

# Garching

## Max-Planck-Institut für Astrophysik

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### 1 Personal und Ausstattung

#### 1.1 Personalstand

##### *Direktoren:*

W. Hillebrandt, R. Sunyaev (Geschäftsführung), S.D.M. White.

##### *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:*

M.A. Aloy, A.J. Bandy, G. Börner, S. Charlot, B. Ciardi, E. Churazov, L. Dessart, T. Di Matteo, H. Dimmelmeier, K. Dolag (seit 1.10.) K. Dullemond (bis 30.9.), T. Enßlin, M. Gilfanov, B. Groves (seit 15.10.), E. Hayashi (seit 1.10.), H.-T. Janka, G. Kauffmann, K. Kifonidis, C. Kobayashi, F. Kupka, T. Leismann (1.2.-30.4.), L.-X. Li (seit 1.9.), A. Merloni, O. Möller (seit 1.9.), E. Müller, S. Nayakshin, R. Oechslin, P. Popowski, M. Revnivtsev, H. Ritter, F. Röpke, G. Rudnick (bis 30.9.), H. Sandvik (seit 1.10.), S. Sazonov, V. Springel, H.C. Spruit, A. Weiss, S. Zaroubi (bis 29.2.).

##### *Sofja Kovalevskaja Programm*

S. Charlot (Preisträger), G. De Lucia (seit 1.8.), C. Möller (bis 30.9.), B. Panter (seit 1.10.).

##### *Alexander von Humboldt Stipendiaten:*

Bifang Liu (bis 30.8.), J. Navarro (seit 1.9.)

##### *EU-Stipendiaten*

A. Arbey (bis 30.9.), S. Bertone (1.3. - 30.9.), A. Ferguson, A. Geminale (seit 1.4.), D. Giannios (seit 15.9.), C. Hernandez-Monteagudo, F. Miniati (bis 30.6.), A. Moretti (seit 1.4.), E. M. Rossi (seit 1.10.), A. Pastorello, (seit 1.10.), J.A. Rubiño-Martín (bis 31.3.).

*Doktoranden:*

A. Arcones (IMPRS), K. Basu (IMPRS, bis 30.11.), S. Bertone (IMPRS) J. Braithwaite (TMR, bis 31.3.), R. Buras (DFG), J. Chluba (IMPRS), D. Croton (IMPRS), J. Cuadra (IMPRS), G. DeLucia (IMPRS, bis 31.7.), D. Docenko (IMPRS, seit 1.9.), A. Gallazzi (IMPRS), L. Gao (IMPRS), M. Gieseler (seit 1.6.), P. Hultsch, G. Hütsi (IMPRS), L. Iapichino (TMR), T. Jaffe (IMPRS), M. Jubelgas (IMPRS), F. Kitaura (IMPRS), A. Kitsikis (IMPRS, seit 1.9.), M. Kitzbichler (TMR) T. Leismann (bis 31.1.), G. Liang (IMPRS), A. Marek (IMPRS), P. Mimica (IMPRS), M. Obergaulinger (seit 1.9.), C. Pfrommer, P. Rebusco (IMPRS), M. Righi (IMPRS seit 1.9.), D. Sauer (DFG), B. M. Schäfer, L. Scheck, W. Schmidt (DFG, bis 31.3.), D. Sijacki (IMPRS), M. Stehle, M. Stritzinger (IMPRS), L. Tasca (IMPRS), C. Vogt (IMPRS), R. Voss (IMPRS), L. Wang (TMR, seit 1.9.), J. Wang (IMPRS, seit 1.9.), F. Xiang (IMPRS, seit 1.9.), S. Zibetti (IMPRS, bis 31.8.), B. Zink (DFG).

*Diplomanden:*

M. Gieseler (bis 31.5.), Ph. Löwenfeld (seit 15.1.), F. Meissner (seit 1.6.), B. Müller (seit 1.11.), M. Obergaulinger (bis 30.8.), S. Taubenberger, A. Waelkens (seit 1.10.).

*Sekretariat und Verwaltung:*

C. Rickl [Skr. Geschäftsführung, -2201]

M. Ihle [Verwaltungsleiter, -3600]

**1.2 Personelle Veränderungen**

B. Ciardi: “Marie Curie Excellence” Preis 2004.

G.H.F. Diercksen: Council of Scientific and Industrial Research (India) – Humboldt Reciprocity Research Preis 2004.

F. Kupka: Annahme als Habilitand an der Fakultät für Physik der TU München mit 20.12.2004.

V. Springel: Heinz-Maier-Leibnitz-Preis 2004 von der DFG.

R. Sunyaev: Oort Professor, Leiden Universität, April 2004.

**2 Gäste**

Mario Abadi, (Victoria Univ. Kanada), 4.10. – 25.10.; Tom Abel, (Univ. California, USA), 15.11. – 11.12.; Eric Armengaud, (IAP Paris), 1.5. – 31.5.; Joe Barranco, (Univ. California, USA), 29.11. – 24.12.; Lars Bildsten, (UC Santa Barbara, USA), 5.7. – 30.7.; Sergey Blinnikov, (ITEP Moskau, Rußland), 1.5. – 30.6.; Gustavo Bruzual, (CIDA, Venezuela), 1.7. – 30.9.; Ivan Černušák, (Bratislava, Slowakei), 28.07.–09.08.; Ruixiang Chang, (Shanghai Obs. China), 1.8. – 31.12.; Dongni Chen, (Shanghai Obs. China), bis 30.9.; Xuelei Chen, (Shanghai Obs. China), 21.1. – 20.2.; Paola Coelho, (Univ. de Sao Paulo, Brasilien), seit 27.9.; Rupert Croft, (Carnegie Mellon Univ.), 12.1. – 11.7.; Anna Geminale, (INAF, Padova, Italien), 1.4. – 30.11.; Violeta Gonzalez, (Barcelona, Spanien), 27.9. – 27.11.; Claire Halliday, (Oss. Astr. di Padova, Italien), 1.3. – 31.3.; „ 20.9.–20.12.; Antonio Hernandez, (Carracas, Venezuela), 08.08.–06.09.; Yonghui Hou, (Shanghai Obs. China), seit 5.10.; Nail Inogamov, Landau (Inst. Moskau, Rußland), 16.2. – 4.4.; Pascale Jablonka, (Obs. de Paris, Frankreich), 20.5. – 21.6.; Yipeng Jing, (Shanghai Obs. China), 15.2. –31.3.; Xi Kang, (Shanghai Obs. China), bis 4.4.; Vladimir Kell’o, (Bratislava, Slowakei), 21.07.–09.08.; Wang Lan, (Shanghai Obs. China), 4.9. – 30.11.; Guoliang Li, (Shanghai Obs. China, bis 30.9.; Weipeng Lin, (Shanghai Obs. China), 22.2 – 15.5.; Zhijian Luo, (Shanghai Obs. China), 1.9. – 31.12.; Alexander Lutovinov, (Space Research Inst. Moskau), 5.10 – 15.11.; Paolo Mazzali, (Oss. Astr. de Trieste, Italien), 10.5. – 18.6.; „ 12.9. – 30.9.; „ seit 1.10.; Sergei Molkov, (Space Research Inst. Moskau), 1.7. – 7.8.; „ 15.11. – 17.12.; Alessia Moretti,

(INAF Padova, Italien), seit 1.4.; Madhusudhan Nikku, (M.I.T.; Cambridge, USA), 29.7. – 3.9.; Dmitri Nadyozhin, (ITEP Moskau, Rußland), 18.3. – 30.4.; Pierre Ocvirk, (Obs. Astr. Strasbourg, Frankreich), bis 30.9.; Igor Panov, (ITEP, Moskau, Rußland), 1.10.–30.11.; Lorenzo Piovan, (Padua, Italien), 1.3. – 31.8.; Simone Recchi, (Trieste Italien), bis 30.6.; Tim Reichard, (Baltimore, USA), 31.5. – 18.6.; Alberto Rubino-Martin, (Inst. de Astr. de Canarias, Spanien), 23.6. – 29.8.; Laura Sales, (Obs. Astr. de Cordoba, Argentinien), 1.10. – 31.12.; Maurizio Salaris, (Liverpool, England), 12.7. – 13.8.; Cecilia Scannapieco, (Inst. de Astr. Buenos Aires, Argentinien), 14.2. – 2.3.; 24.8. – 24.11.; Susana Serna, (Univ. of Valencia, Spanien), 12.1. – 12.2.; Nikolai Shakura, (Sternberg Astr. Inst. Moskau), 1.11. – 30.11.; Shen Shiyin, (Shanghai Obs. China), bis 31.8.; Pavel Shtykovskii, (Space Research Inst. Moskau), 20.9. – 10.12.; Miroslav Urban, (Bratislava, Slowakei), 21.06.–09.07.; Dmitri Uzdensky, (Kavli Inst. UC Santa Barbara), USA, 15.4. – 15.5.; Ronald F. Webbink, (Univ. of Illinois, USA), seit 24.9.; Stanford Woosley, (UC Santa Cruz, USA), 21.3. – 30.4.; Donghai Zhao, (Shanghai Obs. China), 1.10. – 31.12.;

### 3 Lehrtätigkeit, Prüfungen und Gremientätigkeit

#### 3.1 Lehrtätigkeiten

W. Hillebrandt, WS03/04, TU München

H.-Th. Janka, WS03/04 and SS04, TU München

F. Kupka, SS 2004 TU München and WS 04/05 TU München

E. Müller, SS04, TU München

A. Weiss, WS03/04, WS04/05, Universität Augsburg, SS04 LMU München

#### 3.2 Gremientätigkeit

T. Bandy: Mitglied von IDIS Arbeitsgruppe für das ESA-Planck Satellit Projekt – Planck Koordinator für die Technische Arbeitsgruppe (WT 1.7) on “Methods for detection of systematics”. – Planck Koordinator für die Technische Arbeitsgruppe (WT 4.1) on “Effect of systematics on Non-Gaussianity” – Planck Teilkoordinator (WT 5.5.4) on the “Integrated Sachs-Wolfe Effect” – Planck Koordinator für die Technische Arbeitsgruppe (WT 7.4) on “Simulation and analysis tools for polarised galactic emission” – Mitorganisator des EU TMR Netzwerks CMBNet working group on “Large data set analyses” – Mitglied von OPTICON Arbeitsgruppe “Interoperability” – Mitglied von der wissenschaftlichen Arbeitsgruppe für “Astrophysical Virtual Observatory” (AVO) – Mitglied des advisory panel von NASA’s CMB Data Center, the Legacy Archive for Microwave Background Data Analysis (LAMBDA).

S. Charlot: – Mitglied des “HST Cycle 12 TAC Galaxy Panel” – Mitglied der “JWST NIRSpec instrument science team” – Mitglied des “VLT/VIRMOS Wissenschaftsteam” – Mitglied des “GALEX Wissenschaftsteam”

E. Churazov: Mitglied des “INTEGRAL AO-2 peer review”

T. Di Matteo: “EARA Vertreter am MPA”

G. H. F. Dierksen: – Deutscher Delegierter, COST Technical Committee “Telecommunication, Information Science and Technology” – Vorsitzender, COST Action 282 “Knowledge Exploration in Science and Technology” – Wissenschaftlicher und Technischer Koordinator, EC 5th Framework IST Project “Open Computing GRID for Molecular Science and Engineering - OpenMolGRID (bis 30.11.)”

T.A. Enßlin: Mitglied des “Planck-IDIS Development Team”

M. Gilfanov: Mitglied bei INTEGRAL Time allocation Committee, ESA

W. Hillebrandt: – Projektkoordinator, Netzwerk “The Physics of Type Ia Supernovae” – Vorsitzender von Supernova Arbeitsgruppe, IAU, Commission VIII – Fachbeirat, MPI für

Gravitationsphysik (Albert Einstein Institut), Golm – Vorsitzender, Beirat des Rechenzentrums Garching – Stellvertretender Sprecher des Sonderforschungsbereich 375 “Astro-Teilchen Physik” (TU), – Herausgeber, Lecture Notes in Physics – Mitglied, DFG Senat Komitee on Collaborative Research Centres

H.–Th. Janka: – Mitglied des “SciDAC Advisory Committee” – Mitglied des MPA “Future Committee”

P. Mazzali: RTN on SNe Ia. Wissenschaftlicher Sekretär.

E. Müller: – Vorstandsmitglied des Sonderforschungsbereichs “Transregio Gravitationswellenastronomie” – Mitglied des Führungskomitees der NaT-Arbeitsgruppe Garching (Robert Bosch Stiftung) – Mitglied des Wissenschaftlichen Organisationskomitee von der Marie Curie Konferenz “Large-scale Computation in Astrophysics”, Cambridge UK, (11.10.–15.10.) – Mitglied des Wissenschaftlichen Organisationskomitee IPAM’s Herbst 2005 Computational Astrophysics Workshop on “Relativistic Astrophysics”, UCLA, (2.5.–6.5.)

P. Popowski: – Mitglied von GAIA Satellite Arbeitsgruppe (variable stars, scientific alerts)

H.C. Spruit: – Mitglied des Redaktionsteams, Solar Physics journal, EARA Gremium

R. Sunyaev: – Mitglied des Space Council of Russian Academy of Sciences, – Mitglied des Scientific Council of Russian Space Research Institute (IKI), – Mitglied der INTEGRAL wissenschaftlichen Arbeitsgruppe und “Russian Project Scientist for INTEGRAL” (ESA project), – Stellvertretender Vorsitz des SPECTRUM-X space project International Scientific Committee – Co-I of the HFI instrument of ESA PLANCK SURVEYOR project – Leiter für Deutschland im TMR Network “CMBNET” – Mitglied des NOVA International Advisory Board – Mitglied des Evaluation Committee for SISSA

A. Weiss: Mitarbeitervertreter in der CPT-Sektion der MPG

S. White: – Mitglied des Perspektivenkommission des CPT Sektions der MPG Vorsitzender des Gremium, European Association for Research in Astronomy – Mitglied des Kuratoriums, Physik Journal. – Mitglied des Fachbeirats, Observatory of Lyon. – Mitglied des Fachbeirats, Physics Dept. Ecole Normale Supérieure, Paris. – Mitglied von OPTICON “A European Discussion Network for Optical and Infrared Astronomy”. – Mitglied des Fachbeirats, MPI für Astronomie, Heidelberg – Mitglied des Advisory Council, Sloan Digital Sky Survey – Panel Mitglied des ESO Observational Programme Committee. – Mitglied des Fachbeirats, Instituto de Astrofísica de Canarias – Mitglied des “Beirats Wissenschaftskolleg zu Berlin”. – Mitglied des Beratungsausschuss “Canadian Inst. for Advanced Research, Cosmology and Gravity Program. – Mitglied des Fachbeirats, Univ. Bonn, Physikdepartment.

## 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 “Ueber das Institut” und “Jahresberichte” an. Sollten Sie kein Internet haben, können Sie gerne kostenlos einen Jahresbericht unter der Telefon-Nummer 089/30000-2214 anfordern. In unserem Jahresbericht 2004 sind folgende wissenschaftlichen Aktivitäten in englischer Sprache ausführlich beschrieben:

- 4.1 Stellare Physik
- 4.2 Nukleare und Neutrino-Astrophysik
- 4.3 Numerische Hydrodynamik
- 4.4 Hochenergie Astrophysik
- 4.5 Akkretion
- 4.6 Wechselwirkung von Strahlung mit Materie
- 4.7 Galaxienentwicklung und intergalaktisches Medium
- 4.8 Großräumige Strukturen von  $z = 0$  bis zum Urknall
- 4.9 Gravitationslinseneffekt
- 4.10 Untersuchungen des kosmischen Mikrowellenhintergrunds
- 4.11 Quantenmechanik von Atomen und Molekülen, Astrochemie

## 5 Diplomarbeiten, Dissertationen, Habilitationen

### 5.1 Diplomarbeiten

*Abgeschlossen:*

- M. Gieseler: “Nukleosynthese in Typ Ia Supernovae” Technische Universität München.
- M. Obergaulinger: “Numerical Simulations of the Gravitational Collapse of Rotating Magnetised Stellar Cores” Technische Universität München.
- St. Taubenberger: “Lightcurves and Spectra of the Unusual Nearby Supernova 2004aw” Technische Universität München.

