemann; *Phys. Rev. C* **84** (2011) 015802.
202. **Study of Photon Strength Function of Actinides: the Case of  $^{235}\text{U}$ ,  $^{238}\text{Np}$  and  $^{241}\text{Pu}$** , C. Guerrero, et al. (The n\_TOF Collaboration); *J. Kor. Phys. Soc.* **59** (2011) 1510.

203. **Neutron Capture Measurements on Minor Actinides at the n\_TOF Facility at CERN: Past, Present and Future**, D. Cano-Ott, et al. (The n\_TOF Collaboration); *J. Kor. Phys. Soc.* **59** (2011) 1809.
204. **High-energy Neutron-induced Fission Cross Sections of Natural Lead and Bismuth-209**, D. Tarrío, et al. (The n\_TOF Collaboration); *J. Kor. Phys. Soc.* **59** (2011) 1904.
205.  **$^{237}\text{Np}(n,f)$  Cross Section: New Data and Present Status**, C. Paradela, et al. (The n\_TOF Collaboration); *J. Kor. Phys. Soc.* **59** (2011) 1908.
206. **Fission Cross-section Measurements of  $^{233}\text{U}$ ,  $^{245}\text{Cm}$  and  $^{241,243}\text{Am}$  at the CERN n\_TOF Facility**, M. Calviani, et al. (The n\_TOF Collaboration); *J. Kor. Phys. Soc.* **59** (2011) 1912.
207. **Opportunities to constrain astrophysical reaction rates for the s-process through determination of the ground state cross sections**, T. Rauscher, P. Mohr, I. Dillmann, R. Plag; *Ap. J.* **738** (2011) 143.
208. **Activation method combined with characteristic X-ray counting: a possibility to measure  $(\alpha,\gamma)$  cross sections on heavy p-nuclei**, G. G. Kiss, T. Szücs, Gy. Gyürky, Zs. Fülöp, J. Farkas, Zs. Kertész, E. Somorjai, M. Laubenstein, C. Fröhlich, T. Rauscher; *Nucl. Phys.* **A867** (2011) 52.
209. **Determination of the  $^{141}\text{Pr}(\alpha,n)^{144}\text{Pm}$  cross sections at energies of relevance for the astrophysical  $\gamma$  process using the  $\gamma\gamma$  coincidence method**, A. Sauerwein, H. W. Becker, H. Dombrowski, M. Elvers, J. Endres, U. Giesen, J. Hasper, A. Hennig, L. Netterdon, T. Rauscher, D. Rogalla, K. O. Zell, A. Zilges; *Phys. Rev. C* **84** (2011) 045808.
210. **Measurement of the  $^{236}\text{U}(n,f)$  cross section from 170 meV to 2 MeV at the CERN n\_TOF facility**, R. Sarmiento, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **84** (2011) 044618.
211.  **$^{96}\text{Zr}(n,\gamma)$  measurement at the n\_TOF facility at CERN**, G. Tagliente, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **84** (2011) 055802.
212. **Neutron measurements for advanced nuclear systems: The n\_TOF project at CERN**, N. Colonna, et al. (The n\_TOF Collaboration); *Nucl. Instr. Meth. B* **269** (2011) 3251.
213. **Neutron-induced fission cross-section of  $^{233}\text{U}$  in the energy range  $0.5 < E_n < 20$  MeV**, F. Belloni, et al. (The nTOF Collaboration); *Europ. Phys. J. A* **47** (2011) 2.
214. **Measurement of the neutron induced fission cross section of  $^{243}\text{Am}$  relative to  $^{235}\text{U}$  from 0.5 to 20 MeV**, F. Belloni, et al. (The nTOF Collaboration); *Europ. Phys. J. A* **47** (2011) 160.
215. **Investigation of  $\alpha$  induced reactions on  $^{130}\text{Ba}$  and  $^{132}\text{Ba}$  and their importance for the synthesis of heavy p-nuclei**, Z. Halász, Gy. Gyürky, J. Farkas, Zs. Fülöp, T. Szücs, E. Somorjai, T. Rauscher; *Phys. Rev. C* **85** (2012) 025804.

216. **The neutron-induced fission cross-section of  $^{245}\text{Cm}$ : new results from n\_TOF**, M. Calviano, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **85** (2012) 034616.
217. **Simultaneous measurement of neutron-induced capture and fission reactions at CERN**, C. Guerrero, et al. (The nTOF Collaboration); *Europ. Phys. J. A* **48** (2012) 29.
218. **Resonance neutron-capture cross sections of stable magnesium isotopes**, C. Massimi, et al. (The nTOF Collaboration); *Phys. Rev. C* **85** (2012) 044615.
219. **Measurement and resonance analysis of the  $^{237}\text{Np}$  neutron capture cross section**, C. Guerrero, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **85** (2012) 044616.
220. **Measurement of resolved resonances of  $^{232}\text{Th}(n,\gamma)$  at the n\_TOF facility at CERN**, F. Gunsing, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **85** (2012) 064601.
221. **Astrophysical analysis of the measurement of  $(\alpha,\gamma)$  and  $(\alpha,n)$  cross sections of  $^{169}\text{Tm}$** , T. Rauscher, G. G. Kiss, Zs. Fülöp, C. Fröhlich, Gy. Gyürky, Z. Halász, Ys. Kertézs, T. Szücs, E. Somorjai; *Phys. Rev. C* **86** (2012) 015804.
222. **Sensitivity of astrophysical reaction rates to nuclear uncertainties**, T. Rauscher; *Ap. J. Suppl.* **201** (2012) 26.
223. **Formalism for inclusion of measured reaction cross sections in stellar rates including uncertainties and its application to neutron capture in the s-process**, T. Rauscher; *Ap. J. Lett.* **755** (2012) L10.
224. **Investigation of  $\alpha$ -induced reactions on  $^{127}\text{I}$  for the astrophysical  $\gamma$  process**, G. G. Kiss, T. Szücs, Zs. Török, Z. Korkulu, Gy. Gyürky, Z. Halász, Zs. Fülöp, E. Somorjai, T. Rauscher; *Phys. Rev. C* **86** (2012) 035801.
225. **Investigation of the reaction  $^{74}\text{Ge}(p,\gamma)^{75}\text{As}$  using the in-beam method to improve the p-process reaction network**, A. Sauerwein, J. Endres, S. Harisopulos, L. Netterdon, T. Rauscher, A. Zilges; *Phys. Rev. C* **86** (2012) 035802.
226. **Nucleosynthesis in core-collapse supernova explosions triggered by a quark-hadron phase transition**, N. Nishimura, T. Fischer, F.-K. Thielemann, C. Fröhlich, M. Hempel, R. Käppeli, G. Martínez-Pinedo, T. Rauscher, I. Sagert, C. Winteler; *Ap. J.* **758** (2012) 9.
227. **Neutron-induced fission cross section measurement of  $^{233}\text{U}$ ,  $^{241}\text{Am}$  and  $^{243}\text{Am}$  in the energy range  $0.5 \leq E_n \leq 20$  MeV at n\_TOF at CERN**, F. Belloni, et al. (The n\_TOF Collaboration); *Physica Scripta* **T150** (2012) 014005.
228. **Neutron capture cross section of unstable  $^{63}\text{Ni}$ : implications for stellar nucleosynthesis**, C. Lederer, et al. (The nTOF Collaboration); *Phys. Rev. Lett.* **110** (2013) 022501.



229. **Measurement of the neutron-induced fission cross section of  $^{241}\text{Am}$  at the time-of-flight facility n\_TOF**, F. Belloni, et al. (The n\_TOF Collaboration); *Eur. Phys. J. A* **49** (2013) 2.
230. **Performance of the neutron time-of-flight facility nTOF at CERN**, C. Guerrero, et al. (The nTOF Collaboration); *Eur. Phys. J. A* **49** (2013) 27.
231. **Europium s-process signature at close-to-solar metallicity: Insights from presolar Stardust SiC Grains from AGB stars**, J. N. Ávila, T. R. Ireland, M. Lugaro, F. Gyngard, E. Zinner, S. Cristallo, P. Holden, T. Rauscher; *Ap. J. Lett.* **768** (2013) L18.
232. **Constraining the astrophysical origin of the p-nuclei through nuclear physics and meteoritic data**, T. Rauscher, I. Dillmann, N. Dauphas, C. Fröhlich, Zs. Fülöp, Gy. Gyürky; *Rep. Prog. Phys.* **76** (2013) 066201 (invited review).
233. **Systematic study of  $(p,\gamma)$  reactions on Ni isotopes**, A. Simon, A. Spyrou, T. Rauscher, C. Fröhlich, S. J. Quinn, A. Battaglia, A. Best, B. Bucher, M. Couder, P. A. DeYoung, X. Fang, J. Görres, A. Kontos, Q. Li, A. Long, S. Lyons, A. Roberts, D. Robertson, K. Smith, M. K. Smith, E. Stech, B. Stefanek, W. P. Tan, X. D. Tang, M. Wiescher; *Phys. Rev. C* **87** (2013) 055802.
234. **Silicon carbide grains of type C as evidence for the production of the unstable isotope  $^{32}\text{Si}$  in supernovae**, M. Pignatari, E. Zinner, M. G. Bertolli, R. Trappitsch, P. Hoppe, T. Rauscher, C. Fryer, F. Herwig, R. Hirschi, F. X. Timmes, F.-K. Thielemann; *Ap. J. Lett.* **771** (2013) L7.
235. **Solution to the  $\alpha$ -Potential Mystery in the  $\gamma$  Process and its impact on the Nd/Sm ratio in meteorites**, T. Rauscher; *Phys. Rev. Lett.* **111** (2013) 061104.
236. **Suppression of Excited-State Contributions to Stellar Reaction Rates**, T. Rauscher; *Phys. Rev. C* **88** (2013) 035803.
237. **Measurement of the  $^{90,92}\text{Zr}(p,\gamma)^{91,93}\text{Nb}$  reactions for the nucleosynthesis of elements around  $A=90$** , A. Spyrou, S. J. Quinn, A. Simon, T. Rauscher, A. Battaglia, A. Best, B. Bucher, M. Couder, P. A. DeYoung, X. Fang, J. Görres, A. Kontos, Q. Li, A. Long, S. Lyons, A. Roberts, D. Robertson, K. Smith, M. K. Smith, E. Stech, B. Stefanek, W. P. Tan, X. D. Tang, M. Wiescher; *Phys. Rev. C* **88** (2013) 045802.
238. **High precision  $^{113}\text{In}(\alpha,\alpha)^{113}\text{In}$  elastic scattering at subCoulomb energies for the astrophysical  $\gamma$  process**, G. G. Kiss, P. Mohr, Zs. Fülöp, T. Rauscher, Gy. Gyürky, T. Szücs, Z. Halász, E. Somorjai, C. Yalkin, A. Ornelas, C. Yalçin, R. T. Güray, N. Özkan; *Phys. Rev. C* **88** (2013) 045804.
239. **A new CVD diamond mosaic-detector for  $(n,\alpha)$  cross-section measurements at the n\_TOF experiment at CERN**, C. WeiSS, et al. (The n\_TOF Collaboration); *Nucl. Instr. Meth. Phys. A* **732** (2013) 190.

240. **High-accuracy determination of the neutron flux at n\_TOF**, M. Barbagallo, et al. (The n\_TOF Collaboration); *Eur. Phys. J. A* **49** (2013) 156.
241. **Experimental neutron capture data of  $^{58}\text{Ni}$  from the CERN n\_TOF facility**, P. Zugec, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **89** (2014) 014605.
242. **Measurement of the angular distribution of fission fragments using a PPAC assembly at CERN n\_TOF**, D. Tarrío, et al. (The n\_TOF Collaboration); *Nucl. Inst. Meth. Phys. Res. A* **743** (2014) 79.
243.  **$^{62}\text{Ni}(n,\gamma)$  and  $^{63}\text{Ni}(n,\gamma)$  cross sections measured at n\_TOF/CERN**, C. Lederer, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **89** (2014) 025810.
244. **Thermonuclear  $^{42}\text{Ti}(p,\gamma)^{43}\text{V}$  rate in Type I X-ray bursts**, J. J. He, A. Parikh, B. A. Brown, T. Rauscher, S. Q. Hou, Y. H. Zhang, X. H. Zhou, H. S. Xu; *Phys. Rev. C* **89** (2014) 035802.
245. **Challenges in nucleosynthesis of trans-iron nuclides**, T. Rauscher; *AIP Advances* **4** (2014) 041012.
246. **Neutron-induced fission cross section of  $^{234}\text{U}$  measured at the CERN n\_TOF facility**, D. Karadimos, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **89** (2014) 044606.
247. **Measurement and analysis of the  $^{241}\text{Am}(n,\gamma)$  cross section with liquid scintillator detectors using time-of-flight spectroscopy at the n\_TOF facility at CERN**, K. Fraval, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **89** (2014) 044609.
248. **Measurement of the  $^{58}\text{Ni}(\alpha,\gamma)^{62}\text{Zn}$  reaction and its astrophysical impact**, S. J. Quinn, A. Spyrou, E. Bravo, T. Rauscher, A. Simon, A. Battaglia, M. Bowers, B. Bucher, C. Casarella, M. Couder, P. A. DeYoung, A. C. Dombos, J. Görres, A. Kontos, Q. Li, A. Long, M. Moran, N. Paul, J. Pereira, D. Robertson, K. Smith, M. K. Smith, K. Spirito, E. Stech, R. Talwar, W. P. Tan, M. Wiescher; *Phys. Rev. C* **89** (2014) 054611.
249. **GEANT4 simulation of the neutron background of the  $\text{C}_6\text{D}_6$  set-up for capture studies at n\_TOF**, P. Zugec, et al. (The n\_TOF Collaboration); *Nucl. Instr. Meth. Phys. Res. A* **760** (2014) 57.
250. **Alpha induced cross section measurements on  $^{162}\text{Er}$  for the astrophysical  $\gamma$ -process**, G. G. Kiss, T. Szücs, T. Rauscher, Zs. Török, Zs. Fülöp, Gy. Gyürky, Z. Halász, E. Somorjai; *Phys. Lett. B* **735** (2014) 40.
251. **Experimental cross sections of  $^{165}\text{Ho}(\alpha,n)^{168}\text{Tm}$  and  $^{166}\text{Er}(\alpha,n)^{169}\text{Yb}$  for optical potential studies relevant for the astrophysical  $\gamma$  process**, J. Glorius, K. Sonnabend, J. Görres, D. Robertson, M. Knörzer, A. Kontos, T. Rauscher, R. Reifarh, A. Sauerwein, E. Stech, W. Tan, T. Thomas, M. Wiescher; *Phys. Rev. C* **89** (2014) 065808.

252. **Measurement of the  $^{12}\text{C}(\text{n},\text{p})^{12}\text{B}$  cross section at n\_TOF (CERN) by in-beam activation analysis**, P. Zugec, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **90** (2014) 021601(R).
253. **Validation of Cross Sections with Criticality Experiment and Reaction Rates: the Neptunium Case**, L. S. Leong, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **118** (2014) 437.
254. **The CERN n\_TOF Facility: Neutron Beams Performances for Cross Section Measurements**, E. Chiaveri, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **119** (2014) 1.
255. **Investigation of Neutron-induced Reactions at n\_TOF: an Overview of the 2009-2012 Experimental Program**, C. Guerrero, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **119** (2014) 5.
256. **Measurement of the Neutron Capture Cross Section of the Fissile Isotope  $^{235}\text{U}$  with the CERN n\_TOF Total Absorption Calorimeter and a Fission Tagging Based on Micromegas Detectors**, J. Balibrea, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **119** (2014) 10.
257. **Measurement of the  $^{238}\text{U}$  Radiative Capture Cross Section with  $\text{C}_6\text{D}_6$  at the CERN n\_TOF Facility**, F. Mingrone, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **119** (2014) 18.
258. **High-precision Measurement of the  $^{238}\text{U}(\text{n},\gamma)$  Cross Section with the Total Absorption Calorimeter (TAC) at n\_TOF, CERN**, T. Wright, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **119** (2014) 26.
259. **Fission Fragment Angular Distribution of  $^{232}\text{Th}(\text{n},\text{f})$  at the CERN n\_TOF Facility**, D. Tarrío, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **119** (2014) 35.
260. **Study of  $^{234}\text{U}(\text{n},\text{f})$  Resonances Measured at the CERN n\_TOF Facility**, E. Leal-Cidoncha, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **119** (2014) 42.
261. **Capture Cross Section of  $^{236}\text{U}$ : the n\_TOF Results**, M. Barbagallo, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **119** (2014) 45.
262. **Measurement of the  $^{242}\text{Pu}(\text{n},\text{f})$  Cross Section at the CERN n\_TOF Facility**, A. Tsinganis, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **119** (2014) 58.
263. **Measurement of the  $^{241}\text{Am}$  and the  $^{243}\text{Am}$  Neutron Capture Cross Sections at the n\_TOF Facility at CERN**, E. Mendoza, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **119** (2014) 65.
264. **Measurement and Analysis of  $^{241}\text{Am}(\text{n},\gamma)$  Cross Sections with  $\text{C}_6\text{D}_6$  Detectors at the n\_TOF Facility at CERN**, K. Fraval, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **119** (2014) 72.

