

List of Publications

Friedrich Röpke

as of February 21, 2012

Refereed Publications in Main Journals

1. R. Pakmor, M. Kromer, S. Taubenberger, S. A. Sim, **F. K. Röpke**, and W. Hillebrandt (2012):
Normal Type Ia Supernovae from Violent Mergers of White Dwarf Binaries,
Astrophysical Journal Letters, 747, L10
2. S. A. Sim, M. Fink, M. Kromer, **F. K. Röpke**, A. J. Ruiter, and W. Hillebrandt (2012):
2D simulations of the double-detonation model for thermonuclear transients from low-mass carbon-oxygen white dwarfs,
MNRAS, in print
3. S. Benitez-Herrera, **F. K. Röpke**, W. Hillebrandt, C. Mignone, M. Bartelmann, and J. Weller (2012):
Model-Independent Reconstruction of the Expansion History of the Universe from Type Ia Supernovae,
MNRAS, 419, 513–521
4. M. Herzog and **F. K. Röpke** (2011):
Three-dimensional hydrodynamic simulations of the combustion of a neutron star into a quark star,
Phys. Rev. D, 84, 083002
5. S. Blondin, D. Kasen, **F. K. Röpke**, R. P. Kirshner, and K. S. Mandel (2011):
Confronting 2D delayed-detonation models with light curves and spectra of Type Ia supernovae,
MNRAS, 417, 1280–1302
6. C. Travaglio, **F. K. Röpke**, R. Gallino, and W. Hillebrandt (2011):
Type Ia Supernovae as Sites of p-process: Two-Dimensional Models Coupled to Nucleosynthesis,
Astrophysical Journal, 739, 93
7. I. R. Seitenzahl, F. Ciaraldi-Scholmann, and **F. K. Röpke** (2011):
Type Ia supernova diversity: white dwarf central density as a secondary parameter in three-dimensional delayed detonation models,
MNRAS 414, 2709–2715

8. R. Pakmor, S. Hachinger, **F. K. Röpke**, and W. Hillebrandt (2011):
Violent mergers of nearly equal-mass white dwarf as progenitors of subluminous Type Ia supernovae,
Astronomy and Astrophysics 528, A117
9. W. Hillebrandt and **F. K. Röpke** (2010):
Modeling type Ia supernovae,
New Astronomy Reviews 54, 201–205
10. K. Maeda, S. Benetti, M. Stritzinger, **F. K. Röpke**, G. Folatelli, J. Sollerman, S. Taubenberger, K. Nomoto, G. Leloudas, M. Hamuy, M. Tanaka, P. A. Mazzali, and N. Elias-Rosa (2010):
An asymmetric explosion as the origin of spectral evolution diversity in type Ia supernovae,
Nature 466, 82–85
11. M. Kromer, S. A. Sim, M. Fink, **F. K. Röpke**, I. R. Seitenzahl, and W. Hillebrandt (2010):
Double-detonation sub-Chandrasekhar supernovae: Synthetic observables for minimum helium shell mass models,
Astrophysical Journal 719, 1067–1082
12. I. R. Seitenzahl, **F. K. Röpke**, M. Fink, and R. Pakmor (2010):
Nucleosynthesis in thermonuclear supernovae with tracers: convergence and variable mass particles,
MNRAS 407, 2297–2304
13. S. A. Sim, **F. K. Röpke**, W. Hillebrandt, M. Kromer, R. Pakmor, M. Fink, A. R. Ruiter, and I. R. Seitenzahl (2010):
Detonations in Sub-Chandrasekhar Mass C+O White Dwarfs,
Astrophysical Journal 714, L52–L57
14. M. Fink, **F. K. Röpke**, W. Hillebrandt, I. R. Seitenzahl, S. A. Sim, and M. Kromer (2010):
Double-detonation sub-Chandrasekhar supernovae: can minimum helium shell masses detonate the core?,
Astronomy and Astrophysics 514, A53
15. K. Maeda, **F. K. Röpke**, M. Fink, W. Hillebrandt, C. Travaglio, and F.-K. Thielemann (2010):
Nucleosynthesis in Two-Dimensional Delayed Detonation Models of Type Ia Supernova Explosions,
Astrophysical Journal 712, 624–638
16. W. Schmidt, F. Ciaraldi-Schoolmann, J. C. Niemeyer, **F. K. Röpke**, and W. Hillebrandt (2010):