### 5.2 Dissertationen

*Abgeschlossen:*

- K. M. Basu: “CMB Observations and the Metal Enrichment History of the Universe” Ludwig-Maximilians-Universität, München.
- S. Bertone: “Chemical enrichment of the intergalactic medium by galactic winds, University Degli Studi di Torino, Italien.
- J. Braithwaite: “Evolution of strong magnetic fields in stars”, Universität Amsterdam.
- C. Cramphorn: “Astrophysical Applications of Scattering in Interstellar and Intracluster Gases” Ludwig-Maximilians-Universität, München.
- G. De Lucia: “Evolution of Galaxies in Clusters”, Ludwig-Maximilians-Universität, München.
- L. Gao: “On the evolution of small scale cosmic structure” Ludwig-Maximilians-Universität, München.
- T. Leismann: “Relativistic magnetohydrodynamics simulations of extragalactic jets. Technische Universität München.
- P. Mimica: “Numerical Simulations of Blazar Jets and their Non-Thermal Radiation” Ludwig-Maximilians-Universität, München.
- W. Schmidt: “Turbulent Thermonuclear Combustion in Degenerate Stars” Technische Universität München.
- M. Stehle: “Abundance Tomography of Type Ia Supernovae”. Ludwig-Maximilians-Universität, München.

L. Tasca: “Bulge-to-disk decomposition of large galaxies in the Sloan Digital Sky Survey” Ludwig-Maximilians-Universität, München.

C. Vogt: “Investigations of Faraday Rotation Maps of Extended Radio Sources in order to determine Cluster Magnetic Field Properties” Ludwig-Maximilians-Universität, München.

S. Zibetti: “Diffuse stellar components in galaxies and galaxy clusters” Ludwig-Maximilians-Universität, München.

*Laufend:*

A. Arcones: “Nukleosynthese in Supernova-Explosionen massereicher Sterne und Gamma-Blitz-Quellen” Technische Universität; München.

R. Buras: “Zweidimensionale Simulationen von Typ II Supernovae mit Boltzmanntransport”, Ludwig-Maximilians-Universität; München.

J. Cuadra: “Two-phase accretion in AGN and our Galactic Center region” Ludwig-Maximilians-Universität; München.

J. Chluba: “Energy release in the early universe and distortions of the CMB energy spectrum” Ludwig-Maximilians-Universität; München.

D. Croton: “The Star Formation History of the Local Group”, Ludwig-Maximilians-Universität; München.

D. Docenko: “High Z-Ions in the Hot Astrophysical Plasmas” Ludwig-Maximilians-Universität; München.

M. Gieseler: “Theoretische Grundlagen von Simple Stellar Population sektren” Ludwig-Maximilians-Universität; München.

P. Hultsch: “Spektraldiagnostik von Supernovae Ia in den späten Phasen” Ludwig-Maximilians-Universität; München.

G. Hütsi: “Superclustering and Secondary CMB Anisotropies”, Ludwig-Maximilians-Universität; München.

T. Jaffe: “Using phase analysis to detect non-Gaussianity in the cosmic microwave background radiation” Ludwig-Maximilians-Universität; München.

F. Kitaura: “Mapping the Cosmological Large Scale Structure” Ludwig-Maximilians-Universität; München.

A. Kitsikis: “Theoretical AGB and post-AGB Stellar Models for Synthetic Population Studies” Ludwig-Maximilians-Universität; München.

M. G. Kitzbichler: “Galaxy Formation Modelling in the Millennium Simulation” Ludwig-Maximilians-Universität; München.

A. Marek: “Multi-dimensional simulations of core collapse supernovae with different models for neutron star matter and microphysical processes” Technische Universität; München.

M. Obergaulinger: “Influence of Magnetic Fields on the Dynamics of Collapsars”, Technische Universität; München.

C. Pfrommer: “Development of semi-analytic models for cluster of galaxies” Ludwig-Maximilians-Universität; München.

P. Rebusco: “The impact of supermassive black holes in elliptical galaxies and clusters” Ludwig-Maximilians-Universität; München.

M. Rigbi: “Observational consequences of the chemical elements production in the epoch of reionization of the universe” Ludwig-Maximilians-Universität; München.

D. Sauer: “NTLE models and synthetic spectra of Type Ia Supernovae at maximum light” Technische Universität München.

B. M. Schäfer: “Detection of galaxy clusters by gravitational lensing, X-ray emission and the SZ-effect”.

L. Scheck: “Numerische Simulationen von Typ II - Supernovae” Technische Universität München.

M. Stritzinger: “Calibrations of Type Ia Supernovae Lightcurves” Ludwig-Maximilians-Universität; München.

A. von der Linden: “Galaxy Evolution from the EDisCS and SDSS Surveys” Ludwig-Maximilians-Universität; München.

R. Voss: “X-ray binaries in elliptical galaxies” Ludwig-Maximilians-Universität; München.

Jie Wang: Structure formation simulations in various cosmologies”, Ludwig-Maximilians-Universität; München.

Lan Wang: “Building Halo Occupation Distribution Models for comparison with SDSS data” Peking Universität, China.

B. Zink: “Gravitational waves from black hole formation” Ludwig-Maximilians-Universität; München.

## 6 Tagungen, Projekte am Institut und Beobachtungszeiten

### 6.1 Tagungen und Veranstaltungen

J. Cuadra, A. Merloni, E. Meyer-Hofmeister, S. Nayakshin : MPA/MPE/ESO/USM Konferenz on “Growing Black Holes: Accretion in Cosmological Context” Garching (21.6.–25.6.)

T. Di Matteo: EARA Workshop 2004 on “Black holes, stars and galaxies: Simulations and Observations”, MPA, Garching (2.12.–3.12)

K. Dullemond: FYI: Workshop „Modeling the structure, chemistry and appearance of protoplanetary disks“, Schloß Ringberg, (13.4.–17.4)

E. Müller, H.-Th. Janka: Ringberg Workshop on “Nuclear Astrophysics”, Schloß Ringberg, Tegernsee (22.2.–27.3.)

### 6.2 Beobachtungszeiten

A. Cimatti (Arcetri), T. Broadhurst (HUU), B. Ciardi (MPA), E. Daddi (ESO), S. di Serego Alighieri (Arcetri), A. Ferrara (SISSA), J. Vernet (Arcetri): ESO, Paranal, Chile, VLT, FORS2, 21h in service mode Crossing the  $z=6$  Barrier: Searching for Ly-alpha Emitters and PopIII Objects at  $6.4 < z < 6.6$

P. Coelho (USP/MPA), C. Oliveira Mendes (USP): oct10, oct13, oct16, Gemini North Telescope, Mauna Kea, Hawaii; The outer halo of M32

C. Halliday (MPA), B. Milvang-Jensen (MPE), A. Aragón-Salamanca (Nottingham), P. Jablonka (Paris), V. Desai (Caltech), B. Poggianti (Padova), G. Rudnick (MPA), D. Zaritsky (Steward), 30 hours, VLT, Paranal, Chile, UT3 VIMOS, The star formation histories of galaxies infalling into the cluster environment at redshift 0.8;

C. Halliday (MPA), A. Aragón-Salamanca (Nottingham), P. N. Best (Edinburgh), B. Poggianti (Padova), D. Zaritsky (Steward), B. Milvang-Jensen, R. P. Saglia (MPE), G. De Lucia, A. von der Linden (MPA): 4.5-7.5, AAO, Sidling Springs, Australia, 2dF spectrograph, Galaxy star formation rates in the infall regions of a  $z$  0.5 cluster

W. Hillebrandt (PI): – Calar Alto, Spain, 10 nights on the 2.2m and 5 nights on the 3.5m telescope, ToO mode, Photometry and spectroscopy of nearby Type Ia Supernovae – ESO, La Silla, Chile, 2.2m Telescope, WIFI, 20 hours, Photometry of nearby Type Ia supernovae

– NOT, La Palma, 2 nights ToO, 6 nights scheduled, Photometry and spectroscopy of nearby Type Ia supernovae

- WHT, La Palma, 60 hours, Optical spectroscopy of nearby Type Ia supernovae
- UKIRT, Hawaii, 15 hours, Near-infrared spectroscopy of nearby Type Ia supernovae

W. Hillebrandt, P. Mazzali (CoIs): HST, Cycle 13, 153 orbits, UV spectroscopy and photometry of Type Ia supernovae

J.D. Kurk (Arcetri), A. Cimatti (Arcetri), S. di Serego Alighieri (Arcetri), J. Vernet (Arcetri), E. Daddi (ESO), A. Ferrara (SISSA), B. Ciardi (MPA): ESO, Paranal, Chile, VLT, ISAAC, 5h observations HeII Emission from a Possible Population III Object at  $z=6.5$

P. Mazzali: – Late-time spectrophotometry of SNe Ib/c ESO-VLT, P.74 (PI Mazzali)  
– UV spectroscopy of SNe Ia, HST-Large Program (PI Filippenko)

S. Yu. Sazonov: – 27.8., INTEGRAL (International Gamma-Ray Astrophysics Laboratory, European Space Agency, INTEGRAL GRB studies (GRB 040827);

– 19.12., INTEGRAL (International Gamma-Ray Astrophysics Laboratory, European Space Agency, Broad-band spectroscopy of GRB prompt and early afterglow emission (GRB 041219);

## 7 Auswärtige Tätigkeiten

### 7.1 Nationale und internationale Tagungen

G. Börner: CAS-MPG Workshop on “The evolution of galaxies and stars” Huangshan, China (11.10.–16.10.)

E. Churazov: Workshop “High Energy Astrophysics 2004”, Moskau, Rußland (20.12-24.12)

M.Gilfanov: NATO - Advanced Study Institute The Electromagnetic Spectrum of Neutron Stars Marmaris, Türkei (7.6–18.6)

M.Gilfanov: International conference Cosmology and High Energy Astrophysics (Zeldovich-90) Moskau, Rußland (20.12–24.12)

W. Hillebrandt: Summer Program on “Supernovae and Gamma Ray Bursts”, Institute for Nuclear Theory, Seattle, USA (21.6.–27.8.)

W. Hillebrandt: Workshop on “Type Ia Supernovae and Cosmology”, Seattle, USA (4.8.–7.8.)

F. Kupka: Scientific organizing committee of IAU Symposium 224 “The A-star puzzle”, Poprad, Slovakia (8.7.–13.7.)

P. Mazzali: Stellar Theory and Nucleosynthesis. A meeting in honour of Stan Woosley on his 60th birthday. INT, Seattle, (12.7.–14.7.)

A. Merloni, member of the SOC of “From X-ray binaries to quasars: Black hole accretion on all mass scales”. Amsterdam, The Netherlands (12.7–15.7).

G. Kauffmann: Aspen Workshop on “Star Formation in Galaxies” Aspen, Colorado (28.6.–17.7.)

A. Weiss: “Chemical Abundances and Mixing in Stars in the Milky Way and its Satellites”, Castiglione della Pescaia, Italien (13.9.–17.9.)

### 7.2 Vorträge und Gastaufenthalte

A.J. Banday: Jep Propulsion Laboratory, Pasadena (16.04.–21.05.).

G. Börner: – Shanghai Astronomical Observatory (29.03.–05.06.). – RESCEU, Tokyo University, Tokyo (1.12.–31.12.).

E. Churazov: Space Research Institute, Moskau (17.04.–16.05., 30.09.–01.11., 15.12.–31.12.).

B. Ciardi: Kavli Institute for Theoretical Physics, Santa Barbara (25.10–21.11)



M. Gilfanov: Space Research Institute, Moskau (13.05.–11.06., 25.08.–22.09.)

W. Hillebrandt: Institute for Nuclear Theory, Seattle (10.7.–21.8.)

T. Jaffe: Jet Propulsion Laboratory, Pasadena, California, USA (23.11. – 17.12.)

W. Krämer: – Steacie Institute for Molecular Sciences, NRCC, Ottawa (29.03.–30.04.)  
– Dept. Physical Chemistry, Comenius University Bratislava (18.10–13.11.) – Center for  
Complex Systems, Academy of Sciences, Prag (01.12.–18.12.)

F. Kupka: Observatoire de Paris/Meudon, Meudon, Frankreich (25.9.–9.10.)

F. Röpke: Visiting Fellow at the Institute for Nuclear Theory at the Universität Washington, Seattle, U.S.A. (02. Aug.–21. Aug.)

S. Yu. Sazonov: Space Research Institute, Moskau (17.08.–02.09., 19.12.–06.01.).

### 7.3 Übersichtsvorträge

S. Charlot: – International Workshop on “The Spectral Energy Distribution of Gas Rich Galaxies: Confronting Models with Data” (Heidelberg, 4.10–8.10.) – 15th Annual October Astrophysics Konferenz in Maryland “New Windows on Star Formation in the Cosmos” (College Park, 11.10.–13.10.)

E. Churazov: X-Ray Polarimetry Workshop, Stanford, USA (9.02.-11.02)

B. Ciardi: – “Galaxy-Intergalactic Medium Interactions” (Santa Barbara, 25.10.–29.10.) – “Frontiers in Computational Astrophysics” (Wengen, 26.9–30.9.) – “CMB and the First Objects at the End of the Dark Ages: Observational Consequences of Reionization” (Leiden, 26.4.–28.4.)

G. De Lucia: “The Role of Mergers and Feedback in Galaxy Formation”, (Ringberg Schloß, Oct. 31. Nov. 6.)

H. Dimmelmeier: Europäisches Graduiertenkolleg Basel - Tübingen, Graduiertentag in Basel zum Thema “Gravitational Waves” (Basel, Switzerland, 17.12.)

T.A. Enßlin: – 3rd Korean Astrophysics Workshop on Cosmic Rays and Magnetic Fields in Large Scale Structure “Extragalactic Cosmic Rays and Magnetic Fields: Facts and Fiction” (Pusan, 16.8.-20.8, 2004) – International Konferenz on The Magnetized Plasma in Galaxy Evolution “Magnetic Fields in Clusters of Galaxies” (Krakow, 27.9.-1.10)

M. Gilfanov: – NATO - Advanced Study Institute “The Electromagnetic Spectrum of Neutron Stars” Marmaris, Türkei (7.6–18.6) – “Galaxies Viewed with Chandra” CfA, Cambridge, USA (07.07–09.07) – 6-th CAS-MPG workshop on cosmology and galaxy formation” Tunxi, China (12.10–16.10) – “Cosmology and High Energy Astrophysics (Zeldovich-90)” (Moskau, Rußland, 20.12.–24.12.)

W. Hillebrandt: – 5th INTEGRAL Workshop “The Integral Universe” (Munich, 16.2.–20.2.) – 10th International Konferenz on “Numerical Combustion” (Sedona, Arizona, 9.5.–12.5.) – International Konferenz on “Supernovae as Cosmological Lighthouses” (Padua, Italien, 16.6.–19.6.) – Workshop on “Supernova Theory and Nucleosynthesis” (Seattle, USA, 15.7.–17.7.) – Workshop on “Type Ia Supernovae and Cosmology” (Seattle, USA, 4.8.–7.8.)

H.-Th. Janka: “Nuclei in the Cosmos VIII” (Vancouver, 19.7.–23.7.)

G. Kauffmann: – Royal Society Discussion Meeting “The Impact of Active Galaxies on the Universe at Large” (London, 16.2.–17.2.) – IAU Symposium no. 222 “The Interplay among Black Holes, Stars and ISM in galactic Nuclei” (Gramado, 1.3.–5.3.)

F. Kupka: – IAU Symposium 224 “The A-star puzzle”, Poprad, Slovakia (8.7.–13.7.) – ASOS8 (International Kolloquium on Atomic Spectra and Oscillator Strengths), Madison, Wisconsin, USA (8.8.–12.8.)

P. Mazzali: – “Asphericity in Hypernovae: a link to GRBs” at the annual Meeting of the Italian Astron. Soc. (Milan, 20.4.-22.4.) – “Hypernovae/Supernovae in Gamma-Ray Bursts

and X-Ray Flashes” at “The Supernova - Gamma Ray Burst Connection” INT, (Seattle 15.7.-17.7.) – “Hypernovae and Gamma-Ray Bursts”, at “Italian-Israeli Astrophysics Workshop” (Tel Aviv, 12.12.-13.12.)

A. Merloni: – “From X-ray binaries to quasars: Black hole accretion on all mass scales” (Amsterdam, The Netherlands, 12.7–15.7) – “The 2004 Ringberg Schloß Workshop on AGN Physics” (Ringberg Schloß, Germany, 22.11–25.11)

E. Müller: – Meeting of the Physics Peer Review Committee of the AstroParticle Physics European Coordination (Orsay, 28.6.) – Konferenz on Computational Physics 2004 (Genoa, 1.9.–4.9.) – CNRS summer school on Physique Stellaire: Dynamique des fluides stellaires et simulations numériques associees (Aussois, 26.9 - 1.10.) – Isaac Newton Institute for Mathematical Sciences Workshop on “Large-scale Computation in Astrophysics” (Cambridge, 11.10.–15.10.)