265. **New Measurement of the  $^{25}\text{Mg}(n,\gamma)$  Reaction Cross Section**, C. Massimi, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **119** (2014) 110.
266. **Measurement of the  $^{54,57}\text{Fe}(n,\gamma)$  Cross Section in the Resolved Resonance Region at CERN**, n\_TOF G. Giubrone, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **119** (2014) 117.
267. **Spin Measurements of  $n+^{87}\text{Sr}$  for Level Density Studies**, F. Gunsing, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **119** (2014) 132.
268. **A Micromegas Detector for Neutron Beam Imaging at the n\_TOF Facility at CERN**, F. Belloni, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **119** (2014) 365.
269. **The Karlsruhe Astrophysical Database of Nucleosynthesis in Stars project - Status and Prospects**, I. Dillmann, T. Szücs, R. Plag, Zs. Fülöp, F. Käppeler, A. Mengoni, T. Rauscher; *Nucl. Data Sheets* **120** (2014) 171.
270. **Neutron capture reactions on Fe and Ni isotopes for the astrophysical s-process**, C. Lederer, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **120** (2014) 201.
271. **The  $(n,\alpha)$  reaction in the s-process branching point  $^{59}\text{Ni}$** , C. Weiss, et al. (The n\_TOF Collaboration); *Nucl. Data Sheets* **120** (2014) 208.
272. **Measurement and analysis of the  $^{243}\text{Am}$  neutron capture cross section at the n\_TOF facility at CERN**, E. Mendoza, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **90** (2014) 034608.
273. **Cross section measurement of the  $^{130}\text{Ba}(p,\gamma)^{131}\text{La}$  reaction for  $\gamma$ -process nucleosynthesis**, L. Netterdon, G. G. Kiss, J. Mayer, T. Rauscher, A. Sauerwein, P. Scholz, K. Sonnabend, Zs. Török, A. Zilges; *Phys. Rev. C* **90** (2014) 035806.
274. **Pulse pile-up and dead time corrections for digitized signals from a  $\text{BaF}_2$  calorimeter**, E. Mendoza, et al. (The n\_TOF Collaboration); *Nucl. Instr. Meth. Phys. Res. A* **768** (2014) 55.
275. **Radiogenic p-isotopes from SN Ia, nuclear physics uncertainties and Galactic chemical evolution compared with values in primitive meteorites**, C. Travaglio, R. Gallino, T. Rauscher, N. Dauphas, F. Röpke, W. Hillebrandt; *Ap. J.* **795** (2014) 141.
276. **Testing the role of SNe Ia for Galactic chemical evolution of p-nuclei with 2D models and with s-process seeds at different metallicities**, C. Travaglio, R. Gallino, T. Rauscher, F. K. Röpke, W. Hillebrandt; *Ap. J.* **799** (2015) 54.
277. **High-accuracy determination of the  $^{238}\text{U}/^{235}\text{U}$  fission cross section ratio up to  $\approx 1$  GeV at n\_TOF at CERN**, C. Paradela, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **91** (2015) 024602.

278. **Measurement of  $(\alpha, n)$  reaction cross sections of erbium isotopes for testing astrophysical rate predictions**, G. G. Kiss, T. Szücs, T. Rauscher, Zs. Török, L. Csedreki, Zs. Fülöp, Gy. Gyürky, Z. Halász; *J. Phys. G* **42** (2015) 055103.
279. **Test of Statistical Model Cross Section Calculations for  $\alpha$ -Induced Reactions on  $^{107}\text{Ag}$  at Energies of Astrophysical Interest**, C. Yalçin, Gy. Gyürky, T. Rauscher, G. G. Kiss, N. Özkan, R. T. Güray, Z. Halász, Zs. Fülöp, J. Farkas, Z. Korkulu, E. Somorjai; *Phys. Rev. C* **91** (2015) 034610.
280. **The  $^{106}\text{Cd}(\alpha, \alpha)^{106}\text{Cd}$  elastic scattering in a wide energy range for  $\gamma$ -process studies**, A. Ornelas, G. G. Kiss, P. Mohr, D. Galaviz, Zs. Fülöp, Gy. Gyürky, Z. Máté, T. Rauscher, E. Somorjai, K. Sonnabend, A. Zilges; *Nucl. Phys. A* **940** (2015) 194.
281.  **$^{152}\text{Gd}(p, \gamma)^{153}\text{Tb}$  and  $^{152}\text{Gd}(p, n)^{152}\text{Tb}$  Measurements for the astrophysical  $\gamma$  process**, R. T. Güray, N. Özkan, C. Yalçin, T. Rauscher, Gy. Gyürky, J. Farkas, Zs. Fülöp, Z. Halász, E. Somorjai; *Phys. Rev. C* **91** (2015) 055809.
282. **Erratum:  $^{62}\text{Ni}(n, \gamma)$  and  $^{63}\text{Ni}(n, \gamma)$  cross sections measured at n\_TOF/CERN**, C. Lederer, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **92** (2015) 019903.
283. **The Role of Fission in Neutron Star Mergers and the Position of the Third r-Process Peak**, M. Eichler, A. Arcones, A. Kelic, O. Korobkin, K. Langanke, T. Marketin, G. Martínez-Pinedo, I. Panov, T. Rauscher, S. Rosswog, C. Winteler, N. T. Zinner, F.-K. Thielemann; *Ap. J.* **808** (2015) 30.
284. **The new vertical neutron beam line at the CERN n\_TOF facility design and outlook on the performance**, C. WeiSS, et al. (The n\_TOF Collaboration); *Nucl. Instr. Meth. Phys. Res. A* **799** (2015) 90.
285. **s-Process production in rotating massive stars**, U. Frischknecht, R. Hirschi, M. Pignatari, F.-K. Thielemann, A. Maeder, G. Meynet, C. Chiappini, T. Rauscher, C. Georgy, S. Ekström; *Mon. Not. R. Astron. Soc.* **456** (2016) 1803.
286. **Hybrid method to resolve the neutrino mass hierarchy by supernova (anti)neutrino-induced reactions**, D. Vale, T. Rauscher, N. Paar; *J. Cosmol. Astropart. Phys. (JCAP)* **02** (2016) 007.
287. **Neutron induced fission cross section of  $^{237}\text{Np}$  in the keV to MeV range at the CERN n\_TOF facility**, M. Diakaki, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **93** (2016) 034614.
288. **GEANT4 simulation of the n\_TOF-EAR2 neutron beam: Characteristics and prospects**, J. Lerendegui-Marco, et al. (The n\_TOF Collaboration); *Europ. Phys. J A* **52** (2016) 100.
289. **Integral measurement of the  $^{12}\text{C}(n, p)^{12}\text{B}$  integral cross section up to 10 GeV**, P. Zugec, et al. (The n\_TOF Collaboration); *Europ. Phys. J. A* **52** (2016) 101.

290. **Experimental setup and procedure for the measurement of the  ${}^7\text{Be}(n,\alpha)\alpha$  reaction at n\_TOF**, L. Cosentino, et al. (The n\_TOF Collaboration); *Nucl. Instr. Meth. Phys. Res. A* **830** (2016) 197.
291.  **${}^7\text{Be}(n,\alpha){}^4\text{He}$  reaction and the cosmological lithium problem: measurement of the cross section in a wide energy range at n\_TOF at CERN**, M. Barbagallo, et al. (The n\_TOF Collaboration); *Phys. Rev. Lett.* **117** (2016) 152701. (editor's suggestion)
292. **Nuclear data activities at the n\_TOF facility at CERN**, F. Gunsing, et al. (The n\_TOF Collaboration); *Eur. Phys. J. Plus* **131** (2016) 137.
293. **Experimental study of the astrophysical  $\gamma$ -process reaction  ${}^{124}\text{Xe}(\alpha,\gamma){}^{128}\text{Ba}$** , Z. Halász, E. Somorjai, Gy. Gyürky, Z. Elekes, Zs. Fülöp, G. G. Kiss, T. Szücs, N. Szegedi, T. Rauscher, J. Görres, M. Wiescher; *Phys. Rev. C* **94** (2016) 045801.
294. **Uncertainties in the production of p-nuclei in massive stars obtained from Monte Carlo variations**, T. Rauscher, N. Nishimura, R. Hirschi, G. Cescutti, A. St.J. Murphy, A. Heger; *Mon. Not. Roy. Astron. Soc.* **463** (2016) 4153.
295. **Neutron spectroscopy of  ${}^{26}\text{Mg}$  states: constraining the stellar neutron source  ${}^{22}\text{Ne}(\alpha,n)$** , C. Massimi, et al. (The n\_TOF Collaboration); *Phys. Lett. B* **768** (2017) 1.
296. **Neutron capture cross section measurement of  ${}^{238}\text{U}$  at the n\_TOF CERN facility in the energy region from 1 eV to 700 keV**, F. Mingrone, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **95** (2017) 034604.
297. **Uncertainties in s-process nucleosynthesis in massive stars determined by Monte Carlo variations**, N. Nishimura, R. Hirschi, T. Rauscher, A.St.J. Murphy, G. Cescutti; *Mon. Not. Roy. Astron. Soc.* **469** (2017) 1752.
298. **A direct method for unfolding the resolution function from measurements of neutron-induced reactions**, P. Zugec, et al. (The n\_TOF Collaboration); *Nucl. Instr. Meth. Phys. Res. A* **875** (2017) 41.
299. **High-accuracy determination of the neutron flux in the new experimental area n\_TOF EAR2 at CERN**, M. Sabaté-Gilarte, et al. (The n\_TOF Collaboration); *Europ. Phys. J. A* **53** (2017) 210.
300. **Measurement of  ${}^{238}\text{U}(n,\gamma)$  cross section up to 80 keV with the Total Absorption Calorimeter at the CERN n\_TOF facility**, T. Wright, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **96** (2017) 064601.
301. **Cross section of  $\alpha$ -induced reactions on iridium isotopes obtained from thick target yield for the astrophysical  $\gamma$ -process**, T. Szücs, G. G. Kiss, Gy. Gyürky, Z. Halász, Zs. Fülöp, T. Rauscher; *Phys. Lett. B* **776** (2018) 396.
302. **Uncertainties in the production of p-nuclides in thermonuclear supernovae determined by Monte Carlo variations**, N. Nishimura, T. Rauscher,

- R. Hirschi, A. St.J. Murphy, G. Cescutti, C. Travaglio; *Mon. Not. Roy. Astron. Soc.* **474** (2018) 3133.
303. **Experimental setup and procedure for the measurement of the  ${}^7\text{Be}(n,p){}^7\text{Li}$  reaction at n\_TOF**, M. Barbagallo, et al. (The n\_TOF Collaboration); *Nucl. Instr. Meth. Phys. Res. A* **887** (2018) 27.
304. **Radiative neutron capture on  ${}^{242}\text{Pu}$  in the resonance region at the CERN n\_TOF-EAR1 facility**, J. Lerendegui-Marco, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **97** (2018) 024605.
305. **Role of core-collapse supernovae in explaining Solar System abundances of p-nuclides**, C. Travaglio, T. Rauscher, A. Heger, M. Pignatari, C. West; *Ap. J.* **854** (2018) 18.
306. **Preparation and characterization of  ${}^{33}\text{S}$  samples for  ${}^{33}\text{S}(n,\alpha){}^{30}\text{Si}$  cross-section measurements at the n\_TOF facility at CERN**, J. Praena, et al. (The n\_TOF Collaboration); *Nucl. Instr. Meth. Phys. Res. A* **890** (2018) 142.
307. **Investigation of  $\alpha$ -induced reactions on Sb isotopes relevant to the astrophysical  $\gamma$ -process**, Z. Korkulu, N. Özkan, G. G. Kiss, T. Szücs, Gy. Gyürky, Zs. Fülöp, R. T. Güray, Z. Halász, T. Rauscher, E. Somorjai, Zs. Török, C. Yalçın; *Phys. Rev. C* **97** (2018) 045803.
308. **Mass Measurements of Very Neutron-Deficient Y, Zr, and Nb Isotopes and Their Impact on rp- and vp Nucleosynthesis Processes**, Y. M. Xing, et al.; *Phys. Lett. B* **781** (2018) 358.
309. **Measurement and analysis of the  ${}^{241}\text{Am}$  neutron capture cross section at the n\_TOF facility at CERN**, E. Mendoza, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **97** (2018) 054616.
310. **Measurement and resonance analysis of the  ${}^{33}\text{S}(n,\alpha){}^{30}\text{Si}$  cross section at the CERN n\_TOF facility in the energy region from 10 to 300 keV**, J. Praena, et al. (The n\_TOF Collaboration); *Phys. Rev. C* **97** (2018) 064603.
311. **Uncertainties in s-process nucleosynthesis in low mass stars determined from Monte Carlo variations**, G. Cescutti, R. Hirschi, N. Nishimura, J. W. den Hartogh, T. Rauscher, A. St.J. Murphy; *Mon. Not. Roy. Astron. Soc.* **478** (2018) 4101.
312. **The  ${}^7\text{Be}(n,p){}^7\text{Li}$  reaction and the cosmological lithium problem: Measurement of the cross section in a wide energy range at n\_TOF at CERN**, L. Damone, et al. (The n\_TOF Collaboration); *Phys. Rev. Lett.* **121** (2018) 042701.
313. **Preparation and characterization of three  ${}^7\text{Be}$  targets for the measurement of the  ${}^7\text{Be}(n,p){}^7\text{Li}$  and  ${}^7\text{Be}(n,\alpha)$  reaction cross sections**, E. A. Maugeri, et al. (The n\_TOF Collaboration); *Nucl. Instr. Meth. Phys. Res. A* **889** (2018) 138.

314. **Photonuclear Reactions in Astrophysics**, T. Rauscher; *Nuclear Physics News* **28 No. 3** (2018) 12.
315. **Erratum: Formalism for inclusion of measured reaction cross sections in stellar rates including uncertainties and its application to neutron capture in the s-process [Ap. J. Lett. 755 (2012) L10]**, T. Rauscher; *Ap. J. Lett.* **864** (2018) L40.
316. **An alternative methodology for high counting-loss corrections in neutron time-of-flight measurements**, A. Stamatopoulos, et al. (The n\_TOF Collaboration); *Nucl. Instr. Meth. Phys. Res. A* **913** (2019) 40.
317. **Approaching the Gamow window with stored ions: Direct measurement of  $^{124}\text{Xe}(p,\gamma)$  in the ESR storage ring**, J. Glorius, et al.; *Phys. Rev. Lett.*, submitted.
318. **Cross section measurements of  $^{155,157}\text{Gd}(n,\gamma)$  induced by thermal and epithermal neutrons**, M. Mastromarco, et al. (The n\_TOF Collaboration); *Phys. Rev. C*, submitted.
319. **Investigation of the  $^{85}\text{Rb}(p,\gamma)^{86}\text{Sr}$  reaction using the in-beam technique for the nucleosynthesis of p nuclei**, L. Netterdon, A. Endres, F. Heim, T. Rauscher, P. Scholz, M. Spieker, M. Weinert, A. Zilges; *Phys. Rev. C*, submitted.
320. **Axion emission and detection from a Galactic supernova**, P. Carena, F. Capozzi, G. Cò, T. Fischer, M. Gianotti, A. Mirizzi, T. Rauscher; *Phys. Rev. Lett.*, in preparation.
321. **Compound-elastic and -inelastic contributions in the optical model analysis of  $\alpha$ -induced reactions**, T. Rauscher, P. Mohr, Gy. Gyürky, G. G. Kiss, Zs. Fülöp; *Phys. Rev. C*, in preparation.
322. **Critical Nuclear Reactions in the  $\nu\text{p}$ -Process**, C. Fröhlich, T. Rauscher, X. Tang, J. W. Truran; *Phys. Rev. C*, in preparation.



### 3.2.2 Conference Proceedings (refereed and unrefereed)

1. **Direct Capture Analyses of the Reaction  $^{12}\text{C}(\alpha,\gamma)^{16}\text{O}$  at Thermonuclear Energies**, H. Krauss, K. Grün, T. Rauscher, H. Oberhummer, H. Abele, G. Staudt; *Proc. 1st Int. Conf. on Nuclear Astrophysics "Nuclei in the Cosmos", Baden/Vienna 1990*, eds. W. Hillebrandt and H. Oberhummer (Max Planck-Institut für Physik und Astrophysik: Garching 1990), p. 200.
2. **The  $^9\text{Be}(\text{p},\text{d})^8\text{Be}$  Reaction at Stellar Energies**, T. Rauscher, H. Krauss, K. Grün, H. Oberhummer; *Proc. 1st Int. Conf. on Nuclear Astrophysics "Nuclei in the Cosmos", Baden/Vienna 1990*, eds. W. Hillebrandt and H. Oberhummer (Max Planck Institut für Physik und Astrophysik: Garching 1990), p. 220.
3. **Analyses of the Reaction  $^7\text{Li}(\text{d},\text{n})^8\text{Be}$  at subCoulomb Energies**, T. Rauscher, H. Krauss, K. Grün, H. Oberhummer; *Proc. Int. Conf. on Primordial Nucleosynthesis and the Evolution of the Early Universe*, Tokyo 1990 (Kluwer Academic Press: Tokyo 1991), p. 61.
4. **Direct Reaction Analyses of  $^3\text{He}(\text{He},\text{2p})^4\text{He}$  at Solar Energies**, S. Winkler, H. Krauss, K. Grün, T. Rauscher, H. Oberhummer, G. Raimann, G. Staudt; *Proc. 6th Workshop in Nuclear Astrophysics, Ringberg Castle 1991*, eds. E. Müller and W. Hillebrandt (Max Planck-Institut für Physik und Astrophysik: Garching 1991), p. 4.
5. **Calculation of the Astrophysical  $S$ -Factor and Reaction Rates for  $^8\text{Li}(\alpha,\text{n}_0)^{11}\text{B}$** , T. Rauscher, H. Krauss, K. Grün, H. Oberhummer; *Proc. 2nd Int. Conf. on Radioactive Nuclear Beams, Louvain-la-Neuve 1991* (Adam Hilger, IOP Publishing: Bristol 1992), p. 341.
6. **Astrophysical  $S$ -Factors of Reactions Relevant for the Solar Neutrino Problem**, H. Krauss, K. Grün, T. Rauscher, S. Winkler, H. Oberhummer, H. Abele, R. Zwiebel, G. Staudt; *Proc. 1991 Mikolajki School on Nuclear Physics*, ed. G. Szeffinska (IOP Publishing: Bristol 1992), p. 45.
7. **Single-step and Compound-Nucleus Reactions at Thermonuclear Energies**, H. Herndl, K. Grün, H. Krauss, T. Rauscher, H. Scsibraný, H. Oberhummer, G. Staudt, M. Walz; in *From Spectroscopic to Chaotic Features of Nuclear Systems*, ed. D. Seeliger (World Scientific: Singapore 1993), p. 112.
8. **Potential Model and Folding Procedure: A New Method of Calculating Astrophysical  $S$ -Factors**, H. Krauss, K. Grün, H. Herndl, T. Rauscher, H. Oberhummer, H. Abele, P. Mohr, R. Zwiebel, G. Staudt, A. Denker, G. Wolf, W. Hammer; *Proc. 2nd Int. Conf. on Nuclear Astrophysics "Nuclei in the Cosmos", Karlsruhe 1992*, eds. F. Käppeler and K. Wisshak (IOP Publishing, Bristol 1993), p. 393.
9. **Key Nuclear Properties in Nucleosynthesis Calculations and Their Uncertainties**, F.-K. Thielemann, T. Rauscher; *Proc. Int. Conf. on Origin of the Elements*, eds. S. Kubono and T. Kajino (World Scientific: Singapore 1993), p. 254.

