

Garching

Max-Planck-Institut für Astrophysik

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0 Allgemeines

0.1 Kurzgeschichte

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

1 Personal und Ausstattung

1.1 Personalstand

Direktoren und Professoren:

M. Asplund [-2208], W. Hillebrandt [-2200](Geschäftsführung seit 1.1.2009), R. Sunyaev [-2244], S.D.M. White [-2211](Geschäftsführung bis 31.12.2008).

Sekretariat und Verwaltung:

C. Rickl [Sekr. Geschäftsführung, -2201]

M. Ihle [Verwaltungsleiter, -3600]

Auswärtige Wissenschaftliche Mitglieder:

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

Emeritierte Wissenschaftliche Mitglieder:

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

Wissenschaftliche Mitarbeiter:

R. Angulo (seit 1.10.), A.J. Banday, J. Ballot (bis 30.9.), J. Bolton, M. Boylan-Kolchin, L. Cassagrande (seit 15.9.), B. Catinella, P. Cerda-Duran, A. Chiavassa (seit 1.10.), J. Chluba

(bis 31.10.), B. Ciardi, D. Christlein, E. Churazov, R. Collet, G. De Lucia, N. De la Rosa (bis 31.5.), K. Dolag, T. Enßlin, A. Faltenbacher, D. Gadotti, D. Giannios (bis 14.10.), M. Gilfanov, C. Hernandez-Monteagudo, J. Hu, H.-T. Janka, G. Kauffmann, K. Kifonidis (bis 31.12.), F. Kupka, Ch. Li, L.-X. Li (bis 31.12.), S. Lucatello (seit 1.1.), A. Marek, A. Maselli, P. Mazzali, B. Metcalf, P. Montero (seit 1.9.), E. Müller, M. Obergaulinger (seit 1.2.), R. Overzier, E. Puchwein, I. Ramirez (seit 15.9.), M. Reinecke, M. Revnivtsev (bis 31.7.), H. Ritter, F. Röpke, D. Sauer (bis 31.12.8), S. Sazonov, C. Scannapieco, I. Seitenzahl (seit 1.9.), A. Serenelli (seit 1.9.), F. Shankar (seit 1.11.), S. Sim, V. Springel, H.C. Spruit, S. Taubenberger (seit 1.2.), S. Weinmann, A. Weiss, V. Wild (bis 16.10.), J. Zavala-Franco (seit 1.9.), X.-G. Zhang (bis 30.11.)

Alexander von Humboldt Stipendiaten:

C. Hogan (bis 30.3.), J.-M. Wang (15.9.-17.10.) A. Szalay (20.7.-30.8.)

Minerva Stipendiat

E. Neistein (seit 1.10.)

*Doktoranden:*¹

M. Alves-Cruz*, M. Baldi*, A. Bauswein, R. Birkel, A. Bogdan*, S. Bonoli*, M.-P. Bottino*, M.A. Campisi*, M. Carrasco-Kind*, F. Ciaraldi-Schoolmann (seit 1.12.), C. D'Angelo*, J. Donnert, E. Donoso*, D. Docenko* (bis 31.7.), F. Elsner, S. Fabello* (seit 1.9.), X. Fei* (bis 31.12.), M. Fink, M. Frommert, M. Gabler (seit 1.10.), L. Graziani* (seit 1.9.), M. Grossi*, Q. Guo*, S. Hachinger, N. Hammer, S. Hess, S. Hilbert (bis 30.9.), F. Ianuzzi* (seit 1.9.), J. Jasche, A. Jeesson-Daniel* (seit 1.9.), P. Jofre-Pfeil*, M. Kitzbichler* (bis 30.4.), M. Kromer, T. Mädler, U. Maio*, I. Maurer, F. Miczek (seit 1.11.) S. Mineo*, M. Mocak*, R. Moll, B. Müller, M. Obergaulinger (bis 31.1.), R. Pakmor (seit 1.2.) M. Petkova* (seit 1.3.), M. Pierleoni*, P. Piovezan* (seit 1.9.), L. Porter* (seit 1.9.), M. Righi (bis 31.7.)*, T. Sawala*, V. Silva* (seit 1.9.), F. Stasyszyn*, S. Taubenberger (bis 30.1.), M. Ugliano* (seit 15.10.), M. Vogelsberger, M. Wadepuhl (seit 1.11.), A. Waelkens, L. Wang, J. Wang* (bis 30.7.), A. Wongwathanarat*, F. Zaussinger, Z. Zhang* (seit 1.2.), I. Zhuraleva* (seit 1.9.).