S. Sazonov: “The Supernova-Gamma Ray Burst Connection” workshop at the Institute for Nuclear Theory (Seattle, 12.06).

V. Springel: – IAU Kolloquium 195 “The Outskirts of Clusters of Galaxies” (Torino, 12.-16.3.) – MPA/MPE/ESO Konferenz “Growing Black Holes: Accretion in a Cosmological Context” (Garching, 21.-26.6.) – Aspen Summer Workshop “Star Formation in Galaxies” (Aspen, 6.-18.7.) – Workshop “Frontiers in Computational Astrophysics” (Wengen, 27.-29.09.) – KITP Konferenz “Galaxy-Intergalactic Medium Interactions” (Santa Barbara, 25.-29.10.)

R. Sunyaev: – Special session of the Russian Academy of Sciences devoted to the 90th Birthday of Yakov Zeldovich, February 2004. – Symposium “Exploring the Cosmic Frontier”, Berlin, May 2004 – Dark Universe Workshop at MPE, May 2004 – 31st EPS Konferenz on Plasma Physics, London, Juni 2004

A. Weiss: “Chemical Abundances and Mixing in Stars in the Milky Way and its Satellites”, (Castiglione della Pescaia, Italien, 13.9.–17.9.)

S.D.M. White: – Planck Consortium Meeting, Paris 2004 – Dark Matter Workshop, Garching 2004. – Ringberg Workshop on the Evolution of Galactic Disks. – IAU Symposium #225, Gravitational Lensing and Cosmology, Lausanne 2004 – KITP conference on the Intergalactic Medium, Santa Barbara 2004. – Jerusalem Winter School on Galaxy Formation, Israel, 2004. – 1st Chinese Summer School on Extragalactic Astrophysics, Shanghai 2004 – Astroparticle Physics, Erlangen 2004. – German Astroparticle School, Obertrubach 2004.

#### 7.4 Kolloquiums Vorträge

B. Ciardi: UC Santa Cruz (Santa Cruz, 17.10.)

B. Ciardi: SISSA (Trieste, 7.3.)

A. Merloni: Seminaires d’Astrophysique de l’OMP (Toulouse, Frankreich, 6.12)

S. Yu. Sazonov: Weekly colloquium series at the Max-Planck-Institute for Radio Astronomy and the Astronomical Institutes of the Universität Bonn (Bonn, 17.12.)

V. Springel: – Physikalisches Kolloquium (Universität Heidelberg, 2.2.) – Astrophysikalisches Kolloquium (ETH Zürich, 10.2.) – Astrophysikalisches Kolloquium (Saclay, 6.5.) – Astrophysikalisches Kolloquium (Berkeley, 27.10.) – Physikalisches Kolloquium (Universität Hannover, 23.11.)

R. Sunyaev: – Caltech Phys. Kolloquium, January 2004 – Joint Astrophysikalisches Seminar at ESO-Chile, April 2004 – Vortag Kolloquium, ESO-Chile, April, 2004 – Three Oort Professorship colloquia, Leiden, April 2004 – Kolloquium der Heidelberger Physiker, Juli 2004 – Oort Professor Kolloquium, Groningen, September 2004

S.D.M. White: – MPI for Solar System Research. – Astronomy Department, UC Berkeley. – Institute of Astronomy, Granada – Institute of Astronomy, Cambridge

## 7.5 Öffentliche Vorträge

Börner, G.: – Katholische Akademie, München (27.1.)  
 – Universität Mainz–Studium Generale (13.6.)  
 – LMU, München (Reihe Physik Modern"22.7.)  
 – Urania Graz (27.10.)

E. Müller: MPG-Hauptversammlung (Stuttgart, 23.6.)

Sunyaev, R.: Öffentl. Kosmologie Vorlesung, Torino, Italien, März 2004.

## 7.6 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)

G. Börner, H.-Th. Janka, W. Hillebrandt und S. White sind mit einigen Teilprojekten am Sonderforschungsbereich "Astro-Teilchenphysik" (SFB 375) beteiligt. W. Hillebrandt ist stellvertretender Leiter des SFB's. Aufgabe des SFB's ist die Forschung auf dem Gebiet der Astro-Teilchenphysik. (Beteiligte Institute: Physik-Department (TU), Sektion der Physik (LMU), Univ. Sternwarte (LMU) und Max-Planck-Inst. f. Physik in München).

Folgende EU Netzwerke waren 2004 aktiv:

"Thermonuclear Supernovae and Cosmology" (W. Hillebrandt);  
 "Cosmic Microwave Background" (R. Sunyaev);  
 "Gamma-Ray Burst" (R. Sunyaev);  
 "Planck Surveyor" (S. White);  
 "Inter Galactic Medium" (S. White);  
 "Optical-Infrared Co-ordination Network for Astronomy (OPTICON)" (H.Spruit)  
 "Multi-wavelength Analysis of Galaxy Populations (MAGPOP)", (G. Kauffmann)

## 7.7 Sonstige Reisen

A.J. Banday: Jep Propulsion Laboratory, Pasadena (16.04.–21.05.).

G. Börner: Shanghai Astronomical Observatory (29.03.–05.06.). G. Börner: RESCEU, Tokyo University, Tokyo (1.12.–31.12.).

E. Churazov: Space Research Institute, Moskau (17.04.–16.05., 30.09.–01.11., 15.12.–31.12.).

B. Ciardi: Kavli Institute for Theoretical Physics, Santa Barbara (25.10–21.11)

M. Gilfanov: Space Research Institute, Moskau (13.05.–11.06., 25.08.–22.09.)

W. Hillebrandt: Institute for Nuclear Theory, Seattle (10.7.–21.8.)

T. Jaffe: Jet Propulsion Laboratory, Pasadena, California, USA (23.11. – 17.12.)

W. Krämer: – Steacie Institute for Molecular Sciences, NRCC, Ottawa (29.03.–30.04.)  
 – Dept. Physical Chemistry, Comenius University Bratislava (18.10–13.11.) – Center for Complex Systems, Academy of Sciences, Prag (01.12.–18.12.)

F. Kupka: Observatoire de Paris/Meudon, Meudon, Frankreich (25.9.–9.10.)

F. Röpke: Visiting Fellow at the Institute for Nuclear Theory at the Universität Washington, Seattle, U.S.A. (02. Aug.–21. Aug.)

S. Yu. Sazonov: Space Research Institute, Moskau (17.08.–02.09., 19.12.–06.01.).

## 8 Veröffentlichungen

### 8.1 In Zeitschriften und Büchern

*Erschienen:*

- Abazajian, K., et al. (inkl. S. White und S. Zibetti): The Second Data Release of the Sloan Digital Sky Survey *Astron. J.* **128**, (2004) 502–512.
- Abbott, J.B., et al (inkl. L. Dessart): Wolf-Rayet stars in M33 - I. Optical spectroscopy using CFHT-MOS *Mon. Not. R. Astron. Soc.* **350**, (2004) 552–564.
- Acke, B., M.E. van den Ancker, C.P. Dullemond et al.: Correlation between grain growth and disk geometry in Herbig Ae/Be systems. *Astron. Astrophys.* **422**, (2004) 621–626.
- Alcalá, (2004) J. M., M. Pannella, E. Puddu et al.: The Capodimonte Deep Field I - Presentation of the survey und first follow-up studies *Astron. Astrophys.* **428**, (2004) 339–352.
- Alcock, C., et al. (MACHO Collaboration inkl. Popowski, P.) The MACHO Project Large Magellanic Cloud Variable Star Inventory. XIII. Fourier Parameters for the First Overtone RR Lyrae Variables and the LMC Distance. *Astron. J.* **127**, (2004) 334–354.
- Aoki, W., S. Inoue, S. Kawanomoto et al.: A low upper-limit on the lithium isotope ratio in HD140283. *Astron. Astrophys.* **428**, (2004) 579–586.
- Apai, D., I. Pascucci, C. P. Dullemond et al.: Grain growth und dust settling in a brown dwarf disk: Gemini/T-ReCS observations of CFHT-BD-Tau 4 *Astron. Astrophys. Letters.* **426**, (2004) 53–59.
- Arefev, V. A., M. G. Revnivtsev, A. A. Lutovinov und R. A. Sunyaev: Broadband X-ray spectrum of XTE J1550-564 during 2003 outburst *Astronomy Letters.* **30**, (2004) 751–758.
- Arp, H., E.M. Burbidge und G.R. Burbidge: The double radio source 3C 343.1: A galaxy-QSO pair with very different redshifts. *Astron. Astrophysics* **414**, (2004) L37–L40.
- Arp, H., C. Gutiérrez und M. López-Corredoira : New optical spectra und general discussion on the nature of ULX's. *Astron. Astrophysics* **418**, (2004) 877–883.
- Barton, E., D. Romeel, V. Springel et al.: Searching for Star Formation beyond Reionization. *Astrophys. J.* **604**, (2004) L1–L4.
- Barreiro, R. B., M. P. Hobson, A. J. Banday et al.: Foreground separation using a flexible maximum-entropy algorithm: an application to COBE data. *Mon. Not. R. Astron. Soc.* **351**, (2004) 515–540.
- Basu, K., C. Hernández-Monteagudo und R.A. Sunyaev: CMB observations und the production of chemical elements at the end of the dark ages. *Astron. Astrophys.* **416** (2004) 447–466.
- Baugh, C. M., D. Croton, E. Gaztanaga et al. The 2dF Galaxy Redshift Survey: hierarchical galaxy clustering. *Mon. Not. R. Astron. Soc.* **351**, (2004) L44–L48.
- Benetti, S., P. Meikle, M. Stehle et al.: Supernova 2002bo: inadequacy of the single parameter description. *Mon. Not. R. Astron. Soc.* **348**, (2004) 261–278.
- Bicker, J., F. von Alvensleben, C. Möller und K.J. Fricker: Chemically consistent evolution of galaxies II. Spectrophotometric evolution from zero to high redshift. *Astron. Astrophys.* **413**, (2004) 37–48.
- Bielewicz, P., K. M. Górski und A. J. Banday: Low order multipole maps of CMB anisotropy derived from WMAP. *Mon. Not. R. Astron. Soc.*, **355**, (2004) 1283–1302.
- Biller, B.A., C. Forman, W.R. Forman et al.: Hot Gas Structures in the Elliptical Galaxy NGC 4472. *Astrophys. J.* **613**, (2004) 238–246.

- Blaizot, J., B. Guideroni, F. Stoehr et al.: Galics III. Properties of Lyman-break galaxies at a redshift of 3. *Mon. Not. R. Astron. Soc.* **352**, (2004) 571–588.
- Blinnikov S. und E. Sorokina: Type Ia Supernova models: Latest developments. *Astrophys. und Space Science* **290**, (2004) 13–28.
- Böhringer, H., K. Matsushita, E. Churazov et al.: Implications of the central metal abundance peak in cooling core clusters of galaxies. *Astron. Astrophys.* **416**, (2004) L21–L25.
- Boehm, C., T. Enßlin und J. Silk: Can annihilating Dark Matter be lighter than a few GeV?. *Journal of Physics G: Nuclear und Particle Physics.* **30**, (2004) 279–285.
- Boogert, A. C., C.P. Dullemond, et al.: Spitzer Space Telescope Spectroscopy of Ices toward Low-Mass Embedded Protostars. *Astrophys. J. Suppl.* **154**, (2004) 359–362.
- Borgani, S, G. Murante, V. Springel et al.: X-ray properties of galaxy clusters und groups from a cosmological hydrodynamical simulation. *Mon. Not. R. Astron. Soc.* **348**, (2004) 1078–1096.
- Bouche, N. und J. Löwenthal: The clustering of galaxies around three z=3 damped Lyman alpha absorbers. *Astrophys. J.* **609**, (2004) 513–524.
- Braithwaite, J. und H.C. Spruit: A fossil origin for the magnetic field in A-stars und white dwarfs. *Nature* **431**, (2004) 819–821.
- Brinchmann, J., S. Charlot, S. White et al.: The physical properties of star-forming galaxies in the low-redshift Universe. *Mon. Not. R. Astron. Soc.* **351**, (2004) 1151–1179.
- Bünning, A. und H. Ritter: Long-term evolution of compact binaries with irradiation feedback. *Astron. Astrophys.* **423**, (2004) 281–299.
- Burbidge, E. M., G. Burbidge, H. Arp und S. Zibetti: QSOs and Active Galactic Nuclei Associated with NGC 2639. *Astro. Phys. Journ. Supp.* **153**, (2004) 159–163 .
- Chluba, J. und R.A. Sunyaev: Superposition of blackbodies und the dipole anisotropy: A possibility to calibrate CMB experiments *Astron. Astrophys.* **424**, (2004) 389–408.
- Choi, Y.-Y., S. Christopher, S. Heinz et al.: Observations of A4059 with Chandra, Hubble Space Telescope und the Very Large Array: Unraveling a Complex Cluster/Radio Galaxy Interaction. *Astrophys. J.* **606**, (2004) 185–195.
- Churazov, E., W. Forman, C. Jones et al.: XMM-Newton observations of the Perseus cluster - II. Evidence for gas motions in the core. *Mon. Not. R. Astron. Soc.* **347**, (2004) 29–35.
- Churazov, E. und N. Inogamov: Stability of cold fronts in clusters: is magnetic field necessary?. *Mon. Not. R. Astron. Soc.* **350**, (2004) L52–L56.
- Civiš, (2004) S., J. Šebera, W.P. Kraemer et al.: New rotation-vibration band und potential energy function of  $\text{NeH}^+$  in the ground electronic state. *J. Molec. Structure* **511**, (2004) 695–696.
- Clowe, D., G. De Lucia und L. King: Effects of asphericity und substructure on the determination of cluster mass with weak gravitational lensing. *Mon. Not. R. Astron. Soc.* **350**, (2004) 1038–1048.
- Cramphorn, C.K., S.Yu. Sazonov und R.A. Sunyaev: Scattering in the vicinity of relativistic jets: A method for constraining jet parameters. *Astron. Astrophys.* **420**, (2004) 33–48.
- Croton, D. J., E. Gaztanaga, C.M. Baugh et al.: The 2dF Galaxy Redshift Survey: higher-order galaxy correlation functions. *Mon. Not. R. Astron. Soc.* **352** (2004) 1232–1244.
- Croton, D. J., M. Colless, E. Gaztanaga et al.: The 2dF Galaxy Redshift Survey: voids und hierarchical scaling models. *Mon. Not. R. Astron. Soc.* **352** (2004) 828–836.
- De Lucia, G., G. Kauffmann, V. Springel et al.: Substructures in cold dark matter haloes. *Mon. Not. R. Astron. Soc.* **348**, (2004) 333–344.