10. **Direct and resonant neutron-capture cross sections for neutron-rich nuclei around  $N=28$** , A. Wöhr, W. Böhmer, S. Schoedder, K.-L. Kratz, E. Kraussmann, H. Huber, H. Oberhummer, T. Rauscher, F.-K. Thielemann; *Proc. VIII. Int. Symp. on Gamma-Ray Spectroscopy and Related Topics, Fribourg, Switzerland*, ed. J. Kern (World Scientific: Singapore 1994), p. 762.
11. **Direct Capture at Low Energies**, W. Balogh, R. Bieber, H. Oberhummer, T. Rauscher, K.-L. Kratz, P. Mohr, G. Staudt, M.M. Sharma; *Proc. European Workshop on Heavy Element Nucleosynthesis, Budapest 1994*, eds. E. Somorjai und Z. Fülöp (Institute of Nuclear Research of the Hung. Acad. of Sci., Debrecen 1994), p. 67.
12. **Systematics of  $\alpha$ -Nucleus Optical Potentials**, P. Mohr, H. Abele, U. Atzrott, G. Staudt, R. Bieber, K. Grün, H. Oberhummer, T. Rauscher, E. Somorjai; *Proc. European Workshop on Heavy Element Nucleosynthesis, Budapest 1994*, eds. E. Somorjai und Z. Fülöp (Institute of Nuclear Research of the Hung. Acad. of Sci., Debrecen 1994), p. 176.
13. **A Primordial r-Process?**, T. Rauscher, J.H. Applegate, J.J. Cowan, F.-K. Thielemann, M. Wiescher; *Proc. European Workshop on Heavy Element Nucleosynthesis, Budapest 1994*, eds. E. Somorjai und Z. Fülöp (Institute of Nuclear Research of the Hung. Acad. of Sci., Debrecen 1994), p. 121.
14. **Primordial Heavy Element Production**, T. Rauscher, F.-K. Thielemann; *The Light Element Abundances*, ed. P. Crane (Springer, Berlin Heidelberg 1995), p. 31.
15. **Shell Effects in Neutron Capture on Pb**, T. Rauscher, R. Bieber, S. Lingner, H. Oberhummer; *AIP Conference Proc.* **327** (1995) 183.
16. **The Reaction  $^{70}\text{Ge}(\alpha,\gamma)^{74}\text{Se}$  (p-process)**, Zs. Fülöp, Á.Z. Kiss, E. Somorjai, C.E. Rolfs, H.P. Trautvetter, T. Rauscher, H. Oberhummer; *AIP Conference Proc.* **327** (1995) 277.
17. **Theoretical Neutron-Capture Cross Sections for r-Process Nucleosynthesis In The  $^{48}\text{Ca}$  Region**, T. Rauscher, W. Böhmer, K.-L. Kratz, W. Balogh, H. Oberhummer; *Proc. Int. Conf. on Exotic Nuclei and Atomic Masses "ENAM '95"*, eds. M. de Saint Simon and O. Sorlin (Editions Frontières, Gif-sur-Yvette 1995), p. 683.
18. **Calculations of Nuclear Reactions of Astrophysical Interest Involving Unstable Nuclei**, H. Oberhummer, W. Balogh, R. Bieber, H. Herndl, U. Langer, T. Rauscher, H. Beer; *Proc. Int. Conf. on Exotic Nuclei and Atomic Masses "ENAM '95"*, eds. M. de Saint Simon and O. Sorlin (Editions Frontières, Gif-sur-Yvette 1995), p. 649.
19.  **$\beta$ -Decay Studies of Neutron-Rich Sc, Ti, V, Cr**, O. Sorlin, R. Anne, W. Böhmer, V. Borrel, T. Dörfler, S. Grévy, D. Guillemaud-Mueller, K.L. Kratz, M. Lewitowicz, T. Mehren, A.C. Mueller, A. Ostrowsky, F. Pougheon, I. Rabout, T. Rauscher, M. Robinson, M.G. Saint-Laurent, W.-D. Schmidt-Ott; *Proc. Int. Conf.*

- on *Exotic Nuclei and Atomic Masses "ENAM '95"*, eds. M. de Saint Simon and O. Sorlin (Editions Frontières, Gif-sur-Yvette 1995), p. 603.
20. **Production of Radioactive Ag Ion Beams With A Chemically Selective Laser Ion Source**, Y. Jading, R. Catherall, V.N. Fedoseyev, D. Forkel-Wirth, A. Jokinen, O.C. Jonsson, T. Kautzsch, I. Klöckl, K.-L. Kratz, E. Kugler, J. Lettry, T. Mehren, T. Rauscher, V.I. Mishin, H.L. Ravn, O. Tengblad, P. Van Duppen, W.B. Walters, A. Wöhr, and the ISOLDE Collaboration; *Elsevier Preprint EMIS-13*, NIMB 1996.
  21. **Can Entropy Superpositions Fit the Solar System R-Process Abundance Distribution?**, Ch. Freiburghaus, T. Rauscher, F.-K. Thielemann, K.-L. Kratz, B. Pfeiffer; *Nuclear Astrophysics, Ringberg Proc.*, eds. W. Hillebrandt, E. Müller, Max-Planck-Institut MPA/P9 (1996), p. 58.
  22. **Nucleosynthesis at the Proton Drip-Line - A Challenge for Nuclear Physics**, H. Schatz, L. Bildsten, J. Görres, T. Rauscher, F.-K. Thielemann, M. Wiescher; in *Intersections of Nuclear and Particle Physics*, ed. T.W. Donnelly (AIP, New York 1997), p. 987.
  23. **Prediction of  $^{144}\text{Sm}(\alpha,\gamma)^{148}\text{Gd}$  Reaction Rates in the Statistical Model**, T. Rauscher, F.-K. Thielemann, P. Mohr, H. Oberhummer, Zs. Fülöp, E. Somorjai; *Proc. 9th Int. Symp. Gamma-Ray Spectroscopy and Related Topics*, ed. G.L. Molnár, T. Belgya, Zs. Révay (Springer, Budapest 1997), p. 596.
  24. **Study of Radiative Capture Reactions in the Astrophysical p-Process**, E. Somorjai, Zs. Fülöp, Á. Z. Kiss, C. Rolfs, H.-P. Trautvetter, U. Greife, M. Junker, T. Rauscher, H. Oberhummer, M. Arnould, M. Rayet; *Proc. 9th Int. Symp. Gamma-Ray Spectroscopy and Related Topics*, ed. G.L. Molnár, T. Belgya, Zs. Révay (Springer, Budapest 1997), p. 542.
  25. **Nuclear Physics and Astrophysics of the r- and rp-Processes**, F.-K. Thielemann, C. Freiburghaus, E. Kolbe, T. Rauscher, F. Rembges, K.-L. Kratz, B. Pfeiffer, H. Schatz, M. Wiescher, J. Görres, J.J. Cowan; *Proc. 9th Int. Symp. Gamma-Ray Spectroscopy and Related Topics*, ed. G.L. Molnár, T. Belgya, Zs. Révay (Springer, Budapest 1997), p. 521.
  26. **Neutron Capture Reaction Rates of Unstable Isotopes in the s-Process Branchings**, T. Rauscher, H. Beer, H. Oberhummer, F.-K. Thielemann; *Nuclear Data for Science and Technology*, Conference Proceedings Vol. 59, eds. G. Reffo, A. Ventura, C. Grandi, (Società Italiana di Fisica, Bologna 1997), p. 1587.
  27. **Astrophysical Neutron Capture Rates in s- and r-Process Nucleosynthesis**, H. Beer, P. Mohr, H. Oberhummer, T. Rauscher, P. Mutti, F. Corvi, P.V. Sedyshev, Yu. P. Popov; *Proc. 5th Int. Sem. Interact. Neutr. Nucl. "ISINN-5"*, Rep. E3-97-213 (Joint Institute for Nuclear Research, Dubna 1997), p. 229.
  28. **Supernova nucleosynthesis as a tool to analyze the explosion mechanism**, F.-K. Thielemann, F. Brachwitz, C. Freiburghaus, T. Rauscher, K. Iwamoto, K.

- Nomoto, M. Hashimoto, W. R. Hix; in *"Nuclear Astrophysics"*, eds. M. Buballa, W. Nörenberg, J. Wambach, A. Wirzba (Gesellschaft für Schwerionenforschung (GSI), Darmstadt 1998), p. 164.
29. **Global Transmission Coefficients in Hauser-Feshbach Calculations for Astrophysics**, T. Rauscher; in *"Nuclear Astrophysics"*, eds. M. Buballa, W. Nörenberg, J. Wambach, A. Wirzba (Gesellschaft für Schwerionenforschung (GSI), Darmstadt 1998), p. 288.
  30. **Nuclear- and astrophysical interpretation of the Ca-Ti-Cr isotopic anomalies in the inclusion EK 1-4-1 of the Allende Meteorite**, W. Böhmer, K.-L. Kratz, B. Pfeiffer, C. Freiburghaus, T. Rauscher, F.-K. Thielemann; in *"Nuclear Astrophysics"*, eds. M. Buballa, W. Nörenberg, J. Wambach, A. Wirzba (Gesellschaft für Schwerionenforschung (GSI), Darmstadt 1998), p. 305.
  31. **X-Ray Bursts and Nucleosynthesis at the Proton Drip-Line**, H. Schatz, L. Bildsten, J. Görres, T. Rauscher, F.-K. Thielemann, M. Wiescher; in *Tours Symposium on Nuclear Physics III*, eds. M. Arnould, M. Lewitowicz, Y.T. Oganessian, M. Ohta, H. Utsonomya, T. Wada, *AIP Conf. Proc.* **425** (1998) 559.
  32. **The Composition of Supernova Ejecta: Nucleosynthesis as a Tool to Analyze the Explosion Mechanism and Predict Yields for Galactic Chemical Evolution**, F.-K. Thielemann, F. Brachwitz, C. Freiburghaus, T. Rauscher, K. Iwamoto, K. Nomoto, M. Hashimoto, W.R. Hix; in *Supernovae and Cosmology, Symposium in Honor of G.A. Tammann's 65th Birthday*, eds. L. Labhardt, B. Binggeli, R. Buser, Institute of Astronomy, Basel, Switzerland 1998, p. 137.
  33. **Global Statistical Model Calculations and the Role of Isospin**, T. Rauscher, F.-K. Thielemann; in *Stellar Evolution, Stellar Explosions, and Galactic Chemical Evolution*, ed. A. Mezzacappa (IOP Publishing, Bristol 1998), p. 519.
  34. **Explosive Hydrogen Burning, the rp-Process, and X-Ray Bursts**, F.-K. Thielemann, H. Schatz, T. Rauscher, F. Rembges, J. Görres, M. Wiescher, L. Bildsten; in *Stellar Evolution, Stellar Explosions, and Galactic Chemical Evolution*, ed. A. Mezzacappa (IOP Publishing, Bristol 1998), p. 483.
  35. **Comparison of Experimental and Calculated S-Factors of the p-Process Reaction  $^{144}\text{Sm}(\alpha, \gamma)^{148}\text{Gd}$** , E. Somorjai, Zs. Fülöp, Á.Z. Kiss, C.E. Rolfs, H.P. Trautvetter, U. Greife, M. Junker, S. Goriely, M. Arnould, M. Rayet, T. Rauscher, H. Oberhummer; in *Stellar Evolution, Stellar Explosions, and Galactic Chemical Evolution*, ed. A. Mezzacappa (IOP Publishing, Bristol 1998), p. 607.
  36. **Nucleosynthesis Basics and Applications to Supernovae**, F.-K. Thielemann, T. Rauscher, C. Freiburghaus, K. Nomoto, M. Hashimoto, B. Pfeiffer, K.-L. Kratz; in *Nuclear and Particle Astrophysics* eds. J. Hirsch., D. Page (Cambridge University Press, Cambridge 1998), p. 27.
  37. **Astrophysical and Nuclear Physics Aspects of the r-Process**, F.-K. Thielemann, C. Freiburghaus, T. Rauscher, K.-L. Kratz, B. Pfeiffer, J.J. Cowan; in

- Fission and Properties of Neutron-Rich Nuclei*, eds. J. Hamilton, A.V. Ramayya (World Scientific, Singapore 1998), p. 47.
38. **Prediction of Nuclear Reaction Rates for Astrophysics**, T. Rauscher; *Proc. IX Workshop on Nuclear Astrophysics*, eds. W. Hillebrandt, E. Müller, MPA/P10 (MPA, Garching 1998), p. 27.
  39. **Hydrogen Consumption in X-ray Bursts**, J.-F. Rembges, M. Liebendörfer, T. Rauscher, F.-K. Thielemann, H. Schatz; *Proc. IX Workshop on Nuclear Astrophysics*, eds. W. Hillebrandt, E. Müller, MPA/P10 (MPA, Garching 1998), p. 41.
  40. **New Neutron Capture and Total Cross Section Measurements on  $^{88}\text{Sr}$  and Their Impact on s-Process Nucleosynthesis**, P.E. Koehler, R.R. Spencer, K.H. Guber, J.A. Harvey, T. Rauscher, J.C. Blackmon, S. Raman, D.C. Larson, D.W. Bardayan, T.A. Lewis; *Proc. Int Symp. "Nuclei in the Cosmos V"*, eds. N. Prantzos, S. Harissopoulos (Editions Frontières, Gif-sur-Yvette 1998), p. 196.
  41. **Neutron Capture in Dy and Yb Isotopes: Implications for the s-Process**, K. Wisshak, F. Voss, C. Arlandini, F. Käppeler, T. Rauscher; *Proc. Int Symp. "Nuclei in the Cosmos V"*, eds. N. Prantzos, S. Harissopoulos (Editions Frontières, Gif-sur-Yvette 1998), p. 212.
  42. **Cross Section Measurements of the  $^{93}\text{Nb}(p,\gamma)^{94}\text{Mo}$  Reaction in the Energy Range  $E_p=1.4-4.0$  MeV**, S. Harissopoulos, P. Tsagari, E. Skreti, G. Souliotis, T. Paradellis, J.W. Hammer, R. Kunz, C. Angulo, S. Goriely, T. Rauscher; *Proc. Int Symp. "Nuclei in the Cosmos V"*, eds. N. Prantzos, S. Harissopoulos (Editions Frontières, Gif-sur-Yvette 1998), p. 455.
  43. **Radiative Capture Experiments for the Study of p-Process and Comparison to Statistical Calculations**, E. Somorjai, Zs. Fülöp, Á.Z. Kiss, C.E. Rolfs, H.-P. Trautvetter, U. Greife, M. Junker, M. Arnould, M. Rayet, S. Goriely, T. Rauscher, H. Oberhummer, P. Mohr; *Proc. Int Symp. "Nuclei in the Cosmos V"*, eds. N. Prantzos, S. Harissopoulos (Editions Frontières, Gif-sur-Yvette 1998), p. 459.
  44. **Prediction of Thermonuclear Reaction Rates in Astrophysics**, T. Rauscher; *Proc. Int Symp. "Nuclei in the Cosmos V"*, eds. N. Prantzos, S. Harissopoulos (Editions Frontières, Gif-sur-Yvette 1998), p. 484.
  45. **Cross Section Measurements of Nuclear Reactions Relevant to the Astrophysical p-Process**, E. Somorjai, Zs. Fülöp, A.Z. Kiss, C. Rolfs, H.-P. Trautvetter, U. Greife, M. Junker, T. Rauscher, H. Oberhummer, M. Arnould, M. Rayet, S. Goriely; *Proc. Int. Symp. Origin of Matter and Evolution of Galaxies 97*, eds. S. Kubono, T. Kajino, K.I. Nomoto, I. Tanihata (World Scientific, Singapore 1999), p. 359.
  46. **Explosive Nucleosynthesis and the Astrophysical r-Process**, F.-K. Thielemann, C. Freiburghaus, T. Rauscher, E. Kolbe, B. Pfeiffer, K.-L. Kratz, J.J. Cowan;

- Proc. Int. Conf. on Exotic Nuclei and Atomic Masses "ENAM '98"*, eds. B. Sherrill, D.J. Morrissey, C.N. Davids, *AIP Conf. Proc.*, **455** (1999) 837.
47. **X-Ray Bursts and Proton Captures Close To The Dripline**, T. Rauscher, F. Rembges, H. Schatz, M. Wiescher, F.-K. Thielemann; *Proc. Workshop "The  $\beta$  decay, from weak interaction to nuclear structure"*, eds. Ph. Dessagne, A. Michalon, C. Miehé (IReS Strasbourg, France, 1999), p. 51.
  48. **Determination of Astrophysical Reaction Rates: Methods, Data Needs, and Consequences for Nucleosynthesis Studies**, T. Rauscher, R.D. Hoffman, S.E. Woosley, F.-K. Thielemann; *AIP Conf. Proc.* **529** (2000) 331.
  49. **The 1999 Update of Stellar Neutron Capture Rates**, Z.Y. Bao, H. Beer, F. Käppeler, T. Rauscher, F. Voss, K. Wisshak; *AIP Conf. Proc.* **529** (2000) 706.
  50. **Nucleosynthesis in Massive Stars Including All Stable Isotopes**, A. Heger, R.D. Hoffman, T. Rauscher, S.E. Woosley; *Proc. X Workshop on Nuclear Astrophysics*, eds. W. Hillebrandt, E. Müller, MPA/P12 (MPA, Garching 2000), p. 105.
  51. **Nuclear Aspects of Stellar and Explosive Nucleosynthesis**, T. Rauscher, F.-K. Thielemann, R.D. Hoffman, S.E. Woosley; *Proc. "Origin of Elements in the Solar System: Implications of Post-1957 Observations"*, ed. O. Manuel (Kluwer Academic/Plenum Press 2001), p. 143.
  52. **Nuclear Aspects of Nucleosynthesis in Massive Stars**, T. Rauscher, A. Heger, S.E. Woosley; in *"Hadrons, Nuclei, and Applications"*, eds. G. C. Bonsignori, M. Bruno, A. Ventura, D. Vretenar (World Scientific, 2001), p. 277.
  53. **Nucleosynthesis in Massive Stars Using Extended Adaptive Nuclear Reaction Networks**, A. Heger, T. Rauscher, R.D. Hoffman, S.E. Woosley; *AIP Conf. Proc.* **561** (2001) 3.
  54. **Nuclear Aspects of the s- and n-processes in Massive Stars**, T. Rauscher, A. Heger, S.E. Woosley, R.D. Hoffman; *Neutron Spectroscopy, Nuclear Structure, Related Topics: Proc. 9<sup>th</sup> Int. Sem. Interactions of Neutrons With Nuclei (ISINN-9)*, (JINR: Dubna 2001), p. 389.
  55. **Technetium-97 and p-Radionuclides**, N. Dauphas, T. Rauscher, H. Schatz, B. Marty, L. Reisberg; *Geochim. Cosmochim. Acta (Suppl.)* **66** (2002) A169.
  56. **Nucleosynthesis in Supernovae**, F.-K. Thielemann, D. Argast, F. Brachwitz, G. Martinez-Pinedo, T. Rauscher, M. Liebendörfer, A. Mezzacappa, P. Höflich, K. Iwamoto, K. Nomoto; *Proc. Int. Conf. Chemical Enrichment of Intracluster and Intergalactic Medium*, ASP Conf. Proc. **253** (2002) 205.
  57. **Astrophysics program at the CERN n\_TOF facility**, A. Mengoni, The n\_TOF Collaboration; *Proc. Int. Symp. Astrophysics, Symmetries, and Applied Physics at Spallation Neutron Sources*, eds. P. E. Koehler, C. R. Gould, R. C. Haight, T. E. Valentine (World Scientific, Singapore 2002), p. 25.

