

Garching

Max-Planck-Institut für Astrophysik

Karl-Schwarzschild-Straße 1, Postfach 1317, 85741 Garching,
Tel.: (0 89) 30000-0, Telefax: (0 89) 30000-2235
e-Mail: [userid@mpa-garching.mpg.de](mailto:user@mpa-garching.mpg.de)

0 Allgemeines

0.1 Kurzgeschichte

Das Institut für Astrophysik ging hervor aus der gleichnamigen Abteilung am Göttinger MPI für Physik. Mit dem Umzug nach München im Jahre 1958 wurde dieses erweitert zum MPI für Physik und Astrophysik mit Heisenberg und Biermann als Direktoren. Die Arbeiten zur theoretischen Astrophysik lieferten grundlegende Erkenntnisse zur Sonnenphysik, Plasmaphysik und Sternstruktur. 1963 wurde als neues Teilinstitut das Institut für extraterrestrische Physik gegründet. 1991 erfolgte die Aufteilung in drei eigenständige Max-Planck-Institute, das MPI für Physik (MPP), das MPI für Astrophysik (MPA) und das MPI für extraterrestrische Physik (MPE). 2008 feierte das MPA sein 50-jähriges Jubiläum.

1 Personal und Ausstattung

1.1 Personalstand

Direktoren und Professoren:

M. Asplund [-2208], W. Hillebrandt [-2200](Geschäftsführender Direktor), R. Sunyaev [-2244], S.D.M. White [-2211].

Sekretariat und Verwaltung:

C. Rickl [Sekr. Geschäftsführung, -2201]

M. Ihle [Verwaltungsleiter, -3600]

Auswärtige Wissenschaftliche Mitglieder:

R. Giacconi, R.-P. Kudritzki, W. Tscharnuter.

Emeritierte Wissenschaftliche Mitglieder:

H. Billing, R. Kippenhahn, F. Meyer, H.U. Schmidt, E. Trefftz.

Wissenschaftliche Mitarbeiter:

R. Angulo, P. Arevalo (bis 30.6.), A. Bauswein (seit 1.2.), M. Bell (seit 1.7.), M. Bergemann, A. Bogdan (seit 1.2.), M. Boylan-Kolchin (bis 31.8.), L. Casagrande, B. Catinella,

P. Cerda-Duran, Y.M. Chen (bis 29.3.), A. Chiavassa (bis 24.9.), B. Ciardi, D. Christlein (bis 30.6.), E. Churazov, R. Collet, A. Cooper (seit 15.10.), J. Cuadra (bis 31.7.), K. Dolag (bis 31.10.), M. Dotti, M. Egger (seit 1.6.), T. Enßlin, M. Fink (seit 1.12.), M. Gilfanov, T. Greif, M. Grossi (seit 1.8.), A. Gualandris, B. Henriques (seit 1.9.), C. Hernandez-Monteagudo, J. Hu (bis 31.8.), H.-T. Janka, P. Jofre-Pfeil (seit 1.9.), G. Kauffmann, R. Khatri (seit 1.8.), K. Kovac (seit 1.10.), R. Krivonos, Ch. Li (bis 30.9.), K. Lind (seit 1.12.), S. Lucatello (bis 31.7.), A. Marino (seit 1.9.), I. Maurer (seit 1.11.), P. Mazzali, B. Metcalf, P. Montero, B. Moster (seit 1.12.), B. Müller, E. Müller, M. Obergaulinger (bis 31.10.), R. Overzier, E. Puchwein (bis 30.9.), I. Ramirez (bis 30.9.), M. Reinecke, H. Ritter (bis 31.5.), F. Röpke, G. Ruchti (seit 1.10.), A. Ruiter, A. Saintonge, L. Sales (seit 1.9.), L. Sbordone, C. Scoccola, I. Seitenzahl, A. Serenelli (bis 1.9.), F. Shankar, S. Sim (bis 31.10.), V. Springel (bis 28.2.), H.C. Spruit, S. Taubenberger, S. Tsygankov, S. Weinmann (bis 31.8.), A. Weiss, J. Zavala-Franco (bis 31.10.), L. Wang (bis 31.8.), R. Wiersma,

Minerva Stipendiat

E. Neistein (bis 30.9.)

DAAD Stipendiat

S. Nuza (bis 31.3.)

Doktoranden:

M. Alves-Cruz*, P. Baumann, A. Bauswein (bis 31.1.), V. Biffi*, R. Birkel (bis 30.11.), A. Bogdan* (bis 31.1.)*, S. Bonoli* (bis 28.5.), M.-P. Bottino* (bis 22.10.), M.A. Campisi*, F. Ciaraldi-Schoolmann, C. D'Angelo (bis 30.9.)*, F. De Gasperin, J. Donnert, F. Elsner (bis 31.10.), S. Fabello*, M. Fink (30.11.), M. Frommert, M. Gabler, L. Graziani*, M. Grossi (bis 31.1.)*, S. Hachinger, F. Hanke (seit 15.10.), W. Hayek (bis 31.8.), M. Herzog, S. Hess, L. Hüdepohl, F. Ianuzzi*, J. Jasche (bis 15.4.), A. Jeesson-Daniel*, P. Jofre-Pfeil* (bis 30.8.), O. Just, N. Krachmalnikoff* (seit 1.9.), M. Kromer, C. Laporte* (seit 1.9.), N. Lyskova* (seit 1.9.), T. Mädler, Z. Magic* (seit 1.9.), I. Maurer (bis 31.10.), F. Miczek, S. Mineo*, R. Moll (bis 28.1.), R. Pakmor (bis 30.9.), M. Petkova*, L. Porter*, T. Rembiasz*, T. Sawala* (bis 31.12.), R. Schönrich, V. Silva*, F. Stasyszyn*, M. Ugliano*, M. van Daalen* (seit 1.9.), M. Vogelsberger (bis 30.4.), J. von Groote (seit 1.12.), M. Wadepuhl, J. Wang, A. Wongwathanarat*, R. Yates (seit 1.9.), F. Zaussinger (bis 31.8.), Z. Zhang*, I. Zhuraleva*.

Diplomanden, Bachelor- und Masterstudenten:

Ph. Edelmann (bis 30.1.), E. Gall (seit 15.11.), F. Hanke (bis 30.9.), H. Junklewitz (bis 28.2.), S. Lutter (seit 15.11.), Z. Magic (bis 30.6.), U. Nöbauer (seit 1.2.), M. Selig (seit 20.9.), M. Uhlig (seit 22.11.), J. von Groote (bis 30.5.), C. Weig (bis 30.1.), H. Weingartner (seit 22.11.), R. Yates (bis 30.8.)

Technisches Personal - PLANCK Programmierer:

U. Dörl, W. Hovest, J. Knoche, J. Rachen, J. Robbers, T. Riller.

Systemadministratoren:

H.-A. Arnolds, B. Christandl, N. Grüner, H.-W. Paulsen.

Sekretariat:

M. Depner, S. Gründl, G. Kratschmann, K. O'Shea, C. Rickl (Skr. Geschäftsführung).

Bibliothek:

E. Blank, E. Chmielewski (Leitung), C. Hardt.

*IMPRS (International Max-Planck Research School)

1.2 Gebäude und Bibliothek

Die Bibliothek befindet sich im Astrogebäude und wird von Wissenschaftlern zweier Institute genutzt, das Max-Planck-Institut für Astrophysik und extraterrestrische Physik. Die Bibliothek besitzt aktuell (2009) ca. 24.000 Bücher und Konferenzproceedings, sowie Abonnements für ca. 200 wissenschaftliche Zeitschriften. Seit dem 1.1.2010 wird ein neues System verwendet, das von der Max-Planck Digital Library in Zusammenarbeit mit dem Fachinformationszentrum Karlsruhe entwickelt worden ist.

1.3 Personelle Veränderungen

Gerhard Börner: won the CAS Award (Chinese Academy of Science) for International Cooperation in Science and Technology and received the “Friendship Award” of the Chinese government (October 2010).

Akos Bogdan: received the Rudolf-Kippenhahn-Prize for the best scientific paper written by a student.

M. Gilfanov: – Professor of astrophysics (the title awarded by the High Commission of the Ministry of Science and Education of Russian Federation); – Honorary member of Tatarstan Academy of Sciences

Guinevere Kauffmann: received the German Federal Order of Merit.

R. Overzier: Tinsley Visiting Scholar Award, University of Texas

F. Röpke: ARCHES award for German-Israeli collaboration; – Professorship in Astrophysics at the University of Würzburg (starting 01.01.2011)

Rashid Sunyaev: received the German Federal Order of Merit.

Simon White: received the Max-Born Preis 2010 by the Institute of Physics (IOP) and German Physical Society (DFG); – Honorary Citizenship of the City of Padua 2010

2 Gäste

Tom Abel (Stanford Univ.) 5.12.–31.12.; Pavel Abolmasov (Moskau Univ.) 3.9.–16.9.; Tony Banday (Univ. Toulouse) 22.3.–4.4. ; (and 3.8.–18.8.); Altan Baykal (Univ. of Ankara) 13.7.–22.8.; Sergey Blinnikov (ITEP Moskau) 18.3.–31.3.; (and 12.7.–31.8.); Yan Mei Chen (Chin. Acad. Peking) 10.6.–13.7.; Jens Chluba (CITA, Toronto, Kanada) 22.2.–15.3.; Nikolay Chugai (Inst. of Astron. Moskau) 15.3.–15.4.; Weiguang Cui (Shanghai Obs.) bis 18.2.; Marc Davis (Astro, Univ. Berkeley) 1.5.–30.6. ; Tolga Dincer (Faculty of Science, Istanbul) 15.7.–15.9.; Dunja Fabjan (Univ. Trieste) 31.1.–26.2.; Ryan Foley (CfA Harvard Univ.) 6.9.–19.9.; Jian Fu (Shanghai Obs.) bis 15.2.; (und 13.10.–9.11.); Dimitrios Giannios (Princeton Univ.) 5.7.–18.7.; Liang Gao (NAO, Peking) 21.8. – 2.9.; Hong Guo (Shanghai Observatory) bis 31.8.; Qi Guo (Durham Univ.) 15.1.–31.1.; Oliver Hahn (Stanford Univ.) 5.12.–22.12.; Nail Inogamov (Landau Inst. Moskau) 16.8.–12.10.; Anatoly Iyudin (Moskau State Univ.) 3.6.–2.8.; (und 7.12.–20.12.); Jinrong Li (Univ. Hefei, China) 5.12.–20.12.; Li-Xin Li (Peking Univ.) 16.8.–13.9. ; Sean Moran (JHU, Baltimore USA) 24.1.–5.2.; Dmitriy Nadyozhin (ITEP Moskau) 1.3.–30.4.; Yuchiro Nakada (Santa Barbara) 11.7.–8.8.; Ramesh Narayan (CfA Harvard Univ.) 19.9.–20.10.; Eyal Neistein (Racah Inst. Jerusalem) 15.9.–30.9.; Zhizheng Pan (Hefei Univ.) bis 20.3.; Francesca Perotta (Trieste) 1.7.–31.7.; Laura Portinari (Turku Univ. Finland) 5.4.–15.5.; Karine Sagnard (ENSPPS Strasbourg) 1.3.–1.9.; Maurizio Salaris (Liverpool John Moore Univ.) 21.7.–21.8.; Alexander Saro (Trieste Univ.) 27.6.–10.7.; Sergey Sazonov (IKI Moskau) 31.1.–7.4.; (und 1.7.–22.8.); Sara Seager (Cambridge Univ. USA) 5.7.–26.7.; Nikolai Shakura (Sternberg Astron. Moskau) 16.8.–16.9.; Pavel Shtykovskiy (High Energy Dept., Moskau) 24.7.–26.8.; Elena Sorokina (Sternberg Inst. Moskau) 1.7.–31.7.; Victor Utrobin (ITEP, Moskau) 1.10.–30.11.; Wenting Wang (Shanghai Observatory) seit 16.11.; Osorio Yiesson (Uppsalla Univ.) 18.10.–6.11.; Heling Yan (Peking Univ.) bis 30.1.; Wei Zhang (NAOC, Peking) 1.6.–30.6.; Youcai Zhang (Shanghai Obs.) bis

28.2.; Gang Zhao (NOOC, Beijing) 2.5.–31.5.; Jie Zhou (Nat. Astron. Obs. Peking) bis 4.11.

3 Lehrtätigkeit, Prüfungen und Gremientätigkeit

3.1 Lehrtätigkeiten

W. Hillebrandt: SS10, TU München

H.-Thomas Janka: SS10 und WS10/11, TU München

P. Mazzali: Scuola Normale Superiore, Pisa, Italien (Academic year 2010-2011)

E. Müller, WS10/11, TU München

H. Ritter, WS09/10 und WS10/11, LMU München

F. Röpke: WS09/10, SS10 and WS 10/11 TU München

A. Weiss, SS10, LMU München

3.2 Sonstige Kurz-Vorlesungen

G. Börner: “Kosmologie” (Univ. Konstanz, Febr.)

W. Hillebrandt: University of Pisa (Jan. and Okt.)

H.-Th. Janka: “Entwicklung massereicher Sterne und Supernovae” (Univ. Konstanz, 20.1.–21.1.)

H.-Th. Janka: “Stellar Evolution and Death – Models and Modeling” (GSI Darmstadt, 12.7.–17.7.)

F. Röpke: “Introduction to Computational Astrophysics” (Universität Heidelberg, 06.04.–09.04.)

3.3 Gremientätigkeit

M. Asplund: – Sloan Digital Sky Survey III Collaboration Council – Vorsitz des Joint Astronomical Colloquium Komitee – Wissenschaftlicher Beirat - Virtual Atomic and Molecular Data Centre

B. Ciardi: – Mitglied des Wissenschaftsrat von IAU Commission 47 (Kosmologie); – Vorsitzende des Wissenschaftlichen Rats von GLOW (German Long Wavelength) Konsortium; – Stellvertretende Projektleiterin der Arbeitsgruppe SKA (Square Kilometer Array); – Mitglied des Wissenschaftsrat Italian National Institute for Astrophysics (INAF, Italien)

T. Enßlin: – Mitglied des Redaktion Beirat der PLANCK Kollaboration; – Mitglied des Bewerbungskomitee f. Doktoranden, SISSA, Trieste

W. Hillebrandt: – Vorsitzender, Beirat des Rechenzentrums Garching; – Mitherausgeber, Lecture Notes in Physik; – Mitglied des SciDAC Beirats; – Mitglied des wissenschaftlichen Beirats, Zentrum für Astronomie der Universität Heidelberg (ZAH); – Mitglied des Internationalen Beirats, Oskar Klein Centre, Stockholm Univ. – Mitglied des Senatsausschuss fuer Wettbewerb (SAW), Leibniz-Gemeinschaft; – Mitglied des Advisor Committee, German-Israeli Foundation (GIF); – Panel Chair, ESO OPC

G. Kauffmann: – Mitglied des Organisationskomitee “Joint Kolloquium”; – Mitglied des MPA Zukunftskomitee; – Mitglied Aspen Center for Physics Board; – Aspen Center für Physik, Vorlesungskomitee; – Astronet, Vorsitzende der Arbeitsgruppe “wide field spectroscopy”

E. Müller: – Vorstandsmitglied des Sonderforschungsbereichs “Transregio Gravitationswellenastronomie”; – Vorsitzender des Benutzerkomitees und Beirat am Rechenzentrum Garching (RZG/IPP); – Betriebsratvorsitzender am MPA; – Mitglied des Bewerbungskomitee für Doktoranden Univ. of Paris – Mitglied des Bewerbungskomitee für MPA

Postdoktoranden

Friedrich Röpke: Mitarbeitervertreter der Chemisch-Physikalisch-Technischen Sektion der Max-Planck-Gesellschaft.