- De Lucia, G., G. Kauffmann und S.D.M. White: Chemical enrichment of the intracluster and intergalactic medium in a hierarchical galaxy formation model *Mon. Not. R. Astron. Soc.* **349**, (2004) 1101–1116.
- De Lucia, G., B. Poggianti, A. Aragón-Salamanca et al.: The Buildup of the Red Sequence in Galaxy Clusters since  $z \sim 0.8$  *Astrophysikalisches Journal*. **610**, (2004) L77–L80.
- Denissenkov, P. und A. Weiss: Globular Cluster Archaeology: Nucleosynthesis und Extra Mixing in Extinct Stars. *Astrophys. J.* **603**, (2004) 119–126.
- Desjacques, V., A. Nusser, M. Haehnelt und F. Stoehr: Galactic winds und the Lyman alpha forest. *Mon. Not. R. Astron. Soc.* **350**, (2004) 879–892.
- Dessart, L.: 3D hydrodynamical simulations of corotating interaction regions in rotating line-driven stellar winds *Astron. Astrophys.* **423**, (2004) 693–704.
- Dewangan G.C., R. E. Griffiths, T. Di Matteo und J.J. Schurch: Iron  $K\alpha$  emission from the low-luminosity Active Galaxies M81 and NGC 4579, *Astrophys. J.* **607**, (2004) 788–793.
- Di Matteo T., R. Croft, V. Springel und L. Hernquist: The cosmological evolution of metal enrichment in quasar host galaxies. *Astrophys. J.* **610**, (2004) 80–92.
- Di Matteo T., B. Ciardi und F. Miniati: The 21 centimeter emission from the reionization epoch: extended und point source foregrounds. *Mon. Not. R. Astron. Soc.* **355**, (2004) 1053–1065.
- Diaferio, A., S. Borgani, K. Dolag et al.: Measuring cluster peculiar velocities with the Sunyaev-Zeldovich effects: scaling relations und systematics. *Mon. Not. R. Astron. Soc.*, **356**, (2004) 1477–1488.
- Dolag, K., M. Jubelgas und V. Springel: Thermal Conduction in Simulated Galaxy Clusters *Astrophys. J. Lett.* **606**, (2004) L97–L100.
- Dolag, K., M. Bartelmann, F. Perrotta et al.: Numerical study of halo concentrations in dark-energy cosmologies. *Astron. Astrophys.* **416**, (2004) 853–864.
- Dolag, K., D. Grasso, V. Springel und I. Tkachev: Mapping Deflections of Extragalactic Ultrahigh-Energy Cosmic Rays in Magnetohydrodynamics Simulations of the Local Universe. *JETP Letters* **79**, (2004) 583–587.
- Dubus, G., R. Campbell, H.C. Spruit et al.: Excess mid-infrared emission in cataclysmic variables, *Mon. Not. Roy. Astron. Soc.* **349**, (2004) 869–874.
- Dullemond, C. P. und C. Dominik: The effect of dust settling on the appearance of protoplanetary disks *Astron. Astrophys.* **421**, (2004) 1075–1086.
- Dullemond, C. P. und C. Dominik: Flaring vs. self-shadowed disks: The SEDs of Herbig Ae/Be stars *Astron. Astrophys.* **417** (2004) 159–168.
- Eriksen, H. K., F. K. Hansen, A. J. Banday et al.: Erratum: Asymmetries in the CMB anisotropy field. *Astrophys. J.* **609**, (2004) 1198–1199.
- Eriksen, H. K., D. I. Novikov, A. J. Banday et al.: Testing for Non-Gaussianity in the WMAP data: Minkowski functionals und the length of the skeleton. *Astrophys. J.* **612**, (2004) 64–80.
- Eriksen, H. K., A. J. Banday, K. M. Górski und P. B. Lilje: Foreground removal by an Internal Linear Combination method: limitations und implications. *Astrophys. J.* **612**, (2004) 633–646.
- Eriksen, H. K., P. B. Lilje, A. J. Banday und K. M. Górski: Estimating  $N$ -Point Correlation Functions from Pixelized Sky Maps. *Astrophys. J. Suppl. Ser.*, **151**, (2004) 1–11.
- Eriksen, H. K., F. K. Hansen, A. J. Banday et al.: Asymmetries in the CMB anisotropy field. *Astrophys. J.* **605**, (2004) 14–20.

- Eriksen, H. K., I. J. O'Dwyer, A. J. Banday et al.: Power spectrum estimation from high-resolution maps by Gibbs sampling *Astrophys. J. Suppl.* **155**, (2004) 227–241.
- Ettori, S., S. Borgani, A. Diaferio, K. Dolag et al.: Evolution of the X-ray properties of galaxy clusters in a cosmological hydrodynamical simulation. *Mon. Not. R. Astron. Soc.* **354**, (2004) 111–122 (2004)
- Feretti, L., C. Burigana und T.A. Enßlin: Diffuse radio emission from the Intracluster medium. *New Astron. Rev.*, **48** (2004) 1137–1144.
- Filippova, E.V. et al (inkl. M. Revnivtsev, R. Sunyaev): Broadband observations of the transient X-ray pulsar SAX J2103.5 + 4545. *Astron. Lett.* **30**, (2004) 824–833.
- Finoguenov A. und F. Miniati: The impact of high pressure cluster environment on the X-ray luminosity of Coma early-type galaxies. *Astron. Astrophys.* **418**, (2004) L21–L25.
- Finoguenov A., W. Pietsch, B. Aschenbach und F. Miniati: XMM-Newton witness of M86 X-ray metamorphosis. *Astron. Astrophys.* **415**, (2004) 415–424.
- Förster-Schreiber, N. M. et al. (inkl. G. Rudnick): A Substantial Population of Red Galaxies at  $z > 2$ : Modeling of the Spectral Energy Distributions of an Extended Sample. *Astrophys. J.* **616**, (2004) 40–62.
- Furlanetto, S., J. Schaye, V. Springel und L. Hernquist: Ultraviolet Line Emission from Metals in the Low-Redshift Intergalactic Medium. *Astrophys. J.* **606**, (2004) 221–236.
- Gao, L., S. White, A. Jenkins et al.: The subhalo populations of LCDM dark haloes. *Mon. Not. R. Astron. Soc.* **355**, (2004) 819–834.
- Gao, L., A. Loeb, P.J.E. Peebles et al.: Early Formation und Late Merging of the Giant Galaxies. *Astrophys. J.* **614**, (2004) 17–25.
- Gao, L., G. De Lucia, S. White und A. Jenkins: Galaxies und subhaloes in  $\Lambda$  XCDM galaxy clusters. *Mon. Not. R. Astron. Soc.* **352**, (2004) L1–L5.
- Gavazzi, G., A. Donati et al. (inkl. S. Zibetti): The structure of elliptical galaxies in the Virgo cluster. Results from the INT Wide Field Survey *Astron. Astrophys.* **430**, (2004) 411–419.
- Geminale, A. und P. Popowski: Total to Selective Extinction Ratios und Visual Extinctions from Ultraviolet Data. *Acta Astron.* **54**, (2004) 375–390.
- Giannios, D. und H.C. Spruit: Excitation of low-frequency QPOs in black-hole accretion. *Astron. Astroph.* **427**, (2004) 251–261.
- Giavalisco, M., H.C. Ferguson, T. Erben et al.: The Great Observatories Origins Deep Survey: Initial Results from Optical und Near-Infrared Imaging. *Astrophys. J.* **606**, (2004) L93–L98.
- Gilfanov, M.: Low-mass X-ray binaries as a stellar mass indicator for the host galaxy. *Mon. Not. R. Astron. Soc.* **349**, (2004) 146–168.
- Gilfanov, M., H.J. Grimm und R. Sunyaev: Statistical properties of the combined emission of a population of discrete sources: astrophysical implications *Mon. Not. R. Astron. Soc.* **351**, (2004) 1365–1378.
- Gilfanov, M., H.-J. Grimm und R. Sunyaev: Lx-SFR relation in star-forming galaxies. *Mon. Not. R. Astron. Soc.* **347**, (2004) L57–L60.
- Halliday, C., B. Milvang-Jensen, S. Poirier et al.: Spectroscopy of clusters in the ESO Distant Cluster Survey (EDisCS) *Astron. Astrophys.* **427**, (2004) 397–413.
- Hansen, F. K., A. J. Banday und K. M. Górski: Testing the cosmological principle of isotropy: local power spectrum estimates of the WMAP data. *Mon. Not. R. Astron. Soc.*, **354**, (2004) 641–665.
- Hansen, F. K., A. Balbi, A. J. Banday und K. M. Górski: Cosmological parameters und the WMAP data revisited. *Mon. Not. R. Astron. Soc.*, **354**, (2004) 905–912.

- Harutyunyan, A. et al. (inkl. A. Pastorello): Supernova 2004ex in NGC 182. IAU Circ. **8446**, (2004) 3.
- Hayashi, E., J.F. Navarro, C. Power et al.: The inner structure of  $\Lambda$ CDM haloes - II. Halo mass profiles and low surface brightness galaxy rotation curves. Mon. Not. R. Astron. Soc., **355**, (2004) 794–812.
- Heckman, T.M., G. Kauffmann, J. Brinchmann et al.: Present-Day Growth of Black Holes und Bulges: The Sloan Digital Sky Survey Perspective. Astrophys. J. **613**, (2004) 109–118.
- Heinz, S. und A. Merloni: Constraints on relativistic beaming from estimators of the un-beamed flux. Mon. Not. R. Astron. Soc., **355**, (2004) L1–L5.
- Hernández-Monteagudo, C., R. Genova-Santos und F. Atrio-Barandela: The Effect of Hot Gas in the First-Year Wilkinson Microwave Anisotropy Probe (WMAP) Data Astrophys. J. Letters. **613**, (2004) L89–L92.
- Hernández-Monteagudo, C. und J.A. Rubiño-Martín: On the presence of thermal Sunyaev-Zel'dovich induced signal in the first-year WMAP temperature maps. Mon. Not. R. Astron. Soc. **347**, (2004) 403–410.
- Hernández-Monteagudo, C. A. Kashlinsky und F. Atrio-Barandela: Using peak distribution of the cosmic microwave background for WMAP and Planck data analysis: Formalism und simulations. Astron. Astrophys. **413**, (2004) 833–842.
- Hillebrandt, W.: Supernova explosion models: predictions versus observations. New Astron. Rev. **48**, (2004) 615–621.
- Hoog, D., M. Blanton, J. Brinchmann et al.: The dependence on environment of the color magnitude relation of galaxies. Astrophys. J. **601**, (2004) L29–L32.
- Ibata, R., S. Chapman, A. Ferguson et al.: Taking measure of the Andromeda halo: a kinematic analysis of the giant stream surrounding M31. Mon. Not. R. Astron. Soc. **351**, (2004) 117–124.
- Inoue, S.: Probing the cosmic reionization history und local environment of gamma-ray bursts through radio dispersion. Mon. Not. R. Astron. Soc. **348**, (2004) 999–1008.
- Janiuk A., R. Perna, T. Di Matteo und B. Czerny: Evolution of a neutrino-cooled disc in Gamma-Ray Bursts. Mon. Not. R. Astron. Soc. **355**, (2004) 950–958.
- Jensen, P., T.E. Odaka, W.P. Kraemer et al.: Reply to the comment on: “The Renner effect in triatomic molecules with application to  $CH_2^+$ ,  $MgNC$  und  $NH_2$ ”. Spect. Acta Part A: **60**, (2004) 737–739.
- Jing, Y.P. und G. Börner: The threepoint correlation function of Galaxies determined from the 2dFGRS. Astrophys. J. **607**, (2004) 140–163.
- Jing Y.P. und G. Börner: The pairwise velocity dispersion of galaxies: luminosity dependence and a new test for galaxy formation models. Astrophys. J., **617**, (2004) 782–793.
- Jubelgas, M., V. Springel und K. Dolag: Thermal conduction in cosmological SPH simulations. Mon. Not. R. Astron. Soc. **351**, (2004) 423–435.
- Kamp, I. und C.P. Dullemond: The gas temperature in the surface layers of protoplanetary disks Astrophys. J. **615**, (2004) 991–999.
- Käppler, F. et al. (inkl. C. Travaglio): Stellar neutron capture on  $^{180}\text{Ta}^m$  II. Defining the s-process contribution to nature’s rarest isotope. Phys. Review D **69**, (2004) 055802.
- Kauffmann, G., S. White, T. Heckman et al.: The environmental dependence of the relations between stellar mass, structure, star formation und nuclear activity in galaxies. Mon. Not. R. Astron. Soc. **353**, (2004) 713–731.
- Kieninger, M., O. Ventura und G. Diercksen: A comparative density functional study of the torsional potential of 4-fluoro benzene und related species. Chem. Phys. Lett. **389**, (2004) 405–412.



- Kilbinger, M. und P. Schneider: Analysis of two-point statistics of cosmic shear II. Optimizing the survey geometry. *Astron. Astrophys.* **413**, (2004) 465–476.
- Kobayashi, Ch.: GRAPE-SPH chemodynamical simulation of elliptical galaxies - I. Evolution of metallicity gradients *Mon. Not. R. Astron. Soc.* **347**, (2004) 740–758.
- Kong, X., S. Charlot, J. Brinchmann und S.M. Fall: Star formation history und dust content of galaxies drawn from ultraviolet surveys. *Mon. Not. R. Astron. Soc.* **349**, (2004) 769–778.
- Kraft, R. P., W. Forman, E. Churazov et al.: An Unusual Discontinuity in the X-Ray Surface Brightness Profile of NGC 507: Evidence of an Abundance Gradient?. *Astrophys. J.* **601**, (2004) 221–227.
- Krisciunas, K., M. Philips, M. Stritzinger et al.: Optical und infrared photometry of the nearby Type Ia supernovae 1999ee, 2000bh, 2000ca, und 2001ba. *Astron. J.* **127**, (2004) 1664–1681 (2004).
- Kurk, J., et al. (inkl. B. Ciardi): A Lyman alpha emitter at  $z=6.5$  found with slitless spectroscopy. *Astron. Astroph.* **422**, (2004) L13–L17.
- Le Fèvre, O., G. Vettolani, S. Charlot et al.: The VIMOS VLT Deep Survey. Public release of 1599 redshifts to  $I_{AB} \leq 24$  across the Chandra Deep Field South. *Astron. Astrophys.*, **428**, (2004) 1043–1049.
- Lee, B., S. Allam, M. Bartelmann et al.: A catalog of compact groups of galaxies in the SDSS comissioning data. *Astron. J.* **127**, (2004) 1811–1859.
- Leinert, Ch., R. van Boekel, C.P. Dullemond et al.: Mid-infrared sizes of circumstellar disks around Herbig Ae/Be stars measured with MIDI on the VLTI *Astron. Astrophys.* **423**, (2004) 537–548.
- Leismann, T, M.A. Aloy und E. Müller: MHD Simulations of Relativistic Jets. *Astrophys. Space Sci.* **293**, (2004) 157–163.
- Lewis, G. F. et al. (inkl. A. Ferguson): The Andromeda Stream. *Astron. Society of Australia.* **21**, (2004) 203–206 .
- Liu, B.F., F. Meyer und E. Meyer-Hofmeister: A cool disk in the Galactic Center? *Astron. Astrophys.* **421**, (2004) 659–666.
- Lutovinov, A., S. Tsygankov, S. Grebenev et al.: Two years of observations of the X-ray pulsar SMC X-1 with the ART-P telescope onboard the Granat Observatory. *Astron. Lett. J. Astron Space* **30**, (2004) 50–57.
- Malzac, J., A. Merloni und A.C. Fabian: Jet-disc coupling through a common energy reservoir in the black hole XTE J1118+480. *Mon. Not. R. Astron. Soc.* **351**, (2004) 253–264.
- Marigo, P., L. Girardi, A. Weiss et al.: Evolution of Planetary Nebulae. II. Population effects on the bright cut-off of +the PNLF. *Astron. Astrophys.* **423**, (2004) 995–1015.
- McConnachie, A. W., J. M.Irwin, A. Ferguson et al.: The tidal trail of NGC 205? *Mon. Not. R. Astron. Soc.* **351**, (2004) L94–L98 .
- McConnachie, A. W., J.M. Irwin, A. Ferguson et al.: Determining the location of the tip of the red giant branch in old stellar populations: M33, Andromeda I und II. *Mon. Not. R. Astron. Soc.* **350**, (2004) 243–252 .
- Menou, K., S.A. Balbus und H.C. Spruit: Local Axisymmetric Diffusive Stability of Weakly Magnetized, Differentially Rotating, Stratified Fluids, *Astrophys. J.* **607**, (2004) 564–570.
- Merloni, A.: The anti-hierarchical growth of supermassive black holes. *Mon. Not. R. Astron. Soc.* **353**, (2004) 1035–1047.
- Merloni A., G. Rudnick und T. Di Matteo : Tracing the cosmological assembly of stars und supermassive black holes in galaxies, *Mon. Not. R. Astron. Soc.*, **354**, (2004) L37–L42.