58. **Applied physics measurements at the CERN n\_TOF facility**, E. Gonzalez, The n\_TOF Collaboration; *Proc. Int. Symp. Astrophysics, Symmetries, and Applied Physics at Spallation Neutron Sources*, eds. P. E. Koehler, C. R. Gould, R. C. Haight, T. E. Valentine (World Scientific, Singapore 2002), p. 83.
59. **Nuclear Physics Issues of the  $r$ -Process**, F.-K. Thielemann, E. Kolbe, G. Martinez-Pinedo, I. V. Panov, T. Rauscher, K.-L. Kratz, B. Pfeiffer, S. Rosswog; *Capture Gamma-Ray Spectroscopy and Related Topics* (World Scientific, 2003), p. 311.
60. **Reaction Rates and Nuclear Properties Relevant for Nucleosynthesis in Massive Stars and Far From Stability**, T. Rauscher, C. Fröhlich, K.H. Guber; *Capture Gamma-Ray Spectroscopy and Related Topics* (World Scientific, 2003), p. 336.
61. **Se( $p,\gamma$ ) cross section measurements for  $p$ -process studies**, Gy. Gyürky, Zs. Fülöp, E. Somorjai, S. Harissopulos, M. Kokkoris, S. Galanopoulos, P. Demetriou, S. Goriely, T. Rauscher; *Capture Gamma-Ray Spectroscopy and Related Topics* (World Scientific, 2003), p. 682.
62. **The importance of parity-dependence of the nuclear level density in the prediction of astrophysical reaction rates**, D. Mocerlj, T. Rauscher, G. Martinez-Pinedo, Y. Alhassid; *Capture Gamma-Ray Spectroscopy and Related Topics* (World Scientific, 2003), p. 781.
63. **Stellar Sources of the Interstellar Medium**, F.-K. Thielemann, D. Argast, F. Brachwitz, G. Martinez-Pinedo, R. Oechslin, T. Rauscher, W. R. Hix, M. Liebendörfer, A. Mezzacappa, P. Höflich, K. Iwamoto, K. Nomoto, H. Schatz, M. C. Wiescher, K.-L. Kratz, B. Pfeiffer, S. Rosswog; *Proc. ICRC 2001*, Hamburg, Germany.
64. **The ( $n,\gamma$ ) cross sections of short-living  $s$ -process branching points**, K. Sonnabend, A. Mengoni, P. Mohr, T. Rauscher, K. Vogt, A. Zilges; *AIP Conf. Proc.* **704** (2004) 463.
65. **Fission Rate Calculations and Consequences for  $r$ -Process Abundances**, I. V. Panov, E. Kolbe, B. Pfeiffer, T. Rauscher, K.-L. Kratz, F.-K. Thielemann; *Proc. XII Workshop on Nuclear Astrophysics*, eds. E. Müller, H.-T. Janka, MPA/P14 (MPA Garching, 2004), p. 26.
66. **Nucleosynthesis in Pop III Stars**, A. Heger, S. E. Woosley, R. D. Hoffman, T. Rauscher; *Proc. XII Workshop on Nuclear Astrophysics*, eds. E. Müller, H.-T. Janka, MPA/P14 (MPA Garching, 2004), p. 63.
67. **The EK-1-4-1 Story**, K.-L. Kratz, W. Böhmer, C. Freiburghaus, P. Möller, B. Pfeiffer, T. Rauscher, F.-K. Thielemann; *Proc. XII Workshop on Nuclear Astrophysics*, eds. E. Müller, H.-T. Janka, MPA/P14 (MPA Garching, 2004), p. 68.
68. **The  $r$ -Process in Supernovae**, F.-K. Thielemann, D. Argast, D. Mocerlj, T. Rauscher, J. J. Cowan, K.-L. Kratz, B. Pfeiffer; in *The  $r$ -Process: The Astrophysical*

- Origin of the Heavy Elements and Related Rare Isotope Accelerator Physics*, eds. Y.-Z. Qian, E. Rehm, H. Schatz, F.-K. Thielemann (World Scientific, Singapore 2004), p. 1.
69. **Neutron Captures in the r-Process**, T. Rauscher; in *The r-Process: The Astrophysical Origin of the Heavy Elements and Related Rare Isotope Accelerator Physics*, eds. Y.-Z. Qian, E. Rehm, H. Schatz, F.-K. Thielemann (World Scientific, Singapore 2004), p. 63.
  70. **The n\_TOF Facility at CERN: Performances and Physics Results**, The n\_TOF Collaboration; *AIP Conf. Proc.* **769** (2005) 724.
  71. **Cross Measurements for (n,xn) Reactions by In-Beam  $\gamma$ -Ray Spectroscopy**, The n\_TOF Collaboration; *AIP Conf. Proc.* **769** (2005) 876.
  72. **Measurement Of Capture Cross Sections of  $^{90,91,92,94,96}\text{Zr}$  Isotopes at n\_TOF**, The n\_TOF Collaboration; *AIP Conf. Proc.* **769** (2005) 880.
  73. **High-Resolution Study of  $^{237}\text{Np}$  Fission Cross Section from 5 eV to 1 MeV**, The n\_TOF Collaboration; *AIP Conf. Proc.* **769** (2005) 1039.
  74. **Neutron Capture Cross Sections for the Re/Os Clock**, The n\_TOF Collaboration; *AIP Conf. Proc.* **769** (2005) 1335.
  75. **Measurements at n\_TOF of the Neutron Capture Cross Section of Minor Actinides Relevant to Nuclear Waste Transmutation**, The n\_TOF Collaboration; *AIP Conf. Proc.* **769** (2005) 1442.
  76. **Measurement of the  $^{232}\text{Th}$  Neutron Capture Cross Section at the CERN n\_TOF Facility**, The n\_TOF Collaboration; *AIP Conf. Proc.* **769** (2005) 1470.
  77. **New Measurement of the Capture Cross Section of Bismuth and Lead Isotopes**, The n\_TOF Collaboration; *AIP Conf. Proc.* **769** (2005) 1521.
  78. **Fission of Actinides Induced by Neutrons at n\_TOF**, The n\_TOF Collaboration; *AIP Conf. Proc.* **769** (2005) 1529.
  79. **An Updated Library of Reaction Rates for the Astrophysical rp-Process**, A. Sakharuk, T. Elliot, J. L. Fisker, S. Hemingray, A. Kruienza, T. Rauscher, H. Schatz, K. Smith, F.-K. Thielemann, M. Wiescher; *AIP Conf. Proc.* **819** (2006) 118.
  80. **KADoNiS – The Karlsruhe Astrophysical Database of Nucleosynthesis in Stars**, I. Dillmann, M. Heil, F. Käppeler, R. Plag, T. Rauscher, F.-K. Thielemann; *AIP Conf. Proc.* **819** (2006) 123.
  81. **Radiative capture reactions and  $\alpha$ -elastic scattering on  $^{106}\text{Cd}$  for the astrophysical p-process**, Gy. Gyürky, Z. Elekes, G. G. Kiss, Zs. Fülöp, E. Somorjai, Z. Maté, J. Görres, A. Palumbo, M. Wiescher, H.-Y. Lee, N. Ozkan, R. T. Güray, G. Efe, D. Galaviz, A. Kretschmer, K. Sonnabend, A. Zilges, T. Rauscher; *AIP Conf. Proc.* **819** (2006) 201.



82. **Measurement of  $^{139}\text{La}(n,\gamma)$  Cross Sections**, R. Terlizzi, et al. (The n\_TOF Collaboration); *AIP Conf. Proc.* **819** (2006) 283.
83. **Measurement of the resonance capture cross section of  $^{204,206}\text{Pb}$  and the termination of the s-process**, C. Domingo-Pardo, et al. (The n\_TOF Collaboration); *AIP Conf. Proc.* **819** (2006) 288.
84. **Neutron Capture Cross Section Measurements at n\_TOF of  $^{237}\text{Np}$ ,  $^{240}\text{Pu}$ , and  $^{243}\text{Am}$  for the Transmutation of Nuclear Waste**, D. Cano-Ott, et al. (The n\_TOF Collaboration); *AIP Conf. Proc.* **819** (2006) 318.
85. **Neutron captures and the r-process**, K. Farouqi, K.-L. Kratz, B. Pfeiffer, T. Rauscher, F.-K. Thielemann; *AIP Conf. Proc.* **819** (2006) 419.
86. **Implications of  $^{151}\text{Sm}(n,\gamma)$  Cross Section at n\_TOF**, S. Marrone, et al. (The n\_TOF Collaboration); *AIP Conf. Proc.* **831** (2006) 502.
87. **Measurement of the  $^{241}\text{Am}(n,2n)$  reaction cross section by the activation method**, G. Perdikakis, et al. (The n\_TOF Collaboration); *AIP Conf. Proc.* **831** (2006) 532.
88. **Measurement of the  $^{139}\text{La}(n,\gamma)$  Cross Sections at n\_TOF**, R. Terlizzi, et al. (The n\_TOF Collaboration); *AIP Conf. Proc.* **831** (2006) 551.
89. **Neutron cross section measurements at n\_TOF for ADS related studies**, P. F. Mastinu, et al. (The n\_TOF Collaboration); *J. Phys. Conf. Series* **41** (2006) 352.
90. **Elastic  $\alpha$ -scattering on proton-rich nuclei at astrophysically relevant energies**, Zs. Fülöp, D. Galaviz, Gy. Gyürky, G. G. Kiss, Z. Maté, P. Mohr, T. Rauscher, E. Somorjai, A. Zilges; *AIP Conf. Proc.* **847** (2006) 351.
91. **Neutron capture cross section measurements for nuclear astrophysics at n\_TOF**, M. Heil, et al. (The n\_TOF Collaboration); *Proceedings of Science*, PoS(NIC-IX)053 (2006).
92. **Experimental challenges for the Re/Os clock**, M. Mosconi, et al. (The n\_TOF Collaboration); *Proceedings of Science*, PoS(NIC-IX)055 (2006).
93. **Neutron capture measurement on the s-process termination isotopes lead and bismuth**, C. Domingo-Pardo, et al. (The n\_TOF Collaboration); *Proceedings of Science*, PoS(NIC-IX)058 (2006).
94. **Nucleosynthesis in neutrino heated matter: The  $\nu p$ -process and the r-process**, G. Martinez-Pinedo, A. Kelić, K. Langanke, K.-H. Schmidt, D. Mocerlj, C. Fröhlich, F.-K. Thielemann, I. Panov, T. Rauscher, M. Liebendörfer, N. T. Zinner, B. Pfeiffer, R. Buras, H.-Th. Janka; *Proceedings of Science*, PoS(NIC-IX)064 (2006).
95. **First measurements of the total and partial stellar cross section to the s-process branching-point  $^{79}\text{Se}$** , I. Dillmann, M. Heil, F. Käppeler, T. Faestermann, G. Korschinek, K. Knie, M. Poutivtsev, G. Rugel, A. Wallner, T. Rauscher; *Proceedings of Science*, PoS(NIC-IX)089 (2006).

96. **Present Status of the KADoNiS Database**, I. Dillmann, R. Plag, M. Heil, F. Käppeler, T. Rauscher; *Proceedings of Science*, PoS(NIC-IX)090 (2006).
97. **Astrophysical implications of the  $^{139}\text{La}(n,\gamma)$  and  $^{151}\text{Sm}(n,\gamma)$  cross section measured at n\_TOF**, S. Marrone, et al. (The n\_TOF Collaboration); *Proceedings of Science*, PoS(NIC-IX)138 (2006).
98. **Excitation Functions of (p,n) Reactions on  $^{115,116,120}\text{Sn}$** , Ye. Skakun, T. Rauscher; *Proceedings of Science*, PoS(NIC-IX)208 (2006).
99. **Measurement of the  $^{90,91,92,94,96}\text{Zr}$  neutron capture at n\_TOF**, G. Tagliente, et al. (The n\_TOF Collaboration); *Proceedings of Science*, PoS(NIC-IX)227 (2006).
100. **Measurement at n\_TOF of the  $^{237}\text{Np}(n,\gamma)$  and  $^{240}\text{Pu}(n,\gamma)$  Cross Sections for the Transmutation of Nuclear Waste**, C. Guerrero, et al. (The n\_TOF Collaboration); *Proc. "Advances in Nuclear Analysis and Simulation, PHYSOR-2006"*, (American Nuclear Society, La Grange Park 2006), ISBN 0-89448-697-7.
101. **Measurement of the neutron capture cross section of  $^{234}\text{U}$  in n\_TOF at CERN**, W. Dridi, et al. (The n\_TOF Collaboration); *Proc. "Advances in Nuclear Analysis and Simulation, PHYSOR-2006"*, (American Nuclear Society, La Grange Park 2006), ISBN 0-89448-697-7.
102. **n\_TOF fission data of interest to GEN-IV and ADS**, C. Paradela, et al. (The n\_TOF Collaboration); *Proc. "Advances in Nuclear Analysis and Simulation, PHYSOR-2006"*, (American Nuclear Society, La Grange Park 2006), ISBN 0-89448-697-7.
103. **Measurement of the neutron capture cross section of  $^{236}\text{U}$** , F. Gunsing, et al. (The n\_TOF Collaboration); *Proc. "Advances in Nuclear Analysis and Simulation, PHYSOR-2006"*, (American Nuclear Society, La Grange Park 2006), ISBN 0-89448-697-7.
104. **Measurements of neutron capture cross-sections at n\_TOF**, G. Tagliente, et al. (The n\_TOF Collaboration); *AIP Conf. Proc.* **884** (2007) 265.
105. **Measurement of the neutron induced fission cross section on transuranic (TRU) elements at the n\_TOF facility at CERN**, P. F. Mastinu, et al. (The n\_TOF Collaboration); *AIP Conf. Proc.* **947** (2007) 43.
106. **The n\_TOF Facility at CERN**, D. Cano-Ott, et al. (The n\_TOF Collaboration); *Proc. 8th Int. Topical Meeting on Nucl. Applic. and Util. of Accelerators* (American Nuclear Society, La Grange Park, 2007), ISBN 0-89448-054-5 (CD-ROM).
107. **Astrophysical challenges to RIA: explosive nucleosynthesis in supernovae**, G. Martinez-Pinedo, et al.; in *Opportunities with Exotic Beams*, eds. T. Duguet, H. Esbensen, K. M. Nollet, C. D. Roberts (World Scientific, Singapore 2007), p. 163.

108. **Recent Experiments at ORELA and LANSCE and Their Impact on Compound Nuclear Models**, P. E. Koehler, K. H. Guber, J. A. Harvey, T. Rauscher, J. L. Ullmann, T. A. Bredeweg, J. M. O'Donnell, R. Reifarth, R. S. Rundberg, D. J. Vieira, J. M. Wouters; *AIP Conf. Proc.* **1005** (2008) 119.
109. **Astrophysical S-factors and reaction rates of (p,n)-reactions on  $^{117,118,122,124}\text{Sn}$** , Ye. Skakun, T. Rauscher; *Proc. Int. Conf. Nucl. Data for Science and Techn.*, eds. O. Bersillon, F. Gunsing, E. Bauge, R. Jacqmin, and S. Leray (EDP Sciences, 2008), p. 1325.
110. **Measurement of the  $^{90-94,96}\text{Zr}(n,\gamma)$  and  $^{139}\text{La}(n,\gamma)$  cross sections at n\_TOF**, G. Tagliente, et al. (The n\_TOF Collaboration); *Proc. Int. Conf. Nucl. Data for Science and Techn.*, eds. O. Bersillon, F. Gunsing, E. Bauge, R. Jacqmin, and S. Leray (EDP Sciences, 2008), p. 1303.
111. **New Stellar (n, $\gamma$ ) Cross Sections and the “The Karlsruhe Astrophysical Database of Nucleosynthesis in Stars”**, I. Dillmann, R. Plag, C. Domingo-Pardo, M. Heil, F. Käppeler, T. Rauscher, F.-K. Thielemann; *Proc. Int. Conf. Nucl. Data for Science and Techn.*, eds. O. Bersillon, F. Gunsing, E. Bauge, R. Jacqmin, and S. Leray (EDP Sciences, 2008), p. 575.
112. **Improved lead and bismuth (n, $\gamma$ ) cross sections and their astrophysical impact**, C. Domingo-Pardo, et al. (The n\_TOF Collaboration); *Proc. Int. Conf. Nucl. Data for Science and Techn.*, eds. O. Bersillon, F. Gunsing, E. Bauge, R. Jacqmin, and S. Leray (EDP Sciences, 2008), p. 1311.
113. **Capture cross section measurements of  $^{186,187,188}\text{Os}$  at n\_TOF: The resolved resonance region**, K. Fujii, et al. (The n\_TOF Collaboration); *Proc. Int. Conf. Nucl. Data for Science and Techn.*, eds. O. Bersillon, F. Gunsing, E. Bauge, R. Jacqmin, and S. Leray (EDP Sciences, 2008), p. 599.
114. **Measurements of the Au(n, $\gamma$ ) cross section at n\_TOF towards a new standard**, C. Massimi, et al. (The n\_TOF Collaboration); *Proc. Int. Conf. Nucl. Data for Science and Techn.*, eds. O. Bersillon, F. Gunsing, E. Bauge, R. Jacqmin, and S. Leray (EDP Sciences, 2008), p. 1265.
115. **Design study for a new spallation target of the n\_TOF facility at CERN**, C. Carapico, et al. (The n\_TOF Collaboration); *Proc. Int. Conf. Nucl. Data for Science and Techn.*, eds. O. Bersillon, F. Gunsing, E. Bauge, R. Jacqmin, and S. Leray (EDP Sciences, 2008), p. 445.
116. **The neutron capture cross sections of  $^{237}\text{Np}(n,\gamma)$  and  $^{240}\text{Pu}(n,\gamma)$  and its relevance in the transmutation of nuclear waste**, C. Guerrero, et al. (The n\_TOF Collaboration); *Proc. Int. Conf. Nucl. Data for Science and Techn.*, eds. O. Bersillon, F. Gunsing, E. Bauge, R. Jacqmin, and S. Leray (EDP Sciences, 2008), p. 627.
117. **The  $^{234}\text{U}$  neutron capture cross section measurement at the n\_TOF facility**, C. Lampoudis, et al. (The n\_TOF Collaboration); *Proc. Int. Conf.*