F. Shankar: Gast Editor für *Advances in Astronomy and Astrophysics*

H. Spruit: Vorsitzender des Auswahlkomitee Physikdepartment Univ. Graz)

A. Weiss: PLATO Wissenschaftsmanagement, Baugruppenleiter; – Mitglied des Organisationskomitee der Kommission 36 (Stellare Struktur) der IAU

S.D.M. White: – Fachbeiratsmitglied, Institute for Astrophysics, University of Porto; – Fachbeiratsmitglied, Astrophysikalisches Institut Potsdam; – Fachbeiratsmitglied, Physics Department, Ecole Normale Supérieure, Paris; – Mitglied - Netzwerk OPTICON “A European Discussion Network for Optical and Infrared Astronomy”; – Mitglied vom “Beirat Wissenschaftskolleg zu Berlin”; – Mitglied des Revisionskomitee von DAPNIA, Saclay, Frankreich; – Fachbeiratsmitglied Observatoire de Lyon, Frankreich; – Kuratoriumsmitglied vom “Physik Journal”; – Fachbeiratsmitglied - Instituto de Astrofísica de Canarias, Spanien; – Mitglied des Beratungsausschusses “Canadian Institute for Advanced Research, Cosmology and Gravity Program”; – Beratendes Mitglied für Kosmologie Preis, Peter Gruber Stiftung; – Fachbeiratsmitglied, Astronomiedepartment Harvard Univ.; – Fachbeiratsmitglied, LERMA Paris; – Vorsitzender des ESO Beobachtungskomitee;

4 Wissenschaftliche Arbeiten

Für Informationen zu den wissenschaftlichen Arbeiten unseres Instituts, besuchen Sie bitte unsere Webseite unter: <http://www.mpa-garching.mpg.de> und klicken Sie “Über das Institut” und “Jahresberichte” an. Sollten Sie kein Internet haben, können Sie gerne kostenlos einen Jahresbericht unter der Telefon-Nummer 089/30000-2214 anfordern.

4.1 Dissertationen

Abgeschlossen:

Andreas Bauswein: Relativistic simulations of compact object mergers for nucleonic matter and strange quark matter. Technische Universität München (Prüfung: 9.2.2010).

Reiner Birkel: Stationary, axisymmetric neutron stars with meridional circulation in General Relativity. Technische Universität München (Prüfung: 13.1.2010).

Akos Bogdan: X-ray emission from nearby early-type galaxies and origin of Type Ia Supernovae. Ludwig-Maximilians-Universität, München (Prüfung: 25.2.2010).

Silvia Bonoli: The Role of Galaxy Mergers in the Evolution of Supermassive Black Holes. Ludwig-Maximilians-Universität (Prüfung: 28.5.2010).

Maria Paola Bottino: Component separation methods for Cosmic Microwave Background studies. Ludwig-Maximilians-Universität, München (Prüfung: 3.12.2010).

Emilio Donoso: Evolution of radio galaxies across cosmic time. Ludwig-Maximilians-Universität (Prüfung: 10.3.2010).

Franz Elsner: Search for Non-Gaussian signatures in the cosmic microwave background radiation. Ludwig-Maximilians-Universität (Prüfung: 19.11.2010).

Michael Fink: Modeling detonations in Type Ia supernovae. Technische Universität München (Prüfung: 3.12.2010).

Mona Frommert: Temperature and Polarization Studies of the Cosmic Microwave Background. Ludwig-Maximilians-Universität, München (Prüfung: 11.2.2010).

Margherita Grossi: Probing Early Dark Energy and primordial non-Gaussianity with cosmological simulations. Ludwig-Maximilians-Universität, München (Prüfung: 5.2.2010).

Jens Jasche: Bayesian methods for analyzing the large scale structure of the universe. Ludwig-Maximilians-Universität (Prüfung: 15.4.2010).

Paula Jofre Pfeil: The age of the Milky Way halo stars - Implications for galaxy formation. Ludwig-Maximilians-Universität (Prüfung: 10.12.2010).

Immanuel Maurer: Gamma Ray Bursts and their Super Novae. Technische Universität, München (Prüfung: 30.11.2010).

Rainer Moll: Magnetic acceleration and instabilities of astrophysical jets. Universität Amsterdam (Prüfung: 28.1.2010).

Ruediger Pakmor: Progenitor systems of Type Ia Supernovae: mergers of white dwarfs and constraints on hydrogen-accreting white dwarfs. Technische Universität, München (Prüfung: 16.12.2010).

Marco Pierleoni: CRASHa coupling continuum and line radiative transfer. Ludwig-Maximilians-Universität (Prüfung: 17.9.2010).

Mark Vogelsberger: The internal structure of Cold Dark Matter Haloes. Ludwig-Maximilians-Universität, München (Prüfung: 23.4.2010).

Florian Zaussinger: Numerical simulation of double-diffuse convection. Universität Wien (eingereicht).

Laufend:

Monique Alves-Cruz: S-process in extremely metal-poor stars. Ludwig-Maximilians-Universität.

Michael Aumer: Simulations of Disk Galaxy Evolution. Ludwig-Maximilians-Universität.

Patrick Baumann: Chemical composition of solar-type stars and its impact on planet-hosting. Ludwig-Maximilians-Universität.

Sandra Benitez: Model-Independent Reconstruction of the Expansion History of the Universe. Technische Universität München.

Veronica Biffi: Studying the physics of galaxy clusters by simulations and X-ray observations. Ludwig-Maximilians-Universität.

Franco Ciaraldi-Schoolmann: Stochastic modeling of Type Ia supernovae explosions in Large Eddy Simulations. Technische Universität München.

Francesco De Gasperin: Cosmological Evolution of Supermassive Black Holes With LOFAR. Ludwig-Maximilians-Universität.

Julius Donnert: On the non-thermal emission in galaxy clusters. Ludwig-Maximilians-Universität.

Philipp Edelmann: Hydrodynamical simulations coupled to nuclear reaction networks in stellar astrophysics. Technische Universität München.

Silvia Fabello: HI properties of nearby galaxies from ALFALFA data stacking. Ludwig-Maximilians-Universität.

Michael Gabler: Coupled crust-core-magnetosphere oscillations of magnetars. Technische Universität München.

Luca Graziani: Cosmological Radiative Transfer through metals in CRASH. Ludwig-Maximilians-Universität.

Stephan Hachinger: Analysis of photospheric spectra of supernovae. Technische Universität München.

Florian Hanke: Three-dimensional simulations of core-collapse supernovae using a detailed neutrino transport description. Technische Universität München.

Matthias Herzog: Dynamical Simulations of Phase Transitions in Compact Stars. Technische Universität München.

- Steffen Hess: Particle hydrodynamics with tessellation techniques. Ludwig-Maximilians-Universität.
- Michael Hilz: Evolution of Elliptical Galaxies. Ludwig-Maximilians-Universität.
- Francesca Iannuzzi: Studying the survival of galaxies in hydrodynamical simulations of clusters. Ludwig-Maximilians-Universität.
- Akila Jeesson-Daniel: Lyman Alpha Emitters around the Epoch of Reionization. Ludwig-Maximilians-Universität.
- Oliver Just: Numerical models of hyper-accreting post-merger accretion tori. Technische Universität München.
- Simon Karl: The Antennae Galaxies - a key to galactic evolution. Ludwig-Maximilians-Universität.
- Nicoletta Krachmalnicoff: Studying the Epoch of Reionization with LOFAR. Ludwig-Maximilians-Universität.
- Natalya Lyskova: Physics of hot gas in elliptical galaxies. Ludwig-Maximilians-Universität.
- Zazralt Magic: Theoretical models for cool stars including multidimensional atmospheres. Ludwig-Maximilians-Universität.
- Fabian Miczek: Simulation of low Mach number astrophysical flows. Technische Universität München.
- Stefano Mineo: X-ray emission from star-forming galaxies. Ludwig-Maximilians-Universität.
- Niels Oppermann: Non-Gaussianities in Cosmology. Ludwig-Maximilians-Universität.
- Ludwig Oser: Galaxy Formation and Evolution. Ludwig-Maximilians-Universität.
- Margarita Petkova: Numerical radiative transfer and the hydrogen reionization of the Universe. Ludwig-Maximilians-Universität.
- Laura Porter: Modelling dust in cool stellar and substellar atmospheres. Ludwig-Maximilians-Universität.
- Tomasz Rembiasz: Non-ideal MHD instabilities and turbulence in core collapse supernovae. Technische Universität München.
- Ralph Schoenrich: Chemistry and dynamics of the Milky Way. Ludwig-Maximilians-Universität.
- Victor Silva: Asteroseismic Probes of Mixing Processes in Stellar Interiors. Ludwig-Maximilians-Universität.
- Federico Stasyszyn: Smoothed particle magneto-hydro-dynamics for cosmological applications. Ludwig-Maximilians-Universität.
- Irina Thaler: Solar magnetohydrodynamics. Uni Amsterdam.
- Marcella Ugliano: Explosion and remnant systematics for neutrino-driven supernovae. Technische Universität München.
- Marcel van Daalen: Correlation functions from the Millennium XXL simulation. Ludwig-Maximilians-Universität.
- Janina von Groote: Hydrodynamic modelling of the accretion-induced collapse of white dwarfs with detailed neutrino transport. Technische Universität München.
- Markus Wadepuhl: Simulations of the formation of a Milky Way like galaxy. Technische Universität München.
- Jing Wang: The relation between morphology, star formation rate and gas fraction in galaxies. Univ. of Science and Technology of China.
- Annop Wongwathanarat: Multidimensional simulations of core collapse supernovae using a two-patch overset grid in spherical coordinates. Technische Universität München.

Zhongli Zhang: Low-mass X-ray binaries in early-type galaxies. Ludwig-Maximilians-Universität.

Irina Zhuravleva: Radiative transfer in hot gas of galaxy clusters. Ludwig-Maximilians-Universität.

4.2 Diplomarbeiten

Abgeschlossen:

Phillip Edelmann: Modeling of Thermonuclear Reaction Fronts in White Dwarfs. Technische Universität München

Florian Hanke: Studien zum neutrinogetriebenen Explosionsmechanismus von Kernkollaps-supernovae mit Simulationen in ein, zwei und drei Dimensionen. Technische Universität München.

Henrik Junklewitz: Imprints of magnetic power and helicity spectra on radio polarimetry statistics. Ludwig-Maximilians-Universität.

Zazralt Magic: Impact of the new solar abundances on the analysis of galactic clusters and binaries. Ludwig-Maximilians-Universität.

Janina von Groote: Modelling signatures of outflow in X-ray spectra of Active Galactic Nuclei. Universität Regensburg.

Cornelius Weig: Information field theory applied to a spatially distorted log-normal field with Poissonian noise. Ludwig-Maximilians-Universität.

Robert Yates: Analysis of the diffracted light around a coronagraphic external occulter. University di Padova, Italien.

5 Tagungen, Projekte am Institut und Beobachtungszeiten

5.1 Beobachtungszeiten

M. Asplund, L. Casagrande, I. Ramirez et al., 26hr with UVES/ESO VLT: “Planet signatures in the chemical compositions of solar-like stars“ Lind, Asplund et al., 20hr with FLAMES/ESO VLT: “The lithium content of M30 - one of the most metal-poor globular clusters in the Galaxy“

Feltzing, M. Asplund, S. Lucatello (MPA) et al., 34hr with UVES/ESO VLT: “Metallicities, abundance ratios, and ages for dwarf stars in the Galactic bulge“

W. Hillebrandt, F.K. Roepke, M. Kromer, S. Taubenberger, M. Fink, S. Benitez, S. Hachinger (MPA): several dates between September and December 2010, University of Hawaii 2.2m Telescope, Mauna Kea, Hawaii, SNIFS, Measuring H0 with Type IIP Supernovae.

S. Lucatello, M. Asplund, R. Collet, K. Lind, I. Ramirez, G. Ruchti (MPA) et al., 17hr with XSHOOTER/ESO VLT: “Extremely metal-poor stars in the outer halo from the SDSS/SEGUE survey“

Melendez, M. Asplund, L. Casagrande, K. Lind, I. Ramirez (MPA) , 30hr with UVES/ESO VLT: “Fine structure in the lithium Spite plateau“

G. Fabbiano (CfA), S. Mineo (MPA), M. Gilfanov (MPA), J. Wang (CfA) and A. Zezas (CfA) Chandra Cycle 12 Research Program Accepted archive proposal Title: “X-ray populations of different ages in spiral galaxies“

Kervella (Paris), Perrin (Paris), Verhoelst (Leuven), A. Chiavassa (MPA), Ridgway (NOAO, USA), Lacour (Paris), Cami (Western Ontario, USA), Haubois (San Paolo, Brasil), Lai (Canada-France-Hawaii Telescope) VLT - NACO: The evolving circumstellar envelope of Betelgeuse: towards a link between convection and mass loss, November 2010.

P. Mazzali: (PI) CoIs: Pian, Cappellaro, Patat, Turatto, Benetti, Valenti, Kawabata, Nomoto, Maeda, Deng, Tominaga, Matheson, Filippenko, Kirshner Title: Late-time spectropho-

tometry of Type Ib/c Supernovae: diagnostics on energies, asphericities, and progenitors
Instrument: ESO VLT FORS (ESO Cycle 85) Time: 12 hours

P. Mazzali (PI) CoIs: Pian, Cappellaro, Patat, Turatto, Benetti, Valenti, Kawabata, Nomoto, Maeda, Deng, Tominaga, Matheson, Filippenko, Kirshner Title: Late-time spectrophotometry of Type Ib/c Supernovae: diagnostics on energies, asphericities, and progenitors
Instrument: ESO VLT FORS (ESO Cycle 86) Time: 12 hours

L. Sbordone, M. Asplund, R. Collet, R. (MPA), F. D'Antona (NAF Rome), J. Melendez (Porto), P. Ventura (INAF Rome), D. Yong (Mt. Stromlo), ESO Cerro Paranal, Chile, UVES@VLT, "Magnesium isotopic ratios in 47 Tuc: a probe of the origins of abundance variations in metal-rich globular clusters". Proposal first accepted for ESO Period 84 (Sep. 2009-Mar 2010), then only partly executed, accepted again for P86 (Sep 2010-Mar 2011) with same authors and title, to complete targets.

H.C. Spruit: "Brightness of magnetic fields in the quiet Sun", 1-m Swedish Solar Telescope, La Palma, 29.8.-11.9.

S. Taubenberger, W. Hillebrandt, P.A. Mazzali (MPA), F. Patat (ESO), N. Elias-Rosa (Caltech), S. Benetti (Padova), I. Agnoletto (Padova), V. Stanishev (Lisbon), A. Pastorello (Belfast): 6 nights in 2010, service observations, Calar Alto 2.2m Telescope, Calar Alto, Spain, CAFOS, The contribution of Supernovae to the cosmic chemical evolution.

S. Taubenberger (MPA), S. Benetti (Padova), K. Maeda (Tokyo), P.A. Mazzali, J. Sollerman (Stockholm), D. Sauer (Stockholm), V. Stanishev (Lisbon), G. Leloudas (Copenhagen), F. Bufano (Padova), A. Harutyunyan (St. Cruz de La Palma), F. Patat (ESO), N. Elias-Rosa (Caltech), M. Stritzinger (Stockholm), G. Pignata (Santiago de Chile), I. Maurer, S. Hachinger, F.K. Roepke, W. Hillebrandt (MPA): October 12 to 16 & October 27, service observations, VLT-Antu, Paranal, Chile, FORS2, Constraining the explosion mechanism of type Ia supernovae through late-phase spectroscopy.