- Turbulence in a three-dimensional deflagration model for type Ia supernovae: II. Intermittency and the deflagration-to-detonation transition probability,*
Astrophysical Journal 710, 1683–1693
17. R. Pakmor, M. Kromer, **F. K. Röpke**, S. A. Sim, A. J. Ruiter, and W. Hillebrandt (2010):
Sub-luminous type Ia supernovae from the mergers of equal-mass white dwarfs with $M \sim 0.9M_{\text{sun}}$,
Nature 463, 61–64
 18. S. E. Woosley, A. R. Kerstein, V. Sankaran, and **F. K. Röpke** (2009):
Type Ia Supernovae: Calculations of Turbulent Flames Using the Linear Eddy Model,
Astrophysical Journal 704, 255–273
 19. D. Kasen, **F. K. Röpke**, and S. E. Woosley (2009):
The diversity of type Ia supernovae from broken symmetries,
Nature 460, 869–872
 20. F. Ciaraldi-Schoolmann, W. Schmidt, J. C. Niemeyer, **F. K. Röpke**, and W. Hillebrandt (2009):
Turbulence in a three-dimensional deflagration model for type Ia supernovae: I. Scaling properties,
Astrophysical Journal 696, 1491–1497
 21. R. Pakmor, **F. K. Röpke**, A. Weiss, and W. Hillebrandt (2008):
The impact of type Ia supernovae on main sequence binary companions,
Astronomy and Astrophysics 489, 943–951
 22. **F. K. Röpke** and R. Bruckschen (2008):
Thermonuclear Supernovae: A multi-scale astrophysical problem challenging numerical simulations and visualization,
New Journal of Physics 10, 125009
 23. M. Fink, W. Hillebrandt, and **F. K. Röpke** (2007):
Double-detonation supernovae of sub-Chandrasekhar mass white dwarfs,
Astronomy and Astrophysics 476, 1133–1143
 24. **F. K. Röpke** (2007):
Flame-driven deflagration-to-detonation transitions in Type Ia supernovae?,
Astrophysical Journal 668, 1103–1108
 25. **F. K. Röpke**, W. Hillebrandt, W. Schmidt, J. C. Niemeyer, S. I. Blinnikov, and P. A. Mazzali (2007):
A three-dimensional deflagration model for Type Ia supernovae confronted with observations,
Astrophysical Journal 668, 1132–1139

26. S. A. Sim, D. N. Sauer, **F. K. Röpke**, and W. Hillebrandt (2007):
Light curves for off-centre ignition models of type Ia supernovae,
MNRAS 378, 2–12
27. W. Hillebrandt, S. A. Sim, and **F. K. Röpke** (2007):
Off-center explosions of Chandrasekhar-mass white dwarfs: an explanation of super-bright type Ia supernovae?,
Astronomy and Astrophysics 465, L17–L20
28. **F. K. Röpke**, S. E. Woosley, and W. Hillebrandt (2007):
Off-center ignition in type Ia supernovae: I. Initial evolution and implications for delayed detonation,
Astrophysical Journal 660, 1344–1356
29. P. A. Mazzali, **F. K. Röpke**, S. Benetti, and W. Hillebrandt (2007):
A Common Explosion Mechanism for Type Ia Supernovae,
Science 315, 825–828
30. **F. K. Röpke** and J. C. Niemeyer (2007):
Delayed detonations in full-star models of Type Ia supernova explosions,
Astronomy and Astrophysics 464, 683–686
31. S. I. Blinnikov, **F. K. Röpke**, S. I. Sorokina, M. Gieseler, M. Reinecke, C. Travaglio, W. Hillebrandt, and M. Stritzinger (2006):
Theoretical light curves for deflagration models of type Ia supernova,
Astronomy and Astrophysics 453, 229–240
32. **F. K. Röpke**, M. Gieseler, M. Reinecke, C. Travaglio and W. Hillebrandt (2006):
Type Ia supernova diversity in three-dimensional models, Astronomy and Astrophysics 453, 203–217
33. W. Schmidt, J.C. Niemeyer, W. Hillebrandt, and **F. K. Röpke** (2006):
A localized subgrid scale model for fluid dynamical simulations in astrophysics II: Application to type Ia supernovae,
Astronomy and Astrophysics 450, 283–294
34. **F. K. Röpke**, W. Hillebrandt, J.C. Niemeyer, and S.E. Woosley (2006):
Multi-spot ignition in type Ia supernova models,
Astronomy and Astrophysics 448, 1–14
35. C. Kozma, C. Fransson, W. Hillebrandt, C. Travaglio, J. Sollerman, M. Reinecke, **F. K. Röpke**, and J. Spyromilio (2005):
Three-dimensional modeling of Type Ia supernovae – The power of late time spectra,
Astronomy and Astrophysics 437, 983–995