- Nucl. Data for Science and Techn.*, eds. O. Bersillon, F. Gunsing, E. Bauge, R. Jacqmin, and S. Leray (EDP Sciences, 2008), p. 595.
118. **Simultaneous measurement of the neutron capture and fission yields of  $^{233}\text{U}$** , E. Berthoumieux, et al. (The n\_TOF Collaboration); *Proc. Int. Conf. Nucl. Data for Science and Techn.*, eds. O. Bersillon, F. Gunsing, E. Bauge, R. Jacqmin, and S. Leray (EDP Sciences, 2008), p. 571.
119. **Neutron-induced fission cross section measurements at n\_TOF**, L. Audouin, et al. (The n\_TOF Collaboration); *Proc. Int. Conf. Nucl. Data for Science and Techn.*, eds. O. Bersillon, F. Gunsing, E. Bauge, R. Jacqmin, and S. Leray (EDP Sciences, 2008), p. 421.
120. **Neutron resonance spectroscopy at n\_TOF at CERN**, F. Gunsing, et al. (The n\_TOF Collaboration); *Proc. Int. Conf. Nucl. Data for Science and Techn.*, eds. O. Bersillon, F. Gunsing, E. Bauge, R. Jacqmin, and S. Leray (EDP Sciences, 2008), p. 537.
121. **Measurement of neutron induced fission of  $^{233,235}\text{U}$  and  $^{245}\text{Cm}$  with the FIC detector at the CERN n\_TOF facility**, M. Calviani, et al. (The n\_TOF Collaboration); *Proc. Int. Conf. Nucl. Data for Science and Techn.*, eds. O. Bersillon, F. Gunsing, E. Bauge, R. Jacqmin, and S. Leray (EDP Sciences, 2008), p. 335.
122. **Recent Results at n\_TOF and Future Perspectives**, S. Marrone, et al. (The n\_TOF Collaboration); *Ninth Torino Workshop on Evolution and Nucleosynthesis in AGB Stars and the Second Perugia Workshop on Nuclear Astrophysics*, eds. R. Guandalini, S. Palmerini, M. Busso (AIP, 2008), p. 90.
123. **SMOKER and NON-SMOKER neutron-induced fission rates**, I. Korneev, I. V. Panov, T. Rauscher, F.-K. Thielemann; in *Seminar on Fission*, eds. C. Wagemans, J. Wagemans, P. D'Hondt (World Scientific, 2008), p. 177.
124. **Fe-60 in the cosmic blender**, N. Dauphas, D. L. Cook, A. Sacarabany, C. Fröhlich, A. M. Davis, M. Wadhwa, A. Pourmand, T. Rauscher, R. Gallino; *Geochim. Cosmochim. Acta (Suppl.)* **72** (2008) A200.
125. **Application of Photon Strength Functions to (n, $\gamma$ ) measurements with the n\_TOF TAC**, C. Guerrero, et al. (The n\_TOF Collaboration); *Proceedings of Science*, PoS(PSF07)006 (2008).
126. **Study of the Photon Strength Function of  $^{152}\text{Sm}$  in resonance neutron capture at n\_TOF**, S. Marrone, et al. (The n\_TOF Collaboration); *Proceedings of Science*, PoS(PSF07)019 (2008).
127. **Recent Efforts in Data Compilations for Nuclear Astrophysics**, I. Dillmann, et al (The JINA and CARINA Collaborations); *AIP Conf. Proc.* **1016** (2008) 143.
128. **Experimental Astrophysical Reaction Rates of Threshold (p,n)-Reactions on Pd Isotopes**, Ye. Skakun, T. Rauscher; *AIP Conf. Proc.* **1016** (2008) 439.

129. **Two effects relevant for the study of astrophysical reaction rates:  $\gamma$  transitions in capture reactions and Coulomb suppression of the stellar enhancement**, T. Rauscher; *AIP Conf. Proc.* **1090** (2009) 48.
130. **The n\_TOF Total Absorption Calorimeter response to  $\gamma$ -ray cascades following neutron capture in minor actinides**, C. Guerrero, et al. (The n\_TOF Collaboration); *AIP Conf. Proc.* **1090** (2009) 372.
131. **R-matrix Analysis of the U(n, $\gamma$ ) cross section in the resolved resonance region**, Zh. Mezentseva, et al. (The n\_TOF Collaboration); *AIP Conf. Proc.* **1090** (2009) 381.
132. **The  $^{85}\text{Rb}(p,n)^{85}\text{Sr}$  reaction and the modified proton optical potential**, G. G. Kiss, Gy. Gyürky, A. Simon, Zs. Fülöp, E. Somorjai, T. Rauscher; *AIP Conf. Proc.* **1090** (2009) 476.
133. **Astrophysical S-factor for  $\alpha$ -Capture of  $^{113}\text{In}$  in the p-Process Energy Range**, C. Yalçın, R. T. Güray, N. Özkan, S. Kutlu, Gy. Gyürky, J. Farkas, G. G. Kiss, Zs. Fülöp, T. Rauscher, E. Somorjai; *AIP Conf. Proc.* **1090** (2009) 631.
134. **Measurements of  $^{90-94,96}\text{Zr}$  neutron capture cross sections at the n\_TOF facility at CERN**, G. Tagliente, et al. (The n\_TOF Collaboration); *Proceedings of Science*, PoS(NIC-X)086 (2009).
135. **Are there only 30 p-nuclei?**, I. Dillmann, F. Käppeler, T. Rauscher, F.-K. Thielemann, R. Gallino, S. Bisterzo; *Proceedings of Science*, PoS(NIC-X)091 (2009).
136. **Proton Capture on  $^{64,66,67}\text{Zn}$  between 1 and 3 MeV**, Ye. Skakun, S. Utenkov, A. Goncharov, V. Mishchenko, G. G. Kiss, T. Rauscher; *Proceedings of Science*, PoS(NIC-X)098 (2009).
137. **Hauser-Feshbach reaction rates with parity-dependent level densities**, H. P. Loens, E. Litvinova, K. Langanke, G. Martínez-Pinedo, T. Rauscher, F.-K. Thielemann, P. Ring, V. Tselyaev; *Proceedings of Science*, PoS(NIC-X)137 (2009).
138. **R-process nucleosynthesis calculations with complete nuclear physics inputs**, I. Petermann, A. Arcones, A. Kelić, K. Langanke, G. Martínez-Pinedo, K.-H. Schmidt, W. R. Hix, I. Panov, T. Rauscher, F.-K. Thielemann, N. Zinner; *Proceedings of Science*, PoS(NIC-X)143 (2009).
139. **The rp-process in Type I X-ray bursts with REACLIB V1.0**, Z. P. Meisel, R. H. Cyburt, R. Ferguson, S. Warren, A. M. Amthor, K. Smith, J. Fisker, A. Heger, E. Johnson, T. Rauscher, A. Sakharuk, H. Schatz, F.-K. Thielemann, M. Wiescher; *Proceedings of Science*, PoS(NIC-X)173 (2009).
140. **Sensitivity of X-Ray Burst Models to Uncertainties in Nuclear Processes**, K. Smith, A. M. Amthor, R. Cyburt, R. Ferguson, A. Heger, E. Johnson, M. Klein, Z. Meisel, T. Rauscher, A. Sakharuk, H. Schatz, S. Warren, M. Wiescher; *Proceedings of Science*, PoS(NIC-X)178 (2009).

141. **n\_TOF Experiment: Past, Present And Future**, S. Marrone, et al. (The n\_TOF Collaboration); *AIP Conf. Proc.* **1109** (2009) 78.
142. **Fission Cross-Section Measurements On  $^{233}\text{U}$  And Minor Actinides At The CERN n\_TOF Facility**, M. Calviani, et al. (The n\_TOF Collaboration); *AIP Conf. Proc.* **1175** (2009) 211.
143. **Alpha-induced reactions for the astrophysical p-process: the case of  $^{151}\text{Eu}$** , Gy. Gyürky, Z. Elekes, J. Farkas, Zs. Fülöp, G. G. Kiss, E. Somorjai, T. Szücs, T. Güray, N. Özkan, C. Yalçın, T. Rauscher; *J. Phys. Conf. Ser.* **202** (2010) 012004.
144. **Explosive Nucleosynthesis: The r-, p-, rp-, and  $\nu\text{p}$ -Processes**, F.-K. Thielemann, et al., *J. Phys. Conf. Ser.* **202** (2010) 012006.
145. **Network calculations for r-process nucleosynthesis**, I. Petermann, G. Martínez-Pinedo, A. Arcones, W. R. Hix, A. Kelić, K. Langanke, I. Panov, T. Rauscher, K.-H. Schmidt, F.-K. Thielemann, N. Zinner; *J. Phys. Conf. Ser.* **202** (2010) 012008.
146. **Differences between stellar and laboratory rates**, T. Rauscher; *J. Phys. Conf. Ser.* **202** (2010) 012013.
147. **Astrophysical reaction rates as a challenge to nuclear reaction models**, T. Rauscher; *AIP Conf. Proc.* **1269** (2010) 247.
148. **Astrophysical S-Factors and Reaction Rates of Threshold (p,n)-Reactions on  $^{99-102}\text{Ru}$** , Ye. Skakun, T. Rauscher; *AIP Conf. Proc.* **1269** (2010) 390.
149. **Boron depletion in 9 to 15  $M_{\odot}$  stars with rotation**, U. Frischknecht, R. Hirschi, G. Meynet, S. Ekström, C. Georgy, T. Rauscher, C. Winteler, F.-K. Thielemann; *IAU Proc. Series* **268** (2010) 421.
150. **r-Process reaction rates for the actinides and beyond**, I. V. Panov, I. Yu. Korneev, T. Rauscher, F.-K. Thielemann; *Proc. Int. Seminar on Fission*, eds. C. Wagemans, J. Wagemans, P. D'hondt (World Scientific, 2010).
151. **Measurements of high-energy neutron-induced fission of  $^{\text{nat}}\text{Pb}$  and  $^{209}\text{Bi}$** , D. Tarrío, et al. (The n\_TOF Collaboration); *Europ. J. Phys. Web of Conf.* **8** (2010) 07009.
152. **First Measurement of the  $^{64}\text{Ni}(\gamma, n)^{63}\text{Ni}$  Cross Section**, I. Dillmann, T. Faestermann, G. Korschinek, J. Lachner, M. Maiti, M. Poutivtsev, G. Rugel, S. Walter, F. Käppeler, M. Erhard, A. R. Junghans, C. Nair, R. Schwengner, A. Wagner, M. Pignatari, T. Rauscher, A. Mengoni; *Proceedings of Science*, PoS(NIC-XI)049 (2011).
153. **Origin of p-Nuclei in Explosive Nucleosynthesis**, T. Rauscher; *Proceedings of Science*, PoS(NIC-XI)059 (2011).
154. **Effects of rotation on the weak s-process**, U. Frischknecht, R. Hirschi, T. Rauscher, F.-K. Thielemann; *Proceedings of Science*, PoS(NIC-XI)189 (2011).

155. **Reaction rate sensitivity of  $^{44}\text{Ti}$  production in massive stars and implications of a thick target yield measurement for  $^{40}\text{Ca}(\alpha,\gamma)^{44}\text{Ti}$** , R. Hoffman, S. Sheets, J. Burke, N. Scielzo, T. Rauscher; *Proceedings of Science*, PoS(NIC-XI)240 (2011).
156. **How important is the Family? Alpha nuclear potentials and p-process nucleosynthesis**, A. Ornelas, et al; *Proceedings of Science*, PoS(NIC-XI)241 (2011)
157. **Cross sections of low energy (p, $\gamma$ ) and (p,n)-reactions on selenium isotopes for the astrophysical  $\gamma$ -process**, Ye. Skakun, S. Utenkov, V. Mishchenko, J. Farkas, Zs. Fülöp, Gy. Gyürky, G. G. Kiss, E. Somorjai, T. Rauscher; *Proc. Int. Conf. Current Problems in Nuclear Physics and Atomic Energy (NPAE-2010)*, (KINR, Kyiv, Ukraine, 2011), p. 207.
158. **The Neutron Time-Of-Flight Facility n\_TOF At CERN: Phase II**; F. Gunsing, et al. (The n\_TOF Collaboration); *AIP Conf. Proc.* **1336** (2011) 547.
159. **A CVD diamond detector for (n, $\alpha$ ) cross section measurements**, C. Weiss, G. Badurek, E. Berthoumieux, M. Calviani, E. Chiaveri, D. Dobos, E. Griesmayer, C. Guerrero, E. Jericha, F. Käppeler, H. Leeb, T. Rauscher, V. Vlachoudis; *Proceedings of Science*, PoS(ENAS 6)015 (2012).
160. **Investigation of  $\alpha$ -nuclear potential families from elastic scattering experiments**, A. Ornelas, et al; *J. Phys. Conf. Ser.* **337** (2012) 012030.
161. **Present Status and Future Programs of the n\_TOF Experiment**, E. Chiaveri, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **21**(2012) 03001.
162. **Proton-rich abundances and nuclear physics**, T. Rauscher, C. Fröhlich; *AIP Conf. Proc.* **1484** (2012) 73.
163. **Reaction rate uncertainties and the  $\nu\text{p}$ -process**, C. Fröhlich, T. Rauscher; *AIP Conf. Proc.* **1484** (2012) 232.
164. **Neutron induced reactions for the  $s$  process, and the case of Fe and Ni isotopes**, C. Lederer, et al. (The n\_TOF Collaboration); PoS(NIC XII)023 (2012).
165. **Possible solution to the  $\alpha$ -potential mystery in the  $\gamma$ -process and the Nd/Sm ratio in meteorites**, T. Rauscher; PoS(NIC XII)052 (2012).
166. **Neutron beam imaging with Micromegas detectors in combination with neutron time-of-flight at the n\_TOF facility at CERN**, F. Belloni, et al. (The n\_TOF Collaboration); *Proc. Int. Conf. Current Problems in Nuclear Physics and Atomic Energy (NPAE-2012), Part II* (Kyiv Institute for Nuclear Research, Kyiv, Ukraine, 2013), p. 366.
167. **General properties of astrophysical reaction rates for explosive nucleosynthesis**, T. Rauscher; *J. Phys. Conf. Ser.* **420** (2013) 012138.
168. **Neutron studies for advanced reactors at n\_TOF (CERN)**, G. Tagliente, et al. (The n\_TOF Collaboration); *Proc. 11th International Topical Meeting*

- on *Nuclear Applications of Accelerators (AccApp 2013)*, Bruges, Belgium, August 2013, p. 183.
169. **Neutron research at the N\_TOF facility (CERN): Results and perspectives**, N. Colonna, et al. (The n\_TOF Collaboration); *AIP Conf. Proc.* **1525** (2013) 570.
  170. **Determination of the  $^{141}\text{Pr}(\alpha, n)^{144}\text{Pm}$  cross section for the astrophysical p process using the  $\gamma\gamma$  coincidence technique**, A. Sauerwein, M. Elvers, J. Endres, J. Hasper, A. Hennig, L. Netterdon, K.-O. Zell, A. Zilges, H. W. Becker, D. Rogalla, H. Dombrowski, U. Giesen, T. Rauscher; *Proc. CGS14*, eds. P. E. Garrett, B. Hadinia (World Scientific, Singapore, 2013), p. 376.
  171. **Angular distribution in the neutron-induced fission of actinides**, L. S. Leong, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **62** (2013) 08003.
  172.  **$^{238}\text{U}(n, \gamma)$  reaction cross section measurement with  $\text{C}_6\text{D}_6$  detectors at the n-TOF CERN facility**, F. Mingrone, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **66** (2014) 03061.
  173. **The nucleosynthesis of heavy elements in Stars: The key isotope  $^{25}\text{Mg}$** , C. Massimi, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **66** (2014) 07016.
  174. **Measurements of neutron cross sections for advanced nuclear energy systems at n-TOF (CERN)**, M. Barbagallo, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **66** (2014) 10001.
  175. **Measurements of alpha-induced reaction cross sections on erbium isotopes for  $\gamma$ -process studies**, G. G. Kiss, T. Szücs, Zs. Török, Zs. Fülöp, Gy. Gyürky, Zs. Halász, E. Somorjai, T. Rauscher; *AIP Conf. Proc.* **1594** (2014) 196.
  176. **Neutron cross-sections for advanced nuclear systems: The n-TOF project at CERN**, M. Barbagallo, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **79** (2014) 01003.
  177. **The influence of fission on neutron star merger r-process and the position of the third r-process peak**, M. Eichler, A. Arcones, A. Kelić, O. Korobkin, K. Langanke, G. Martínez-Pinedo, I. Panov, T. Rauscher, S. Rosswog, C. Winteler, N. T. Zinner, F. K. Thielemann; *Proceedings of Science*, PoS(NIC XIII)021.
  178. **p-Process Overview: (p,  $\gamma$ ) and ( $\alpha\gamma$ ,) Reactions in Regular and Inverse Kinematics**, A. Spyrou, et al.; *Proceedings of Science*, PoS(NIC XIII)025.
  179. **Quantification of nuclear uncertainties in nucleosynthesis of elements beyond Iron**, T. Rauscher; *Proceedings of Science*, PoS(NIC XIII)026.
  180. **The key role of SNIa for Galactic Chemical Evolution of p-nuclei: 2D-3D comparison**, C. Travaglio, F. K. Röpkke, I. Seitenzahl, R. Gallino, T. Rauscher, W. Hillebrandt; *Proceedings of Science*, PoS(NIC XIII)032.