I. Ramirez, M. Asplund, R. Schoenrich et al., 39hr with FLAMES/ESO VLT: "Abundances of red giants in the inner disk of the Galaxy"

I. Ramirez, Asplund, Baumann, Melendez, 26hr with UVES/ESO VLT: "Planet signatures in stellar abundances: beyond solar twins"

Zoccali, M. Asplund (MPA) et al., 32hr with FLAMES+CRIRES/ESO VLT: "Tracing the formation of the Galactic bulge from CNO abundance trends in the Sagittarius window"

6 Auswärtige Tätigkeiten

6.1 Vorträge und Gastaufenthalte

Übersichtsvorträge

M. Asplund: – "Galactic Archeology with HERMES", Sydney, Australia, Sept. 28-29 – "ILL 2020 Vision", Grenoble, France, Sept. 15-17 – "Cool Stars 16", Seattle, USA, Aug. 29 - Sept. 2 – "Galaxies and their masks", Soussevlei, Namibia, April 11-17

A. Bauswein: – Sino-German Frontiers of Science Symposium, (Qingdao, China, 20.5.-23.5.)

E. Churazov: – "215th AAS Meeting", (Washington, DC, 3.1-7.1) – "Physics and Astrophysics of Neutron Stars and Black Holes", (Bremen, 16.7-17.7) – "High-resolution X-ray spectroscopy: past, present, and future", (Utrecht, 15.3-17.3) – "Formation and evolution of black holes, galaxies and their environment", (Potsdam, 20.9-24.9) – "SPIE Symposium", (San Diego, 27.6-2.7) – "Galaxy clusters: observations, physics and cosmology", (Garching, 26.7-30.7)

B. Ciardi: – "The First Galaxies, Quasars, and Gamma-Ray Bursts" (State College, USA 7.6-10.6) – "Cosmological Reionization" (Allahabad, India 16.2-20.2)

M. Dotti: – "LISA Astro-GR@Paris" workshop, (Paris, France, 13.9.-17.9.)

T. Enßlin: – "Rotation Measure Analysis of Magnetic Fields in and around Radio Galaxies", (Riccione, Italien, 10.5.-14.5.) – "Magnetic fields on scales from kiloparsecs to kilometers: properties and origin", (Krakow, Poland, 17.5.-21.5.) – "Cosmic magnetism", (Kiama, Australia, 7.6.-11.6.) – "Theory and observations of extragalactic magnetic fields", (Paris, France, 13.12.-15.12)

H. Junklewitz: – "Large Scale Magnetic Fields in the Universe", (Bern, Switzerland, 1.3.-5.3.)

M. Gilfanov: – "Ultra-luminous X-ray sources and middle weight black holes" (ESAC, Madrid, Spain, 24.05.-26.05.) – "Frontiers of non-linear physics" (Nizhnii Novgorod, 11.07.-20.07.) – "Astrophysics of neutron stars" (Cesme, Turkey, 2.08.-6.8.) – "New methods in space research" (Kazan, Russia, 6.10.-10.10.) – "GRAVITAS science workshop" (Garching bei Muenchen, 25.10.-26.10.) – "High energy astrophysics - 2010" (Moskau, 21.12.-24.12.)

A. Gualandris: – "Central Massive Objects: The Stellar Nuclei - Black Hole Connection" (ESO garching, 22.6-25.6)

W. Hillebrandt: – 15th Ringerg Workshop on Nuclear Astrophysics (Tegernsee, 22.3. - 26.3.) – DEISA-PRACE Conference, (Barcelona 10.5.-12.5.) – Annual Meeting of the Astronomische Gesellschaft, (Bonn, 13.8.-17.8.)

H.-Th. Janka: – INPC 2010 – International Nuclear Physics Conference (Vancouver, Canada, 4.7.-9.7.) – Workshop on Neutrinos from Supernovae (Paris, France, 16.12.-17.12.) – "Science Week", The Annual Cluster Science Meeting (Garching, Germany, 11.10.-14.10.)

P. Mazzali: – Summary talk "Observational Signatures of Type Ia Supernovae" (Leiden, The Netherlands 20.9.-24.9.)

E. Müller: – "Simulating the explosion of massive stars: computational challenges and recent results" SECAM Workshop, (ENS Lyon, France, 11.10.-15.10.)

F. Röpke: – Erice School on "Particle and Nuclear Astrophysics" (Erice, Italien, 16.9.-24.9.)

H.C. Spruit: – Plenary talk, "Theory of magnetically powered jets", 25th Texas conference, (Heidelberg, 6.-10.12.)

A. Weiss: "Red giants as probes of the structure and evolution of the milky way" workshop, (Rome, Italien, 15.11.-17.11.2009)

S.D.M. White: – Dynamics from the Galactic Center to the Milky Way Halo, (Cambridge, USA 2010) – The Theory of the Universe and Everything in it, (Toronto, 2010) – GGI Conference on The Dark Matter Connection: Theory and Experiment (Florence 2010) – A Universe of dwarf galaxies: Observations, Theories, Simulations (Lyon 2010) – CCP 2010 Conference on Computational Physics (Trondheim, Norway 2010) – Darkness Visible: Dark Matter in astrophysics and particle physics (Cambridge, UK 2010) – Kavli Prize Symposium on Astrophysics (Oslo, 2010) – Evolution of Galaxies, their central black holes and their large-scale environment, (Potsdam, Germany 2010) – IAU Symposium No. 277 "Tracing the Ancestry of Galaxies, Ouagadougou, Burkina Faso 2010

R. Wiersma: – Metal Enrichment from Hydrodynamical Simulations, (El Escorial, Spain, 16.9.-17.9.)

Kolloquiumsvorträge

M. Asplund: Ludwig-Maximilians-Univ., July; – Trieste Univ., May; – ETH Zürich, March;

P. Baumann: Univ. Göttingen, 23.9.

B. Ciardi: (Garching, b. München; 12.2)

B. Ciardi: (IoA Cambridge, England 21.1)

I. Cordero-Carrión: MPA Institute Seminar (MPA Garching, 28.6).

M. Dotti: (AEI Golm; 26.12.); – (AEI Golm; 25.5.); – (MPIA Heidelberg; 10.5.)

- T. Enßlin: (DESY Zeuthen; 26.1.); – (CITA Toronto; 5.7.); – (Universe Cluster München; 11.10.)
- H.-Th. Janka: (ULB Brussels, 23.11.)
- M. Kromer: (Astronomical Institute of the Czech Academy of Sciences, Ondrejov; 21.04.)
- P. Mazzali: Gamma-Ray Bursts and Supernovae Cerro Calan Obs., Santiago, Chile, 23.3.10
- P. Montero: (YITP Kyoto; 25.04.); – (Univ. of Valencia; 19.05.) – (Albert Einstein Institute, Potsdam; 24.09)
- E. Müller: (Univ. Duisburg-Essen; 5.5.); – (Univ. Libre Bruxelles; 9.11.)
- R. Overzier: (UC Riverside; 03.02.); – (Caltech Pasadena; 08.02.)
- G. Robbers: (Institute for Theoretical Particle Physics and Cosmology, (RWTH Aachen: 22.4.); – (Institute for Theoretical Astrophysics, Univ. Oslo: 2.9.)
- A. J. Ruiter: (Univ. Tübingen; 22.11.10)
- L. Sbordone: Ringberg Symposium (Tegernsee, 13.5.)
- I. Seitenzahl: (ULB Astronomy, Brussels; 7.6.)
- A. Weiss: (Aarhus Univ.; 20.09.) A. Weiss: (Liverpool John Moores Univ.; 19.10.)
- R. Wiersma: (Leiden Observatorium; 12.5.)

Öffentliche Vorträge

- G. Börner: – Ökumenischer Kirchentag München (13.5.) – G. Börner: Evang. Akademie Meissen (13.11.)
- T. Enßlin: – Ludwig-Maximilian-Universität München (17.6) – Technische Universität München (22.7)
- W. Hillebrandt: – Planetarium Nuernberg (27.1.); – Planetarium Hamburg (15.10.)
- P. Mazzali: – Come misurare l’Universo (How to measure the Universe) High Schools of Liguria (Genoa Science Festival, Sarzana, Italien, 18.10.)
- B. Müller: Volkssternwarte Winzer (24.4.)
- E. Müller: – Tag der offenen Tür, Schloss Ringberg (26.6.)

6.2 Kooperationen

E. Müller und H.-Th. Janka vom MPA sind mit zwei Teilprojekten am Sonderforschungsbereich/Transregio 7, “Gravitationswellenastronomie” beteiligt (Verwaltung des SFB in Jena) Der SFB beschäftigt sich hauptsächlich mit der theoretischen Modellierung der kosmischen Quellen der Gravitationsstrahlung, der Verbesserung des Detektorenkonzeptes und der Auswertung der zu erwartenden Gravitationswellensignale. (Beteiligte Institute: Univ. Hannover, Univ. Tübingen, Univ. Jena)

H.-Th. Janka hat in dem neuen Neutrino-Sonderforschungsbereich (TR27) ein Teilprojekt. Der SFB wird vom Physik-Department der TU München verwaltet. Beteiligte Institute sind: Univ. Karlsruhe, Univ. Tübingen, MPI f. Physik München, MPI f. Kernphysik Heidelberg. Nach den jüngsten Erfolgen in der Neutrinophysik greift dieser SFB zentrale Themen, sowohl im Experiment als auch in der Theorie auf.

S. White und W. Hillebrandt sind in dem Transregio TR33 “Dunkles Universum” mit Teilprojekten involviert. Beteiligte Institute sind: Univ. Heidelberg, Univ. Bonn und Ludwig-Maximilians-Univ. München.

A. Asplund, W. Hillebrandt, S. White u.v.m. Excellence Cluster Universe - Origin and Structure of the Universe - Beteiligte Institute: Ludwig-Maximilians-Univ. München, Technische Univ. München, ESO sowie die Max-Planck Institute f. Astrophysik, extraterrestrische

sche Physik, Plasmaphysik, Halbleiterlabor Neuperlach

6.3 EU Netzwerke - 2010 aktiv:

– “Planck Surveyor” (S. White); – Early Stage Training Site (Marie Curie Program) in the European Association for research in Astronomy (EARA). (S. White, H. Spruit) – “Multi-wavelength Analysis of Galaxy Populations (MAGPOP)”, – (G. Kauffmann) – “Marie Curie Site IMPRS in Astrophysics (International Max-Planck Research School) S. White.

6.4 Andere Netzwerke

CosmoComp - Koordinator am MPA ist S. White. (Internationales Netzwerk) Beteiligte Institute sind: Durham, Nottingham, Sussex (England); Triest (Italien), Leiden (Niederlande), Barcelona (Spanien), Shanghai (China) und Buenos Aires, (Argentinien). Computer simulationen zum besseren Verständnis des frühen Universums.

VIRGO- Arbeitsgemeinschaft - Kosmologische Supercomputer Simulationen (S. White)

7 Veröffentlichungen

7.1 In Zeitschriften und Büchern

Abbas, U., S. De La Torre, et al. (incl. L. Guzzo): The VIMOS-VLT deep survey: evolution in the halo occupation number seit $z \sim 1$. *Mon. Not. R. Astron. Soc.* **406**, 1306 - 1317 (2010).

Abdikamalaov, E. et al. (incl. A. Marek und H.-T. Janka): Axisymmetric general relativistic simulations of the accretion-induced collapse of white dwarfs. *Physical Review D*, **81**, 044012 (2010).

Aleksic, J., L.A. Antonelli et al. (incl. T. Ensslin): MAGIC gamma-ray telescope observation of the Perseus cluster of galaxies: implications for cosmic rays, dark matter, and NGC 1275. *Astrophys. J.* **710**, 634 - 647 (2010).

Angulo, R.E. und S.D.M. White: The birth und growth of neutralino haloes. *Mon. Not. R. Astron. Soc.* **401**, 1796 - 1803 (2010).

Angulo, R.E. und S.D.M. White: One simulation to fit them all - changing the background parameters of a cosmological N-body simulation. *Mon. Not. R. Astron. Soc.* **405**, 143 - 154 (2010).

Aumer, M., A. Burkert, P. Johansson und R. Genzel: The structure of gravitationally unstable gas-rich disk galaxies. *Astrophys. J.* **719** 1230 - 1243 (2010).

Baldi, M., V. Pettorino, G. Robbers und V. Springel: Hydrodynamical N-body simulations of coupled dark energy cosmologies. *Mon. Not. R. Astron. Soc.* **403**, 1684 - 1702 (2010).

Baumann, P., I. Ramirez, J. Melendez et al.: Lithium depletion in solar-like stars: no planet connection. *Astron. Astrophys.* **519**, A87 (2010).

Bauswein, A., H.-Th. Janka und R. Oechslin: Testing approximations of thermal effects in neutron star merger simulations. *Physical Review D*, **82**, 084043 (2010).

Bauswein, A., R. Oechslin und H.-Th. Janka: Discriminating strange star mergers from neutron star mergers by gravitational-wave measurements. *Phys. Rev. D* **81**, 1 - 21 (2010).

Behara, N.T, P. Bonifacio et al. (incl. L. Sbordone): Three carbon-enhanced metal-poor dwarf stars from the SDSS. Chemical abundances from CO5BOLD 3D hydrodynamical model atmospheres. *Astron. Astrophys.* **513**, A72 (2010).

Bedding, T.R., D. Huber et al. (incl. A. Weiss): Solar-like oscillations in low-luminosity red giants: first results from Kepler. *Astrophys. J. Lett.* **713**, L176 - L181 (2010).

- Bensby, T., M. Asplund, J. Johnson et al.: Chemical evolution of the galactic bulge as traced by microlensed dwarf und subgiant stars - III. Detection of lithium in the metal-poor bulge dwarf MOA-2010-BLG-285S. *Astron. Astrophys.* **521** L57 (2010).
- Belczynski, K., T. Bulik et al. (incl. A. J. Ruitter): On The Maximum Mass of Stellar Black Holes. *Astrophys. J.* **714**, 1217 - 1226 (2010).
- Bergemann, M., Pickering und T. Gehren: NLTE analysis of Co i /Co ii lines in spectra of cool stars with new laboratory hyperfine splitting constants. *Mon. Not. R. Astron. Soc.* **401**, 1334 - 1346 (2010).
- Bergemann, M. und G. Cescutti: Chromium: NLTE abundances in metal-poor stars und nucleosynthesis in the Galaxy. *Astron. Astrophys.* **522**, A9 (2010).
- Bernardi, M., F. Shankar, J.B. Hyde et al.: Galaxy luminosities, stellar masses, sizes, velocity dispersions as a function of morphological type. *Mon. Not. R. Astron. Soc.* **404**, 2087 - 2122 (2010).
- Bernardi G., A. de Bruyn et al. (incl. B. Ciardi): Foregrounds for observations of the cosmological 21 cm line: II. Westerbork observations of the fields around 3C196 und the North Celestial Pole. *Astron. Astrophys.* **522**, A67 (2010).
- Bersanelli, M., N. Mundolesi et al. (incl. A. Banday): Planck pre-launch status: design und description of the low frequency instrument. *Astron. Astrophys.* **520**, A4 (2010).
- Bertone, S., J. Schaye et al. (incl. R. Wiersma): Metal-line emission from the warm-hot intergalactic medium - I. Soft X-rays. *Mon. Not. R. Astron. Soc.* **407**, 544 - 566 (2010).
- Bertone, S., J. Schaye et al. (incl. R. Wiersma): Metal-line emission from the warm-hot intergalactic medium: II. Ultraviolet. *Mon. Not. R. Astron. Soc.* **408** 1120 - 1138 (2010).
- Boehringer, H., G.W. Pratt et al. (K. Dolag): Substructure of the galaxy clusters in the REXCESS sample: observed statistics und comparison to numerical simulations. *Astron. Astrophys.* **514**, A32 (2010).
- Bogdan, A. und M. Gilfanov: Soft bund X/K luminosity ratios for gas-poor early-type galaxies. *Astron. Astrophys.* **512**, A16 (2010).
- Bogdan, A. und M. Gilfanov: Unresolved X-ray emission in M31 und constraints on progenitors of classical novae. *Mon. Not. R. Astron. Soc.* **405**, 209 - 218 (2010).
- Bois, M., F. Bournaud et al. (incl. T. Naab): Formation of slowly rotating early-type galaxies via major mergers: a resolution study. *Mon. Not. R. Astron. Soc.* **406**, 2405 - 2420 (2010).
- Bonafede, A., L. Feretti et al. (incl. K. Dolag): The Coma cluster magnetic field from Faraday rotation measures. *Astron. Astrophys.* **513**, A30 (2010).
- Bonoli, S., F. Shankar, S.D.M. White et al.: On merger bias und the clustering of quasars. *Mon. Not. R. Astron. Soc.* **404**, 399 - 408 (2010).
- Bottino, M., A. Banday und D. Maino: New insights into the foreground analysis of the WMAP 5-year data using FASTICA. *Mon. Not. R. Astron. Soc.* **402**, 207 - 225 (2010).
- Boylan-Kolchin, M., V. Springel, S.D.M. White und A. Jenkins: There's no place like home? Statistics of Milky Way-mass dark matter haloes. *Mon. Not. R. Astron. Soc.* **406**, 896 - 912 (2010).
- Bragaglia, A., E. Carretta et al. (incl. S. Lucatello): Helium in first und second-generation stars in globular clusters from spectroscopy of red giants. *Astron. Astrophys.* **519**, A60 (2010).
- Bragaglia, A., E. Carretta et al. (incl. S. Lucatello): X-shooter observations of main-sequence stars in the globular cluster NGC 2808: first chemical tagging of a He-normal und a He-rich dwarf. *Astrophys. J. Lett.* **720**, L41 - L45 (2010).