36. **F. K. Röpke** (2005):
Following multi-dimensional Type Ia supernova models to homologous expansion,
Astronomy and Astrophysics 432, 969–983
37. **F. K. Röpke** and W. Hillebrandt (2005):
Full-star Type Ia supernova explosion models,
Astronomy and Astrophysics 431, 635–645
38. **F. K. Röpke** and W. Hillebrandt (2005):
The distributed burning regime in Type Ia supernova models,
Astronomy and Astrophysics 429, L29–L32
39. W. Hillebrandt, M. Reinecke, W. Schmidt, **F. K. Röpke**, C. Travaglio, and J. C. Niemeyer (2005):
“Simulations of turbulent thermonuclear burning in Type Ia supernovae”,
in “Analysis and Numerics for Conservation Laws”, ed. by G. Warnecke, Springer-Verlag Berlin Heidelberg 2005, 363–384 (preprint: astro-ph/0405209)
40. **F. K. Röpke** and W. Hillebrandt (2004):
The case against the progenitor’s carbon-to-oxygen ratio as a source of peak luminosity variations in Type Ia supernovae,
Astronomy and Astrophysics 420, L1–L4
41. **F. K. Röpke**, W. Hillebrandt, and J. C. Niemeyer (2004):
The cellular burning regime in Type Ia supernova explosions. I. Flame propagation into quiescent fuel,
Astronomy and Astrophysics 421, 783–795
42. **F. K. Röpke**, W. Hillebrandt, and J. C. Niemeyer (2004):
The cellular burning regime in Type Ia supernova explosions. II. Flame propagation into vortical fuel,
Astronomy and Astrophysics 420, 411–421
43. **F. K. Röpke**, J. C. Niemeyer, and W. Hillebrandt (2003):
On the small-scale stability of thermonuclear flames in Type Ia supernovae,
Astrophysical Journal 588, 952–961
44. W. Hillebrandt, J. C. Niemeyer, M. Reinecke, **F. Röpke**, and C. Travaglio (2003):
Multidimensional Simulations of Type Ia Supernova Explosions and Nucleosynthesis,
Nuclear Physics A 718, 229c–238c
45. E. Murgu, **F. Röpke**, S. M. Djambova, and T. F. Gallagher (1999):
Changing configurations with electric fields,
Journal of Chemical Physics 110/19, 9500–9503

Review Articles

46. **F. K. Röpke** and W. Schmidt (2009):
Turbulent combustion in thermonuclear supernovae,
in “Interdisciplinary Aspects of Turbulence”, ed. by W. Hillebrandt and F. Kupka,
Lecture Notes in Physics 756, 255–289, Springer-Verlag Berlin Heidelberg 2009
47. **F. K. Röpke** (2006):
Multi-dimensional numerical simulations of type Ia supernova explosions,
Reviews in Modern Astronomy 19, 127–156