- Mescheryakov, A. V., et al. (inkl. M. Revnivtsev) Optical und X-ray Observations of Thermonuclear Bursts from GS 1826-24 during September-October 2003. *Astronomy Lett.* **30**, (2004) 751–758.
- Meyer-Hofmeister, E.: Why soft X-ray transients can remain in the low/hard state during outburst. *Astron. Astrophys.* **423**, (2004) 321–326.
- Mimica, P., M. Aloy, E. Müller und W. Brinkmann: Synthetic X-ray light curves of BL Lacs from relativistic hydrodynamic simulations. *Astron. Astrophys.* **418**, (2004) 947–958.
- Mimica, P., M.A. Aloy, E. Müller und W. Brinkmann: Computation of X-Ray Blazar Light Curves Using RHD Simulations. *Astrophys. Space Sci.*, **293**, (2004) 165–172.
- Miniati, F., A. Ferrara, S. White und S. Bianchi: Ultraviolet background radiation from cosmic structure formation. *Mon. Not. R. Astron. Soc.* **348**, (2004) 964–976.
- Mo, H. J., X. Yang, F. van den Bosch und Y. P. Jing: The dependence of the galaxy luminosity function on large-scale environment. *Mon. Not. R. Astron. Soc.* **349**, (2004) 205–212.
- Mobasher, B., R. Idzi, T. Erben et al.: Photometric redshift for galaxies in the GOODS southern field. *Astrophys. J.* **600**, (2004) L167–L170.
- Molkov, S. V., A. Cherepashchuk, M. Revnivtsev et al.: A Hard X-ray Survey of the Sagittarius Arm Tangent with the IBIS Telescope of the INTEGRAL Observatory: A Catalog of Sources. *Astronomy Lett.* **30**, (2004) 534–539.
- Montgomery, M.H. und Kupka F.: White dwarf envelopes: further tests of non-local models of convection. *Mon. Not. R. Astron. Soc.* **350**, (2004) 267–276.
- Müller E., M. Rampp M., R. Buras et al.: Towards gravitational wave signals from realistic core collapse supernova models. *Astrophys. J.* **603**, (2004) 221–230.
- Nagamine, K., V. Springel und L. Hernquist: Abundance of damped Lyman alpha absorbers in cosmological smoothed particle hydrodynamics simulations. *Mon. Not. R. Astron. Soc.* **348**, (2004) 421–434.
- Nagamine, K., V. Springel und L. Hernquist: Star formation rate und metallicity of damped Lyman alpha absorbers in cosmological smoothed particle hydrodynamics simulations. *Mon. Not. R. Astron. Soc.* **348**, (2004) 435–450.
- Nagamine, K., V. Springel, L. Hernquist und M. Machacek: Photometric properties of Lyman-break galaxies at  $z=3$  in cosmological SPH simulations. *Mon. Not. R. Astron. Soc.* **350**, (2004) 385–395.
- Nagamine, K., R. Cen, V. Springel et al.: Is there a missing galaxy problem at the high redshift? *Astrophys. J.* **610**, (2004) 45–50.
- Natarajan, P. und V. Springel: Abundance of substructure in clusters of galaxies: *Astrophys. J.* **617**, (2004) L13–L16.
- Navarro, J. F., E. Hayashi, S. White et al.: The inner structure of  $\Lambda$ CDM haloes - III. Universality und asymptotic slopes. *Mon. Not. R. Astron. Soc.* **349**, (2004) 1039–1051.
- Navasardyan, H. et al. (inkl. A. Pastorello): Supernova 2004ex in NGC 182. *IAU Circ.* **8454**, (2004) 3.
- Nayakshin, S.: Close stars und accretion in low-luminosity active galactic nuclei. *Mon. Not. R. Astron. Soc.* **352**, (2004) 1028–1036.
- Nayakshin, S., J. Cuadra und R. Sunyaev: X-ray flares from Sgr A\*: Star-disk interactions? *Astron. Astrophys.* **413**, (2004) 173–188.
- Nendwich, J., U. Heiter, F. Kupka et al.: Interpolation of Stellar Model Grids und Application to the NEMO Grid. *Comm. in Asteroseismology* **144**, (2004) 43–78.

- O'Dwyer, I. J., H. K. Eriksen, A. J. Banday et al.: Bayesian power spectrum analysis of the first-year WMAP data *Astrophys. J.*, **617**, (2004) L99–L102.
- Oechslin, R., K. Uryu, G. Poghosyan und F. K. Thielemann: The Influence of Quark Matter at High Densities on Binary Neutron Star Mergers *Mon. Not. R. Astron. Soc.* **349** (2004) 1469–1480.
- Osaki, Y. und F. Meyer: Enhanced mass transfer during dwarf nova outbursts by irradiation of the secondary? *Astron. Astrophys.*, **428**, (2004) L17–L20.
- Padilla, N.D., C. Baugh, D. Croton et al.: The 2dF Galaxy Redshift Survey: the clustering of galaxy groups. *Mon. Not. R. Astron. Soc.* **352**, (2004) 211–225.
- Pascucci, I., et al. (inkl. C.P. Dullemond): The 2D continuum radiative transfer problem. Benchmark results for disk configurations. *Astron. Astrophys.* **417** (2004) 793–805.
- Pfrommer, C. und T. Enßlin: Constraining the population of cosmic ray protons in cooling flow clusters with gamma-ray und radio observations: Are radio mini-halos of hadronic origin? *Astron. Astrophys.* **413**, (2004) 17–36.
- Pfrommer, C. und T. Enßlin: Estimating galaxy cluster magnetic fields by the classical and hadronic minimum energy criterion. *Mon. Not. R. Astron. Soc.* **352**, (2004) 76–90.
- Pieri, M. und M. Haehnelt: Pixel correlation searches for O vi in the Lyman forest und the volume filling factor of metals in the intergalactic medium at  $z \sim 2 - 3.5$ . *Mon. Not. R. Astron. Soc.* **347**, (2004) 985–993.
- Pierre, M., et al. (inkl. S. White): The XMM-LSS survey: Survey design und first results *J. Cosmol. Astropart. Phys.* **9** (2004) 011.
- Pignata, G., et al. (inkl. W. Hillebrandt und P. Mazzali): Photometric observations of the Type Ia SN 2002er in UGC 10743. *Mon. Not. R. Astron. Soc.*, **355**, (2004) 178–190.
- Pignata, G. et al. (inkl. P. Ruiz-Lapuente): Photometric observations of the Type Ia SN 2002er in UGC 10743. *Mon. Not. R. Astron. Soc.*, **433**, (2004) 1–13.
- Podsiadlowski, Ph., P. Mazzali, K. Nomoto et al.: The rates of hypernovae und gamma-ray bursts: Implications for their progenitors. *Astrophys. J.* **607**, (2004) L17–L20.
- Popowski, P. und W. Weinzierl: A Test for the Origin of Quasar Redshifts. *Mon. Not. R. Astron. Soc.* **348**, (2004) 235–240.
- Rappaport, S.A., J.M. Fregeau und H.C. Spruit: Accretion onto Fast X-Ray Pulsars, *Astrophys. J.* **606**, (2004) 436–444.
- Rebolo, R. et al. (inkl. A. Rubino-Martin): Cosmological parameter estimation using Very Small Array data out to  $1z = 1500$ . *Mon. Not. R. Astron. Soc.* **353**, (2004) 747–759.
- Rebusco, P.: Twin Peaks kHz QPOs: Mathematics of the 3:2 Orbital Resonance. *Publ. Astron. Soc. Japan* **56**, (2004) 553–557.
- Recchi, S.: Dynamical und Chemical Evolution of IZw18. *Publ. Astron. Soc. Aus.* **21**, (2004) 157–160.
- Recchi, S., F. Matteucci, A. D’Ercole und M. Tosi: Continuous star formation in IZw18. *Astron. Astrophys.*, **426**, (2004) 37–51.
- Revnivtsev, M., E. Churazov, S. Sazonov et al.: Hard X-ray view of the past activity of Sgr A\* in a natural Compton mirror. *Astron. Astrophys.* **425**, (2004) L49–L52.
- Revnivtsev, M. G., A. Lutovinov, B. Suleimanov et al.: Broadband X-ray Spectrum of the Intermediate Polar V2400 Oph. *Astronomy Lett.* **30**, (2004) 772–778.
- Revnivtsev, M. G., R. Sunyaev, M. Gilfanov et al.: A Hard X-ray Sky Survey with the SIGMA Telescope of the GRANAT Observatory. *Astronomy Letters.* **30**, (2004) 527–533.

- Revnivtsev, M. G., R. Sunyaev, D. Varshalovich et al.: A Hard X-ray Survey of the Galactic-Center Region with the IBIS Telescope of the INTEGRAL Observatory: A Catalog of Sources. *Astronomy Letters*. **30**, (2004) 382–389.
- Revnivtsev, M., R. Burenin, S. Fabrika et al.: First simultaneous X-ray und optical observations of rapid variability of supercritical accretor SS433. *Astron. Astrophys.* **424**, (2004) L5–L8.
- Revnivtsev, M. G., R. Sunyaev und M. Gilfanov: A Hard X-ray Sky Survey with the SIGMA Telescope of the GRANAT Observatory. *Astronomy Letters* **30** (2004) 527–533.
- Revnivtsev, M. G., R. Sunyaev und D. Varshalovich: A Hard X-ray Survey of the Galactic-Center Region with the IBIS Telescope of the INTEGRAL Observatory: A Catalog of Sources. *Astronomy Letters* **30**, (2004) 382–389.
- Revnivtsev, M., S. Sazonov, K. Jahoda und M. Gilfanov: RXTE all-sky slew survey. Catalog of X-ray sources at  $|b| > 10^\circ$  *Astron. Astrophys.* **418**, (2004) 927–936.
- Revnivtsev, M., A. Lutovinov, V. Suleimanov et al.: Broadband X-ray spectrum of intermediate polar V1223 Sgr *Astron. Astrophys.* **426**, (2004) 253–256.
- Röpke, F.K., J. Niemeyer und W. Hillebrandt: The cellular burning regime in type Ia supernova explosions: I. Flame propagation into quiescent fuel. *Astron. Astrophys.* **420**, (2004) 411–422.
- Röpke, F.K., J. Niemeyer und W. Hillebrandt: The cellular burning regime in type Ia supernova explosions: II. Flame propagation into vortical fuel. *Astron. Astrophys.* **421**, (2004) 783–795.
- Röpke, F.K. und W. Hillebrandt: The case against the progenitor’s carbon-to-oxygen ratio as a source of peak luminosity variations in type Ia supernovae. *Astron. Astrophys.* **420**, (2004) L1–L4.
- Robertson, B., N. Yoshida, V. Springel und L. Hernquist: Disk galaxy formation in a cold dark matter universe. *Astrophys. J.* **606**, (2004) 32–45.
- Rocha, G. et al. (inkl. A. J. Banday): Topology of the universe from COBE-DMR; a wavelet approach. *Mon. Not. R. Astron. Soc.* **351**, (2004) 769–778.
- Rubiño-Martín, J. A., C. Hernández-Monteagudo und T. Enßlin: Measuring dark matter flows in merging clusters of galaxies *Astron. Astrophys.* **419** (2004) 439–447.
- Ruiz-Lapuente, P., F. Comerón, J. Méndez et al.: The progenitor binary system of Tycho Brahe’s 1572 supernova. *Nature*, **431**, (2004) 1069–1072.
- Ruiz-Lapuente, P.: Cosmology with Supernovae. *Astrophys. Space Sci.* **290**, (2004) 43–59.
- Ruiz-Lapuente, P.: Tycho Brahe’s supernova: light from centuries past. *Astrophys. J.* **612**, (2004) 357–363.
- Sako, T., S. Yamamoto und G. Diercksen: Confined quantum systems: dipole transition moment of two- and three-electron quantum dots, und of helium und lithium atom in a harmonic oscillator potential. *J. Phys. B. At. Mol. Opt. Phys.* **37**, (2004) 1673–1688.
- Sako, T., I. Černušák und G. H. F. Diercksen: Confined quantum systems: structure of the electronic ground state und of the three lowest excited electronic states of the lithium molecule. *J. Phys. B: At. Mol. Opt. Phys.* **37**, (2004) 1091–1102.
- Salaris, M., A. Weiss und S.M. Percival: The age of the oldest Open Clusters. *Astron. Astrophys.* **414**, (2004) 163–174.
- Salaris, M., M. Riello, S. Cassisi und G. Piotto: The initial helium abundance of the galactic globular cluster system. *Astron. Astrophys.* **420**, (2004) 911–919.
- Sazonov, S.Yu., J.P. Ostriker und R.A. Sunyaev: Quasars: the characteristic spectrum und the induced radiative heating. *Mon. Not. R. Astron. Soc.* **347**, (2004) 144–156.

- Sazonov, S. und M. Revnivtsev: Statistical properties of local active galactic nuclei inferred from the RXTE 3-20 keV all-sky survey. *Astron. Astrophys.* **423** (2004) 469–480.
- Sazonov, S. Yu., M.G. Revnivtsev, A.A. Lutovinov et al.: Broadband X-ray spectrum of GRS 1734-292, a luminous Seyfert 1 galaxy behind the Galactic Center. *Astron. Astrophys.* **421**, (2004) L21–L24.
- Sazonov, S. Yu., A.A. Lutovinov und R.A. Sunyaev: An apparently normal gamma-ray burst with an unusually low luminosity. *Nature*. **430**, (2004) 646–648.
- Scheck L., T. Plewa, H.-T. Janka et al.: Pulsar recoil by large-scale anisotropies in supernova explosions. *Phys. Review Lett.* **92**, (2004) 011103–011107.
- Schücker, P. A. Finoguenov, F. Miniati et al.: Probing turbulence in the Coma galaxy cluster. *Astron. Astrophys.* **426**, (2004) 387–397.
- Schwartz, P., P. Heinzl, U. Anzer und B. Schmieder: Determination of the 3D structure of an EUV-filament observed by SoHO/CDS, SoHO/SUMER and VTT/MSDP, *Astron. Astrophys.* **421**, (2004) 323–338.
- Setiawan S., M. Ruffert und H.-Th. Janka: Non-stationary hyperaccretion of stellar-mass black holes in three dimensions: Torus evolution und neutrino emission. *Mon. Not. R. Astron. Soc.* **352**, (2004) 753–758.
- Sigl, G., F. Miniati und T. Enßlin: Ultra-High Energy Cosmic Ray Probes of Large Scale Structure und Magnetic Fields. *Phys. Rev. D.* **70**, (2004) 043007–043017.
- Sokasian, A., N. Yoshida, T. Abel et al.: Cosmic reionization by stellar sources: population III stars. *Mon. Not. R. Astron. Soc.* **350**, (2004) 47–65.
- Spruit, H.: Gamma-Ray Burst Central Engines. *Baltic Astronomy*, **13**, (2004) 266–274.
- Sterzik, M.F. et al (inkl. C. Dullemond): Evolution of Young Brown Dwarf Disks in the Mid-Infrared *Astron. Astrophys.* **427**, (2004) 245–250.
- Sugiyama, N., S. Zaroubi und J. Silk: Isocurvature fluctuations induce early star formation. *Mon. Not. R. Astron. Soc.* **354**, (2004) 543–548.
- Tom, E., M. Meneghetti, M. Bartelmann et al.: The impact of cluster mergers on arc statistics. *Mon. Not. R. Astron. Soc.* **349**, (2004) 476–490 (2004) .
- Tomàs, R. et al. (inkl. H.T. Janka und L. Scheck): Neutrino signatures of supernova shock und reverse shock propagation. *J. of Cosmology und Astroparticle Phys. (JCAP)*, **09** (2004) 015.
- Tornatore, L., S. Borgani, F. Matteucci et al.: Simulating the metal enrichment of the intracluster medium. *Mon. Not. R. Astron. Soc.* **349**, (2004) L19–L24.
- Torri, E., M. Meneghetti, M. Bartelmann et al.: The impact of cluster mergers on arc statistics. *Mon. Not. R. Astron. Soc.* **349**, (2004) 476–490.
- Travaglio, C., K. Kifonidis und E. Müller: Nucleosynthesis in multi-dimensional simulations of SN II. *New Astronomy Review.* **48**, (2004) 25–30.
- Travaglio, C., W. Hillebrandt, M. Reinecke und F. Thielemann: Nucleosynthesis in multi-dimensional SN Ia explosions. *Astron. Astrophys.* **425**, (2004) 1029–1040.
- Travaglio, C., R. Gallino, E. Arnone et al.: Galactic evolution of Sr, Y, und Zr: a multiplicity of nucleosynthetic processes. *Astrophys. J.* **601**, (2004) 864–884.
- Tremonti, C., T.M. Heckman, G. Kauffmann et al.: The Origin of the Mass-Metallicity Relation: Insights from 53,000 Star-forming Galaxies in the Sloan Digital Sky Survey. *Astrophys. J.*, **613**, (2004) 898–913.
- Trujillo, I., G. Rudnick, H.-W. Rix: et al.: The Luminosity-Size und Mass-Size Relations of Galaxies out to  $z \approx 3$ . *Astrophys. J.* **604**, (2004) 521–533.