- Brasseur, C. M., P.B. Stetson et al. (incl. L. Casagrande): Fiducial Stellar Population Sequences for the VJKS Photometric System *Astrophys. J.* **140**, 1672 - 1686 (2010).
- Brown, P.J. P. Roming et al. (incl. P. Mazzali): The Absolute Magnitudes of Type Ia Supernovae in the Ultraviolet. *Astrophys. J.* **721**, 1608 - 1626 (2010).
- Caffau, E., L. Sbordone, H.-G. Ludwig et al.: Sulphur abundances in halo stars from multiplet 3 at 1045 nm. *Astron. Nachrichten*, **331**, 725 - 730 (2010).
- Campisi, M.A., L.-X. Li und P. Jakobsson: Redshift distribution und luminosity function of long gamma-ray bursts from cosmological simulations. *Mon. Not. R. Astron. Soc.* **407**, 1972 - 1980 (2010).
- Cappelluti, N., M. Ajello et al. (incl. S. Bonoli): Active Galactic Nuclei Clustering in the Local Universe: An Unbiased Picture from Swift-BAT. *Astrophys. J. Lett.* **716**, L209 - L213 (2010).
- Carretta, E., A. Bragaglia et al. (incl. S. Lucatello): The radial distribution of stars of different stellar generations in the globular cluster NGC 3201. *Astron. Astrophys.* **519**, A71 (2010).
- Catinella, B., D. Schiminovich, G. Kauffmann et al.: The GALEX Arecibo SDSS Survey - I. Gas fraction scaling relations of massive galaxies und first data release. *Mon. Not. R. Astron. Soc.* **403**, 683 - 708 (2010).
- Cerda-Duran, P.: Numerical viscosity in hydrodynamics simulations in general relativity. *Classical und Quantum Gravity* **27** 1 - 14 (2010).
- Chaplin, W., T. Appourchaux et al. (incl. Serenelli): The asteroseismic potential of Kepler: first results for solar-type stars. *Astrophys. J. Lett.* **713**, L169 - L175 (2010).
- Chen, Y.M., C. Tremonti et al. (incl. G. Kauffmann): Absorption-line probes of the prevalence und properties of outflows in present-day star-forming galaxies. *Astron. J.* **140**, 445 - 461 (2010).
- Chiavassa, A., Lacour, F. Millour et al.: VLTI/AMBER spectro-interferometric imaging of VX Sagittarii's inhomogenous outer atmosphere. *Astron. Astrophys.* **511**, A51 (2010).
- Chiavassa, A., X. Haubois, J.S. Young, et al.: Radiative hydrodynamics simulations of red supergiant stars. II. Simulations of convection on Betelgeuse match interferometric observations. *Astron. Astrophys.* **515**, A12 (2010).
- Chiavassa, A., R. Collet, L. Casagrande und M. Asplund: Three-dimensional hydrodynamical simulations of red giant stars: semi-global models for interpreting interferometric observations *Astron. Astrophys.* **524**, A93 (2010).
- Chluba, J.: Could the cosmological recombination spectrum help us understand annihilating dark matter? *Mon. Not. R. Astron. Soc.* **402**, 1195 - 1207 (2010).
- Chluba J. und R.A. Sunyaev: Ly alpha escape during cosmological hydrogen recombination: the 3d-1s und 3s-1s two-photon processes. *Astron. Astrophys.* **512**, A53 (2010).
- Chluba J. und R.A. Sunyaev: Cosmological recombination: feedback of helium photons und its effect on the recombination spectrum. *Mon. Not. R. Astron. Soc.* **402**, 1221 - 1248 (2010).
- Chluba, J., G. Vasil und L. Dursi: Recombinations to the Rydberg states of hydrogen und their effect during the cosmological recombination epoch. *Mon. Not. R. Astron. Soc.* **407**, 599 - 612 (2010).
- Christlein, D., D. Zaritsky und J. Blund-Hawthorn: A spectroscopic study of the H α surface brightness profiles in the outer discs of galaxies. *Mon. Not. R. Astron. Soc.* **405**, 2549 - 2560 (2010).
- Churazov, E., S. Tremaine, W. Forman et al.: Comparison of approximately isothermal gravitational potentials of elliptical galaxies based on X-ray und optical data. *Mon.*

- Not. R. Astron. Soc. **404**, 1165 - 1185 (2010).
- Ciardi, B., R. Salvaterra und T. Di Matteo: Lyman alpha versus X-ray heating in the high-z intergalactic medium. *Mon. Not. R. Astron. Soc.* **401**, 2635 - 2640 (2010).
- Cohen, J., A. Gould, et al. (incl. M. Asplund): A Puzzle Involving Galactic Bulge Microlensing Events. *Astrophys. J. Lett.* **711**, L48 - L52 (2010).
- Cooper A.P. et al. (incl. S. White und V. Springel): Galactic stellar haloes in the CDM model. *Mon. Not. R. Astron. Soc.* **406**, 744 - 766 (2010).
- Cucciati, O., C. Marinoni et al. (incl. S. Charlot): The VIMOS-VLT deep survey: the group catalogue. *Astron. Astrophys.* **520**, A42 (2010).
- Cunha, K., V. Smith, M. Bergemann et al.: Manganese Abundances in the Globular Cluster Centauri. *Astrophys. J.* **717**, 333 - 341 (2010).
- D'Angelo, C. und H. Spruit: Episodic accretion on to strongly magnetic stars. *Mon. Not. R. Astron. Soc.* **406**, 1208 - 1219 (2010).
- D'Onghia, E., V. Springel, L. Hernquist und D. Keres: Substructure Depletion in the Milky Way Halo by the Disk. *Astrophys. J.* **09**, 1138 - 1147 (2010).
- Das, P., O. Gerhard, E. Churazov und I. Zhuravleva: Steepening mass profiles, dark matter und environment of X-ray bright elliptical galaxies. *Mon. Not. R. Astron. Soc.* **409**, 1362 - 1378 (2010).
- De Lucia, G., M. Boylan-Kolchin, A. Benson et al.: A semi-analytic model comparison - gas cooling und galaxy mergers. *Mon. Not. R. Astron. Soc.* **406**, 1533 - 1552 (2010).
- Decarli, M. Dotti, C. Montuori und C. Liimets: The peculiar optical spectrum of 4C+22.25: Imprint of a massive black hole binary? *Astrophys. J. Lett.* **720**, L93 - L96 (2010).
- Degraf, C., T. Di Matteo und V. Springel: Faint-end quasar luminosity functions from cosmological hydrodynamic simulations. *Mon. Not. R. Astron. Soc.* **402**, 1927 - 1936 (2010).
- Di Cecco, A., R. Becucci et al. (incl. A. Weiss): On the absolute age of the globular cluster M92. *Astronomical Society of the Pacific* **122**, 991 - 999 (2010).
- Docenko, D. und R.A. Sunyaev: Fine-structure infrared lines from the Cassiopeia A knots. *Astron. Astrophys.* **509** 1 - 20 (2010).
- Dolag, K., G. Murante und S. Borgani: Dynamical difference between the cD galaxy und the diffuse, stellar component insimulated galaxy. *Mon. Not. R. Astron. Soc.* **405**, 1544 - 1559 (2010).
- Donnert, J., K. Dolag, Brunetti et al.: Radio haloes from simulations und hadronic models - I. The Coma cluster *Mon. Not. R. Astron. Soc.* **401**, 47 - 54 (2010).
- Donoso, E., Ch. Li, G. Kauffmann, et al.: Clustering of radio galaxies und quasars. *Mon. Not. R. Astron. Soc.* **407**, 1078 - 1089 (2010).
- Dotti, M. und M. Ruskowski: AGN pairs: chance superpositions or black hole binaries? *Astrophys. J. Lett.* **713**, L37 - L40 (2010).
- Elsner, F., B. Wundelt und M.D. Schneider: Probing local non-Gaussianities within a Bayesian framework. *Astron. Astrophys.* **513**, A59 (2010).
- Elsner, F. und B. Wundelt: Local non-Gaussianity in the cosmic microwave background the bayesian way. *Astrophys. J.* **724**, 1262 - 1269 (2010).
- Enke, H., M. Steinmetz, et al. (incl. T. Ensslin): AstroGrid-D: Grid technology for astronomical science. *New Astron.* **16**, 79 - 93 (2010).
- Ensslin, T. und C. Weig: Inference with minimal Gibbs free energy in information field theory. *Phys. Rev. E.* **882**, 051112, 1 - 13 (2010).

- Fabjan, D., S. Borgani et al. (incl. K. Dolag): Simulating the effect of active galactic nuclei feedback on the metal enrichment of galaxy clusters. *Mon. Not. R. Astron. Soc.* **401**, 1670 - 1690 (2010).
- Fakhouri, O., Ch-P. Ma, und M. Boylan-Kolchin: The Merger Rates und Mass Assembly Histories of Dark Matter Haloes in the Two Millennium Simulations. *Mon. Not. R. Astron. Soc.* **406**, 2267 - 2278 (2010).
- Faltenbacher, A.: The impact of environment on the dynamical structure of satellite systems. *Mon. Not. R. Astron. Soc.* **408**, 947 - 960 (2010).
- Faltenbacher, A. und S.D.M. White: Assembly Bias und the Dynamical Structure of Dark Matter Halos. *Astrophys. J.* **708**, 469 - 473 (2010).
- Faltenbacher, A., A. Finoguenov und N. Drory: The halo mass function conditioned on density from the millennium simulation: insights into missing baryons und galaxy mass functions. *Astrophys. J.* **712**, 484 - 493 (2010).
- Faucher-Giguere, C.A., D. Keres, M. Dijkstra et al.: Ly α cooling emission from galaxy formation *Astrophys. J.* **725**, 633 - 657 (2010).
- Fink, M., F. Röpke, W. Hillebrandt et al.: Double-detonation sub-Chandrasekhar supernovae: can minimum helium shell masses detonate the core? *Astron. Astrophys.* **514**, A53 (2010).
- Fowler, J.W., V. Acquaviva et al. (incl. C. Hernandez-Monteagudo): The Atacama cosmology telescope: a measurement of the 600 < 1 < 8000 cosmic microwave background power spectrum at 148 GHz. *Astrophys. J.* **722**, 1148 - 1161 (2010).
- Fraser, M., K. Takats, et al. (incl. S. Taubenberger): On the Progenitor und Early Evolution of the Type II Supernova 2009kr. *Astrophys. J. Lett.* **714**, L280 - L284 (2010).
- Frommert, M. und T.A. Enßlin: The axis of evil - a polarization perspective. *Mon. Not. R. Astron. Soc.* **403**, 1739 - 1748 (2010).
- Frommert, M., D. Pflueger, T. Riller et al. Efficient cosmological parameter sampling using sparse grids. *Mon. Not. R. Astron. Soc.* **406**, 1177 - 1189 (2010).
- Fryer, C.L., A. J. Ruiter et al. (incl. P. Mazzali): Spectra of Type Ia Supernovae from Double Degenerate Mergers *Astrophys. J.* **725**, 296 - 308 (2010).
- Fu, J., Q. Guo, G. Kauffmann und M. Krumholz: The atomic-to-molecular transition und its relation to the scaling properties of galaxy discs in the local universe. *Mon. Not. R. Astron. Soc.* **409**, 515 - 530 (2010).
- Gadotti, D. M.Baes und S. Falony: Radiative transfer in disc galaxies - IV. The effects of dust attenuation on bulge und disc structural parameters. *Mon. Not. R. Astron. Soc.* **403**, 2053 - 2062 (2010).
- Galametz, A., J. Vernet et al. (incl. R. Overzier): Galaxy protocluster candidates at 1.6 < z = 2. *Astron. Astrophys.* **522**, A58 (2010).
- Gundhi, P., V.S. Dhillon et al. (incl. H. Spruit): Rapid optical und X-ray timing observations of GX339-4: multicomponent optical variability in the low/hard state. *Mon. Not. R. Astron. Soc.* **407**, 2166 - 2192 (2010).
- Gao, L., T. Theuns, et al. (incl. V. Springel und S. White): The earliest stars und their relics in the Milky Way. *Mon. Not. R. Astron. Soc.* **403**, 1283 - 1295 (2010).
- Gawryszczak, A., J. Guzman, T. Plewa und K. Kifonidis: Non-spherical core collapse supernovae - III. Evolution towards homology und dependence on the numerical resolution. *Astron. Astrophys.* **521**, A38 (2010).
- Genel, S., N. Bouche, T. Naab et al. The growth of dark matter halos: evidence for significant smooth accretion. *Astrophys. J.* **719**, 229 - 239 (2010).
- Gilfanov, M. und A. Bogdan: An upper limit on the contribution of accreting white dwarfs

- to the type Ia supernova rate. *Nature*, **463**, 924 - 925 (2010).
- Giuffrida, G., L. Sbordone, S. Zaggia et al.: A wide angle view of the Sagittarius dwarf Spheroidal Galaxy. I: VIMOS photometry und radial velocities across Sgr dSph major und minor axis. *Astron. Astrophys.* **513**, A62 (2010).
- Gizon, L., A.C. Birch und H.C. Spruit: Local He- lioseismology: Three Dimensional Imaging of the Solar Interior. *Ann. Rev. Astron. Astrophys.* **48**, 289 - 338 (2010).
- Gjerlow, E., H.K. Erikson, A.J. Banday et al: The two- und three-point correlation functions of the polarized five-year WMAP sky maps. *Astrophys. J.* **710**, 689 - 697 (2010).
- Goncalves, T. S., A. Basu-Zych, R. Overzier et al: The Kinematics of Ionized Gas in Lyman-break Analogs at z 0.2. *Astrophys. J.* **724**, 1373 - 1388 (2010).
- Goodger, J., M. Hardcastle et al. (incl. M. Gilfanov): Long-Term Monitoring of the Dynamics und Particle Acceleration of Knots in the Jet of Centaurus A. *Astrophys. J.* **708**, 675 - 697 (2010).
- Graziani, L, L. Barletti, S. Aiello und C. Cecchi-Pestellini: Radiative transfer modelling in protoplanetary disks with the P-N approximation und Monte Carlo techniques. *Math. Meth. Appl. Sci.* **33**, 1263 - 1273 (2010).
- Grebenev, S.A. und R. A. Sunyaev: New fast X-ray transient IGR J18462-0223 discovered by the INTEGRAL observatory. *Astron. Lett.* **36**, 533 - 539 (2010).
- Greif, T.H., S.C. Glover, V. Bromm und R. Klessen: The First Galaxies: Chemical Enrichment, Mixing, und Star Formation. *Astrophys. J.* **716**, 510 - 520 (2010).
- Grevesse, N., M. Asplund, A. Sauval und P. Scott. The chemical composition of the Sun. *Astrophys. und Space Science* **328**, 179 - 183 (2010).
- Gritschneder, M., A. Burkert, T. Naab und S. Walch: Detailed Numerical Simulations on the Formation of Pillars Around H II Regions. *Astrophys. J.* **723**, 971-984 (2010).
- Gualandris, A., S. Gillessen und D. Merritt: The Galactic Centre star S2 as a dynamical probe for intermediate-mass black holes. *Mon. Not. R. Astron. Soc.* **409**, 1146 - 1154 (2010).
- Gunar, S., P. Schwartz et al. (incl. U. Anzer): Statistical comparison of the observed und synthetic hydrogen Lyman line profiles in solar prominences. *Astron. Astrophys.* **514**, 1 - 11 (2010).
- Guo, Qi, S. White, Ch. Li, und M. Boylan-Kolchin: How do galaxies populate dark matter haloes? *Mon. Not. R. Astron. Soc.* **404**, 1111 - 1120 (2010).
- Gustafsson, B., J. Melendez, M. Asplund und D. Yong: The chemical composition of solar-type stars in comparison with that of the Sun. *Astrophys. und Space Science* **328**, 185 - 191 (2010).
- Hammer, N., H.-Th. Janka und E. Müller: Three-dimensional Simulations of Mixing Instabilities in Supernova Explosions. *Astrophys. J.* **714**, 1371 - 1385 (2010).
- Harker, G., S. Zaroubi et al. (incl. B. Ciardi): Power spectrum extraction for redshifted 21-cm Epoch of Reionization experiments: the LOFAR case. *Mon. Not. R. Astron. Soc.* **405**, 2492 - 2504 (2010).
- Haurberg, N., G. Lubell et al. (incl. A. Serenelli): Ultraviolet-bright Stellar Populations und Their Evolutionary Implications in the Collapsed-core Cluster M15. *Astrophys. J.* **722**, 158 - 177 (2010).
- Hayek, W., M. Asplund et al. (incl. R. Collet): Radiative transfer with scattering for domain-decomposed 3D MHD simulations of cool stellar atmospheres. *Astron. Astrophys.* **517**, A49 (2010).
- Heinzel, P., U. Anzer und S. Gunar: Solar quiescent prominences. Filamentary structure und energetics. *Mem. S.It.* **81**, 654 - 662 (2010).