181. **Large Scale Monte Carlo Study Of Nucleosynthesis Based On Nuclear Physics Uncertainties**, N. Nishimura, R. Hirschi, T. Rauscher; *Proceedings of Science*, PoS(NIC XIII)127.
182. **Production of  $^{92}\text{Nb}$ ,  $^{92}\text{Mo}$ , and  $^{146}\text{Sm}$  in the  $\gamma$ -process in SNIa**, T. Rauscher, C. Travaglio, R. Gallino, N. Nishimura, R. Hirschi; *Proceedings of Science*, PoS(NIC XIII)141.
183. **The Fission Programme at the CERN n\_TOF Facility**, A. Tsingaris, et al. (The n\_TOF Collaboration); *Physics Procedia* **64** (2015) 130.
184. **Experimental neutron capture data of  $^{58}\text{Ni}$  from the CERN n\_TOF facility**, P. Zugec, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **93** (2015) 02009.
185. **Nuclear Reactions For Nucleosynthesis Beyond Fe**, T. Rauscher; *AIP Conf. Proc.* **1681** (2015) 050003.
186. **Measurement of the  $^{240}\text{Pu}(n,f)$  cross-section at the CERN n\_TOF facility: first results from EAR-2**, A. Tsingaris, et al. (The n\_TOF Collaboration); in *Proc. 14th Int. Conf. Nuclear Reaction Mechanisms*, eds. F. Cerutti, M. Chadwick, A. Ferrari, T. Kawano, P. Schoofs, CERN-Proceedings-2015-001, ISBN 978-92-9083-418-2 (CERN, Geneva 2015), p. 21.
187. **Nuclear Astrophysics at n\_TOF facility, CERN**, G. Tagliente, et al. (The n\_TOF Collaboration); in *Proc. 14th Int. Conf. Nuclear Reaction Mechanisms*, eds. F. Cerutti, M. Chadwick, A. Ferrari, T. Kawano, P. Schoofs, CERN-Proceedings-2015-001, ISBN 978-92-9083-418-2 (CERN, Geneva 2015), p. 267.
188. **Integral cross section measurement of the  $^{12}\text{C}(n,p)^{12}\text{B}$  reaction**, P. tugec, et al. (The n\_TOF Collaboration); in *Proc. 14th Int. Conf. Nuclear Reaction Mechanisms*, eds. F. Cerutti, M. Chadwick, A. Ferrari, T. Kawano, P. Schoofs, CERN-Proceedings-2015-001, ISBN 978-92-9083-418-2 (CERN, Geneva 2015), p. 275.
189. **Nuclear data measurements at the upgraded neutron time-of-flight facility n\_TOF at CERN**, F. Gunsing, et al. (The n\_TOF Collaboration); in *Proc. 14th Int. Conf. Nuclear Reaction Mechanisms*, eds. F. Cerutti, M. Chadwick, A. Ferrari, T. Kawano, P. Schoofs, CERN-Proceedings-2015-001, ISBN 978-92-9083-418-2 (CERN, Geneva 2015), p. 323.
190. **Experiments with neutron beams for the astrophysical s-process**, C. Lederer, et al. (The n\_TOF Collaboration); *J. Phys. Conf. Ser.* **665** (2016) 012020.
191. **Current hot questions on the s-process in AGB stars**, M. Lugaro, S. W. Campbell, V. D’Orazi, A. I. Karakas, D. A. Garcia-Hernandez, R. J. Stancliffe, G. Tagliente, C. Iliadis, T. Rauscher; *J. Phys. Conf. Ser.* **665** (2016) 012021.
192. **Revision of the derivation of stellar rates from experimental data and its impact on Eu s-process contributions**, T. Rauscher; *J. Phys. Conf. Ser.* **665** (2016) 012024.

193. **Cross section measurements for  $\gamma$ -process studies using a LEPS detector**, T. Szücs, G. G. Kiss, T. Rauscher, Zs. Török, Z. Halász, Zs. Fülöp, Gy. Gyürky, E. Somorjai; *J. Phys. Conf. Ser.* **665** (2016) 012041.
194. **Investigation of Alpha-Induced Reactions on  $^{107}\text{Ag}$  at Astrophysical Energies**, C. Yalçin, N. Özkan, R. T. Güray, Gy. Gyürky, G. G. Kiss, T. Szücs, Z. Halász, Zs. Fülöp, J. Farkas, E. Somorjai, Z. Korkulu, T. Rauscher; *J. Phys. Conf. Ser.* **665** (2016) 012043.
195. **Nuclear Astrophysics with radioactive ions at FAIR**, R. Reifarth, et al.; *J. Phys. Conf. Ser.* **665** (2016) 012044.
196. **The Impact of Fission on r-Process Calculations**, M. Eichler, A. Arcones, R. Käppeli, O. Korobkin, M. Liebendörfer, G. Martínez-Pinedo, I. V. Panov, T. Rauscher, S. Rosswog, F.-K. Thielemann, C. Winteler; *J. Phys. Conf. Ser.* **665** (2016) 012054.
197. **Recent Results In Nuclear Astrophysics At The n-TOF Facility At CERN**, G. Tagliente, et al. (The n\_TOF Collaboration); *Proceedings of Science PoS(INPC2016)* 161.
198. **Towards the high-accuracy determination of the  $^{238}\text{U}$  fission cross section at the threshold region at CERN – n\_TOF**, M. Diakaki, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **111** (2016) 02002.
199. **High accuracy  $^{235}\text{U}(n,f)$  data in the resonance energy region**, C. Paradela, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **111** (2016) 02003.
200. **New measurement of the  $^{242}\text{Pu}(n,\gamma)$  cross section at n\_TOF**, J. Lerendegui-Marco, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **111** (2016) 02004.
201. **Fission Fragment Angular Distribution measurements of  $^{235}\text{U}$  and  $^{238}\text{U}$  at the CERN n\_TOF facility**, E. Leal-Cidoncha, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **111** (2016) 10002.
202. **The CERN n\_TOF facility: a unique tool for nuclear data measurement**, F. Mingrone, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **122** (2016) 05001.
203. **The role of fission on neutron star mergers and its impact on the r-process peaks**, M. Eichler, A. Arcones, A. Kelic, O. Korobkin, K. Langanke, T. Marketin, G. Martínez-Pinedo, I. Panov, T. Rauscher, S. Rosswog, Ch. Winteler, N. T. Zinner, F.-K. Thielemann; *AIP Conf. Proc.* **1743** (2016) 040004.
204. **Theory Considerations For Nucleosynthesis Beyond Fe With Special Emphasis On p-Nuclei In Massive Stars**, T. Rauscher, N. Nishimura, R. Hirschi; *AIP Conf. Proc.* **1743** (2016) 040008.
205. **In Memoriam: Heinz Oberhummer (1941-2015)**, T. Rauscher; *JPS Conf. Proc.* **14** (2017) 010001.

206. **Production Uncertainties of p-Nuclei in the  $\gamma$ -Process in Massive Stars Using a Monte Carlo Approach**, T. Rauscher, N. Nishimura, R. Hirschi, G. Cescutti, A. St.J. Murphy, A. Heger; *JPS Conf. Proc.* **14** (2017) 010509.
207. **Nucleosynthesis in Supernovae, Hypernovae/Gamma-ray Bursts and Compact Binary Mergers**, F.-K. Thielemann, et al. (The Basel Nuclear and Computational Astrophysics Group); *JPS Conf. Proc.* **14** (2017) 010605.
208. **Neutron Capture Cross Sections of the s-Process Branching Points  $^{147}\text{Pm}$ ,  $^{171}\text{Tm}$ , and  $^{204}\text{Tl}$** , C. Guerrero, et al. (The n\_TOF and LiLiT Collaborations); *JPS Conf. Proc.* **14** (2017) 010903.
209. **Impact of Nuclear-Physics Uncertainty at Stellar Temperatures on the s-Process Nucleosynthesis**, N. Nishimura, G. Cescutti, R. Hirschi, T. Rauscher, J. den Hartogh, A. St. J. Murphy; *JPS Conf. Proc.* **14** (2017) 020903.
210. **Time-of-flight and activation experiments on  $^{147}\text{Pm}$  and  $^{171}\text{Tm}$  for astrophysics**, C. Guerrero, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **146** (2017) 01007.
211.  **$^7\text{Be}(n,\alpha)$  and  $^7\text{Be}(n,p)$  cross-section measurement for the cosmological lithium problem at the n\_TOF facility at CERN**, M. Barbagallo, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **146** (2017) 01012.
212. **The n\_TOF facility: Neutron beams for challenging future measurements at CERN**, E. Chiaveri, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **146** (2017) 03001.
213. **Characterization of the n\_TOF EAR-2 neutron beam**, Y. H. Chen, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **146** (2017) 03020.
214. **Monte carlo simulations of the n\_TOF lead spallation target with the Geant4 toolkit: A benchmark study**, J. Lerendegui-Marco, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **146** (2017) 03030.
215. **Measurement of the  $^{240}\text{Pu}(n,f)$  cross-section at the CERN n\_TOF facility: First results from experimental area II (EAR-2)**, A. Stamatopoulos, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **146** (2017) 04030.
216. **High accuracy  $^{234}\text{U}(n,f)$  cross section in the resonance energy region**, E. Leal-Cidoncha, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **146** (2017) 04057.
217. **Dissemination of data measured at the CERN n\_TOF facility**, E. Dupont, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **146** (2017) 07002.
218. **The  $^{33}\text{S}(n,\alpha)^{30}\text{Si}$  cross section measurement at n\_TOF-EAR2 (CERN): From 0.01 eV to the resonance region**, M. Sabaté-Gilarte, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **146** (2017) 08004.
219. **The measurement programme at the neutron time-of-flight facility n\_TOF at CERN**, F. Gunsing, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **146** (2017) 11002.

220. **Measurement of the neutron capture cross section of the fissile isotope  $^{235}\text{U}$  with the CERN n\_TOF total absorption calorimeter and a fission tagging based on micromegas detectors**, J. Balibrea-Correa, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **146** (2017) 11021.
221. **Measurement of the  $^{241}\text{Am}$  neutron capture cross section at the n\_TOF facility at CERN**, E. Mendoza, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **146** (2017) 11022.
222. **High precision measurement of the radiative capture cross section of  $^{238}\text{U}$  at the n\_TOF CERN facility**, F. Mingrone, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **146** (2017) 11028.
223. **New measurement of the  $^{242}\text{Pu}(n,\gamma)$  cross section at n\_TOF-EAR1 for MOX fuels: Preliminary results in the RRR**, J. Lerendegui-Marco, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **146** (2017) 11045.
224. **The  $^{236}\text{U}$  neutron capture cross-section measured at the n\_TOF CERN facility**, M. Mastromarco, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **146** (2017) 11054.
225. **The s-process nucleosynthesis: impact of the uncertainties in the nuclear physics determined by Monte Carlo variations**, G. Cescutti, N. Nishimura, R. Hirschi, T. Rauscher, J. W. den Hartogh, A. St. J. Murphy; *Mem. Soc. Astron. It.* **88** (2017) 432.
226. **The Nuclear Astrophysics Programme at n\_TOF (CERN)**, N. Colonna, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **165** (2017) 01014.
227. **Sensitivity to neutron captures and  $\beta$ -decays of the s-process in massive stars at low metallicities**, N. Nishimura, R. Hirschi, T. Rauscher; *J. Phys. Conf. Ser.* **940** (2017) 012051.
228. **Measurement of the radiative capture cross section of the s-process branching points  $^{204}\text{Tl}$  and  $^{171}\text{Tm}$  at the n\_TOF facility (CERN)**, A. Casanovas, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **178** (2018) 03004.
229. **Abundance Uncertainties Obtained With the PizBuin Framework For Monte Carlo Reaction Rate Variations**, T. Rauscher, N. Nishimura, G. Cescutti, R. Hirschi, A. St.J. Murphy; *AIP Conf. Proc.* **1947** (2018) 020015.
230. **First measurement of  $^{72}\text{Ge}(n,\gamma)$  at n\_TOF**, M. Dietz, et al. (The n\_TOF Collaboration); *EPJ Web of Conferences* **184** (2018) 02005.
231. **Impacts of nuclear-physics uncertainties in the s-process determined by Monte-Carlo variations**, N. Nishimura, G. Cescutti, R. Hirschi, T. Rauscher, J. den Hartogh, A. St. J. Murphy; *Proceedings of "the 2017 Symposium on Nuclear Data"*, in press.

232. **Uncertainties in the production of p nuclides in SN Ia determined by Monte Carlo variations**, T. Rauscher, N. Nishimura, R. Hirschi, A. St.J. Murphy, G. Cescutti, C. Travaglio; *Springer Proceedings in Physics*, in press.
233. **Women Scientists Who Made Nuclear Astrophysics**, C. V. Hampton, M. Lugaro, P. Papakonstantinou, P. G. Isar, B. Nordström, N. Özkan, M. Aliotta, A. Čiprijanović, S. Curtis, M. Di Criscienzo, J. den Hartogh, A. S. Font, A. Kankainen, C. Kobayashi, C. Lederer-Woods, E. Niemczura, T. Rauscher, A. Spyrou, S. Van Eck, M. Yavahchova, W. Chantereau, S. E. de Mink, E. Kaiser, F.-K. Thielemann, C. Travaglio, A. Venkatesan, R. Collet; *Springer Proceedings in Physics*, in press.
234. **The s-process nucleosynthesis in low mass stars: impact of the uncertainties in the nuclear physics determined by Monte Carlo variations**, G. Cescutti, R. Hirschi, N. Nishimura, T. Rauscher, J. W. den Hartogh, A. St.J. Murphy, S. Cristallo; *Springer Proceedings in Physics*, in press.
235. **Axion emission and detection from a Galactic supernova**, P. Carena, F. Capozzi, G. Cò, T. Fischer, M. Giannotti, A. Mirizzi, T. Rauscher; *14th Patras Workshop on Axions, WIMPs and WISPs, 2018, DESY Proceedings*, in press.



### 3.2.3 Invited Reviews in Books, Popular Articles

(Review articles in journals are included above in the journal publications.)

1. **Nukleare Astrophysik als Schlüssel zum Verständnis der Elementerzeugung**, T. Rauscher; *Mitteilungsblatt der Österreichischen Physikalischen Gesellschaft* 1/2000 (ÖPG, Wien 2000), p. 16.
2. **Das Leben der Sterne und die Entstehung der Elemente**, T. Rauscher; *ASTRONOMIE + RAUMFAHRT im Unterricht* **6** (2002) 23 (Erhard Friedrich Verlag, Leipzig).
3. **The Origin of the Chemical Elements**, T. Rauscher, H. Oberhummer, A. Patkós; in *Handbook of Nuclear Chemistry, Vol. 2* (Kluwer 2003, ISBN 1-4020-1305-1).
4. **Tools for Theories & Observations: Nuclear Reactions**, M. Wiescher, T. Rauscher; in *Astronomy with Radioactivities*, Lecture Notes in Physics, Vol. **812**, eds. R. Diehl, D. H. Hartmann, N. Prantzos (Springer, 2010, ISBN 978-3-642-12697-0), p. 461.
5. **The Origin of the Chemical Elements**, T. Rauscher, A. Patkós; in *Handbook of Nuclear Chemistry, Second Edition* (Springer, 2011, ISBN 978-1-4419-0721-9), Vol. 2, Chapter 1 (p. 611-665).
6. **Nuclear Reactions**, M. Wiescher, T. Rauscher; in *Astronomy with Radioactivities*, Astrophysics and Space Science Library (ASSL), Vol. **453**, eds. R. Diehl, D. H. Hartmann, N. Prantzos (Springer, 2018, ISBN 978-3-319-91928-7), p. 523.

### 3.2.4 Books

1. **Essentials for Nucleosynthesis and Theoretical Nuclear Astrophysics** (graduate textbook and researcher formulary), IOP Publishing, in preparation (2019).

### 3.2.5 Reports and Other Publications

1. **Direct Reaction Mechanism in Transfer Reactions**, H. Oberhummer, T. Rauscher, K. Grün, H. Herndl, B. Bach; *Verhandlungen der DPG* **3** (1989) 49.
2. **Cross Sections of Transfer Reactions in Primordial Nucleosynthesis**, T. Rauscher, B. Bach, K. Grün, H. Oberhummer; 40th Annual Meeting of the Austrian Physical Society, Abstract in *Tagungsprogramm zur 40. Jahrestagung der ÖPG 1990*, p. 52.
3. **The Deuteron-Deuteron Reactions in the Framework of DWBA and DC**, K. Grün, H. Krauss, H. Herndl, T. Rauscher, H. Oberhummer, G.M. Hale, T.L. Talley; Spring Meeting of the DPG, ELFT, JCSMF-FVS, ÖPG, SPG, Salzburg 1992, Abstract in *Verhandlungen der DPG* **1** (1992) 44.

4. **Analysis of Transfer and Capture Reactions at Thermonuclear and Thermal Energies with Potential Models**, E. Krausmann, W. Böhmer, K. Grün, H. Huber, K.-L. Kratz, H. Krauss, H. Oberhummer, T. Rauscher, F.-K. Thielemann, A. Wöhr, W. Ziegert; *Jahresbericht 1992* (Annual Report), Institut für Kernchemie, Universität Mainz, ed. H.O. Denschlag (Universität Mainz, 1992).
5. **Direct Radiative Capture of Neutrons on Nuclei with Low Level Densities**, H. Huber, H. Krauss, E. Krausmann, H. Oberhummer, T. Rauscher, W. Böhmer, K.-L. Kratz, A. Wöhr, F.-K. Thielemann; 43th Annual Meeting of the Austrian Physical Society, Abstract in *Tagungsprogramm zur 43. Jahrestagung der ÖPG 1993*, p. 52.
6. **Neutron-Capture Cross Sections for N=82 Magic-Shell Nuclei**, A. Wöhr, K.-L. Kratz, H. Oberhummer, T. Rauscher, F.-K. Thielemann; *GSI Scientific Report 1993*, GSI 94-1, p. 61.
7. **Towards an Improved Level Density Description for Unstable Nuclei**, T. Rauscher, F.-K. Thielemann, K.-L. Kratz; *Jahresbericht 1993* (Annual Report), Institut für Kernchemie, Universität Mainz, ed. H.O. Denschlag (Universität Mainz, 1994), p. 39.
8. **Neutron-Capture Cross Sections for N=82 Magic-Shell Nuclei**, A. Wöhr, K.-L. Kratz, H. Oberhummer, T. Rauscher, F.-K. Thielemann; *Jahresbericht 1993* (Annual Report), Institut für Kernchemie, Universität Mainz, ed. H.O. Denschlag (Universität Mainz, 1994), p. 38.
9. **Nukleosynthese mit radioaktiven Kernen: Reaktionsmechanismen und Modelle**, T. Rauscher, K.-L. Kratz, A. Wöhr, K. Grün, H. Oberhummer, F.-K. Thielemann, P. Möller, P. Mohr, G. Staudt; *Verhandlungen der DPG(VI) 29* (1994) 1913.
10. **Systematics of  $\alpha$ -Potentials: Application for  $\alpha$ -capture reactions**, H. Abele, U. Atzrott, V. Kölle, P. Mohr, S. Wilmes, G. Staudt, H. Oberhummer, T. Rauscher; 44. Annual Meeting of the Austrian Physical Society, *Abstract in Tagungsprogramm 1994*, p. 152.
11. **Direct Capture at Low Energies**, W. Balogh, R. Bieber, H. Oberhummer, T. Rauscher, K.-L. Kratz, P. Mohr, G. Staudt, M.M. Sharma; report IK-TUW 9403402, TU Vienna, 1994.
12. **Systematics of  $\alpha$ -nucleus optical potentials**, P. Mohr, H. Abele, U. Atzrott, G. Staudt, R. Bieber, K. Grün, H. Oberhummer, T. Rauscher, E. Somorjai; report IK-TUW 9404402, TU Vienna, 1994.
13. **Primordial Heavy Element Production**, T. Rauscher, F.-K. Thielemann; *Jahresbericht 1994* (Annual Report), Institut für Kernchemie, Universität Mainz, ed. H.O. Denschlag (Universität Mainz, 1995), p. 38.
14. **Shell Effects in Neutron Capture on Pb**, T. Rauscher, R. Bieber, H. Oberhummer, K.-L. Kratz; *Jahresbericht 1994* (Annual Report), Institut für Kernchemie, Universität Mainz, ed. H.O. Denschlag (Universität Mainz, 1995), p. 40.