Diplomanden:

C. Auer (seit 1.6.), S. Benitez (seit 1.10.), X. Bian (seit 1.4.), M. Häberlein (seit 1.11.), L. Hüdepohl (seit 14.11.), P. Kuchar (seit 1.10.), M. Petkova (bis 28.2.), M. Wadepuhl (1.1.-30.10.)

Technisches Personal - PLANCK Programmierer:

H.-M. Adorf (bis 31.8.), U. Dörl, W. Hovest, J. Knoche, J. Rachen, T. Riller.

Systemadministratoren:

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

1.2 Personelle Veränderungen

Eugene Churazov: wurde zum Mitglied der Russischen Akademie der Wissenschaften gewählt.

Gabriella De Lucia: erhielt vom Rat der Europäischen Wissenschaften ein Stipendium für eine eigene Nachwuchsgruppe.

Friedrich Kupka: Habilitation an der Fakultät für Physik. TU München. Seit 30. Juni ist er Privatdozent der TU München.

Cheng Li: wurde von der Chinesischen Akademie der Wissenschaften unter die 50 besten Dissertationen 2008 gewählt.

¹*IMPRS (International Max-Planck Research School)

Fritz Röpke: gründete die Emmy Noether Nachwuchsgruppe “Comprehensive Modeling of Type Ia Supernova Explosions”

Rashid Sunyaev: erhielt den “Crafoord Prize 2008” von der Königlichen Schwedischen Akademie der Wissenschaften.

Rashid Sunyaev erhielt den “2008 Henry Norris Russell Prize” der American Astronomical Society

Rashid Sunyaev erhielt die “36ste Karl-Schwarzschild Medaille” der Astronomischen Gesellschaft

Simon White: bekam den “Dirk Brouwer Preis 2008” der American Astronomical Society

Simon White: Oort Professorship 2008, Leiden University

Simon White: erhielt den “2008 Latsis Prize” der Europäischen Wissenschafts Stiftung.

1.3 Gebäude und Bibliothek

Die Bibliothek befindet sich im Astrogebäude und wird von Wissenschaftlern zweier Institute genutzt, das Max-Planck-Institut für Astrophysik und extraterrestrische Physik. Die Bibliothek besitzt aktuell ca. 23.000 Bücher und Konferenzproceedings, sowie Abonnements für 200 wissenschaftliche Zeitschriften. Ein neues System (Edoc-Server) für elektronische Publikationen wurde vor 5 Jahren in der Bibliothek eingeführt.