- Hennawi, J., A.D. Myers et al. (incl. F. Shankar): Binary quasars at high redshift. I. 24 new quasar pairs at $z \sim 3-4$. *Astrophys. J.* **719**, 1672 - 1692 (2010).
- Henning, P.A., C.M. Springob et al. (incl. B. Catinella): The Arecibo L-band Feed Array Zone of Avoidance Survey. I. Precursor Observations Through the Inner und Outer Galaxy. *Astron. J.* **139**, 2130 - 2147 (2010).
- Herbert-Fort, S., D. Zaritsky, D. Christlein und S. Kannappan: The surface mass density und structure of the outer disk of NGC 628. *Astrophys. J.* **715**, 902 - 907 (2010).
- Hernandez-Monteagudo, C.: Revisiting the WMAP-NVSS angular cross correlation. A skeptic's view. *Astron. Astrophys.* **520** A101 (2010).
- Hernandez-Monteagudo, C. und R.A. Sunyaev: Galaxy clusters as mirrors of the distant Universe. Implications of the blurring term for the kSZ und ISW effects. *Astron. Astrophys.* **509** 1 - 9 (2010).
- Hess, S. und V. Springel: Particle hydrodynamics with tessellation techniques. *Mon. Not. R. Astron. Soc.* **406**, 2289 - 2311(2010).
- Hilbert St. und S.D.M. White: Abundances, masses und weak-lensing mass profiles of galaxy clusters as a function of richness und luminosity in Λ CDM cosmologies. *Mon. Not. R. Astron. Soc.* **404**, 486 - 501 (2010).
- Hirschmann, M., S. Khochfar et al. (incl. T. Naab): On the evolution of the intrinsic scatter in black hole versus galaxy mass relations. *Mon. Not. R. Astron. Soc.* **407**, 1016 - 1032 (2010).
- Hosford, A., A.E. Garcia Perez, R. Collet et al.: Lithium abundances of halo dwarfs based on excitation temperatures. II. Non-local thermodynamic equilibrium. *Astron. Astrophys.* **511** 1 - 12 (2010).
- Hou, Z., A.J. Banday, K. Gorski et al.: Frequentist comparison of CMB local extrema statistics in the five-year WMAP data with two anisotropic cosmological models. *Mon. Not. R. Astron. Soc.* **401**, 2379 - 2387 (2010).
- Hou, Z., A.J. Banday, et al. (incl. F. Elsner): The primordial non-Gaussianity of local type (f'local'NL) in the WMAP 5-year data: the length distribution of CMB skeleton. *Mon. Not. R. Astron. Soc.* **407**, 2141 - 2156 (2010).
- Hüdepohl, L., B. Müller, H.-T. Janka et al.: Neutrino Signal of Electron-Capture Supernovae from Core Collapse to Coolin. *Phys. Rev. Lett.* **104**, 251101 (2010).
- Inoue, S., R. Salvaterra et al. (incl. B. Ciardi): Probing intergalactic radiation fields during cosmic reionization through gamma-ray absorption. *Mon. Not. R. Astron. Soc.* **404**, 1938 - 1943 (2010).
- Irrgang, A., N. Przybilla et al. (incl. F. Nieva): The nature of the hyper-runaway candidate Hip 60350. *Astrophys. J.* **711**, 138 - 143 (2010)
- Jackson, N., S. Bryan, S. Mao und Ch. Li: Satellites in the field und lens galaxies: SDSS/COSMOS versus SLACS/CLASS. *Mon. Not. R. Astron. Soc.* **403**, 826 - 837 (2010).
- Jaffe, T., J. Leahy, A. Banday et al.: Modelling the galactic magnetic field on the plane in two dimensions. *Mon. Not. R. Astron. Soc.* **401**, 1013 - 1028 (2010).
- Jasche, J., F.S. Kitaura, B. Wundelt und T. Ensslin: Bayesian power-spectrum inference for large-scale structure data *Mon. Not. R. Astron. Soc.* **406**, 60 - 85 (2010).
- Jasche, J. und F. Kitaura: Fast Hamiltonian sampling for large-scale structure inference. *Mon. Not. R. Astron. Soc.* **407**, 29 - 42 (2010).
- Jasche, J., F.S. Kitaura, Ch. Li und T. Ensslin: Bayesian non-linear large-scale structure inference of the sloan digital sky survey data release 7. *Mon. Not. R. Astron. Soc.* **409**, 355 - 370 (2010).
- Jennings, E., C. Baugh, R. Angulo und S. Pascoli: Simulations of quintessential cold dark

- matter: beyond the cosmological constant. *Mon. Not. R. Astron. Soc.* **401**, 2181 - 2201 (2010).
- Jofre-P., B. Panter, C.J. Hansen und A. Weiss: Stellar atmosphere parameters with MA_Ξ, a MA_{SS}ive compression of Xi2 for spectral fitting. *Astron. Astrophys.* **517**, 1 - 17 (2010).
- Karl, S., T. Naab, P. Johansson et al.: One moment in time - modeling star formation in the antennae. *Astrophys. J. Lett.* **715**, L88 - L93 (2010).
- Kauffmann, G., Ch. Li, und T.M. Heckman: The Accretion of Gas onto Galaxies as Traced by their Satellites. *Mon. Not. R. Astron. Soc.* **409**, 491 - 499 (2010).
- Kawabata, K. S., K. Maeda, et al. (incl. S. Taubenberger): A massive star origin for an unusual helium-rich supernova in an elliptical galaxy. *Nature*, **465**, 326 - 328 (2010).
- Kitaura, F.S., J. Jasche und B. Metcalf: Recovering the non-linear density field from the galaxy distribution with a Poisson-lognormal filter. *Mon. Not. R. Astron. Soc.* **403**, 589 - 604 (2010).
- Kotarba, H., et al. (incl. K. Dolag und F. Stasyszyn): Simulating Magnetic Fields in the Antennae Galaxies. *Astrophys. J.* **716**, 1438 - 1452 (2010).
- Kraemer, W. und V. Spirko: Statistical properties of the energies und electric dipole moments of the bound vibrational states of the system HCO⁺/COH⁺. *Chemical Physics* **373**, 170 - 180 (2010).
- Krivonos, R., M. Revnivtsev, S. Tsygankov et al. INTEGRAL/IBIS 7-year All-Sky Hard X-Ray Survey. Part I: Image Reconstruction. *Astron. Astrophys.* **519**, A107 (2010).
- Krivonos, R., S. Tsygankov, M. Revnivtsev et al.: INTEGRAL/IBIS 7-year All-Sky Hard X-Ray Survey. Part II: Catalog of Sources. *Astron. Astrophys.* **523**, A61 (2010).
- Kromer, M., S.A. Sim, M. Fink et al.: Double-detonation Sub-Chandrasekhar Supernovae: Synthetic Observables for Minimum Helium Shell Mass Models. *Astrophys. J.* **719**, 1067 - 1082 (2010).
- Kuiper, E., N.A. Hatch, et al. (incl. R. Overzier): A galaxy populations study of a radio-selected protocluster at $z \sim 3.1$. *Mon. Not. R. Astron. Soc.* **405**, 969 - 986 (2010).
- Lundau, S.J. und G.C. Scoccola: Constraints on variation in alpha und me from WMAP 7-year data. *Astron. Astrophys.* **517**, 1 - 4 (2010).
- Ledo, H., M. Sarzi, M. Dotti und S. Khochfar: A census of nuclear stellar discs in early-type galaxies. *Mon. Not. R. Astron. Soc.* **407**, 969 - 985 (2010).
- Lee, J. und V. Springel: A scaling relation of the evolving tidal fields in a Lambda-CDM cosmology. *J. of Cosmology und Astrop. Phys.* **05**, 031-042 (2010).
- Li, Z.Y., L.R. Spitler et al. (incl. M. Gilfanov): X-ray Emission from the Sombrero Galaxy: Discrete Sources *Astrophys. J.* **721**, 1368 - 1382 (2010).
- Li, Ch. und S.D.M. White: Autocorrelations of stellar light und mass in the low-redshift Universe. *Mon. Not. R. Astron. Soc.* **407**, 515 - 519 (2010).
- Liu, L., X.H. Yang, et al. (incl. V. Springel): The Stellar Mass Components of Galaxies: Comparing Semi-Analytical Models with Observation. *Astrophys. J.* **712**, 734 - 745 (2010).
- Ludlow, A. D., J.F. Navarro, V. Springel et al.: Secondary Infall und the Pseudo-Phase-Space Density Profiles of Cold Dark Matter Halos. *Mon. Not. R. Astron. Soc.* **406**, 137 - 146 (2010).
- Lund T., A. Marek, et al. (incl. H.-T. Janka): Fast time variations of supernova neutrino fluxes und their detectability. *Physical Review D.* **83**, 1 - 13 (2010).
- Maeda K., et al. (incl. F. Röpke und S. Taubenberger): An asymmetric explosion as the

- origin of spectral evolution diversity in type Ia supernovae. *Nature*, **466**, 82 - 85 (2010).
- Maeda K., S. Taubenberger et al. (incl. P. Mazzali): Nebular Spectra und Explosion Asymmetry of Type Ia Supernovae. *Astrophys. J.* **708**, 1703 - 1715 (2010).
- Maeda, K., F. Röpke, M. Fink, W. Hillebrandt et al.: Nucleosynthesis in Two-Dimensional Delayed Detonation Models of Type Ia Supernova Explosions. *Astrophys. J.* **712**, 624 - 638 (2010).
- Magic, Z., A. Serenelli, A. Weiss und B. Chaboyer: On Using the Color-Magnitude Diagram Morphology of M67 to Test Solar Abundances. *Astrophys. J.* **718**, 1378 - 1387 (2010).
- Maio, U., B. Ciardi, K. Dolag et al.: the transition from population III to population II-I star formation. *Mon. Not. R. Astron. Soc.* **407**, 1003 - 1015 (2010).
- Mundolesi, N. et al. (incl. MPA PLANCK group): Planck pre-launch status: the Planck-LFI programme. *Astron. Astrophys.* **520**, A3 (2010).
- Maurer I. und P.A. Mazzali: Oxygen recombination in the nebular phase of supernovae 1998bw und 2002ap. *Mon. Not. R. Astron. Soc.* **408**, 947 - 960 (2010).
- Maurer, I., P. Mazzali et al. (incl. S. Taubenberger): Characteristic velocities of stripped-envelope core-collapse supernova cores. *Mon. Not. R. Astron. Soc.* **402**, 161 - 172 (2010).
- Maurer, I., P. Mazzali, S. Taubenberger und S. Hachinger: Hydrogen und helium in the late phase of supernovae of Type IIb *Mon. Not. R. Astron. Soc.* **409**, 1441 - 1454 (2010).
- Mazzali, P. A., I. Maurer, S. Valenti et al.: The Type Ic SN 2007gr: a census of the ejecta from late-time optical-infrared spectra. *Mon. Not. R. Astron. Soc.* **408**, 87 - 96 (2010).
- McCarthy, I.G., J. Schaye et al. (incl. R. Wiersma): The case for AGN feedback in galaxy groups. *Mon. Not. R. Astron. Soc.* **406**, 822 - 839 (2010).
- Mead, J.M.G, L.J. King et al. (incl. E. Puchwein): The impact of AGN feedback und baryonic cooling on galaxy clusters as gravitational lenses. *Mon. Not. R. Astron. Soc.* **406**, 434 - 444 (2010).
- Melendez, J., I. Ramirez, L. Casagrande, et al.: The solar, exoplanet und cosmological lithium problems. *Astrophys. und Space Science*, **328**, 193 - 200 (2010).
- Melendez, J., L. Casagrande, I. Ramirez et al.: Observational evidence for a broken Li Spite plateau und mass-dependent Li depletion. *Astron. Astrophys. Lett.* **515**, 1 - 7 (2010).
- Melendez, J., et al. (incl. I. Ramirez und L. Casagrande): UV by-beta photometry of solar twins: the solar colors, model atmospheres, und the Teff und metallicity scales. *Astron. Astrophys.* **522**, A98 (2010).
- Menanteau, F., J. Gonzalez et al. (incl. C. Hernandez-Monteagudo): The Atacama cosmology telescope: physical properties und purity of a galaxy cluster sample selected via the Sunyaev-Zel'dovich effect. *Astrophys. J.* **723**, 1523 - 1541 (2010).
- Meneghetti, M., E. Rasia et al. (incl. K. Dolag): Weighing simulated galaxy clusters using lensing und X-ray. *Astron. Astrophys.* **514**, 1 - 23 (2010).
- Metcalf, R.B.: Neutrino masses, dark energy und the gravitational lensing of pre-galactic H i. *Mon. Not. R. Astron. Soc.* **401**, 1999 - 2004 (2010).
- Metcalf, T.S., M. Monteiro et al. (incl. V.A. Silva): A precise asteroseismic age und radius for the evolved sun-like star KIC 11026764. *Astrophys. J.* **723**, 1583 - 1598 (2010).
- Milne, P.A, P. Brown et al. (incl. P. Mazzali): Near-ultraviolet Properties of a Large Sample of Type Ia Supernovae as Observed with the Swift UVOT. *Astrophys. J.* **721**, 1627 - 1655 (2010).

- Mocak, M., S. Campbell, E. Müller und K. Kifonidis: The core helium flash revisited. III. From Population I to Population III stars. *Astron. und Astrophys.* **520** A114 (2010).
- Moll, R.: Large jets from small-scale magnetic fields. *Astron. Astrophys.* **512**, A5 (2010).
- Monaco, L., P. Bonifacio, L. Sbordone et al.: The lithium content of omega Centauri. New clues to the cosmological Li problem from old stars in external galaxies. *Astron. Astrophys.* **519**, L3 (2010).
- Montero, P., J. Font und M. Shibata: Influence of Self-Gravity on the Runaway Instability of Black-Hole-Torus Systems. *Phys. Rev. Lett.* **104**, 191101 (2010).
- Moradi, H., C. Baldner, et al. (incl. H. Spruit): Modeling the Subsurface Structure of Sunspots. *Sol. Phys.* **267**, 1 (2010).
- Moran, S.M., G. Kauffmann, et al. (incl. B. Catinella): UGC8802: A Massive Disk Galaxy in Formation. *Astrophys. J.* **720**, 1126 - 1135 (2010).
- Moriya, T., N. Tominaga, et al. (incl. P. Mazzali): Fallback Supernovae: A Possible Origin of Peculiar Supernovae with Extremely Low Explosion Energies. *Astrophys. J.* **719**, 1445 - 1453 (2010).
- Müller, B., H.-Th Janka und H. Dimmelmeier: A New Multi-dimensional General Relativistic Neutrino Hydrodynamic Code for Core-collapse Supernovae. I. Method und Code Tests in Spherical Symmetry. *Astrophys. J. Suppl.*, **189**, 104 - 133 (2010).
- Muthsam, H.J., F. Kupka, B. Loew-Baselli et al.: ANTARES - A Numerical Tool for Astrophysical RESEARCH with applications to solar granulation. *New Astron.* **15**, 460 - 475 (2010).
- Navarro, J. F., Ludlow, A., V. Springel, et al.: The diversity und similarity of simulated cold dark matter haloes. *Mon. Not. R. Astron. Soc.* **402**, 21 - 34 (2010).
- Nayakshin, S. und C. Power: Simulations of momentum feedback by black hole winds. *Mon. Not. R. Astron. Soc.* **402**, 789 - 802 (2010).
- Neistein, E., A. Maccio und A. Dekel: Universal merger histories of dark-matter haloes. *Mon. Not. R. Astron. Soc.* **403**, 984 - 995 (2010).
- Neistein, E. und S. Weinmann: The degeneracy of galaxy formation models. *Mon. Not. R. Astron. Soc.* **405**, 2717 - 2736 (2010).
- Noebauer, U., K.S. Long, S. Sim und C. Knigge: The Geometry und Ionization Structure of the Wind in the Eclipsing Nova-like Variables RW Tri und UX UMa. *Astrophys. J.* **719**, 1932 - 1945 (2010).
- Nuza, S., K. Dolag und A. Saro: Photometric und clustering properties of hydrodynamical galaxies in a cosmological volume: results at $z = 0$. *Mon. Not. R. Astron. Soc.* **407**, 1376 - 1386 (2010).
- Obergaulinger, M., M.A. Aloy und E. Müller: Local simulations of the magnetized Kelvin-Helmholtz instability in neutron-star mergers. *Astron. Astrophys.* **515** 1 - 25 (2010).
- Oser, L., J. Ostriker, T. Naab et al.: The Two Phases of Galaxy Formation. *Astrophys. J.* **725**, 2312 - 2323 (2010).
- Overzier, R.A., T.M. Heckman, D. Schiminovich et al.: Morphologies of Local Lyman Break Galaxy Analogs. II. A Comparison with Galaxies at $z = 2 - 4$ in ACS und WFC3 Images of the Hubble Ultra Deep Field. *Astrophys. J.* **710**, 979 - 991 (2010).
- Padilla, N., D. Christlein, E. Gawiser et al.: Clustering und descendants of MUSYC galaxies at $z < 1.5$. *Mon. Not. R. Astron. Soc.* **409**, 184 - 198 (2010).
- Pakmor, R., M. Kromer, F.K. Röpke et al.: Sub-luminous type Ia supernovae from the mergers of equal-mass white dwarfs with $M \sim 0.9 M_{\odot}$. *Nature*, **463**, 61 - 64 (2010).
- Pastorello, A., M.T. Botticella, et al. (incl. S. Taubenberger): Multiple major outbursts

- from a restless luminous blue variable in NGC 3432. *Mon. Not. R. Astron. Soc.* **408**, 181 - 198 (2010).
- Pedrosa, S., P. Tissera und C. Scannapieco: The joint evolution of baryons und dark matter haloes. *Mon. Not. R. Astron. Soc.* **402**, 776 - 788 (2010).
- Perets, H. B., A. Gal-Yam, P. Mazzali et al.: A faint type of supernova from a white dwarf with a helium-rich companion. *Nature*, **465**, 322 - 325 (2010).
- Perets, H. B. und A. Gualandris: Dynamical constraints on the origin of the young B-stars in the galactic center . *Astrophys. J.* **719**, 220 - 228 (2010).
- Poggianti, B., G. De Lucia et al. (incl. S.D.M. White): The evolution of the density of galaxy clusters und groups: denser environments at higher redshifts. *Mon. Not. R. Astron. Soc.* **405**, 995 - 1005 (2010).
- Portinari, L., L. Casagrande und C. Flynn: Revisiting $\Delta Y/\Delta Z$ from multiple main sequences in globular clusters: insight from nearby stars. *Mon. Not. R. Astron. Soc.* **406**, 1570 - 1582 (2010).
- Prézeau, G. und M. Reinecke: Algorithm for the Evaluation of Reduced Wigner Matrices *Astrophys. J. Suppl.* **190**, 267 - 274 (2010).
- Przybilla, N., M. Firnstein, F. Nieva et al.: Mixing of CNO-cycled matter in massive stars. *Astron. Astrophys.* **517**, 1 - 6 (2010).
- Puchwein, E., V. Springel, D. Sijacki und K. Dolag: Intracluster stars in simulations with AGN feedback. *Mon. Not. R. Astron. Soc.* **406**, 936 - 951 (2010).
- Ramirez, I., M. Asplund, P. Baumann et al. A possible signature of terrestrial planet formation in the chemical composition of solar analogs. *Astron. Astrophys.* **521**, A33 (2010).
- Reid, B., L. Verde, K. Dolag et al.: Non-Gaussian halo assembly bias. *J. Cosmol. Astropart. Phys.* **7**, 1 - 21 (2010).
- Ritter, H.: Formation und evolution of cataclysmic variables: *Mem. Soc. Astron. It.* **81**, 849 - 862 (2010).
- Roncarelli, R., L. Moscardini et al. (incl. K. Dolag): Imprints of primordial non-Gaussianities in X-ray und SZ signals from galaxy clusters. *Mon. Not. R. Astron. Soc.* **402**, 923 - 933 (2010).
- Ruffert, M. und H.-Th. Janka: Polytropic neutron star - black hole merger simulations with a Paczyński-Wiita potential. *Astron. Astrophys.* **514**, A66 (2010).
- Ruiter, A. J., K. Belczynski, M. Benacquista, et al.: The LISA Gravitational Wave Foreground: A Study of Double White Dwarfs. *Astrophys. J.* , **717**, 1006 - 1021 (2010).
- Ryde, N., B. Gustaffson, et al. (incl. M. Asplund): Chemical abundances of 11 bulge stars from high-resolution, near-IR spectra. *Astron. Astrophys.* **509**, A20 (2010).
- Saglia, R.P., P. Sanchez-Blazquez et al. (incl. S.D.M. White): The fundamental plane of EDisCS galaxies. The effect of size evolution. *Astron. Astrophys.* **524**, A6 (2010).
- Sako, T., J. Paldus und G. Diercksen: Origin of Hund's multiplicity rule in quasi-two-dimensional two-electron quantum dots. *Phys. Rev. A.* **81**, 022501 (2010).
- Sales, L., J. Navarro et al. (incl. V. Springel): Feedback und the structure of simulated galaxies at redshift $z = 2$. *Mon. Not. R. Astron. Soc.* **409**, 1541 - 1556 (2010).
- Saracco, F., M. Pietroni et al. (incl. G. Robbers): Nonlinear matter spectra in coupled quintessence. *Phys. Rev. D.* **82**, 1 - 14 (2010).
- Saro, A., G. De Lucia, S. Borgani, und K. Dolag: Gas cooling in semi-analytic models und smoothed particle hydrodynamics simulations: are results consistent? *Mon. Not. R. Astron. Soc.* **406**, 729 - 743 (2010).

- Sawala, T., C. Scannapieco, U. Maio und S.D.M. White: Formation of isolated dwarf galaxies with feedback. *Mon. Not. R. Astron. Soc.* **402**, 1599 - 1613 (2010).
- Sbordone, L., P. Bonifacio, E. Caffau et al.: The metal-poor end of the Spite plateau. I. Stellar parameters, metallicities, und lithium abundances. *Astron. Astrophys.* **522**, A26 (2010).
- Scannapieco, C., D.A. Gadotti, P. Jonsson und S.D.M. White: An observer's view of simulated galaxies: disc-to-total ratios, bars, und (pseudo-) bulges. *Mon. Not. R. Astron. Soc. Lett.* **407**, 41 - 45 (2010).
- Schäfer, J.: Transport Coefficients of dilute hydrogen gas, calculations und comparisons with experiments. *Chemical Physics* **368**, 38 - 48 (2010).
- Schäfer, J.: Calculated cross sections for transport coefficients of H₂ dilute in He und HI gas. *Chemical Physics* **374**, 15 - 21 (2010).
- Schiminovich, D., B. Catinella, G. Kauffmann, et al.: The GALEX Arecibo SDSS Survey - II. The star formation efficiency of massive galaxies. *Mon. Not. R. Astron. Soc.* **408**, 919 - 934 (2010).
- Schmidt, W., F. Ciaraldi-Schoolmann, J. Niemeyer et al.: Turbulence in a Three-Dimensional Deflagration Model For Type Ia Supernovae. II. Intermittency und the Deflagration-to-Detonation Transition Probability. *Astrophys. J.* **710**, 1683 - 1693 (2010).
- Schönrich, R., J. Binney und W. Dehnen: Local kinematics und the local standard of rest. *Mon. Not. R. Astron. Soc.* **403**, 1829 - 1833 (2010).
- Schrabback, T., J. Hartlap, et al. (incl. S. Hilbert): Evidence of the accelerated expansion of the Universe from weak lensing tomography with COSMOS. *Astron. Astrophys.* **516**, A63 (2010).
- Sehgal, N., P. Bode, et al. (incl. C. Hernandez-Monteagudo): Simulations of the microwave sky. *Astrophys. J.* **709**, 920 - 936 (2010).
- Seitenzahl, I., F. Röpke, M. Fink und R. Pakmor: Nucleosynthesis in thermonuclear supernovae with tracers: convergence und variable mass particles. *Mon. Not. R. Astron. Soc.* **407**, 2297 - 2304 (2010).
- Semboloni, E., T. Schrabback et al. (incl. S. Hilbert): Weak lensing from space: first cosmological constraints from three-point shear statistics. *Mon. Not. R. Astron. Soc.* **410**, 143 - 160 (2010).
- Serenelli, A.: New results on standard solar models. *Astrophysics und Space Science* **328**, 13 - 21 (2010).
- Serenelli, A. und S. Basu: Determining the Initial Helium Abundance of the Sun. *Astrophys. J.* **719**, 865 - 872 (2010).
- Shankar, F., F. Marulli, M. Bernardi et al.: Sizes und ages of SDSS ellipticals: comparison with hierarchical galaxy formation models. *Mon. Not. R. Astron. Soc.* **403**, 117 - 128 (2010).
- Shankar, F., F. Marulli, et al. (incl. M. Boylan-Kolchin): Further constraining galaxy evolution models through the size function of SDSS early-type galaxies. *Mon. Not. R. Astron. Soc.* **405**, 948 - 960 (2010).
- Shankar, F., D.H. Weinberg und Y. Shen: Constraints on black hole duty cycles und the black hole-halo relation from SDSS quasar clustering. *Mon. Not. R. Astron. Soc.* **406**, 1959 - 1966 (2010).
- Shankar, F., G. Sivakoff, M. Vestergaard und X.Y. Dai: The relative growth of optical und radio quasars in SDSS. *Mon. Not. R. Astron. Soc.* **401**, 1869 - 1881 (2010).
- Shen, Y., J. Hennawi, F. Shankar et al.: Binary quasars at high redshift. II. Sub-Mpc clustering at $z \sim 3-4$. *Astrophys. J.* **719**, 1693 - 1698 (2010).

- Sheth, K., M. Regan et al. (D. Gadotti): The Spitzer survey of stellar structure in galaxies (S4G). *Publ. Astron. Soc. Pac.* **122**, 1397 - 1414 (2010).
- Shtykovskiy, P. und M. Gilfanov: Thermal diffusion in the intergalactic medium of clusters of galaxies. *Mon. Not. R. Astron. Soc.* **401**, 1360 - 1368 (2010).
- Silva, A.V., M. Catelan, A. Weiss: Pulsation period changes as a tool to identify pre-zero age horizontal branch stars. *Astrophys. und Space Science*, **328**, 123 - 127 (2010).
- Silva Aguirre, V., J. Ballot, A. Serenelli und A. Weiss: Semiconvective mixing in low-mass stars. *Astrophysics und Space Science* **328**, 129 - 133 (2010).
- Sim, S.A., L. Miller, K.S. Long et al.: Multidimensional modelling of X-ray spectra for AGN accretion disc outflows - II. *Mon. Not. R. Astron. Soc.* **404**, 1369 - 1384 (2010).
- Sim, S.A., D. Proga, L. Miller et al.: Multidimensional modelling of X-ray spectra for AGN accretion disc outflows - III. Application to a hydrodynamical simulation. *Mon. Not. R. Astron. Soc.* **408**, 1396 - 1408 (2010).
- Sim, S.A., F. Röpke, W. Hillebrandt et al.: Detonations in Sub-Chandrasekhar-mass C+O White Dwarfs: *Astrophys. J. Lett.* **714**, L52 - L57 (2010).
- Simionescu, A., N. Werner et al. (incl. E. Churazov): Metal transport by gas sloshing in M87. *Mon. Not. R. Astron. Soc.* **405**, 91 - 99 (2010).
- Springel, V.: E pur si muove: Galilean-invariant cosmological hydrodynamical simulations on a moving mesh. *Mon. Not. R. Astron. Soc.* **401**, 791 - 851 (2010).
- Spruit, H., G.B. Scharmer und M.G. Loefdahl: Striation and convection in penumbral filaments. *Astron. Astrophys.* **521**, A72 (2010).
- Stasyszyn, F., S. Nuza, K. Dolag et al.: Measuring cosmic magnetic fields by rotation measure-galaxy cross-correlations in cosmological simulations. *Mon. Not. R. Astron. Soc.* **408**, 684 - 694 (2010).
- Stello, D., et al. (incl. A. Serenelli, V. Silva und A. Weiss): Detection of solar-like oscillations from Kepler photometry of the open cluster NGC 6819. *Astrophys. J. Lett.* **713**, L182 - L186 (2010).
- Strigari, L., C. Frenk und S.D.M. White: Kinematics of Milky Way satellites in a Lambda cold dark matter universe. *Mon. Not. R. Astron. Soc.* **408**, 2364 - 2372 (2010).
- Suyu, S.H., P. Marshall et al. (incl. S. Hilbert): Dissecting the Gravitational lens B1608+656. II. Precision measurements of the Hubble constant, spatial curvature, and the dark energy equation of state. *Astrophys. J.* **711**, 201 - 221 (2010).
- Tanaka, M., K. Kawabata et al. (incl. P. Mazzali): Spectropolarimetry of extremely luminous type Ia supernova 2009dc: nearly spherical explosion of super-Chandrasekhar mass white dwarf. *Astrophys. J.* **714**, 1209 - 1216 (2010).
- Tauber, J. A. et al. (incl. MPA PLANCK Group): Planck pre-launch status: The Planck mission. *Astron. Astrophys.* **520**, A1 (2010).
- Thöne, C., D. Kann et al. (incl. R. Sunyaev): Photometry and spectroscopy of GRB 060526: a detailed study of the afterglow and host galaxy of a $z = 3.2$ gamma-ray burst. *Astron. Astrophys.* **523**, A70 (2010).
- Tissera, P., S.D.M. White, S. Pedrosa und C. Scannapieco: Dark matter response to galaxy formation. *Mon. Not. R. Astron. Soc.* **406**, 922 - 935 (2010).
- Tornatore, L., S. Borgani, M. Viel und V. Springel: The impact of feedback on the low-redshift intergalactic medium. *Mon. Not. R. Astron. Soc.* **402**, 1911 - 1926 (2010).
- Tsygankov, S. S., A.A.Lutovinov und A.V. Serber: Completing the puzzle of the 2004-2005 outburst in V0332+53: the brightening phase included. *Mon. Not. R. Astron. Soc.* **401**, 1628 - 1635 (2010).

- Tsygankov, S. S. und E.M. Churazov: Search for outbursts in the narrow 511-keV line from compact sources based on INTEGRAL data. *Astronomy Lett.* **36**, 237 - 247 (2010).
- Turk, M., P. Clark et al. (incl. T. Greif): Effects of varying the three-body molecular hydrogen formation rate in primordial star formation. *Astrophys. J.* **726**, 1 - 11 (2010).
- Utrobin, V., N. Chugai und M. Botticella: Type IIP supernova 2009kf: Explosion driven by black hole accretion? *Astrophys. J. Lett.* **723**, L89 - L92 (2010).
- Utsumi, Y., T. Goto et al. (incl. R. Overzier): A Large Number of $z > 6$ Galaxies Around a QSO at $z = 6.43$: Evidence for a Protocluster? *Astrophys. J.* **721**, 1680 - 1688 (2010).
- Van den Berg, D.A., L. Casagrande und P. Stetson: An Examination of Recent Transformations to the BV(RI) C Photometric System from the Perspective of Stellar Models for Old Stars. *Astrophys. J.* **140**, 1020 - 1037 (2010).
- Viel, M., M.G. Haehnelt und V. Springel: The effect of neutrinos on the matter distribution as probed by the intergalactic medium. *J. of Cosmology und Astrop. Phys.* **06**, 015 - 053 (2010).
- Volonteri, M., K. Gültekin, und M. Dotti: Gravitational recoil: effects on massive black hole occupation fraction over cosmic time. *Mon. Not. R. Astron. Soc.* **404**, 2143 - 2150 (2010).
- von der Linden, A., V. Wild, G. Kauffmann, et al.: Star formation und AGN activity in SDSS cluster galaxies. *Mon. Not. R. Astron. Soc.* **404**, 1231 - 1246 (2010).
- Wang, J., R. Overzier, G. Kauffmann et al.: The UV-optical colours of brightest cluster galaxies in optically und X-ray selected clusters. *Mon. Not. R. Astron. Soc.* **401**, 433 - 444 (2010).
- Wang, J.Y., H. Xu et al. (incl. Z. Zhang): How to identify und separate bright galaxy clusters from the low-frequency radio sky. *Astrophys. J.* **723**, 620 - 633 (2010).
- Wang, Y., H.G. Xu et al. (incl. Z. Zhang): Central gas entropy excess as direct evidence for AGN feedback in galaxy groups und clusters. *Res. Astron. Astrophys.* **10**, 1013 - 1022 (2010).
- Weig, C. und T.A. Enßlin: Bayesian analysis of spatially distorted cosmic signals from Poissonian data. *Mon. Not. R. Astron. Soc.* **409**, 1393 - 1411 (2010).
- Weinmann, S., G. Kauffmann, A. von der Linden und G. De Lucia: Cluster galaxies die hard. *Mon. Not. R. Astron. Soc.* **406**, 2249 - 2266 (2010).
- Werner, N., A. Simionescu, et al. (incl. E. Churazov): Feedback under the microscope-II. Heating, gas uplift und mixing in the nearest cluster core. *Mon. Not. R. Astron. Soc.* **407**, 2063 - 2074 (2010).
- Wiersma, R., J. Schaye, C. Dalla Vecchia et al.: The enrichment history of cosmic metals. *Mon. Not. R. Astron. Soc.* **409**, 132 - 144 (2010).
- Wongwathanarat, A., N. Hammer und E. Müller: An axis-free overset grid in spherical polar coordinates for simulating 3D self-gravitating flows. *Astron. Astrophys.* **514**, A48 (2010).
- Wongwathanarat, A., H.-Th. Janka und E. Müller: Hydrodynamical Neutron Star Kicks in Three Dimensions. *Astrophys. J. Lett.* **725**, L106 - L110 (2010).
- Xu, H.G., J.H. Gu et al. (incl. Z.L. Zhang): Clumpy metal concentrations in elliptical galaxies NGC 4374 und NGC 4636. *Res. Astron. Astrophys.* **10**, 220 - 226 (2010).
- Xu, D. D., S. Mao et al. (incl. V. Springel): Substructure Lensing: Effects of Galaxies, Globular Clusters und Satellite Streams. *Mon. Not. R. Astron. Soc.* **408**, 1721 - 1729 (2010).
- Zavala, J., M. Vogelsberger und S.D.M. White: Relic density und CMB constraints on dark matter annihilation with Sommerfeld enhancement. *Physical Review D*, **81**, 083502

(2010).

Zavala, J., V. Springel und M. Boylan-Kolchin: Extragalactic gamma-ray background radiation from dark matter annihilation. *Mon. Not. R. Astron. Soc.* **405**, 593 - 612 (2010).

Zhang, Y., V. Springel und X. Yang: Genus statistics using the Delaunay tessellation field estimation method - I. Tests with the millennium simulation und the SDSS DR7. *Astrophys. J.* **722**, 812 - 824 (2010).

Zhuravleva, I. V., E. M. Churazov, S. Sazonov et al.: Polarization of X-ray lines from galaxy clusters und elliptical galaxies - a way to measure the tangential component of gas velocity. *Mon. Not. R. Astron. Soc.* **403**, 129 - 150 (2010).

7.2 Konferenzbeiträge

Alves-Brito, J. Melendez und M. Asplund: Chemical similarities between the galactic bulge und local thick disk red giant stars: analysis from optical data. In: *Chemical Abundances in the Universe: Connecting First Stars to Planets*. Eds. Cunha, K., M. Spite und B. Barbuy. IAU Symposium **265**, Cambridge University Press, 342-343.

Asplund, M. und K. Lind: The light elements in the light of 3D und non-LTE effects. In: *Titel: Light Elements in the Universe*, Eds. Charbonnel, C. et al. IAU Symposium **268** Cambridge University Press, 191-200.

Athanassoula, E., D. Gadotti, L. Carrasco et al.: Barred galaxy photometry: comparing results from the Cananea sample with N-body simulations. In: *Long Walk Through Astronomy: A Celebration of Luis Carrasco's 60th Birthday*. *Revista mexicana de astronomia y astrofisica - serie de conferencias* **37**, 79-82.

Bauswein, A. und H.-Th. Janka: Relativistic simulations of neutron star und strange star mergers. In: *High Performance Computing in Science und Engineering, Garching/Munich 2009: Transactions of the Fourth Joint HLRB und KONWIHR Review und Results Workshop*. Eds. Wagner, S., M. Steinmetz et al., Springer Verlag 2010, 347-358.

Bensby, T., S. Feltzing et al. (incl. M. Asplund): Elemental abundances in the galactic bulge from microlensed dwarf stars. In: *Chemical Abundances in the Universe: Connecting First Stars to Planets*. Eds. Cunha, K., M. Spite und B. Barbuy. IAU Symposium **265**, Cambridge University Press, 346-347.

Bergemann, M., und T. Gehren: Fe-peak element abundances in disk und halo stars In: *Chemical Abundances in the Universe: Connecting First Stars to Planets*. Eds. Cunha, K., M. Spite und B. Barbuy. IAU Symposium **265**, Cambridge University Press, 346-347.

Bonifacio, P., L. Monaco, L. Sbordone et al.: Lithium in a metal-poor external galaxy: Omega Centauri In: *Titel: Light Elements in the Universe*, Eds. Charbonnel, C. et al. IAU Symposium **268** Cambridge University Press, 269-274.

Bosma, A., D.A. Gadotti, W.J. de Blok und E. Athanassoula: Kinematics of the barred spiral galaxy NGC 1291. In: *Galaxies in isolation: exploring nature versus nurture*. Eds. Verdes-Montenegro, L., A. del Olmo und J. Sulentic. San Francisco : Astronomical Society of the Pacific **421**, 53-56.

Casagrande, L., L. Portinari und C. Flynn: Revisiting the helium abundance in globular clusters with multiple main sequences. In: *Titel: Light Elements in the Universe*, Eds. Charbonnel, C. et al. IAU Symposium **268** Cambridge University Press, 129-134.

Catinella, B., D. Schiminovich, und G. Kauffmann: HI und Star Formation Properties of Massive Galaxies: First Results from the GALEX Arecibo SDSS Survey. In: *Hunting for the Dark: The Hidden Side of Galaxy Formation*. Eds. Debattista, V. P. und Popescu, C.C. AIP Conference Proceedings, Vol. **1240**, 95-98.

- Churazov E., Zhuravleva I., Sazonov S., Sunyaev R.: Resonant Scattering of X-ray Emission Lines in the Hot Intergalactic Medium. In: Space Science Reviews, "X-ray Spectroscopy", Eds. J. Kaastra und F. Paerels, 104-122.
- Clarke, T.E., A. Cohen, T.A. Enßlin et al.: Tracing Diffuse Emission in Galaxy Clusters at Low Frequencies. In: American Astronomical Society, AAS Meeting 215, 436.31. Bulletin of the American Astronomical Society **42**, 389.
- Cooper, A.P. et al. (incl S. White und V. Springel): Galactic stellar haloes in the CDM model. In: Hunting for the Dark: The Hidden Side of Galaxy Formation. Eds. Debattista, V. P. und C.C. Popescu. AIP Conference Proceedings, Melville : American Institute of Physics. Vol. **1240**, 293-294.
- Cordero-Carrion, I., P. Cerda-Duran und J.M. Ibanez: Numerical evolution und gravitational radiation in Fully Constrained Formulation. In: 8th Edoardo Amaldi Conference on Gravitational Waves. Proceedings of the 8th Edoardo Amaldi Conference on Gravitational Waves. Journal of Physics: 2010 Conference Series **228**, IOP Publishing 012055.
- Cordero-Carrion, I., J.M. Ibanez und J.A. Morales Lladosa: On the local existence of maximal slicings in spherically symmetric spacetimes. In: XXXII Spanish Relativity Meeting (ERE 2009) 'Gravitation in the Large' (Bilbao, 7-11 September 2009). Proceedings of the Spanish Relativity Meeting, ERE 2009. (Eds: R. Lazkoz und R. Vera). Journal of Physics: 2010, Conference Series **229**, 012029.
- Creech-Eakman, M., J. Young et al. (incl. A. Chiavassa): Imaging simulations of selected science with the Magdalena Ridge Observatory Interferometer. In: Optical und Infrared Interferometry II Eds. Danchi, W., F. Delplancke und J. Rajagopal. Proceedings of SPIE Bellingham, Washington, USA : Society of Photo-Optical Instrumentation Engineers **7734**, 1-7.
- Cuadra, J.: Black hole binary mergers within gas discs. In: Hunting for the Dark: The Hidden Side of Galaxy Formation. Eds. Debattista, V. P. und Popescu, C.C. AIP Conference Proceedings, Melville : American Institute of Physics, Vol. **1240**, 231-234.
- Das, P., O. Gerhard et al. (incl. E. Churazov): The outer haloes of massive, elliptical galaxies. In: Highlights of Astronomy, Ed. I.F. Corbett Intern. Astron. Union 2010. Cambridge, UK : Cambridge University Press **15**, p. 92.
- De Gouveia Dal Pino, E., P. Piovezan, L. Kadowaki et al.: On the role of magnetic reconnection in jet/accretion disk systems. In: Highlights of Astronomy, Ed. I.F. Corbett Intern. Astron. Union 2010. Cambridge, UK : Cambridge University Press **15**, 247-248.
- Docenko, D., und R. Sunyaev: Possibility of measuring the amount of intergalactic metals with 14N VII HFS line. In: Chemical Abundances in the Universe: Connecting First Stars to Planets. Eds. Cunha, K., M. Spite und B. Barbuy. IAU Symposium **265**, Cambridge University Press, 167-170.
- Docenko, D., und R. Sunyaev: Hyperfine structure radio lines from hot ISM in elliptical galaxies. In: Highlights of Astronomy, Ed. I.F. Corbett Intern. Astron. Union 2010. Cambridge, UK : Cambridge University Press **15**, p. 278.
- Dolag, K.: Magnetic fields und cosmic rays in galaxy clusters. In: Highlights of Astronomy, Ed. I.F. Corbett Intern. Astron. Union 2010. Cambridge, UK : Cambridge University Press **15**, 461-463.
- Dotti, M., M. Colpi, L. Maraschi, et al.: A Path to Radio-Loudness through Gas-Poor Galaxy Mergers und the Role of Retrograde Accretion. In: Accretion und Ejection in AGN: a Global View. Proceedings of a conference held June 22-26, 2009 in Como, Italien. Eds. Maraschi, L., G. Gishelina et al. Verlag ?? p.19
- Enßlin, T.A., T. Clarke et al. (incl. A. Waelkens): Magnetic turbulence in clusters of galaxies. In: Highlights of Astronomy, Ed. I.F. Corbett Intern. Astron. Union 2010.

- Cambridge, UK : Cambridge University Press **15**, p. 456.
- Fabello, S., B. Catinella, K. Guinevere et al.: Exploiting HI surveys with stacking. In: Proceedings of the ISKAF2010 Science Meeting. Assen, the Netherlands. 2010, 16-28.
- Fabjan, D., S. Borgani et al. (incl. K. Dolag): AGN feedback effect on intracluster medium properties from galaxy cluster hydrodynamical simulations. In: AGN Feedback in Galaxy Formation: Proceedings of the Workshop held in Vulcano, Eds. Antonuccio-Delogu, V. und J. Silk. Cambridge, UK : Cambridge University Press **15**, 175-182.
- Font, J.A., P. Cerda-Duran und N. Stergioulas: Relativistic MHD simulations of Alfvén QPOs in magnetars. In: Numerical Modeling of Space Plasma Flows: ASTRONUM-2009. Eds. Pogorelov, N., E. Audit und G. Zank. San Francisco : Astronomical Society of the Pacific. **429**, 72-78.
- Forman, W., E. Churazov, S. Giacintucci et al.: 3C28 in Abell 115- a radio source with a twist. In: X-Ray Astronomy 2009. Present Status, Multi-Wavelength approach und future perspectives. Eds. Comastri, A., M. Cappi und L. Angelini. Melville, NY, USA : American Institute of Physics. AIP Conference Proceedings, 2010, Vol. **1248**, 273-276.
- Frailis, M., A. Zacchei, et al. (incl. MPA PLANCK group): The Planck/LFI data processing: real-time analysis, data management und scientific workflows. In: Astroparticle, particle und space physics, detectors und medical physics applications. Eds. Leroy C. et al., World Scientific Publishing Co. Pte. Ltd., 2010, 709-718.
- Fu, J., Q. Guo und G. Kauffmann: Semi-analytic models on the molecular und neutral gas in galaxies. In: Hunting for the Dark: The Hidden Side of Galaxy Formation. Eds. Debattista, V. P. und Popescu, C.C. AIP Conference Proceedings, 2010, Vol. **1240**, 177-178.
- Fulton, C., H. Arp und J. Hartnett: Analyses of the 2dF deep field. In: Frontiers of Fundamental und Computational Physics: 10th International Symposium. Eds. Hartnett, J.G. und P.C. Abbott. Melville, NY, USA : American Institute of Physics **1246**, 131-135.
- Gundhi, P., V.S. Dhillon et al. (incl. H. Spruit): Rapid timing studies of black hole binaries in optical und X-rays: correlated und non-linear variability. In: X-Ray Astronomy 2009. Present Status, Multi-Wavelength approach und future perspectives. Eds. Comastri, A., M. Cappi und L. Angelini. AIP Conference Proceedings, Melville, NY, USA : American Institute of Physics 2010, Vol. **1248**, 119-122.
- Gilfanov, M.: X-Ray Emission from Black-Hole Binaries. In: The Jet Paradigm - From Microquasars to Quasars. Ed. T. Belloni. Lecture Notes in Physics, Berlin Springer Verlag, 2010 **794**, 17-51.
- Gilfanov, M. und A. Bogdan: Warm ionized ISM in the bulge of Andromeda galaxy. In: Highlights of Astronomy as presented at the XXVII IAU General Assembly, 2009 Ed. I.F. Corbett Intern. Astron. Union 2010. Cambridge, UK : Cambridge University Press **15**, p. 296.
- Gvaramadze, V.V., A. Gualandris, S. Portegies Zwart: High-velocity runaway stars from three-body encounters. In: Star clusters: basic galactic building blocks throughout time und space, Proceedings of the International Astronomical Union, IAU Symposium, **266**, 413-416.
- Hammer, N., H.-Th. Janka und E. Mueller: 3D simulations of large-scale mixing in core collapse supernova explosions. In: High Performance Computing in Science und Engineering, Garching/Munich 2009: Transactions of the Fourth Joint HLRB und KONWIHR Review und Results Workshop. Eds. Wagner, S., M. Steinmetz et al., Springer Verlag 2010, 335-346.
- Heald, G., J. McKean et al. (incl. F. de Gasperin): Progress with the LOFAR imaging pipeline. In: Proceedings of Science, ISKAF2010 Science Meeting Trieste, SISSA 2010,

1 - 11.

- Hummels, C. B., D. Schiminovich, B. Catinella et al.: The GALEX Arecibo SDSS Survey (GASS): First Results. American Astronomical Society, AAS Meeting 215, Bulletin of the American Astronomical Society, Vol. **42**, 561.
- Inoue, S., R. Salvaterra et al. (incl. B. Ciardi): Deciphering the ancient universe with high-energy gamma-rays from gamma-ray bursts. In: Deciphering the Ancient Universe with Gamma-Ray Bursts AIP Conference Proceedings. Eds. Kawai, N. und S. Nagataki. Melville : American Institute of Physics, 2010 **1279**, 128-131.
- Irrgang, A., N. Przybilla et al. (incl. F. Nieva): HIP 60350: A supernova ejected hyper-runaway star? In: 11th Symposium on Nuclei in the Cosmos - NIC XI. Proceedings of Science, Trieste : SISSA 2010, 1-5.
- Janka, H.-Th.: Stellar evolution und death models und modeling. In: 11th Symposium on Nuclei in the Cosmos - NIC XI. Proceedings of Science, Trieste : SISSA 2010, 1-114.
- Jennings, E., C.M. Baugh, R.E. Angulo und S. Pascoli: How BAO measurements can fail to detect quintessence. In: International Conference on the Invisible Universe, Invisible Universe International Conference, Eds. Alimi, J.-M. und A. Füzfa. AIP Conference Proceedings. Melville, NY, USA : American Institute of Physics, 2010, **1241**, 945-954.
- Jones, C., E. Churazov, S. Giacintucci et al.: Hot gas in clusters, groups und galaxies: from SMBH outbursts to cosmology. In: X-Ray Astronomy 2009. Present Status, Multi-Wavelength approach und future perspectives. Eds. Comastri, A., M. Cappi und L. Angelini. AIP Conference Proceedings, Melville, NY, USA : American Institute of Physics 2010, Vol. **1248**, 253-260.
- Krivonos, R., M. Revnivtsev, S. Tsygankov und S. Sazonov: INTEGRAL all-sky survey: deep inside galaxy and beyond In: The Extreme sky: Sampling the Universe above 10 keV (extremesky2009), Proceeding of Science, SISSA, Trieste, 1 - 8.
- Krivonos, R. und M. Revnivtsev: The X-Ray AGN Bias Factor at Zero Redshift. In: Co-Evolution of Central Black Holes und Galaxies, Proc. of the International Astronomical Union, IAU Symposium 2010, Cambridge University Press Volume **267**, p. 462.
- Krivonos, R. und M. Revnivtsev: Large Scale structure of the local Universe traced by hard X-ray emitting AGNs. In: X-Ray Astronomy 2009. Present Status, Multi-Wavelength approach und future perspectives. Eds. Comastri, A., M. Cappi und L. Angelini. AIP Conference Proceedings, Melville, NY, USA : American Institute of Physics 2010, Vol. **1248**, 399-402.
- Krivonos, R., M. Revnivtsev, S. Tsygankov et al.: Broad view on hard X-ray background emission of the Galaxy. Highlights of Astronomy, Ed. I.F. Corbett Intern. Astron. Union 2010. **15**, p. 810-810.
- Kupka, F., H. Muthsam, F. Zaussinger et al.: Solar surface flow simulations at ultra-high resolution. In: High Performance Computing in Science und Engineering, Garching/Munich 2009: Transactions of the Fourth Joint HLRB und KONWIHR Review und Results Workshop. Eds. Wagner, S., M. Steinmetz et al., Springer Verlag 2010, 415-425.
- Le Fevre, O., D. Maccagni et al. (incl. B. Ciardi): DIORAMAS: a wide-field visible und near-infrared imaging multi-slit spectrograph for the EELT. In: Proceedings of the SPIE, Ground-based und Airborne Instrumentation for Astronomy III. Eds. McLean, Ian S., S. Ramsay et al. Volume 7735, pp. 773528-773528-11 (2010).
- Lind K., F. Primas et al. (incl. M. Asplund): Observational signatures of lithium depletion in the metal-poor globular cluste. NGC6397. In: Titel: Light Elements in the Universe, Eds. Charbonnel, C. et al. IAU Symposium **268** Cambridge University Press, 263 - 268.
- Lutovinov, A., M. Revnivtsev und R. Krivonos: Galactic plane structure in hard X-rays.

- In: Highlights of Astronomy, Ed. I.F. Corbett Intern. Astron. Union 2010. Cambridge, UK : Cambridge University Press **15**, p. 809.
- Maeda, K., K. Kawabata et al. (inc. P. Mazzali): Similarity und difference in GRB-associated SN Ic 1998bw und other type Ib/c supernovae. In: Deciphering the Ancient Universe with Gamma-Ray Bursts AIP Conference Proceedings. Eds. Kawai, N. und S. Nagataki. Melville : American Institute of Physics, 2010 **1279**, 366-368.
- Malbet, F., W. Cotton et al. (incl. A. Chiavassa): The 2010 interferometric imaging beauty contest. In: Optical und Infrared Interferometry II Eds. Danchi, W., F. Delplancke und J. Rajagopal. Proceedings of SPIE Bellingham, Washington, USA : Society of Photo-Optical Instrumentation Engineers **7734**, 1 - 12.
- Melendez, J., L. Casagrande, I. Ramirez et al.: Observational signatures for depletion in the Spite plateau: solving the cosmological Li discrepancy? In: Titel: Light Elements in the Universe, Eds. Charbonnel, C. et al. IAU Symposium **268** Cambridge University Press, 211 - 214.
- Melendez, J., L. Casagrande, I. Ramirez et al.: Precise Li abundances in metal-poor stars: depletion in the Spite plateau. In: Chemical Abundances in the Universe: Connecting First Stars to Planets. Eds. Cunha, K., M. Spite und B. Barbuy. IAU Symposium **265**, Cambridge University Press, 71 - 72.
- Melendez, J., M. Asplund, B. Gustafsson et al.: Unprecedented accurate abundances: signatures of other Earths? In: Chemical Abundances in the Universe: Connecting First Stars to Planets. Eds. Cunha, K., M. Spite und B. Barbuy. IAU Symposium **265**, Cambridge University Press, 412 - 415.
- Melendez, J., I. Ramirez, M. Asplund und P. Baumann: Lithium in other suns: no connection between stars und planets. In: Titel: Light Elements in the Universe, Eds. Charbonnel, C. et al. IAU Symposium **268** Cambridge University Press, 341 - 342.
- Mei, S., B. Holden et al. (incl. R. Overzier): Stellar populations und morphology on the red sequence at $z \approx 1$. In: International Conference on the Invisible Universe, Invisible Universe International Conference, Eds. Alimi, J.-M. und A. Füzfa. AIP Conference Proceedings. Melville, NY, USA : American Institute of Physics, 2010, **1241**, 236-243.
- Mocak, M. und E. Müller: The core helium flash: 3D hydrodynamic models. In: High Performance Computing in Science und Engineering, Garching/Munich 2009: Transactions of the Fourth Joint HLRB und KONWIHR Review und Results Workshop. Eds. Wagner, S., M. Steinmetz et al., Springer Verlag 2010, 323-334.
- Müller, B., A. Marek, und H.-Th. Janka: The SuperN-Project: current advances in understanding core collapse supernovae. In: High Performance Computing in Science und Engineering '09: Transactions of the High Performance Computing Center Stuttgart (HLRS) 2009 Eds. Nagel, W., D. Kröner und M. Resch. Proceedings, Springer Verlag, 17 - 32.
- Müller, B., L. Hüdepohl, A. Marek et al.: The SuperN-Project: an update on core-collapse supernova simulations. In: High Performance Computing in Science und Engineering '09: Transactions of the High Performance Computing Center Stuttgart (HLRS) 2009, Eds. Nagel, W., D. Kröner und M. Resch. Proceedings, Springer Verlag, 69 - 83.
- Nieva, M.F. und N. Przybilla: Improving stellar parameter und abundance determinations of early B-type stars In: Hot und Cool: Bridging Gaps in Massive Star Evolution. Eds. Leitherer C., P. Bennet et al. Astronomical Society of the Pacific Conference Series 2010, **425**, 146-151.
- Nunes, N., T. Dent, C. Martins und G. Robbers: Reconstructing the evolution of dark energy with variations of fundamental parameters. In: Highlights of Astronomy, Ed. I.F. Corbett Intern. Astron. Union 2010. Cambridge, UK : Cambridge University Press **15**, p. 303.

- Obergaulinger, M., P. Cerda-Duran, E. Müller und M.A. Aloy: Simulations of the magneto-rotational instability in core-collapse supernovae. In: Numerical Modeling of Space Plasma Flows: ASTRONUM-2009. Eds. Pogorelov, N., E. Audit und G. Zank. San Francisco : Astronomical Society of the Pacific. **429**, 136-141.
- Overzier, R.: Massive dense nuclei in young starbursts: progenitors of early-type galaxy cusps? In: Co-Evolution of Central Black Holes und Galaxies, Proc. of the International Astronomical Union, IAU Symposium 2010, Cambridge University Press Volume **267**, p.128
- Patru, F., A. Chiavassa, D. Mourard und N. Tarmoul. Direct imaging with a hypertelescope of red supergiant stellar surfaces. In: Optical und Infrared Interferometry II Eds. Danchi, W., F. Delplancke und J. Rajagopal. Proceedings of SPIE Bellingham, Washington, USA : Society of Photo-Optical Instrumentation Engineers **7734**, 1 - 14.
- Pedrosa, S., P. Tissera und C. Scannapieco: Baryons und dark matter halo distributions in Λ CDM cosmology. In: Stellar Populations - Planning for the Next Decade. Eds. Bruzual G. und S. Charlot. IAU Symposium **262**, Cambridge University Press, 404-405.
- Predehl, P., H. Böhringer et al. (incl. E. Churazov und R. Sunyaev): eROSITA on SRG. In: X-Ray Astronomy 2009. Present Status, Multi-Wavelength approach und future perspectives. Eds. Comastri, A., M. Cappi und L. Angelini. AIP Conference Proceedings, Melville, NY, USA : American Institute of Physics 2010, Vol. **1248**, 543-548.
- Predehl, P., et al. (incl. E. Churazov und R. Sunyaev): eROSITA on SRG. In: Space Telescopes und Instrumentation 2010: Ultraviolet to Gamma Ray. Eds. Arnaud, M., St. Murray und T. Takahashi. Proceedings of SPIE **7732**, San Diego, CA, USA 2010, 1-10.
- Primas, F., K. Lind et al. (incl. M. Asplund): The lithium history of NGC 6397. In: Star clusters: basic galactic building blocks throughout time und space. Eds. de Grijs, R., und J.R. Lepine. IAU Symposium **266**, Cambridge University Press, 143 - 148.
- Przybilla, N., M. Farnstein und M.F. Nieva: Tepid supergiants: chemical signatures of stellar evolution und the extent of blue loops. In: Hot und Cool: Bridging Gaps in Massive Star Evolution. Eds. Leitherer C., P. Bennet et al. Astronomical Society of the Pacific Conference Series 2010, **425**, 134-139.
- Reisenegger, A., P. Jofre-Pfeil und R. Fernandez: Constraining a possible time-variation of the gravitational constant through 'gravitochemical heating' of neutron stars. In: Highlights of Astronomy, Ed. I.F. Corbett Intern. Astron. Union 2010. Cambridge, UK : Cambridge University Press **15**, p. 314.
- Röpke, F., W. Hillebrandt, D. Kasen und S. Woosley: Modeling the diversity of type Ia supernova explosions In: Numerical Modeling of Space Plasma Flows: ASTRONUM-2009. Eds. Pogorelov, N., E. Audit und G. Zank. San Francisco : Astronomical Society of the Pacific. **429**, 142-147.
- Ruiter, A. J., K. Belczynski, S. A. Sim et al.: Type Ia Supernovae und Accretion Induced Collapse In: International Conference of binaries: In celebration of Ron Webbink's 65th Birthday. Eds. Kologera, V. und M. van der Sluys. AIP Conference Proceedings, Vol. **1314**, 233-238.
- Sbordone, L., P. Bonifacio, E. Caffau et al. The metal-poor end of the Spite plateau: gravity sensitivity of the H α wings fitting. In: Titel: Light Elements in the Universe, Eds. Charbonnel, C. et al. IAU Symposium **268** Cambridge University Press, 355 - 356.
- Schönrich, R.: Physics und structure of the galactic disc(s) In: Highlights of Astronomy, Ed. I.F. Corbett Intern. Astron. Union 2010. Cambridge, UK : Cambridge University Press **15**, p. 185.

- Scoccola, C., S. Lundau und H. Vucetich: WMAP 5-year constraints on α und m_e . In: Highlights of Astronomy, Ed. I.F. Corbett Intern. Astron. Union 2010. Cambridge, UK : Cambridge University Press **15**, p. 307.
- Seitenzahl, I., F. Röpke, R. Pakmor und M. Fink: Nucleosynthetic post-processing of type Ia supernovae with variable tracer masses. In: Proceedings of Science, 11th Symposium on Nuclei in the Cosmos - NIC XI, SISSA Trieste 2010, 1-5.
- Shankar, F.: Merger-induced quasars, their light curves, und their host halos. In: Co-Evolution of Central Black Holes und Galaxies, Proc. of the International Astronomical Union, IAU Symposium 2010, Cambridge University Press Volume **267**, 248-253.
- Sijacki, D., V. Springel und M. Haehnelt: Growing supermassive black holes in cosmological simulations of structure formation. In: Co-Evolution of Central Black Holes und Galaxies, Proc. of the International Astronomical Union, IAU Symposium 2010, Cambridge University Press Volume **267**, 445-450.
- Sim, S., M. Kromer, F. Röpke et al.: Monte Carlo radiative transfer simulations: applications to astrophysical outflows und explosions. In: Numerical Modeling of Space Plasma Flows: ASTRONUM-2009. Eds. Pogorelov, N., E. Audit und G. Zank. San Francisco : Astronomical Society of the Pacific. **429**, 148-153.
- Spruit, H.C.: Theory of Magnetically Powered Jets. In: The Jet Paradigm - From Microquasars to Quasars. Ed. T. Belloni. Lecture Notes in Physics, Berlin Springer Verlag, **794**, 2010, 233-262.
- Tanaka M., K. Kawabata et al. (incl. P. Mazzali): Multi-dimensional explosion geometry of supernovae: spectropolarimetric study with Subaru. In: Deciphering the Ancient Universe with Gamma-Ray Bursts AIP Conference Proceedings. Eds. Kawai, N. und S. Nagataki. Melville : American Institute of Physics, 2010 **1279**, 433-435.
- Wanajo, Sh. und H.-Th. Janka: The r-process in black hole winds. In: The 10th International Symposium on Origin of Matter und Evolution of Galaxies, Eds. Tanihara, I., T. Shima et al. AIP Conference Proc. Melville, New York : American Institute of Physics **1269**, 120 - 125.
- Wang, J., G. Kauffmann und R. Overzier: The relation between gas accretion und resolved star formation in galaxies. In: Hunting for the Dark: The Hidden Side of Galaxy Formation. Eds. Debattista, V. P. und Popescu, C.C. AIP Conference Proceedings, Vol. **1240**, 177-178.
- Werner, N., I. Zhuravleva, E. Churazov et al.: Constraints on turbulent pressure in the X-ray halos of giant elliptical galaxies from resonant scattering. In: Highlights of Astronomy, Ed. I.F. Corbett Intern. Astron. Union 2010. Cambridge, UK : Cambridge University Press **15**, p. 297.
- White, S.D.M.: ID 3 evolution of structure in the universe. In: Highlights of Astronomy, Ed. I.F. Corbett Intern. Astron. Union 2010. Cambridge, UK : Cambridge University Press **15**, p. 45.
- Zavala, J., V. Springel und M. Boylan-Kolchin: Mapping extragalactic dark matter structures through gamma-rays. In: 2009 Fermi Symposium, Washington, DC, USA, 1 - 7.
- Zhuravleva, I., E. Churazov, S. Sazonov: Polarization of X-ray lines from galaxy clusters und elliptical galaxies. In: The Coming of Age of X-ray Polarimetry. Eds. Bellazzini, R., E. Costa et al. Cambridge University Press **22**, 146 - 149.

Prof. Dr. Wolfgang Hillebrandt (Geschäftsführender Direktor)