15. **Production of Samarium in Supernovae**, T. Rauscher, H. Oberhummer, F.-K. Thielemann; *Jahresbericht 1994* (Annual Report), Institut für Kernchemie, Universität Mainz, ed. H.O. Denschlag (Universität Mainz, 1995), p. 39.
16. **An Improved Nuclear Level Density Description**, T. Rauscher, F.-K. Thielemann; *Jahresbericht 1994* (Annual Report), Institut für Kernchemie, Universität Mainz, ed. H.O. Denschlag (Universität Mainz, 1995), p. 37.
17. **Theoretical Capture Cross Sections for the r- and  $\gamma$ -Process**, T. Rauscher, F.-K. Thielemann, H. Oberhummer, W. Balogh, R. Bieber, M. Brozovic, K.-L. Kratz; *Verhandlungen der DPG(VI) 30* (1995) 710.
18. **Half-life Measurements of Heavy Silver Isotopes for the r-Process**, Y. Jading, V. Fedoseyev, K.-L. Kratz, M. Krieg, T. Mehren, V.I. Mishin, T. Rauscher, H.L. Ravn, F. Scheerer, A. Wöhr, and the ISOLDE collaboration; *Verhandlungen der DPG(VI) 30* (1995) 710.
19. **Berechnung von astrophysikalisch relevanten Kernreaktionen mit radioaktiven Kernen**, W. Balogh, H. Herndl, U. Langer, S. Lingner, R. Hofinger, H. Oberhummer, R. Pichler, T. Rauscher; 45th Annual Meeting of the Austrian Physical Society, Abstract in *Tagungsprogramm 1995*.
20. **Ursprung der solaren  $^{48}\text{Ca}$  Ueberhäufigkeit und der korrelierten Ca-Ti-Cr Isotopenanomalien im Einschluß EK 1-4-1 des Allende-Meteoriten**, W. Böhmer, C. Freiburghaus, K.-L. Kratz, T. Rauscher, F.-K. Thielemann; *Jahresbericht 1995* (Annual Report), Institut für Kernchemie, Universität Mainz, ed. H.O. Denschlag (Universität Mainz, 1996), p. 19.
21. **Decay of New Neutron-Rich Isotopes  $^{54-57}\text{Ti}$** , T. Dörfler, O. Sorlin, T. Mehren, R. Anne, W. Böhmer, V. Borrel, S. Grévy, D. Guillemaud-Mueller, T. Hild, K.-L. Kratz, M. Lewitowicz, P. Möller, A.C. Mueller, A. Ostrowsky, B. Pfeiffer, F. Pougheon, T. Rauscher, M. Robinson, M.G. Saint-Laurent, W.-D. Schmidt-Ott; *Verhandlungen der DPG(VI) 31* (1996) 840.
22. **Kern- und astrophysikalische Interpretation der Ca-Ti-Cr Isotopenhäufigkeitsanomalien im Einschluß EK 1-4-1 des Allende-Meteoriten**, W. Böhmer, C. Freiburghaus, K.-L. Kratz, T. Rauscher, F.-K. Thielemann; *Verhandlungen der DPG(VI) 31* (1996) 865.
23. **Eine Ratenbibliothek für astrophysikalische Anwendungen**, T. Rauscher, F.-K. Thielemann, H. Oberhummer; 47th Annual Meeting of the Austrian Physical Society, Abstract in *Tagungsprogramm zur 47. Jahrestagung der ÖPG 1997*, p. 240.
24. **Nuclear- and Astrophysical Interpretation of the Ca-Ti-Cr Isotopic Anomalies in the Inclusion EK 1-4-1 of the Allende Meteorite**, W. Böhmer, K.-L. Kratz, C. Freiburghaus, T. Rauscher, F.-K. Thielemann; *Verhandlungen der DPG(VI) 33* (1998) 455.
25. **Prediction of Nuclear Reaction Rates for Astrophysics – Recent Achievements and Open Problems**, T. Rauscher; 48th Annual Meeting of the Austrian

- Physical Society, Abstract in *Tagungsprogramm zur 48. Jahrestagung der ÖPG* 1998, p. 161.
26. **Cross section measurements for the astrophysical r-process**, T. Rauscher, U. Greife; *PIAFE Project Report*, March 1998, eds. U. Köster, J.-A. Pinston (ISN, Grenoble 1998), p. 22.
  27. **Findet der r-Prozeß in Neutronenstern-Mergern statt?**, C. Freiburghaus, S. Rosswog, T. Rauscher, F.-K. Thielemann; *Verhandl. DPG(VI)* **34** (1999) 164.
  28. **Predictions of nuclear reaction rates far from stability and their impact on r-process nucleosynthesis**, T. Rauscher; *Abs. Pap. Am. Chem. Soc.* **217** (1999) U32.
  29. **Proposal for a Neutron Time of Flight Facility**, European Collaboration for High-Resolution Measurements of Neutron Cross Sections Between 1 eV and 250 MeV; Abramovich *et al.* (The TOF Collaboration); *CERN/SPSC 99-8, SPSC/P 310* (CERN, Geneva 1999).
  30. **Nuclear Aspects of stellar and explosive nucleosynthesis**, T. Rauscher; *Abs. Pap. Am. Chem. Soc.* **218** (1999) U1034.
  31. **Nukleosynthese von protonenreichen Kernen in einem quasi-thermischen Photonenbad**, K. Vogt, J. Enders, T. Hartmann, C. Hutter, P. Mohr, T. Rauscher, S. Volz, A. Zilges; *Verhandl. DPG(VI)* **35** (2000) 249.
  32.  **$(\gamma, n)$ -Reaktionsraten im astrophysikalischen  $\gamma$ -Prozess**, K. Vogt, M. Babilon, W. Bayer, K. Deneffle, D. Galaviz, T. Hartmann, C. Hutter, K. Lindenberg, P. Mohr, F. Neumann, T. Rauscher, S. Volz, A. Zilges; *Verhandl. DPG(VI)* **36** (2001) 2/39.
  33. **Evaluation of Silicon Neutron Resonance Parameters in the Energy Range Thermal to 1800 keV**, H. Derrien, L. C. Leal, K. H. Guber, T. Valentine, N. M. Larson, T. Rauscher; *ORNL/TM-2001/271* (Oak Ridge National Laboratory, Oak Ridge, TN, USA, August 2002).
  34. **Bestimmung des  $(n, \gamma)$ -Wirkungsquerschnitts des Verzweigungskerns  $^{95}\text{Zr}$  im s-Prozess**, K. Sonnabend, A. Mengoni, P. Mohr, T. Rauscher, K. Vogt, A. Zilges; *Verhandl. DPG(VI)* **38** (2003) 3/24.
  35.  **$\alpha$ -Kern-Potentiale und Nukleosynthese durch Photonen**, D. Galaviz, M. Babilon, Zs. Fülöp, Gy. Gyürky, R. Hillier, Z. Maté, P. Mohr, T. Rauscher, E. Somorjai, A. Zilges; *Verhandl. DPG(VI)* **38** (2003) 3/24.
  36. **Bestimmung der  $(\gamma, n)$ -Reaktionsraten der Quecksilber-Isotope  $^{196}\text{Hg}$ ,  $^{198}\text{Hg}$  und  $^{204}\text{Hg}$  im astrophysikalischen  $\gamma$ -Prozess**, K. Vogt, P. Mohr, M. Babilon, W. Bayer, T. Hartmann, T. Rauscher, K. Sonnabend, S. Volz, A. Zilges; *Verhandl. DPG(VI)* **38** (2003) 3/24.

37. **CERN n\_TOF Facility: Performance Report**, The n\_TOF collaboration; CERN, Geneva, *report CERN/INTC-O-011, INTC-2002-037, CERN-SL-2002-053 ECT*.
38. **R-Matrix Evaluation of Cl Neutron Cross Sections up to 1.2 MeV**, R. O. Sayer, K. H. Guber, L. C. Leal, N. M. Larson, T. Rauscher; Oak Ridge National Laboratory, Oak Ridge, TN, USA, *report ORNL/TM-2003/50* (2003).
39. **Mapping Galactic  $^{60}\text{Fe}$  Synthesis in Centaurus-Circinus**, D. Hartmann, R. Diehl, A. Heger, R. Hoffman, J. Knödlseher, K. Kretschmer, M. D. Leising, G. Lichti, B. Meyer, U. Oberlack, T. Rauscher, V. Schönfelder, D. Smith, L.-S. The, G. Vedrenne, S. E. Woosley, C. Wunderer; proposal submitted to *INTEGRAL observation program AO-2*, October 2003.
40. **Astrophysical Conditions for an r-Process in the High-Entropy Bubble Scenario**, K. Farouqi, K.-L. Kratz, B. Pfeiffer, C. Freiburghaus, F.-K. Thielemann, T. Rauscher; *Jahresbericht 2003* (Annual Report), Institut für Kernchemie, Universität Mainz, ed. J.-V. Kratz (Universität Mainz, 2004), A16.
41. **Photoneutron reaction rates of the nuclei  $^{191,193}\text{Ir}$** , A. Kretschmer, D. Galaviz, S. Müller, T. Rauscher, K. Sonnabend, K. Vogt, A. Zilges; *Verhandl. DPG(VI) 39* (2004) 1/24.
42. **Nuclear Astrophysics With Real Photons**, K. Sonnabend, M. Babilon, W. Bayer, D. Galaviz, T. Hartmann, A. Kretschmer, S. Müller, T. Rauscher, D. Savran, K. Vogt, S. Volz, A. Zilges; *Verhandl. DPG(VI) 39* (2004) 1/66.
43. **Systematic study of  $\alpha$ -nucleus potentials for the astrophysical p-process**, D. Galaviz, Zs. Fülöp, Gy. Gyürky, G. Kiss, A. Kretschmer, Z. Maté, P. Mohr, T. Rauscher, E. Somorjai, A. Zilges; *Verhandl. DPG(VI) 39* (2004) 1/67.
44. **s-Prozess Wirkungsquerschnitte – Experimente mit reellen Photonen**, K. Sonnabend, D. Galaviz, A. Kretschmer, S. Müller, T. Rauscher, M. Zarza, A. Zilges; *Verhandl. DPG(VI) 40* (2005) 4/72.
45. **The r-Process in the High-Entropy Bubble Scenario**, K. Farouqi, K.-L. Kratz, B. Pfeiffer, C. Freiburghaus, F.-K. Thielemann, T. Rauscher; *Jahresbericht 2004* (Annual Report), Institut für Kernchemie, Universität Mainz, ed. J.-V. Kratz (Universität Mainz, 2005), A12.
46. **Neutron Captures and the r-Process**, K. Farouqi, K.-L. Kratz, B. Pfeiffer, F.-K. Thielemann, T. Rauscher; *Jahresbericht 2004* (Annual Report), Institut für Kernchemie, Universität Mainz, ed. J.-V. Kratz (Universität Mainz, 2005), A13.
47. **The  $(n,\gamma)$  cross sections of light p-nuclei at  $kT=25$  keV: Towards an updated experimental database for the p-process**, I. Dillmann, M. Heil, F. Käppeler, T. Rauscher, F.-K. Thielemann; *Verhandl. DPG(VI) 40* (2005) 4/73.
48. **The measurement campaigns at the n\_TOF facility at CERN**, A. Pavlik, E. Jericha, G. Badurek, H. Leeb, H. Oberhummer, M. T. Pigni, I. Raskinyte, H.

- Frais-Kölbl, E. Griesmayer, and The n\_TOF Collaboration; 55th Annual Meeting of the Austrian Physical Society, abstract in *Tagungsprogramm zur 55. Jahrestagung der ÖPG 2005*, p. 57.
49. **Determination of stellar neutron cross sections with AMS**, I. Dillmann, L. Coquard, M. Heil, T. Fästermann, F. Käppeler, K. Knie, G. Korschinek, W. Kutschera, M. Poutivsev, T. Rauscher, G. Rugel, F.-K. Thielemann, A. Wallner; *Verhandl. DPG(VI)* **41** (2006) 4/HK 26.3.
  50. **Untersuchung des astrophysikalisch relevanten ( $\gamma, n$ )-Wirkungsquerschnitts von  $^{191,193}\text{Ir}$** , J. Hasper, D. Galaviz, A. Kretschmer, T. Rauscher, K. Sonnabend, A. Zilges; *Verhandl. DPG(VI)* **41** (2006) 4/HK 26.6.
  51. **Die Spallationsneutronenquelle n\_TOF am CERN: Resultate und Perspektiven**, H. Leeb, G. Badurek, E. Jericha, H. Oberhummer, M. T. Pigni, I. Raskinyte, H. Frais-Kölbl, E. Griesmayer, and the n\_TOF collaboration; 56th Annual Meeting of the Austrian Physical Society, abstract in *Tagungsprogramm zur 56. Jahrestagung der ÖPG 2006*, p. 57.
  52. **Messung der Neutroneneinfangquerschnitte von Blei und Wismuth Isotopen**, C. Domingo-Pardo, and The n\_TOF Collaboration; *Verhandl. DPG(VI)* **42** (2007) 4/HK 15.9.
  53. **Feasibility studies for direct reactions on exotic nuclei at storage rings**, S. Ilieva and The EXL Collaboration; *Verhandl. DPG(VI)* **42** (2007) 4/HK 30.2.
  54. **Einfluss von Spaltungsprozessen auf die Isotopenverteilung im r-Prozess**, I. Petermann, A. Kelic, K. Langanke, G. Martinez-Pinedo, I. Panov, T. Rauscher, K.-H. Schmid, F.-K. Thielemann, N. Zinner; *Verhandl. DPG(VI)* **43** (2008) 4/HK 24.5.
  55. **Parity Dependent Nuclear Level Densities in Hauser-Feshbach Calculations for Stellar Reaction Rates**, H. P. Loens, G. Martinez-Pinedo, K. Langanke, F.-K. Thielemann, T. Rauscher; *Verhandl. DPG(VI)* **43** (2008) 4/HK 36.8.
  56. **Electron Scattering Off Rare Isotopes – The ELISE Experiment at FAIR**, H. Simon for the ELISE-Collaboration; *Verhandl. DPG(VI)* **43** (2008) 4/HK 34.104.
  57. **Constraining Nucleosynthesis in Type I X-Ray Bursts through Mass Measurements**, A. Parikh, J. José, C. Iliadis, F. Moreno, T. Rauscher; *Verhandl. DPG(VI)* **44** (2009) 4/HK 38.3.
  58. **Neutron-capture cross sections of Fe-peak seed nuclei**, I. Dillmann, et al. (The n\_TOF Collaboration); *Verhandl. DPG(VI)* **44** (2009) 4/HK 60.2.
  59. **R-process nucleosynthesis calculations with complete nuclear physics input**, I. Petermann, A. Arcones, A. Kelić, K. Langanke, G. Martínez-Pinedo, I. Panov, T. Rauscher, K.-H. Schmidt, F.-K. Thielemann, N. Zinner; *Verhandl. DPG(VI)* **44** (2009) 4/HK 60.3.

60. **Measurement of neutron-induced fission cross sections of Pb-nat and Bi-209 up to 1 GeV**, D. Tarrío, et al. (The n\_TOF Collaboration); *Verhandl. DPG(VI) 44* (2009) 4/HK 77.5.
61. **Low-lying dipole response in the Relativistic Quasiparticle Time Blocking Approximation and its influence on neutron capture cross sections**, E. Litvinova, H. P. Loens, K. Langanke, G. Martínez-Pinedo, T. Rauscher, P. Ring, F.-K. Thielemann, V. Tselyaev; *GSI Annual Report 2008*, (GSI Report 2009-1), p. 174.
62. **Experimental constraints on the stellar  $^{63}\text{Ni}(n,\gamma)^{64}\text{Ni}$  cross section**, I. Dillmann, et al. (The FZK-FZD-TUM Collaboration); *Verhandl. DPG(VI) 45* (2010) 4/HK 55.1.
63. **Changes of the ashes of an X-ray burst due to better known nuclear masses**, E. Haettner, et al.; *GSI Scientific Report 2010*, (GSI Darmstadt, 2011), p. 156.
64. **Neutron-Induced Astrophysical Reaction Rates for Translead Nuclei**, I. V. Panov, I. Yu. Korneev, T. Rauscher, G. Martínez-Pinedo, A. Kelić-Heil, N. T. Zinner, F.-K. Thielemann; *GSI Scientific Report 2010*, (GSI Darmstadt, 2011), p. 173.

### 3.3 Electronic Material (WWW) and Computer Codes

- Scientific Home Page:<http://nucastro.org/>
- Personal Home Page (including CV and publication list):<http://thomasrauscher.ch>
- Web interface to nuclear reaction cross sections and astrophysical reaction rates calculated in the framework of a statistical model (Hauser-Feshbach theory) in JAVA and as HTML form:  
<http://nucastro.org/reaclib.html>
- Online Hauser-Feshbach reaction cross section code NON-SMOKER<sup>WEB</sup>:  
<http://nucastro.org/nonsmoker.html>
- Online multi-reaction mechanism code for astrophysical reaction rates SMARAGD (under development, not yet publicly available).
- Monte Carlo tools for reaction network studies including the driver PIZBUIN and the reaction network code MCWINNET.
- List of codes developed or modified by T. Rauscher (incomplete, hydro and Monte Carlo codes not (yet) publicly accessible):  
<http://nucastro.org/codes.html>

## 4 Invited Talks

(Here only invited talks are given, my numerous contributed talks and posters at conferences are not listed.)

- **Nukleosynthese mit radioaktiven Kernen: Reaktionsmechanismen und Modelle** (Nucleosynthesis With Radioactive Nuclei: Reaction Mechanisms And Models); Annual Meeting of the German Physical Society, Section Hadrons and Nuclei, Munich, Germany, March 1994.
- **Nuclear Level Density And The Hauser-Feshbach Theory**, University of Basel, Basel, Switzerland, April 1995.
- **Theoretische Methoden zur Vorhersage von astrophysikalischen Reaktionsraten an instabilen Kernen** (Theoretical Methods For The Prediction Of Astrophysical Reaction Rates On Unstable Nuclei); Forschungszentrum Karlsruhe, Karlsruhe, Germany, July 1997.
- **Prediction of Nuclear Reaction Rates For Astrophysics**; Int. Conf. “Nuclei in the Cosmos V”, Volos, Greece, July 1998.
- **Prediction of Nuclear Reaction Rates for Astrophysics – Recent Achievements and Open Problems**; Oak Ridge National Laboratory (ORNL), Oak Ridge, TN, USA, September 1998.
- **Nuclear Astrophysics As A Challenge To Understand Neutron-Rich Heavy Nuclei**; 1<sup>st</sup> Collaboration Meeting of the CERN-PS Neutron TOF Facility, CERN, Geneva, Switzerland, January 1999.
- **New predictions of astrophysical reaction rates and consequences for nucleosynthesis in type II supernovae**; Workshop on Nuclear Reactions in Stars and in the Laboratory, European Center for Theoretical Studies in Nuclear Physics and Related Areas (ECT\*), Trento, Italy, February 1999.
- **X-ray bursts and proton captures close to the driplines**; NORDITA, Copenhagen, Sweden, February 1999.
- **Prediction of Nuclear Reactions Far From Stability and Their Impact on r-Process Nucleosynthesis**; Spring meeting of the American Chemical Society, Anaheim, CA, USA, March 1999.
- **Prediction of Nuclear Reaction Rates for Astrophysics and the rp-Process**; Workshop “The Beta Decay, From Weak Interaction To Nuclear Structure”, Strasbourg, France, March 1999.
- **Nuclear Physics and the Formation of the Chemical Elements in the Universe**; MSU (NSCL), East Lansing, MI, USA, March 1999.
- **Nuclear Aspects of Stellar Evolution and Nucleosynthesis**; “The Origin Of Elements In The Solar System”, special symposium at the Annual Meeting of the American Chemical Society, New Orleans, LA, USA, September 1999.

- **Determination of Reaction Rates for Nucleosynthesis – Methods and Problems**; 10<sup>th</sup> Int. Symp. Capture Gamma Ray Spectroscopy and Related Topics (CGS10), Santa Fe, NM, USA, September 1999.
- **Findet der r-Prozess in Supernovae statt?** (Does the r-process take place in supernovae?); Ludwig Boltzmann Award talk, Annual meeting of the Austrian Physical Society, Innsbruck, Austria, September 1999.
- **Nukleare Astrophysik als Schlüssel zum Verständnis von Sternen und Sternexplosionen** (Nuclear Astrophysics as the key to understand stars and stellar explosions); physics colloquium, University of Basel, Basel, Switzerland, January 2000.
- **Nuclear physics requirements for astrophysical simulations**; IPN (Institut de Physique Nucléaire) Orsay, Paris, France, January 2000.
- **Nucleosynthesis in massive stars**; Int. Conf. “Structure of the Nucleus at the Dawn of the Century”, Bologna, Italy, May 2000.
- **Nucleosynthesis in Quiescent and Explosive Stellar Burning**; Yale University, New Haven, CT, USA, November 2000.
- **Nukleosynthese in explosivem stellaren Brennen als Herausforderung an die Kernphysik** (Nucleosynthesis in explosive stellar burning as a challenge for Nuclear Physics); Institut für Strahlenphysik, Universität Stuttgart, Germany, December 2000.
- **Nuclear Physics and Nucleosynthesis in Massive Stars**, Annual Meeting of the Swiss Physical Society, Dübendorf, Switzerland, May 2001.
- **Nuclear Aspects of the s- and n-Processes in Massive Stars**, IX International Seminar on Interaction of Neutrons with Nuclei (ISINN-9), Dubna, Russia, May 2001.
- **Nucleosynthesis of Solar Abundances as a Challenge to Modern Nuclear Physics**, Los Alamos National Laboratory, USA, June 2001.
- **Einführung in die Nukleare Astrophysik** (Introduction to Nuclear Astrophysics); invited condensed lecture series, University of Tübingen, Tübingen, Germany, October 2001.
- **Production of Intermediate and Heavy Nuclei in Explosive Events**, Ecole Nationale Supérieure de Géologie and CRPG (CNRS), Nancy, France, January 2002.
- **Properties of Neutron-Rich Nuclei Relevant for Astrophysics**, workshop “Nuclear Collective Dynamics at Extreme Conditions”, ECT\*, Trento, Italy, March 2002.
- **p Process in Type II Supernovae**, ESF Exploratory Workshop on p-Process Nucleosynthesis, Athens, Greece, April 2002.



- **Reaction Rates and Nuclear Properties Relevant for Nucleosynthesis in Massive Stars and Far From Stability**, 11<sup>th</sup> Int. Symp. on Capture  $\gamma$ -Ray Spectroscopy and Related Topics, Prague, Czech Republic, September 2002.
- **Stellar Evolution and Nucleosynthesis of Massive Stars and Related Nuclear Uncertainties**, 17<sup>th</sup> Int. Nuclear Physics Divisional Conf. of the EPS “Nuclear Physics in Astrophysics”, Debrecen, Hungary, October 2002.
- **Neue experimentelle und theoretische Herausforderungen in der Nuklearen Astrophysik** (New experimental and theoretical challenges in Nuclear Astrophysics); Atomic Institute of the Austrian Universities, Vienna, Austria, February 2003.
- **Theoretical Nuclear Cross Sections and Reaction Networks**, nTOF winter school, Les Houches, France, February 2003.
- **Kernphysikalische Aspekte der Nukleosynthese in schweren Sternen** (Nuclear physics aspects of nucleosynthesis in massive stars), Department of Physics, University of Rostock, Rostock, Germany, May 2003.
- **Nucleosynthesis in Massive Stars**, Int. Workshop “Astronomy With Radioactivities”, Seon, Germany, May 2003.
- **Exotic Nuclei and Their Properties Relevant for Astrophysical Applications**, Colloque Noyaux Exotique, meeting of the interdisciplinary research collaboration (Groupement de Recherches) “Structure des Noyaux Exotiques”, IPN Orsay, France, September 2003.
- **What Can RIA Contribute to the Improved Determination of Astrophysical Reaction Rates Involving Unstable Nuclei?**, RIA Theory Group meeting, Tucson, AZ, USA, November 2003.
- **RIA and r-process rates**, RIA Astrophysics Group Workshop on r-Process Nucleosynthesis, Seattle, WA, USA, January 2004.
- **Stellar Evolution and Nucleosynthesis: Reaction Rates in Astrophysics**, LLNL Workshop “Nuclear Reactions on Unstable Nuclei and the Surrogate Reaction Technique”, Monterey, CA, USA, January 2004.
- **Kernphysikalische Aspekte der Nukleosynthese in schweren Sternen** (Nuclear physics aspects of nucleosynthesis in massive stars), Kolloquium, TU Darmstadt, Germany, February 2004.
- **Nuclear Reactions in Astrophysics: Rates, Networks, and Equilibria**, VISTARS Workshop on Nuclear Astrophysics, Russbach, Austria, March 2004.
- **Reaction rates in stellar nucleosynthesis**, 2nd n\_TOF Winter School, Flachau, Austria, March 2004.
- **Kernphysikalische Aspekte der Nukleosynthese in schweren Sternen** (Nuclear physics aspects of nucleosynthesis in massive stars), FZ Rossendorf, Dresden, Germany, May 2004.

- **The impact of nuclear reactions on stellar evolution and nucleosynthesis**, 2004 Gordon Research Conference on Nuclear Chemistry: “Nuclear Reactions, Flavors Across Energies”, New London, NH, USA, June 2004.
- **Nucleosynthesis Contributions of Massive Stars**, Workshop on Nuclear Astrophysics, FZ Karlsruhe, Germany, September 2004.
- **Key Data for Astrophysical Applications**, VISTARS Workshop on Nuclear Astrophysics, Russbach, Austria, March 2005.
- **Reaction Theory in Astrophysics**, Workshop on Reaction Mechanisms for Rare Isotope Beams, MSU, USA, March 2005.
- **Predicting Low-Energy Cross Sections for Astrophysics**, Int. Symposium on Neutrons in Basic Science and Nuclear Technologies, CERN, Switzerland, March 2005.
- **Nuclear Aspects of Energy Generation and Nucleosynthesis in Massive Stars**, Colloquium of the Int. Graduate School Giessen-Kopenhagen, Giessen, Germany, June 2005.
- **Nuclear properties and reaction rates for hydrostatic and explosive burning**, Workshop on Nuclear Astrophysics with SPIRAL2, Caen, France, October 2005.
- **Das Leben der Sterne und die Entstehung der Elemente** (Life of Stars and Creation of the Elements), public outreach talk, 3. Naturwissenschaftliches Forum, Academia Engiadina, Samedan, Switzerland, November 2005.
- **Reaction rate uncertainties in the p-process**, International Workshop XXXIV on Gross Properties of Nuclei and Nuclear Excitations, Hirschegg, Austria, January 2006.
- **Understanding nucleosynthesis and stellar explosions: A challenge for modern nuclear physics**, IoP Meeting on Nuclear Astrophysics, Edinburgh, UK, May 2006.
- **Predictions of reaction rates: Statistical methods**, NIC IX satellite workshop “Data Needs in Nuclear Astrophysics”, Basel, Switzerland, June 2006.
- **Nuclear Aspects of Nucleosynthesis in Massive Stars**, Kolloquium, Institute for Isotope Research and Nuclear Physics, University of Vienna, Vienna, Austria, July 2006.
- **Uncertainties in (astrophysical reaction rates for) p-process nucleosynthesis**, SFB seminar talk, TU Darmstadt, Germany, November 2006.
- **Nuclear Astrophysics**, main lectures, workshop Schleching, Germany, February 2007.
- **Nucleosynthesis in the deep layers and shells of exploding massive stars**, 3rd Int. Conf. Nuclear Physics in Astrophysics, Dresden, Germany, March 2007.

- **Successes and Challenges in the Determination of Neutron-Induced Rates**, Workshop on Experimental Opportunities for Nuclear Astrophysics at the Frankfurt Neutron Source of the Stern-Gerlach-Zentrum (FRANZ), FZ Karlsruhe and University of Frankfurt, Germany, May 2007.
- **Nuclear Physics in Astrophysics**, Swiss Institute of Particle Physics (CHIPP) Plenary Meeting, PSI, Villigen, Switzerland, October 2007.
- **The Origin of Nuclear Species and Evolution of the Universe**, Faculty of Physics, University of Vienna, Austria, November 2007.
- **Nucleosynthesis**, lecture series at the Sino-German Summer School on Cool Stars as Tools for Studying the Early Universe, Weihai, China, July 2008.
- **Neutrino-p process and the Lighter Element Primary Process (LEPP)**, 3rd Sino-German Workshop on Galactic Astronomy with LAMOST, Weihai, China, July 2008.
- **Stellar evolution and explosive nucleosynthesis**, lecture series at the TU Munich, München, Germany, September 2008.
- **Important Differences Between Reactions in the Laboratory and Reactions in Stars**, n\_TOF Spring School, Florence, Italy, March 2009.
- **Nucleosynthesis in the Early and Contemporary Universe**, colloquium talk, Groupe de Recherche en Astronomie et Astrophysique du Languedoc (GRAAL), University of Montpellier, France, May 2009.
- **Astrophysical Reaction Rates for Explosive Nucleosynthesis**, Int. Conf. on Nucleus-Nucleus Collisions (NN '09), Beijing, China, August 2009.
- **Complications in Determining Stellar Reaction Rates for Explosive Nucleosynthesis**, 10<sup>th</sup> Int. Symp. on Origin of Matter and Evolution of the Galaxies (OMEG10), Osaka, Japan, March 2010.
- **Elemententstehung als Herausforderung an die Kernphysik** (Element synthesis as a challenge to nuclear physics), physics colloquium talk, TU Darmstadt, Germany, March 2010.
- **Explosive Nucleosynthesis and the p-Process**, Intl. Conf. “Nuclei in the Cosmos XI”, Heidelberg, Germany, July 2010.
- **Astrophysical and Nuclear Uncertainties in the Modelling of p-Process Nucleosynthesis**, Nuclear Physics Colloquium, Department of Physics, University of Cologne, Germany, November 2010.
- **Astrophysical reaction rates for proton- and neutron-rich nucleosynthesis (and connections to experiments)**, Workshop on Origin of Elements: A Modern Perspective, European Center for Theoretical Studies in Nuclear Physics and Related Areas (ECT\*), Trento, Italy, May 2011.
- **Origin of the p-Nuclides and Relevant Astrophysical Reaction Rates**, Workshop on p-Process: Present Status and Outlook, Istanbul, Turkey, May 2011.

- **Origin of the Elements as Challenge for Astrophysics and Nuclear Physics**, physics colloquium, Univ. of Frankfurt, Germany, September 2011.
- **Reaction Rates between the Driplines for Astrophysics**, THEXO Workshop, European Center for Theoretical Studies in Nuclear Physics and Related Areas (ECT\*), Trento, Italy, October 2011.
- **Network calculations and nuclear inputs for astrophysics close to stability**, WE-Heraeus Workshop on Astrophysics With Modern Small-Scale Accelerators, Bad Honnef, Germany, February 2012.
- **High-Energy Sites and the p-Nucleus Puzzle**, research colloquium, Department of Physics, UTSA, San Antonio, TX, March 2012.
- **Explosive nucleosynthesis and its connection to astrophysical reaction rates for unstable nuclei**, 11th Int. Conf. on Nucleus-Nucleus Collisions, San Antonio, TX, USA, May 2012.
- **New Insights into the  $\alpha$ -Potential Mystery in the  $\gamma$ -Process**, THEXO Workshop, European Center for Theoretical Studies in Nuclear Physics and Related Areas (ECT\*), Trento, Italy, October 2012.
- **The p-Nucleus Puzzle**, Ortvay Colloquium, Eötvös-Loránd-University Budapest, Hungary, November 2012.
- **Introduction to Nucleosynthesis and Nuclear Astrophysics**, lecture series, MTA ATOMKI, Debrecen, Hungary, November 2012.
- **A Nuclear Physics View of the p-Nucleus Puzzle**, ATOMKI seminar, MTA ATOMKI, Debrecen, Hungary, January 2013.
- **How to correctly translate laboratory cross sections and MACS to stellar reaction rates for the s-process**, nTOF collaboration meeting, University of Manchester, UK, May 2013.
- **On the origin of the p-nuclei**, Workshop on Heavy Element Nucleosynthesis and Galactic Chemical Evolution, ITEP Moscow, Russia, September 2013.
- **Origin of the elements beyond Fe in stellar explosions - a continuing challenge for astrophysics and nuclear physics**, colloquium, Paul Scherrer Institut (PSI), Switzerland, May 2014.
- **Challenges in prediction and measurements of stellar rates for heavy element nucleosynthesis**, INT Program INT-14-2b on “Nucleosynthesis and Chemical Evolution: Recent Progress and Future Directions”, University of Washington, Seattle, WA, USA, August 2014.
- **Challenges in Nucleosynthesis of Nuclei beyond Fe**, 36<sup>th</sup> Int. School of Nuclear Physics, Erice, Italy, September 2014.
- **Calculations of reaction rates for the p process and their uncertainties**, Workshop on “p-Process: Status and Outlook”, Larnaca, Cyprus, June 2015.

- **Heavy Element Nucleosynthesis and its nuclear uncertainties**, Int. Conf. on “Nuclear Structure and Dynamics III”, Portoroz, Slovenia, June 2015.
- **Evolution of Massive Stars and their Nucleosynthesis**, CETUP\* Neutrino Physics session 2015, Lead, SD, USA, July 2015.
- **Theory considerations in nucleosynthesis beyond Fe with special emphasis on p-nuclei**, 2nd BRIDGCE workshop “Stars, Supernovae and Nucleosynthesis”, Keele University, UK, September 2015.
- **Nucleosynthesis beyond Fe and related nuclear uncertainties**, Nuclear Physics Seminar, University of Surrey, UK, March 2016.
- **Quantifying Abundance Uncertainties in Nucleosynthesis Beyond Fe Through a Monte Carlo Approach**, XVIII Workshop on Nuclear Astrophysics, Ringberg Castle, Germany, March 2016.
- **Uncertainties in the  $\gamma$ -Process**, 3rd BRIDGCE workshop “Stars, Supernovae and Nucleosynthesis”, Keele University, UK, September 2016.
- **Explosive nucleosynthesis in the outer shells of massive stars**, NewCompStar Workshop on “Compact Objects, Their Equation of State, Related Explosive Events, and Their Nucleosynthesis”, Basel, Switzerland, September 2016.
- **Nuclear physics uncertainties in nucleosynthesis of s- and p-nuclei**, International Symposium on Origin of Matter and Evolution of Galaxies (OMEG), Daeyoun, Korea, June 2017.
- **Nucleosynthesis sensitivity studies using Monte Carlo variation**, 4th BRIDGCE workshop “Stars, Supernovae and Nucleosynthesis”, Higgs Centre for Theoretical Physics, University of Edinburgh, UK, September 2017.
- **Nuclear abundance uncertainties in the s-,  $\gamma$ -, and  $\nu$ p-processes**, Workshop on Explosive Nucleosynthesis, MTA ATOMKI, Debrecen, Hungary, September 2018.
- **Impact of Uncertainties in Nuclear Reaction Cross Sections on Nucleosynthesis Beyond Fe**, 13th Int. Conf. on Nucleus-Nucleus Collisions, Saitama, Japan, December 2018.