Conference Proceedings

48. **F. K. Röpke**, M. Fink, R. Pakmor, M. Kromer, S. A. Sim, I. R. Seitenzahl, F. Ciaraldi-Schoolmann, and W. Hillebrandt (2011):
Type Ia Supernovae as Final Stage of Binary Evolution,
Astronomical Society of the Pacific Conference Series, 447, 303
49. M. Fink, **F. K. Röpke**, W. Hillebrandt, M. Kromer, S. A. Sim, and I. R. Seitenzahl (2011):
Modeling Sub-Chandrasekhar Type Ia Supernovae,
Astronomical Society of the Pacific Conference Series, 444, 15
50. **F. K. Röpke**, I. R. Seitenzahl, S. Benitez, M. Fink, R. Pakmor, M. Kromer, S. A. Sim, F. Ciaraldi-Schoolmann, and W. Hillebrandt (2011):
Modeling Type Ia supernova explosions,
Progress in Particle and Nuclear Physics, 66, 309–318
51. **F. K. Röpke**, M. Fink, W. Hillebrandt, M. Kromer, R. Pakmor, I. R. Seitenzahl, and S. A. Sim (2011):
Multi-dimensional models of Type Ia supernovae,
Proceedings of Science
52. I. R. Seitenzahl, **F. K. Röpke**, R. Pakmor, and M. Fink (2011):
Nucleosynthetic post-processing of Type Ia supernovae with variable tracer masses,
Proceedings of Science
53. **F. K. Röpke**, W. Hillebrandt, D. Kasen, and S. E. Woosley (2010): *Modeling the Diversity of Type Ia Supernova Explosions*,
to appear in Proceedings of the 4th International Conference on Numerical Modeling of Space Plasma Flows (Chamonix 2009)
54. S. A. Sim, M. Kromer, **F. K. Röpke**, E. I. Sorokina, S. I. Blinnikov, D. Kasen, and W. Hillebrandt (2009):

- Monte Carlo Radiative Transfer Simulations: Applications to Astrophysical Outflows and Explosions*,
to appear in Proceedings of the 4th International Conference on Numerical Modeling of Space Plasma Flows (Chamonix 2009)
55. R. Pakmor, **F. Röpke**, A. Weiss, and W. Hillebrandt (2009):
The Impact of type Ia Supernovae on main sequence companions,
AIP Conference Series 111, 285–288
 56. S. Sim, M. Kromer, W. Hillebrandt, and **F. Röpke**, and S. E. Woosley (2009):
Lopsided explosion models for Type Ia supernovae,
AIP Conference Series 111, 281–284
 57. D. Kasen, R. C. Thomas, **F. Röpke**, and S. E. Woosley (2008):
Multidimensional radiative transfer calculations of the light curves and spectra of Type Ia supernovae,
Journal of Physics: Conference Series 125, 012007
 58. P. A. Mazzali, K. Nomoto, K. Maeda, J. Deng, S. Benetti, **F. Röpke**, and W. Hillebrandt (2008):
The Progenitors of Type I SNe,
ASP Conference Series 391, 347–357
 59. **F. K. Röpke** (2008):
Thermonuclear Supernovae,
Proceedings of Science
 60. W. Hillebrandt and **F. K. Röpke** (2007):
Type Ia Supernovae and Cosmology,
in “Relativistic Astrophysics Legacy and Cosmology – Einstein’s Legacy” ESO Astrophysics Symposia, Springer-Verlag, Berlin Heidelberg, 21–28
 61. W. Hillebrandt and **F. K. Röpke** (2007):
The Physics and Astrophysics of Type Ia Supernova Explosions,
ASP Conference Series 374, 53–60
 62. D. Kasen, S. Woosley, and **F. K. Röpke** (2007):
The Light Curves and Spectra of Supernova Explosions: Multi-Dimensional Time-Dependent Monte Carlo Radiative Transfer Calculations,
Journal of Physics: Conference Series 78, 012037
 63. S. E. Woosley, A. Almgren, J. B. Bell, G. Glatzmaier, D. Kasen, A. R. Kerstein, H. Ma, P. Nugent, **F. Röpke**, V. Sankaran, and M. Zingale (2007):
Type Ia Supernovae,
Journal of Physics: Conference Series 78, 012081