- Tsygankov, S., A. Lutovinov, S. Grebenev et al.: Observations of the X-ray pulsar GX 301-2 with the ART-P Telescope of the Granat Observatory. *Astron. Lett.-J. Astron. Space Astrophys.* **30**, (2004) 540–548.
- Utrobin, V.: The Light Curve of Supernova 1987A: The Structure of the Presupernova und Radioactive Nickel Mixing. *Astron. Lett.* **30**, (2004) 293–308.
- van Boekel, R., L.B. Waters, C. Dullemond et al.: Spatially und spectrally resolved 10 emission in Herbig Ae/Be stars *Astron. Astrophys.* **418**, (2004) 177–184.
- van den Bosch, F.C., H.J. Mo und X. Yang: Erratum: Towards cosmological concordance on galactic scales. *Mon. Not. R. Astron. Soc.* **348**, (2004) 736.
- van den Bosch, F.C., X. Yang und H.J. Mo: Erratum: Linking early- und late-type galaxies to their dark matter haloes. *Mon. Not. R. Astron. Soc.* **348**, (2004) 735 (2004)
- van Dokkum, P. G., M. Franx, G. Rudnick et al.: Stellar Populations und Kinematics of Red Galaxies at  $z > 2$ : Implications for the Formation of Massive Galaxies *Astrophys. J.* **611**, (2004) 703–724.
- Viel, M., S. Matarrese, V. Springel et al.: The bispectrum of the Lyman alpha forest at  $z$  2-2.4 from a large sample of UVES QSO absorption spectra (LUQAS). *Mon. Not. R. Astron. Soc.* **347**, (2004) L26–L30.
- Viel, M., M. Haehnelt und V. Springel: Inferring the dark matter power spectrum from the Lyman  $\alpha$  forest in high-resolution QSO absorption spectra. *Mon. Not. R. Astron. Soc.* **354**, (2004) 684–694.
- Wake D.A., C.J. Miller, T. Di Matteo et al.: The clustering of Active Galactic Nuclei in the Sloan Digital Sky Survey, *Astrophys. J. Lett.*, **610**, (2004) L85–L88.
- Wegmann, R., K. Dennerl und C.M. Lisse: The morphology of cometary X-ray emission. *Astron. Astrophys.*, **428**, (2004) 647–661.
- Weiss, A., H. Schlattl, M. Salaris und S. Cassisi: Models for extremely metal-poor halo stars. *Astron. Astrophys.* **422**, (2004) 217–223.
- Yang, X., H.J. Mo, F. van den Bosch et al.: Populating dark matter haloes with galaxies: comparing the 2dFGRS with mock galaxy redshift surveys. *Mon. Not. R. Astron. Soc.* **350** (2004) 1153–1173.
- Young, C.H., C.P. Dullemond, et al.: A “Starless” Core that Isn’t: Detection of a Source in the L1014 Dense Core with the Spitzer Space Telescope. *Astrophysical Journal Supplements* **154**, (2004) 396–401.
- Yurchenko, S. N., P.R. Bunker, W.P. Kraemer und P. Jensen: The spectrum of singlet SiH<sub>2</sub>. *Canad. J. Chem.* **82**, (2004) 694–708.
- Zehavi, I. et al. (inkl. H.J. Mo for the SDSS Collaboration): On Departures form a Power Law in the Galaxy Correlation Function. *Astrophys. J.* **608** (2004) 16–24.
- Zibetti, S. und A. Ferguson: A faint red stellar halo around an edge-on disc galaxy in the Hubble Ultra Deep Field. *Mon. Not. R. Astron. Soc.* **352**, (2004) L6–10 .
- Zibetti, S., S.D.M. White und J. Brinkmann: Haloes around edge-on disc galaxies in the Sloan Digital Sky Survey *Mon. Not. R. Astron. Soc.* **347**, (2004) 556–568.
- Eingereicht, im Druck:*
- Abazajian, K. et al. (inkl. S. White). The Third Data Release of the Sloan Digital Sky Survey. *Astrophys. J.*
- Aloy, M.A., H.-T. Janka und E. Müller: Relativistic outflows from compact object mergers und their viability producing short Gamma-Ray Bursts. *Astron. und Astrophys.*
- Anzer, U. und P. Heinzel: On the nature of dark EUV structures seen by SOHO/EIT und TRACE. *Astrophys. J.*

- Arnouts, S., D. Schiminovich, S. Charlot et al.: The GALEX-VVDS Measurement of the Evolution of the 1500 Å Luminosity Function. *Astrophys. J.*, Lett.
- Bertone, S., F. Stoehr und S. White: Semi-analytic Simulations of Galactic Winds: Volume Filling Factor, Ejection of Metals und Parameter Study. *Mon. Not. R. Astron. Soc.*
- Braithwaite, J.: The stability of toroidal fields in stars *Astron. Astrophys.*
- Braithwaite, J.: A magnetic dynamo in a differentially rotating star. *Astron. Astrophys.*
- Braithwaite, J. und Å. Nordlund: Stable magnetic fields in stellar interiors. *Astron. Astrophys.*
- Braithwaite J. und H.C. Spruit: Evolution of the magnetic field in magnetars *Astron. Astrophys.*
- Buat, V., J. Iglesias-Páramo, C. Charlot et al.: Dust Attenuation in the Nearby Universe: Comparison between Galaxies Selected in the Ultraviolet und the far-Infrared. *Astrophys. J. Letters.*
- Budavári, T., A.S. Szalkay, S. Charlot et al.: The Ultraviolet Luminosity Function of GALEX Galaxies at Photometric Redshifts between 0.07 und 0.25. *Astrophys. J. Letters*
- Chluba, J., G. Hütsi und R.A. Sunyaev: Clusters of galaxies in the microwave band: influence of the motion of the Solar System. *Astron. Astrophys.*
- Christensen-Dalsgaard, J., M.P. Di Mauro, H. Schlattl und A. Weiss: On helioseismic tests of basic physics. *Mon. Not. R. Astron. Soc.*
- Churazov, E., R. Sunyaev, S. Sazonov et al.: Positron annihilation spectrum from the Galactic Center region observed by SPI/INTEGRAL. *Mon. Not. R. Astron. Soc.*
- Ciardi, B. und A. Ferrara: The first cosmic structures und their effects. *Space Science Reviews.*
- Dessart, L. und Owocki, S.P.: Inferring hot-star-wind acceleration from Line Profile Variability *Astron. Astrophys.*
- Di Matteo T., V. Springel und L. Hernquist: Energy input from quasars regulates the growth of black holes und their host galaxies, *Nature.*
- Dimmelmeier, H., J. Novak, J.A. Font, et al.: Mariage des Maillages: A new numerical approach for 3D relativistic core collapse simulations. *Phys. Rev. D,*
- Dolag, K., Vogt, C., Enßlin, T.A.: Pacerman (I): A New Algorithm to calculate Faraday Rotation Maps. *Mon. Not. R. Astron. Soc.*
- Dolag, K., D. Grasso, V. Springel und I. Tkachev: Constrained Simulations of the Magnetic Field in the Local Universe und the Propagation of UHECRs. *Journal of Cosmology und Astroparticle Physics.*
- Dullemond, C.J.P. und H.C. Spruit: Evaporation of ion-illuminated disks. *Astron. Astrophys.*
- Dullemond, C.J.P. und I. van Bemmelen: Clumpy tori around AGN. *Astron. Astrophys.*
- Dullemond, C.J.P. und C. Dominik: Dust coagulation in protoplanetary disk: a time scale problem. *Astron. Astrophys.*
- Eriksen, H. K., A. J. Banday, K. M. Górski und P. B. Lilje: The N-Point Correlation Functions of the First-Year Wilkinson Microwave Anisotropy Probe Sky Maps. *Astrophys. J.*
- Ferguson, A. M. N., R. Johnson, D. Faria et al.: The Stellar Populations of M31 Halo Substructure *Astrophys. J. Letters.*
- Giannios, D. und H.C. Spruit: Spectra of Poynting-flux powered GRB outflows. *Astron. Astrophys.*

- Goriely, S., Demetriou, P., Janka, H.-Th., Pearson, J.M. und M. Samyn: The r-process nucleosynthesis: a continued challenge for nuclear physics und astrophysics. Nuclear Physics A.
- Gorski, K. E. Hivon, A. J. Banday, M. Reinecke et al.: HEALPix – a Framework for High Resolution Discretization, und Fast Analysis of Data Distributed on the Sphere. *Astrophys. J.*
- Hamana T., M. Bartelmann, N. Yoshida und C. Pfrommer: Statistical distribution of gravitational-lensing excursion angles: Winding ways to us from the deep universe. *Mon. Not. R. Astron. Soc.*
- Hayashi, E., J. Navarro, A. Jenkins, S. White et al. Disk Galaxy Rotation Curves in Triaxial CDM Halos. *Astrophys. J. (Letters)*.
- Heckman, T.M., C.G Hoopes, G. Kauffmann, C. Charlot et al.: The Properties of Ultraviolet-Luminous Galaxies at the Current Epoch. *Astrophys. J. Letters*.
- Heger, A. S.E. Woosley und H.C. Spruit: Presupernova Evolution of Differentially Rotating Massive Stars Including Magnetic Fields. *Astrophys. J.*
- Hernández-Monteagudo, C. und R. Sunyaev: Cross Terms und Weak Frequency Dependent Signals in the CMB Sky. *Mon. Not. R. Astron. Soc.*
- Hou, Y.H., Y. P. Jing, D. H. Zhao und G. Börner: The non-linear evolution of the bispectrum in scale-free N-body simulations. *Astrophys. J.*
- Huxor, A. P., N. Tanvir, M. Irwin, A. Ferguson et al.: Three New, Unusual und Extended Clusters in the Halo of M31 *Mon. Not. R. Astron. Soc.*
- Janka, H.-Th., R. Buras, J. Kitaura et al.: Neutrino-driven supernovae: An accretion instability in a nuclear physics controlled environment. Nuclear Physics A
- Jing, Y.P. und G. Börner: The pairwise velocity dispersion of galaxies :luminosity dependence and a new test of galaxy formation models. *Astrophys. J.*
- Kang, X., Y.P. Jing, H.J. Mo, G. Boerner: Modeling galaxy formation with high resolution N-body simulations. *Astrophys. J.*
- Kauffmann, G. und T.M. Heckman: The Formation of Bulges und Black Holes: lessons from a census of active galaxies in the SDSS. *Philosophical Transactions of the Royal Society.*
- Kitzbichler, M., und S.D.M. White: Pure Luminosity Evolution Models: Too Few Massive Galaxies at Intermediate und High Redshift. *Mon. Not. R. Astron. Soc.*
- Kraemer, W. und V. Špirko: Bound und low-lying quasibound rotation-vibration levels of the ground electronic state of  $\text{LiH}_2^+$ . *J. Chem. Phys.*
- Leismann, T., L. Antón, M. Aloy et al.: RMHD simulations of extragalactic jets. *Astron. Astrophys.*
- Liebendörfer M., M. Rampp, H.-T. Janka und A. Mezzacappa: Supernova simulations with Boltzmann neutrino transport: A comparison of methods. *Astrophys. J.*, in press
- Lo, J. H. M., M. Klobukowski und G. H.F. Diercksen: Low-lying excited states of the hydrogen molecule in cylindrical harmonic confinement. *Adv. Quantum Chem.*
- Lutovinov, A., M. Reznitsev, S. Molkov und R.Sunyaev: INTEGRAL observations of five sources in the Galactic Center region *Astron. Astrophys.*
- Mazzali, P., S. Benetti, M. Stehle et al.: High velocity features in the spectra of the Type Ia SN 1999ee: a property of the explosion or evidence of circumstellar interaction? *Mon. Not. R. Astron. Soc.*
- McConnachie, A. W., M. Irwin, A. Ferguson et al.: Distances und Metallicities for 17 Local Group Galaxies *Mon. Not. R. Astron. Soc.*



- Meijerink, R., R.P.J. Tilanus, C.P. Dullemond et al.: A submillimeter exponential disk in M51. *Astron. Astrophys.*
- Meyer-Hofmeister, E., B.F. Liu und F. Meyer: Hysteresis in spectral state transitions - a challenge for theoretical modeling. *Astron. Astrophys.*
- Molkov, S., M. Revnivtsev, A. Lutovinov und R. Sunyaev: INTEGRAL detection of a long powerful burst from SLX1735-269 *Astron. Astrophys.*
- Mrugala, F., V. Špirko, und W.P. Kraemer: Radiative association of He<sup>+</sup> with H<sub>2</sub> at temperatures below 100K. *J. Chem. Phys.*
- Nagamine, K. et al (inkl. V. Springel): Massive Galaxies in Cosmological Simulations: Ultraviolet-selected Sample at Redshift  $z = 2$ . *Astrophys. J.*
- Nayakshin, S. : Using close stars as probes of hot accretion flow in Sgr A\*, *Astron. Astrophys.*
- Nayakshin, S.: Warped accretion disks und the unification of Active Galactic Nuclei. *Mon. Not. R. Astron. Soc.*
- Nayakshin, S. und J. Cuadra: Self-gravitating accretion disk in Sgr A\* few million years ago: was Sgr A\* a failed quasar? *Astron. Astrophys.*
- Osaki, Y. und F. Meyer: Enhanced mass transfer during dwarf nova outbursts by irradiation of the secondary? *Astron. Astrophys.*
- Pfrommer, C., T. Enßlin und C. L. Sarazin: Unveiling the composition of radio plasma bubbles in galaxy clusters with the Sunyaev-Zel'dovich effect. *Astron. Astrophys.*
- Pontoppidan, K. und C.P. Dullemond et al.: Spitzer spectroscopy and 2D modeling of the edge-on disk CRBR 2422.8-3423. *Astrophys. J.*
- Pruet, J., S. Woosley, R. Buras et al.: Nucleosynthesis in the hot convective bubble in core-collapse supernovae. *Astrophys. J.*
- Rasia, E., P. Mazzotta, S. Borgani, K. Dolag et al.: Mismatch between X-ray und emission-weighted temperatures in galaxy clusters: cosmological implications. *Astrophys. J. Lett.*
- Rich, R.M., S. Salim, J. Brinchmann, S. Charlot et al.: Systematics of the Ultraviolet Rising flux in a GALEX/SDSS sample of Early-type Galaxies. *Astrophys. J., Lett.*
- Röpke, F.K.: Following multi-dimensional type Ia supernova explosion models to homologous expansion. *Astron. Astrophys.*
- Röpke, F.K. und Hillebrandt, W.: Full-star Type Ia supernova explosion models. *Astron. Astrophys.*
- Röpke, F.K. und Hillebrandt, W.: The distributed burning regime in Type Ia supernova models. *Astron. Astrophys. Lett.*
- Salaris, M. und L. Girardi: Tip of the Red Giant Branch distances to galaxies with composite stellar populations. *Mon. Not. R. Astron. Soc.*
- Salim, S., S. Charlot, M.R. Rich et al.: New Constraints on the Star Formation Histories und Dust Attenuation of Galaxies in the Local Universe from GALEX. *Astrophys. J. Letters*
- Sarzi, M., H.-W. Rix, G. Rudnick et al.: The Stellar Populations in the Central Parsecs of Galactic Bulges Central Stellar Populations. *Astrophys. J.*
- Sazonov, S., J.P. Ostriker, C. Ciotti und R. Sunyaev: Radiative feedback from quasars und the growth of massive black holes in stellar spheroids. *Mon. Not. R. Astron. Soc.*
- Schimminovich, D., O. Ilbert, S. Charlot et al.: The GALEX-VVDS Measurement of the Evolution of the Far-Ultraviolet Luminosity Density und the Cosmic Star Formation Rate. *Astrophys. J., Lett.*

- Schmidt, W., Hillebrandt, W., Niemeyer, J.C.: Numerical dissipation und the bottleneck effect in simulations of compressible isotropic turbulence. *Comp. Fluids*
- Semenov, D., Ya. Pavlyuchenkov, C. Dullemond et al.: Millimeter observations und modelling of the AB Aurigae system. *Astrophys. J.*
- Springel V., Di Matteo T. und Hernquist L.: Black holes in galaxy mergers: The formation of red elliptical galaxies *Astrophys. J. Letters*,
- Spruit, H.C., H. Steinle und G. Kanbach: Search for fast correlated X-ray und optical variability in Cir X-1 und XTE J1746-321.
- Spruit, H.C. und G. Scharmer: Magnetic und thermal structure of penumbral filaments *Solar Phys.*
- Stehle, M., P. Mazzali, S. Benetti und W. Hillebrandt: Abundance Tomography of Type Ia Supernovae: I. The case of SN 2002bo, *Mon. Not. R. Astron. Soc.*
- Shtykovskiy, P. und M. Gilfanov: High mass X-ray binaries in LMC: dependence on the stellar population age und the propeller effect. *Astron. Astrophys.*
- Shtykovskiy, P., A. Lutovinov, M. Gilfanov und R.Sunyaev: Constraints on the luminosity of the stellar remnant in SNR1987A. *Astron. Lett.*
- Suleimanov, V., M. Revnivtsev und H. Ritter: RXTE broadband X-ray spectra of intermediate polars und white dwarf mass estimates. *Astron. Astrophys.*
- Vogt, C., K. Dolag und T. Enßlin: Pacerman (II): Application und Statistical Characterisation of Improved RM Maps. *Mon. Not. R. Astron. Soc.*
- Vogt, C., und T. Enßlin: A Bayesian View on Faraday Rotation Maps - Seeing the Magnetic Power Spectra in Galaxy Clusters. *Astron. Astrophys.*
- Wegmann, R. und K. Dennerl: X-ray tomography of a cometary bow shock. *Astron. Astrophys. Letts.*
- Wegmann, R., A.H.M. Murid und M.M.S. Nasser: The Riemann-Hilbert problem und the generalized Neumann kernel. *J. Comput. Appl. Math.*
- White, S.D.M., D.I. Clowe, L. Simard et al. EDISCS – the ESO Distant Cluster Survey Sample Definition und Optical Photometry. *Astron. Astrophys.*
- Yamamoto, S., H. Tatewaki und G. H. F. Dierksen: Characterization of the higher-excited states of ethylene. *Intern. J. Quantum Chem.*
- Zibetti, S., S.D.M. White, D.P. Schneider und J. Brinkmann. Intergalactic stars in  $z \sim 0.25$  galaxy clusters: systematic properties from stacking of Sloan Digital Sky Survey imaging data. *Mon. Not. R. Astron. Soc.*

## 8.2 Konferenzbeiträge

### *Erschienen:*

- Aloy, M.A.: The first steps in the life of a short GRB. In: *Cosmic Explosions: On the 10th anniversary on SN1993J*. Proc. IAU 192 colloquium, Valencia, 2003. Eds. J.M. Marcaide, K.W. Weiler. Springer Proceedings in Physics 2004, 99, 483–489.
- Aloy, M.A., Janka, H.-T., Müller E.: The first steps in the life of a short GRB. In: *Gamma-Ray Bursts: 30 years of discovery* Proc. 2003 GRB conference, Santa Fe, 2003. Eds. E. Fenimore, M. Galassi. AIP Konferenz Proceedings 2004, 727, 380–383.
- Blinnikov, S., P.V.Baklanov, A.V.Kozyreva und E.I.Sorokina: Light Curve Models of Supernovae und X-ray spectra of Supernova Remnants. In: *Supernovae as Cosmological Lighthouses*, Padua, Juni 16-19, 2004. Eds. M.Turatto et al. ASP Konferenz Series.
- Börner, G. und Y.P. Jing: The threepoint correlation function of galaxies determined from the 2dFGRS. In: *Frontier in Astroparticle Physics und Cosmology*. Proc. RESCEU

- International Symposium Series No. 6 Eds. K. Sato, S. Nagataki. Universal Academy Press Tokyo 2004, 199–207
- Ciardi, B.: Probing IGM Reionization through the 21-cm Radiation. In: Multiwavelength Cosmology Proc. meeting Multiwavelength Cosmology, Mykonos, Greece, 2003. Ed. M. Plionis. Kluwer Academic Publishers 2004, 313–316.
- Cuadra, J. und S. Nayakshin: Birth und evolution of stars in AGN disks. In: *Astronomische Nachrichten*, Vol. 325, Supplement 1, Short Contributions presented at the Annual Scientific Meeting of the Astronomische Gesellschaft and the Czech Astronomical Society in Prag, September 20-25, 2004. Ed.: Schielicke, R.E. Wiley-VCH, 2004, 36.
- De Lucia, G., B. Poggianti, A. Aragón-Salamanca et al. Observing the build-up of the colour-magnitude relation at redshift  $\sim 0.8$  In: *Outskirts of Galaxy Clusters: Intense Life in the Suburbs*, (12 - 16 März 2004 in Torino) IAU Colloquium no. 195, Ed. A. Diaferio, 473–477.
- Di Matteo T., R. Croft, V. Springel und L. Hernquist: The cosmological evolution of quasars and their environments In: *AGN Physics with the Sloan Digital Sky Survey*, Eds: G.T.Richard und P.B. Hall Astronomical Society of the Pacific Konferenz Series, 2004, 453–457.
- Di Matteo T., R. Croft, V. Springel und L. Hernquist: Quasars and their environment along cosmic history. In: *The Interplay among Black Holes, Stars und ISM Galactic Nuclei: Proc. of the 222th Symposium of Int. Astron. Union.* (Konferenz held in Gramado, Brazil) Eds. T. Storchi-Bergamini, L. Ho und H. Schmitt. Cambridge University Press, 2004, 472–476.
- Dolag, K., D. Grasso, V. Springel und L. Tkachev: Magnetic Field in the Local Universe und the Propagation of UHECRs. In: *International Konferenz on Cosmic Rays and Magnetic Fields in Large Scale Structure Proc.*, Busan, Korea (16.-20. August 2004) published in *Journal of Korean Astronomical Society (JKAS)*, Vol. 37, No. 5, 2004, Special issue, 2004, 427–432.
- Dolag, K., D. Grasso und V. Springel: Constrained simulations of the magnetic field in the local supercluster und the propagation of UHECR. In: *Frontier in astroparticle physics und cosmology. Proc. of the 6th RESCEU Int. Symp.* Universal Academy Press. Tokyo 2004.
- Dominik, C., C.P. Dullemond, J. Cami und J. H. van Winckel: The Black-Body Dust Excess Around the Binary Post-AGB Star HR 4049 In: *Asymmetrical Planetary Nebulae III: Winds, Structure und the Thunderbird.* Proc. of the conference held 28 Juli - 1 August 2003 at Mt. Rainer, Washington, USA. Eds. M. Meixner et al. ASP Konferenz Proceedings, Vol. 313. San Francisco: Astronomical Society of the Pacific, 2004., p.535
- Drenkhahn, G. und H.C. Spruit: Magnetically powered prompt radiation und flow acceleration in GRB: In: *Third Rome Workshop on Gamma-ray bursts in the afterglow era.* Eds.: Feroci, M., F. Frontera, N. Masetti und L. Piro. Astron. Soc. of the Pacific Conf. Series 312, 2004, 357–362.
- Enßlin, T.: Extragalactic cosmic rays und magnetic fields: facts and fiction: In: *International Konferenz on Cosmic Rays and Magnetic Fields in Large Scale Structure Proc.*, Busan, Korea (16.-20. August 2004) published in *Journal of Korean Astronomical Society (JKAS)*, Vol. 37, No. 5, 2004, Special issue, 2004, 439–446.
- Ferguson, A., S. Chapman, R. Ibata et al.: A Keck/Deimos Survey of Red Giant Branch Stars in the Outskirts of M31 In: *Proceedings of the ESO Workshop "Planetary Nebulae beyond the Milky Way"* Eds. J. Walsh und L. Stanghellini und N. Douglas Springer-Verlag, in press.
- Gallazzi A., Charlot S., White S.D.M., J. Brinchmann: Age und metallicity estimates from high-resolution galaxy spectra: application to early-type galaxies. In: *Proceedings of*

- the International Astronomical Union Colloquium no. 195, (held 12-16 März, 2004 in Torino, Italien) Eds.: A. Diaferio. Cambridge University Press, 2004, 478–482.
- Gilfanov, M.: X-ray binaries und ultraluminous X-ray sources in nearby und distant galaxies. In: Proceedings of “Stellar-Mass, Intermediate-Mass und Supermassive Black Holes”. Kyoto, Japan, 28-31 October, 2003, Eds. S. Mineshige und K. Makishima. Progress of Theoretical Physics Supplement, 2004, 155, 49–58.
- Gilfanov, M., H.-J. Grimm und R. Sunyaev: HMXB, ULX und star formation. In: Proceedings of the BeppoSAX Konferenz “The Restless High-Energy Universe”. Eds. E.P.J. van den Heuvel, R.A.M.J. Wijers und J.J.M. int’Zand. Nuclear Physics B (Proc.-Suppl.) 132, 2004, 369–375.
- Gilfanov, M., E. Churazov und M. Revnivtsev: Doppler broadening of the iron line und R–Gamma correlation in black hole binaries. In: Proceedings of “X-ray Timing: Rossi und Beyond”. Eds. P. Kaaret, F.K. Lamb und J.H. Swank. AIP Konferenz Proceedings, Melville, New York Vol. 714, 2004, 97–100.
- Halliday, C., B. Milvang-Jensen, S. Poirier et al.: ESO distant cluster survey: spectroscopy In: Outskirts of Galaxy Clusters: Intense Life in the Suburbs IAU Colloquium no. 195, Ed. A. Diaferio, 236–238.
- Heckman, T. und G. Kauffmann: The host galaxies of 23,000 AGN. In: Multiwavelength AGN surveys: Proc. of the Guillermo Haro conference. Eds. M. Raul und R. Maiolino. Conf. held in Cozumel, Mexico. Publ. World Scientific Publ. Company Singapore 2004, 365–371.
- Heger, A., S. Woosley, N. Langer und H. Spruit: Presupernova evolution of rotating massive stars und the rotation rate of pulsars. In: Stellar rotation, Proc. IAU Symposium. (Conf. Cancun, Mexico) Eds. A. Maeder und Ph. Eeens. Astron. Soc. of the Pacific, 2004, 591–512.
- Heinzel, P. und U. Anzer: Physics of solar prominences: In: Solar Magnetic Phenomena. Proc. of the 3rd Sommerschool at the Solar Obs. Kanzelhöhe, Kärnten, Austria. Eds. A. Hanslmeier, A. Veronig und M. Messori. Astrophys. und Space Science Library Vol. 320. Springer Verlag, 115–138.
- Hillebrandt, W.: Models of Supernova Explosions: Where Do We Stand? In: Supernovae (10 Years of SN1993J) Proc. IAU Colloquium 192, Valencia, Spain, 22-26 April 2003. Eds.: Marcaide, J.M. und K.W. Weiler, Springer, 2004, 241–252.
- Hillebrandt, W.: Cosmic Explosions. In: The INTEGRAL Universe Proc. 5th INTEGRAL Workshop, Munich, 16–20 February 2004. Eds.: Schönfelder, V., G. Lichti und C. Winkler, ESA Pub., 2004, 485–494.
- Hillebrandt, W.: Type Ia Supernovae: What can we learn from better data?. Proceedings of the 12th Workshop on “Nuclear Astrophysics”, Ringberg Schloß, Tegernsee, Germany, März 22–27, 2004 Eds. E. Müller und H.-T. Janka. MPA/P14, MPA 2004, 83–87.
- Hillebrandt, W., Reinecke, M., Röpke et al.: Thermonuclear supernovae In: The Future Astronuclear Physics From Microscopic Puzzles to Macroscopic Nightmares. Eds. A. Jorissen, S. Goriely, M. Rayet, L. Siess, und H. Boffin EAS Publications Series Vol. 11, EDP Sciences 2004, 141–142.
- Hillebrandt, W., M. Reinecke, W. Schmidt et al.: Simulations of Turbulent Thermonuclear Burning in Type Ia Supernovae. To appear in: Analysis und Numerics for Conservation Laws Ed. G. Warnecke, Springer-Verlag, 2004
- Iapichino, L. und W. Hillebrandt: Before the flame is born: the ignition process in Type Ia Supernovae. Proceedings on the 12<sup>th</sup> Workshop on “Nuclear Astrophysics”, Ringberg Schloß, Tegernsee, Germany, März 22-27, 2004, Eds. E. Müller und H.-T. Janka, MPA/P14, MPA Garching 2004, p. 87-89.
- Inoue, S., N. Iwamoto, M. Orito und M. Terasawa: Nucleosynthesis of light und heavy elements in Baryon-rich outflows associated with gamma-ray bursts. In: Third Rome

- Workshop on Gamma-ray bursts in the afterglow era. Eds.: Feroci, M., F. Frontera, N. Masetti und L. Piro. Astron. Soc. of the Pacific Conf. Series 312, 2004, 429–432.
- Janka, H.-Th.: Neutron stars formation und birth properties. In: Young neutron stars und their environments. IAU Symposium Vol. 218., (Sydney Australia) Eds. F. Camilo und M.B. Gaensler. Astron. Soc. of the Pacific, 2004, 3–12.
- Janka H.-Th., R. Buras, J. Kitaura et al.: Core-collapse supernovae: Modeling between pragmatism and perfectionism. In: Proceedings of 12th Workshop on Nuclear Astrophysics, Ringberg Schloß, Tegernsee, März 22–27, 2004, Eds. E. Müller und H.-Th. Janka, Report MPA-P14, Max-Planck-Institut für Astrophysik, Garching, p. 150–160.
- Janka H.-Th., R., Buras, K. Kifonidis, T. Plewa, und M. Rampp: “Explosion mechanisms of massive stars”, in: *Stellar Collapse*, Ed. C.L. Fryer, Kluwer Academic Publishers, Dordrecht, The Netherlands, p. 65–97.
- Janka, H.-Th., R. Buras, K. Kifonidis, A. Marek und M. Rampp: Core-collapse supernovae at the threshold. In: Cosmic Explosions (On the 10th Anniversary of SN1993J) Proc. IAU Coll. 192, Valencia, Spain, 22–26 April 2003, Eds.: Marcaide, J.M. und K.W. Weiler. Springer, 2004, 253–262.
- Jing, Y.P.: What X-rays tell us about dark matter halos. In: Dark Matter in galaxies IAU Symposia. Vol. 220. Astron. Soc. Pacific San Francisco 2004, 455–460.
- Jing, Y.P. und G. Börner: Velocity of galaxies with different luminosity: In: Outskirts of Galaxy Clusters: Intense Life in the Suburbs, (12 - 16 März 2004 in Torino) IAU Colloquium no. 195, Ed. A. Diaferio, 418–422.
- Kupka, F., D.J. Landstreet, A. Sigut et al.: Observational signatures of atmospheric velocity fields in main sequence stars. In: “The A-Star Puzzle”, IAU Symposium 224. Eds.: J. Zverko, W.W. Weiss, J. Žižňovský und S.J. Adelman, 2004, 573–579.
- Le Fevre, O. et al. (inkl. S. Charlot): Deep redshift surveys: The VIMOS VLT deep survey. In: Multiwavelength Cosmology Proc. Mykonos Konferenz Proceedings, Mykonos, 2003. Eds. M. Plionis. Kluwer Academic Publishers 2004. 7–13.
- Le Fevre, O. et al. (inkl. S. Charlot): The VIMOS VLT deep survey: redshift distribution of a  $I_{AB} \leq 24$  sample, and the effect of environment on galaxu evolution. In: Astrophysics und Space Science. Conf. held in Pilanesberg, South Africa. Eds. D. Block et al. Springer Verl. Dordrecht 2004, 415–422.
- Lemson, G., P. Dowler und A. J. Banday: A unified domain model for astronomy. In: Astronomical Data Analysis Software und Systems XIII, ASP Konferenz Proceedings, Vol. 314 Eds. F. Ochsenbein, M. G. Allen und D. Egret Astronomical Society of the Pacific, San Francisco, 2004, 472–475.
- Malzac, J., T. Belloni, H.C. Spruit und G. Kanbach: The optical und X-ray flickering of XTE J1118+480. In: Proceedings of the BeppoSAX Konferenz “The Restless High-Energy Universe”. Eds. E.P.J. van den Heuvel, R.A.M.J. Wijers und J.J.M. int’Zand. Nuclear Physics B (Proc.Suppl.) 132, 2004, 400–403.
- Martínez-Pinedo, G., K. Langanke, H.-Th. Janka et al.: Weak interaction processes in core-collapse supernovae. In: Cosmic Explosions (On the 10th Anniversary of SN1993J) Proc. IAU Coll. 192, Valencia, Spain, 22–26 April 2003, Eds.: Marcaide, J.M. und K.W. Weiler. Springer, 2004, 321–326.
- Mathis, H., S. Charlot, J. Brichmann, S. White et al.: Extracting star formation histories from large, medium resolution spectroscopic surveys. In: SF2A-2004: Semaine de l’Astrophysique Francaise (Paris, Frankreich, Juni 14-18, 2004) Eds. F. Combes, D. Barret et al.: EdP-Sciences, Konferenz Series, p.189.
- Merloni, A.: The Fundamental Plane of Black Hole Activity und the Census of the Local Black Holes’ Population. In: AGN Physics with the Sloan Digital Sky Survey, Proceedings of a conference held in Princeton, NJ, USA, 27-31 Juli 2003, Edited by Gordon