2 Gäste

Tom Abel (Stanford Univ.) 15.8.–8.9.; Evangelie Athanassoula (LAM/OAMP) 15.05.-15-06.; Jerome Ballot (Toulouse, FR) 30.11.–12.12.; Isabelle Baraffe (ENS, Lyon) 17.11.–17.12.; Altan Baykal (ET Univ. Ankara) 14.7.–29.8.; Sergey Blinnikov (ITEP, Moscow) 1.8.–31.8.; Annalisa Bonafede (Ira, Bologna) 15.9. - 16.12.; Albert Bosma (LAM/OAMP) 15.05.-15-06.; Jonathan Braithwaite (CITA, Canada) 14.7.–15.8.; Matthieu Brassart (IAP, France) bis 30.9.; Alan Brito (Sao Paulo, Brazil) 30.6.–26.7.; Brian Chaboyer (Dartmouth College, NH, USA) 16.6.–27.8.; Gilles Chabrier (ENS, France) 17.11.–17.12.; Yan-Mei Chen (IHEP, Beijing) bis 31.10.; Candace Church (Ucolick, California) 2.6.–28.6.; Paula Coelho (IAP, France) 27.10.–9.11.; Stephane Colomobi (IAP, France) 19.5.–6.6.; Jordan Del Nero (Belem, Brazil) 16.11.–14.12.; Andrey Egorov (Sternberg Inst. Moscow) 15.11.–15.12.; Celine Eminian (Brighton, U.K.) 4.12.–21.12.; Chad Fendt (Univ. of Illinois) 8.7.–24.7.; Ekaterina Filippova (IKI, Moscow) 1.4.–31.5. und 1.10.–30.11.; Rohit Gart (IUCCA, Pune, India) 11.5.–20.7.; Tuhin Gosh (IUCCA, Pune, India) 1.4.–30.6.; Nicolas Grevesse (Univ. de Liege, Belgien) 10.11.–19.12.; Timothy Heckman (JHU, Baltimore) 18.4. –10.5.; Petr Heinzl (Astron. Inst. Ondřejov) 21.4.-2.5.; Zhen Hou (Beijing, China) 1.1.–31.12.; Nail Inogamov (Landau Inst. Moscow) 20.11.–20.12.; Chunyan Jiang (Shanghai Obs.) bis 31.9.; Patrik Jonsson (UC Santa Cruz) 18.9.–17.10.; Anjor Kanekar (Pune, India) 20.5.–25.6.; Dan Kasen (Univ. of California) 22.6.–9.7.; Jasna Krivicic (Padova University, Italy) 1.6.–19.12.; Jounghun Lee (Seoul Nat. Univ. Korea) 27.1.–28.2.; Yang-Shyang Li (Kapteyn Astron. Inst., NL); Shude Mao (Manchester, U.K.) 1.7.–31.8.; Petar Mimica (CITA, Canada) 8.2.–22.2.; Sean Moran (Bloomberg Center, USA) 23.4.–9.5.; Dmitrij Nadyozhin (ITEP, Moscow) 30.7.–25.9.; Poul Erik Nissen (Aarhus, Denmark) 8.9.–26.9.; Kai Noeske (CfA, Harvard) 26.5.–19.6.; Ken'ichi Nomoto (Univ. of Tokyo) 3.8.–22.8.; John Norris (Austr. Nat. Univ. Canberra) 13.7.–27.7.; Sebastian Nuza (IAFE, Argentina) 26.3.–26.9.; Feryal Özel (Univ. of Arizona) 15.6.–29.6.; Josef Paldus (Waterloo, Canada) 1.09.–25.09.; Tiago Pereira (Austr. Nat. Univ. Canberra) 1.11.–4.12.; Konstantin Postnov (Sternberg Inst. Moscow) 15.11.–15.12.; Igor Prokopenko (Space Research Inst., Moscow) 1.2.–31.8.; Dimitrios Psaltis (Univ. of Arizona) 15.6.–29.6.; Alessandro Rettura (JHU Baltimore, USA) 1.5.–31.5.; Kirsty Rhook (Univ. of Cambridge) 1.3.–31.8.; Luke Roberts (Santa Cruz) 12.6.–10.7.; Tokuei Sako (Tokyo, Japan) 6.09.–20.09.; Patrick Scott (Stockholm University) 15.10.–15.11.; Nikolai Shakura (Sternberg Inst. Moscow) 1.9.–30.9.; Shiyin Shen (SHAO,

Shanghai) 1.4.–30.6.; Pavel Shtykovskiy (Space Research Inst., Moscow) 25.4.–24.5.; und 21.10.–19.12.; Michael Specian (JHU, Baltimore) 1.6.–31.8.; Nick Stergioulas (Univ. Thessaloniki, Greece) 10.7.–23.7.; Tamas Szalay (Caltech) 21.7.–19.9.; Victor Utrobin (ITEP, Moscow) 1.10.–30.11.; Jian-Min Wang (ITEP, Beijing) 1.4.–1.6; und 15.9.–15.10.; Jing Wang (USTC, Hefei) seit 1.3.; Stan Woosley (Santa Cruz, USA) 1.6.–9.7.; Shoichi Yamada (Waseda Univ., Japan) 1.4.–30.9.; Tatsuya Yamasaki (CEA, France) seit 2.11.; Sung-Chul Yoon (Ucolick Obs. Santa Cruz) 1.6.–22.6.; Bin Yue (Beijing, China) 18.1.–27.7.; Zhongli Zhang (Shanghai Obs. China) 10.01.–10.05.;