64. **F. K. Röpke** (2007):
Numerical simulations of multi-scale astrophysical problems: the example of Type Ia supernovae,
in “Modelling and Simulation in Science” — Proceedings of the 6th International Workshop Data Analysis in Astronomy “Livio Scarsi”, World Scientific, Singapore
65. **F. K. Röpke** (2006):
On the road to consistent Type Ia supernova explosion models,
to appear in the Proceedings of the XXVIth IAU General Assembly, Highlights of Astronomy 14, ed. by K. A. van der Hucht
66. **F. K. Röpke** and S. E. Woosley (2006):
Surface detonation in type Ia supernova explosions?,
Journal of Physics: Conference Series 46, 413–417
67. **F. K. Röpke**, W. Hillebrandt, and S. I. Blinnikov (2005):
On the mechanism of Type Ia supernovae,
Proceedings of the EPS-13 Conference “Beyond Einstein – Physics for the 21st Century”, ed. by A. M. Cruise and L. Ouwehand ESA-SP 637
68. **F. K. Röpke** and W. Hillebrandt (2006):
Three-dimensional Modeling of Type Ia Supernova Explosions,
in “International Symposium of Origin of Matter and Evolution of Galaxies 2005: New Horizons of Nuclear Astrophysics and Cosmology”, ed. by S. Kubono, W. Aoki, T. Kajino, T. Motobayashi, and K. Nomoto,
AIP Conference Proceedings 847, AIP Melville, New York, 2006, 190–195
69. **F. K. Röpke** and W. Hillebrandt (2005):
Turbulent Combustion in Type Ia Supernova Models,
in “Proceedings of the Workshop on Interdisciplinary Aspects of Turbulence, Ringberg Castle, Tegernsee, Germany, April 18–22, 2005” ed. by F. Kupka and W. Hillebrandt,
MPA/P15 168–171, preprint: astro-ph/0609457
70. **F. K. Röpke**, W. Hillebrandt, and M. Gieseler (2005):
Type Ia supernova diversity from 3-dimensional models,
in “1604–2004: Supernovae as Cosmological Lighthouses”, ed. by M. Turatto, W. R. L. Shea, S. Benetti, and L. Zampieri,
ASP Conference Series 342, ASP San Francisco 2005, 397–398,
preprint: astro-ph/0609459
71. **F. K. Röpke**, W. Hillebrandt, M. Gieseler, M. Reinecke, and C. Travaglio (2004):
Numerical Simulations of Type Ia Supernova Explosions,
in “Proceedings of the 12th Workshop on ‘Nuclear Astrophysics’, Ringberg Castle,

- Tegernsee, Germany, March 22–27, 2004”, ed. by E. Müller and H.-T. Janka, MPA/P14 90–95, preprint: astro-ph/0609456
72. W. Hillebrandt, M. Reinecke, **F. K. Röpke**, M. Stehle, C. Travaglio, and J. C. Niemeyer (2004):
Thermonuclear Supernovae,
in “The Future of Astronuclear Physics: From Microscopic Puzzles to Macroscopic Nightmares”, ed. by A. Jorissen, S. Goriely, M. Rayet, L. Siess, and H. Boffin, EDP Sciences, Les Ulis, vol. 11 of EAS Publication Series, 141–162
73. **F. K. Röpke** and W. Hillebrandt (2005):
On the stability of thermonuclear burning fronts in Type Ia supernovae,
in “Cosmic Explosions – On the 10th Anniversary of SN1993J (IAU Colloquium 192)”, ed. by J. M. Marcaide and K. W. Weiler, Springer-Verlag, 333–338, preprint: astro-ph/0404500
74. **F. K. Röpke**, W. Hillebrandt, and J. C. Niemeyer (2002): *Investigating the flame microstructure in Type Ia supernovae*,
in: “Proceedings of the 11th Workshop on ‘Nuclear Astrophysics’, Ringberg Castle, Tegernsee, Germany, February 11-16, 2002”, W. Hillebrandt and E. Müller, MPA/P13 41–47, preprint: astro-ph/0204036
75. M. Reinecke, W. Hillebrandt, J. C. Niemeyer, **F. Röpke**, W. Schmidt, D. Sauer (2002):
Recent progress in multidimensional SN Ia simulations,
in “Proceedings of the 11th Workshop on ‘Nuclear Astrophysics’, Ringberg Castle, Tegernsee, Germany, February 11-16, 2002”, ed. by W. Hillebrandt and E. Müller, MPA/P13 54–56

Habilitation Thesis

76. *Thermonuclear Supernovae*,
Technische Universität München (2008)

Doctoral Thesis

77. *On the stability of thermonuclear flames in Type Ia supernova explosions*,
Technische Universität München (2003)

Diploma Thesis

78. *Thermodynamics of rotating objects in gravitation theory*,
Friedrich-Schiller-Universität Jena (2000)

Popular Articles

79. Hans-Thomas Janka, Sylvio Close, and **Friedrich Röpke** (2011):
Supernovae and kosmische Gammablitz – Teil 1: Neue Vielfalt der Erscheinungen,
Sterne und Weltraum 3/2011, 30–41
80. Hans-Thomas Janka, Sylvio Close, and **Friedrich Röpke** (2011):
Supernovae and kosmische Gammablitz – Teil 2: Die allerhellsten Phänomene,
Sterne und Weltraum 4/2011, 44–52
81. **F. K. Röpke** and W. Hillebrandt (2006):
Simulating Type Ia Supernovae on DEISA,
DEISA Newsletters Vol. 4, 2006
82. W. Hillebrandt, J. Niemeyer, **F. Röpke**, and W. Schmidt (2006):
Den Rätseln der Sternexplosionen auf der Spur,
Bayerische Akademie der Wissenschaften, Akademie Aktuell 02 2006, 59–63
83. W. Hillebrandt and **F. K. Röpke** (2005):
Supernovae vom Typ Ia,
Sterne und Weltraum 44/5, 22–28

Scientific Talks and Presentations

Friedrich Röpke

as of February 21, 2012

Invited Talks at Conferences

1. IAU symposium 281 “Binary paths to Type Ia supernova explosions”, Padova, Italy, July 4–8, 2011
2. ECT* workshop “The origin of elements: A modern perspective”, Trento, Italy, May 16–20, 2011
3. ESO workshop “Evolution of Compact Binaries”, Viña del Mar – Valparaíso, Chile, March 6–11, 2011
4. “Frontiers in Computational Astrophysics”, ENS Lyon, Lyon, France, October 11–15, 2010
5. Erice School on Nuclear Physics: “Particle and Nuclear Astrophysics”, Erice/Trapani, Sicily, Italy, September 16–24, 2010
6. 11th Symposium on Nuclei in the Cosmos, Heidelberg, Germany, July 19–23, 2010
7. “Dense QCD Phases in Heavy Ion Collisions and Supernovae”, Prerow, Germany, October 11–13, 2009
8. KITP conference “Stellar Deaths and Supernovae”, Santa Barbara, USA, August 17–21, 2009
9. 4th International Conference on Numerical Modeling of Space Plasma Flows (ASTRONUM–2009), Chamonix, France, June 28–July 3, 2009
10. 432. WE-Heraeus-Seminar “Nucleosynthesis – making the Elements in the Universe”, Bad Honnef, Germany, June 04–06, 2009
11. XXIII Trobades Científiques de la Mediterrània “Supernovae: light in the darkness”, Maó, Menorca, Spain, October 3–5, 2007
12. 6th International Workshop Data Analysis in Astronomy Livio Scarsi “Modelling and Simulation in Science”, Ettore Majorana Foundation and Centre for Scientific Culture, Erice, Italy, April 15–22, 2007

13. KITP Conference “Paths to Exploding Stars: Accretion and Eruption”, Santa Barbara, USA, March 19–23, 2007
14. XXIII Texas Symposium on Relativistic Astrophysics, Melbourne, Australia, December 11–15, 2006
15. XXVI General Assembly of the International Astronomical Union, Joint Discussion JD09 “Supernovae: One Millenium after SN1006”, Prague, Czech Republic, August 17–18, 2006
16. International Workshop XXXIV on Gross Properties of Nuclei and Nuclear Excitations: “Astrophysics and Nuclear Structure”, Hirschegg, Kleinwalsertal, Austria, January 15–21, 2006
17. Origin of Matter and Evolution of Galaxies (OMEG05): “New Horizon of Nuclear Astrophysics and Cosmology”, Tokyo, Japan, November 8–11, 2005
18. Highlight Talk at the fall assembly of the Astronomical Society (Astronomische Gesellschaft), Köln, Germany, September 30, 2005
19. Workshop on Type Ia Supernovae, Berkeley National Laboratory, USA, September 7–9, 2005
20. 13th General Meeting of the European Physical Society – EPS-13 “Beyond Einstein – Physics for the 21st Century”, Bern, Switzerland, July 13, 2005
21. JINA Workshop on Classical Novae and Type Ia Supernovae, Kavli Institute for Theoretical Physics at the University of California Santa Barbara, USA, May 20–21, 2005

Conference Contributions, Colloquia, Seminars, and Schools

22. HIC for FAIR Colloquium, Universität Gießen, Germany, February 2, 2012
23. Joint JINA/Universe Cluster Astrophysical Nuclear Reaction Network School Abtei Frauenwörth, Chiemsee, Bavaria, Germany April 10–17, 2011
24. Helmholtz International Summer School “Nuclear Theory and Astrophysical Applications”, JINR Dubna, Russia, July 26, 2011
25. Annual Fall Meeting of the Astronomische Gesellschaft: Recent Advances in Cosmology (splinter meeting), Potsdam, Germany, September 22, 2009
26. Fireworks 2008 Meeting: First Results from Wide-Field Surveys, Weizmann Institute of Science, Rehovot, Israel, December 18, 2008

27. Science Week of the Excellence Cluster Universe, Garching, December 3, 2008
28. SciDAC Computational Astrophysics Meeting, SLAC/KIPAC Stanford, April 7, 2008
29. SIAM Twelfth International Conference on Numerical Combustion, Monterey, CA, USA, April 1, 2008
30. 14th Workshop on “Nuclear Astrophysics”, Ringberg Castle, Tegernsee, Germany, March 10–15, 2008
31. Joint Institute for Nuclear Astrophysics (JINA) Seminar at the Michigan State University, USA, November 20, 2006
32. Santa Cruz Institute for Particle Physics (SCIPP) Seminar, Santa Cruz, USA, November 7, 2006
33. Theoretical Astrophysics Center (TAC) Seminar at the University of California Berkeley, USA, Oktober 16, 2006
34. “Scientific Discovery through Advanced Computing” (SciDAC) Conference, Denver, June 25–29, 2006 (Poster)
35. Astrophysical Colloquium at the University of Oxford, UK, Oktober 18, 2005
36. Workshop on “Interdisciplinary Aspects of Turbulence”, Ringberg Castle, Tegernsee, Germany, April 20, 2005
37. Astrophysical Seminar at the Kavli Institute for Theoretical Physics at the University of California Santa Barbara, USA, January 27, 2005
38. Astrophysical Seminar at the Universität Würzburg, Germany, December 16, 2004
39. RTN workshop on Progenitor Modelling of Type Ia Supernovae, Institute of Astronomy, Cambridge, UK, Dezember 9–10, 2004
40. Type Ia Supernovae and Cosmology Workshop at the Institute for Nuclear Theory at the University of Washington, Seattle, USA, August 6, 2004
41. “1604–2004: Supernovae as Cosmological Lighthouses”, Padua, Italy, June 16–19, 2004 (talk and poster)
42. “The Dark Universe in Munich”, Garching, Germany, May 6–7, 2004
43. 12th Workshop on “Nuclear Astrophysics”, Ringberg Castle, Tegernsee, Germany, March 22–27, 2004
44. IAU Colloquium 192 “Supernovae (10 years of SN 1993J)”, Valencia, Spain, April 22–26, 2003

45. Talk at the DAAD Summer School, JINR, Dubna, Russia, July 21 – August 10, 2002
46. 11th Workshop on “Nuclear Astrophysics”, Ringberg Castle, Tegernsee, Germany, February 11–16, 2002
47. 11th GAMM Workshop on Numerical Methods in Fluid Mechanics, Kirchzarten, November 26–27, 2001
48. 2nd ANuME Workshop on Level Set Methods, Lambrecht, Germany, March 22–23, 2001