- T. Richards und Patrick B. Hall, ASP Konferenz Series, Volume 311. San Francisco: Astronomical Society of the Pacific, 2004., p.95
- Meyer-Hofmeister, E.: Why Can Soft X-Ray Transients Remain in the Low/Hard State during Outburst. In: Stellar-Mass, Intermediate Mass, und Supermassive Black Holes Proc. Konferenz Kyoto, Japan 28–31 October 2003. Eds.: Mineshige S. and K. Makishima. Progress of Theoretical Physics Suppl. Vol. 155, 2004, 383 – 384.
- Meyer, F.: ULXs, Accretion Disk Fragmentation, und Super-Eddington Luminosities. In: Stellar-Mass, Intermediate Mass, und Supermassive Black Holes Proc. Konferenz Kyoto, Japan 28–31 October 2003. Eds.: Mineshige S. and K. Makishima. Progress of Theoretical Physics Suppl. Vol. 155, 2004, 45 – 48.
- Meyer-Hofmeister E., F. Meyer und Bifang Liu: A disk in the Galactic Center in the past? Beitrag zu Konferenz Proc. “Growing Black Holes”, Garching 2004, Eds. A. Merloni, S. Nayakshin, R. Sunyaev, Springer Verlag, Series of “ESO Astrophysics Symposia”, in press
- Meyer, F.: Super-Eddington luminosity from fragmented accretion disks. Beitrag zu Konferenz Proc. “Growing Black Holes”, Garching 2004, Eds. A. Merloni, S. Nayakshin, R. Sunyaev, Springer Verlag, Series of “ESO Astrophysics Symposia” in press.
- Mimica, P., Aloy, M-A., Müller, E., Brinkmann, W. Synthetic X-ray light curves of BL Lacs from relativistic hydrodynamic simulations In: VIRTUAL astrophysical jets Proc. “Virtual Astrophysical jets” Konferenz, Dogliani (Italien), 2-4 October 2003. Eds.: Masaglia, S., Ferrari, A. Astrophysics und Space Science 293, 2004, 165–172.
- Obrić, M. et al (inkl. G. Kauffmann): Multiwavelength view of SDSS galaxies. In: The Interplay among Black Holes, Stars und ISM Galactic Nuclei: Proc. of the 222th Symposium of Int. Astron. Union. (Konferenz held in Gramado, Brazil) Eds. T. Storchi-Bergmann, L. Ho und H. Schmitt. Cambridge University Press, 2004, 533–534.
- Osterloo, T., R. Morganti, E. Sadler, A. Ferguson et al.: Tidal Remnants und Intergalactic HII Regions In: Proceedings of the International Astronomical Union Symposium no. 217 Eds. P.-A. Duc, J. Braine, und E. Brinks Astronomical Society of the Pacific 2004, 486–492.
- Pfrommer, C. und T.A. Ensslin: The quest for cosmic ray protons in galaxy clusters. In: International Konferenz on Cosmic Rays and Magnetic Fields in Large Scale Structure Proc., Busan, Korea (16.-20. August 2004) published in Journal of Korean Astronomical Society (JKAS), Vol. 37, No. 5, 2004, Special issue, 2004, 455–460.
- Pignata, G. et al. (inkl. W. Hillebrandt und M. Stritzinger): In: Cosmic Explosions: On the 10th anniversary on SN1993J. Proc. IAU 192 colloquium, Valencia, 2003. Eds. J.M. Marcaide, K.W. Weiler. Springer Proceedings in Physics 2004, 99, 33–38.
- Raffelt G., M. Keil, R. Buras, H.-Th. Janka und M. Rampp: Supernova neutrinos: Flavor-dependent fluxes und spectra, In: Proceedings of the 4th Workshop on Neutrino Oscillations and their Origin: NoON 2003, Kanazawa, Japan, Feb. 10–14, 2003, Eds. Y. Suzuki, M. Nakahata, et al. World Scientific, Singapore, p. 380–387.
- Röpke, F.K. und W. Hillebrandt: On the Stability of Thermonuclear Burning Fronts in Type Ia Supernovae. To appear in: IAU Colloquium 192: Supernovae (10 years of SN1993J) Eds. J. Marcaide, K. Weiler, Springer-Verlag, 2004
- Röpke, F.K., W. Hillebrandt, M. Gieseler, M. Reinecke and C. Travaglio: Numerical simulations of Type Ia Supernova Explosions. Proceedings of the 12th Workshop on “Nuclear Astrophysics”, Ringberg Schloß, Tegernsee, Germany, März 22–27, 2004 Eds. E. Müller und H.-T. Janka MPA/P14, MPA 2004, 90–95.
- Röpke, F.K., Hillebrandt, W., Gieseler, M.: Type Ia Supernova Diversity from 3-dimensional Models To appear in: 1604–2004: Supernovae as Cosmological Lighthouses. Ed. M. Turatto, W.R.J. Shea, S. Benetti, L. Zampieri ASP Konferenz Series, 2004

- Samadi, R., J.-J. Goupil, F. Kupka et al.: Effect of Local Treatments of Convection upon the Solar P-Mode Excitation Rates. In: "Helio- and Asteroseismology: Towards a Golden Future". Proc. of the SOHO 14 / GONG 2004 Workshop, New Haven, Connecticut, USA, 12-16 Juli 2004. Ed.: D. Danesy. ESA SP-559, 611–614.
- Sauer, D., A.W.A. Pauldrach, T. Hoffmann, W. Hillebrandt: Synthetic Spectra for Type Ia Supernovae at Early Epochs. In: Cosmic Explosions. On the 10th Anniversary of SN1993J Proc. IAU Colloquium 192, Valencia, 22-26 April 2003 Eds: J.M. Marcaide, K.W. Weiler, Springer Proceedings in Physics 99, 2004 ???-??? (Seitenzahl)
- Scheck L., T. Plewa, K. Kifonidis, T. Janka und E. Müller: Global anisotropies in supernova explosions and pulsar recoil. In: Proceedings of 12th Workshop on Nuclear Astrophysics Ringberg Schloß, Tegernsee, März 22–27, 2004, Eds. E. Müller und H.-Th. Janka, Report MPA-P14, Max-Planck-Institut für Astrophysik, Garching p. 161–163.
- Sijacki, D. und G. Tormen: Scaling laws of simulated galaxy clusters. In: Proceedings of the International Astronomical Union Colloquium no. 195, (held 12-16 März, 2004 in Torino, Italien) Eds.: A. Diaferio. Cambridge University Press, 2004, 305–308.
- Springel, V., S. White und L. Hernquist: The shapes of simulated dark matter halos. In: International Astronomical Union Symposium no. 220, (held 21 - 25 Juli, 2003 in Sydney, Australia) Eds.: D. Ryder et al. San Francisco: Astronomical Society of the Pacific., 421–429.
- Spruit, H.C.: Angular momentum transport und mixing by magnetic fields. In: Stellar rotation, Proc. IAU Symposium. (Conf. Cancun, Mexico) Eds. A. Maeder und Ph. Eeens. Astron. Soc. of the Pacific, 2004, 356–365.
- Stehle, M. und P. Mazzali: Synthetic Spectra of the Type Ia SN 2002bo. In: Cosmic Explosions. On the 10th Anniversary of SN 1993J. IAU Colloquium 192, Valencia, 22-26 April 2003. Eds.: Marcaide, J.M., Weiler, K.W.. Springer, 2005, 129–133.
- Stütz, C., und F. Kupka: Stellar model atmospheres with emphasis on velocity dynamics. In: "The A-Star Puzzle", IAU Symposium 224. Eds.: J. Zverko, W.W. Weiss, J. Žižňovský and S.J. Adelman, 2004, 570–572.
- Tasca, L.A.M. und S.D.M. White: Quantitative Morphology of Galaxies in the Sloan Digital Sky Survey. In: Multiwavelength Cosmology Proc. Mykonos Konferenz Proceedings, Mykonos, 2003. Eds. M. Plionis Kluwer Academic Publishers 2004.
- Tasca, L.A.M. und S.D.M. White: How much light comes from Bulges und Disks? In: Multiwavelength Mapping of Galaxy Formation und Evolution Proc. ESO Astrophysics Symposia, Venice, 2003. Eds. R. Bender und A. Renzini Springer-Verlag 2004.
- Travaglio, C., K. Kifonidis und E. Müller: Multi-dimensional Nucleosynthesis Calculations of Type II SNe. In: Origin und Evolution of the Elements Carnegie Observatories Astrophysics Symposium Volume 4. Eds. A. McWilliam, M. Rauch. Cambridge University Press 2004.
- Travaglio, C., K. Kifonidis und E. Müller: Nucleosynthesis in multi-dimensional SNIa explosions. In: Cosmic Explosions: On the 10th anniversary on SN1993J. Proc. IAU 192 colloquium, Valencia, 2003. Eds. J.M. Marcaide, K.W. Weiler. Springer Proceedings in Physics 2004, 99, 297–301.
- Travaglio, C., Hillebrandt, W., Reinecke, M.: Nucleosynthesis in multi-dimensional SNIa explosions. Proceedings of the 12th Workshop on "Nuclear Astrophysics", Ringberg Schloß, Tegernsee, Germany, März 22–27, 2004 Eds. E. Müller und H.-T. Janka MPA-P14, MPA 2004, 101–104.
- Vogt, C., und T. Ensslin: A Bayesian view on Faraday rotation maps- seeing the magnetic power spectrum in clusters of galaxies. In: International Konferenz on Cosmic Rays and Magnetic Fields in Large Scale Structure Proc., Busan, Korea (16.-20. August 2004) published in Journal of Korean Astronomical Society (JKAS), Vol. 37, No. 5, 2004, Special issue, 2004, 349–353.

Weiss, A. und C. Charbonnel: Mixing along the Red Giant Branch. In: Astrophysical impact of abundance in globular cluster stars. Eds: F. D'Antona und G. Da Costa. Memorie della Societa Astron. Italiana, 2004, 347–355.

Weiss, A.: The AGB contamination scenario. In: Astrophysical impact of abundance in globular cluster stars. Eds: F. D'Antona und G. Da Costa. Memorie della Societa Astron. Italiana, 2004, p. 391.

Wegmann, R.: Methods for numerical conformal mapping, In: Handbook of complex analysis, Vol. 2, Ed: R. Kühnau. Elsevier 2005, 351–477.

Zibetti, S., S.D.M. White: Intracluster light at  $z \sim 0.25$  from SDSS imaging data In: IAU Colloquium 195 - Outskirts of galaxy clusters: intense life in the suburbs - Torino, Italien - März 12-16, 2004. Ed. Diaferio, A. - IAU Symposium und Colloquium Proceedings Series, Cambridge University Press, 195, 2004, 226–230.

### 8.3 Populärwissenschaftliche und sonstige Veröffentlichungen

Börner, G.: – Reise zum Anfang der Welt. Südd. Zeitung, **79** (2004). – The Early Universe—Facts und Fiction. (2nd corr. reprint of 4th edition). Springer Verlag, 2004, 590 Seiten. – Kosmologie. (zweite Auflage). S. Fischer Verlag, 2004. 128 Seiten. – Astronomen entschlüsseln den Bauplan des Kosmos: Von der Rotverschiebung zur Dunklen Energie., In: Mensch und Kosmos. Fischer Taschenbuch 168–188 (2004). – Time und the Universe. Lecture Notes in Physics, **648**, 21–32. .

Braithwaite, J. und H.C. Spruit: A fossil origin for the magnetic field in A-stars und white dwarfs. Nature **431**, 819–821.

Hillebrandt, W. und F. Röpke: Die Physik der Typ Ia Supernovae. Erschienen in Sterne und Weltraum (2004)

Hillebrandt, W. und E. Müller: Supernovae im Superrechner: Wie sich in der Astrophysik das Unsichtbare sichtbar und das Sichtbare verständlich machen lässt. Phys. Journal **3**, 49–55 (2004).

Janka, H.-Th., K. Kifonidis K., E. Müller et al.: Neutron stars as cosmic cannonballs. In: Annual Report 2003, Eds.: Börner, G., Kauffmann, G., Meyer-Hofmeister et al. MPA Garching, 3 pages.

McConnachie, A., M. Irwin, A. Ferguson et al.: Exploring Andromeda's Halo with the INT. The Isaac Newton Group Newsletter, 2004, 9 (in press)

Müller, E. und H.-Th. Janka (Eds.): Proc. of the 12th Workshop on "Nuclear Astrophysics" Ringberg Schloß, März 22–27. MPA Garching 2004, 181 pages.

Sunyaev, R.: When we were young. In: Zeldovich: Reminiscences, Capman & Hall/CRC, 2004, 360 pages.

Weiss, A.: Die Jagd nach den Ersten Sternen, Bild der Wissenschaft, 12/2004, 54–59.

Weiss, A., W. Hillebrandt, H.–C. Thomas und H. Ritter (eds.): Cox & Giuli's Principles of Stellar Structure: Extended second edition. Cambridge Scientific Publishers Ltd, 2004, 767 pages.

### 8.4 elektronische Veröffentlichungen

Downes, R.A., R.F. Webbink, M.M. Shara, H. Ritter et al.: A catalog und atlas of cataclysmic variables: The living edition.

<http://www-int.stsci.edu/downes/cvcat/>

Enßlin, T. A., C. Vogt, C. Pfrommer Magnetic Fields und Cosmic Rays in Galaxy Cluster Cooling Flows In: The Riddle of Cooling Flows in Galaxies and Clusters of Galaxies Charlottesville, VA, May 31 - Juni 4, 2003, Eds.: Reiprich, T., Kempner, J., und N. Soker.

<http://www.astro.virginia.edu/coolflow/>

Galianni, P. , E.M. Burbidge, H., Arp, S. Zibetti et al. The Discovery of a High Redshift X-ray Emitting QSO Very Close to the Nucleus of NGC 7319 (astro-ph/0409215)



Geminale, A., und P. Popowski: Total to Selective Extinction Ratios und Visual Extinctions from Ultraviolet Data. <http://www.arxiv.org/abs/astro-ph/0409509>

Heinz, S., T.A. Enßlin The Interaction of Jets with the Intracluster Medium In: The Riddle of Cooling Flows in Galaxies and Clusters of Galaxies Charlottesville, VA, May 31 - Juni 4, 2003, Eds.: Reiprich, T., Kempner, J., und N. Soker.  
<http://www.astro.virginia.edu/coolflow/>

Kempner, J. C., E. L. Blanton, T.E. Clarke, et al. Konferenz Note: A Taxonomy of Extended Radio Sources in Clusters of Galaxies. In: The Riddle of Cooling Flows in Galaxies and Clusters of Galaxies Charlottesville, VA, May 31 - Juni 4, 2003, Eds.: Reiprich, T., Kempner, J., und N. Soker.  
<http://www.astro.virginia.edu/coolflow/>

Popowski, P.: Searching for Sagittarius Microlensing Events.  
<http://www.stelab.nagoya-u.ac.jp/hawaii/Popowski/hawaii2004.html>

Ritter, H. und U. Kolb: Catalogue of cataclysmic binaries, low-mass X-ray binaries und related objects (Edition 7.3).  
<http://www.mpa-garching.mpg.de/RKcat/>  
<http://physics.open.ac.uk/RKcat/>  
<http://vizier.cfa.harvard.edu/viz-bin/VizieR?-source=V/113A>  
<http://vizier.u-strasbg.fr/viz-bin/VizieR?-source=V/113A>

Rudnick, G. H., et al.: The Luminosity Function of EDisCS Cluster Galaxies In: Clusters of Galaxies: Probes of Cosmological Structure und Galaxy Evolution, from the Carnegie Observatories Centennial Symposia. Carnegie Observatories Astrophysics Series, Pasadena, 2002. Eds. J.S. Mulchaey, A. Dressler, und A. Oemler. Carnegie Observatories,  
<http://www.ociw.edu/ociw/symposia/series/symposium3/proceedings3.html>

Shields, J. C., H.-W. Rix, G. Rudnick et al.: Black Holes as Traced by Weak Active Nuclei In: Coevolution of Black Holes und Galaxies, from the Carnegie Observatories Centennial Symposia. Carnegie Observatories Astrophysics Series, Pasadena, 2002. Eds. L. C. Ho Carnegie Observatories,  
<http://www.ociw.edu/ociw/symposia/series/symposium1/proceedings.html>

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