3 Lehrtätigkeit, Prüfungen und Gremientätigkeit

3.1 Lehrtätigkeiten

E. Müller, WS08/09 und SS08, TU München
 W. Hillebrandt, SS08, TU München
 H.-Th. Janka, WS07/08, TU München
 F. Kupka, WS08/09, TU München
 F. Röpke, WS08/09, TU München
 A. Weiss, WS07/08, SS08, und WS08/09, LMU München

3.2 Sonstige Kurz-Vorlesungen

G. De Lucia, “Theoretical scenarios of galaxy formation” (School of Astrophysics ‘Francesco Lucchin’ - Asiago 21.9.–27.9.)
 K. Dolag: “Numerical Simulations”, IAFE Buenos Aires, 24.11–27.11.
 E. Müller: “Core Collapse Supernovae: gravitational wave signature and the influence of magnetic fields” (Erice, 28.6.–4.7.)
 H.-Th. Janka: “Stellar Evolution and Death: Physics and Astrophysics” (Schladming, Austria, 23.2.–1.3.)
 V. Springel: “IMPRS Munich: Advanced Course II” (9.4.–14.4.)
 H. Spruit: “Accretion and jets” (IMPRS, Garching, 1.12.–5.12.)

3.3 Gremientätigkeit

M. Asplund: – Sloan Digital Sky Survey III Collaboration Council – MPP/MPG Berufungskomitee – Uppsala University Astronomer, Bewerbungskomitee
 A. Banday: –Mitglied des Beirats des NASA’s CMB Datenzentrum, the Legacy Archive for Microwave Background Data Analysis (LAMBDA).; – Vorsitzender des Planck Level-S change configuration board (CCB).; – Mitglied des Planck SGS2 End-to-end test review board.; – Planck Koordinator der Technischen Arbeitsgruppe (WT 8) on “Planck and the Virtual Observatory”.
 E. Churazov: Mitglied der INTEGRAL Projektgruppe
 B. Ciardi: Vorsitzende der wissenschaftlichen Arbeitsgruppe von GLOW (German LOng Wavelength) Consortium; – Projektmanagerin für die Entstehung und Platzierung von LO-FAR (Radioteleskop Station am MPA); – Mitglied der wissenschaftlichen Arbeitsgruppe SKA (Square Kilometer Array); – Mitglied des Wissenschaftsrat von INAF (Italian National Institute for Astrophysics)
 T. Enßlin: Projektleiter des MPA Planck Analysis Centre; – Steuerungsausschuss des AstroGrid-D
 M. Gilfanov: Chandra Proposal Review, CfA, Boston, MA

W. Hillebrandt: – Vorsitzender von Supernova Arbeitsgruppe, IAU, Commission VIII; – Vorsitzender, Beirat des Rechenzentrums Garching; – Mitherausgeber, Lecture Notes in Physics; – Mitglied, DFG Senat Komitee on Collaborative Research Centres; – Mitglied des SciDAC Beirats; – Fachbeirat von INAF, Padua und Triest Observatorium

G. Kauffmann: – Mitglied Aspen Center for Physics Board; – Vorsitzende des EARA Beirats; – Astronet, Mitglied von panel für “Galaxienentwicklung”

E. Müller: – Vorstandsmitglied des Sonderforschungsbereichs “Transregio Gravitationswellenastronomie”; – Vorsitzender des Benutzerkomitees und Beirat am Rechenzentrum Garching (RZG/IPP); – Betriebsratsvorsitzender am MPA; – Mitglied des Organisationskomitee der IAU Commission 35

S. Sazonov: Russland Beauftragter für INTEGRAL Time Allocation Committee

H. Spruit: Mitglied des ESO Beobachtungs Proposal Committee; H. Spruit: Mitglieder der Stiftung f. