

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. Banday, 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. Banday: 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 (Genève, 1.9.–4.9.) – CNRS summer school on Physique Stellaire: Dynamique des fluides stellaires et simulations numériques associées (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

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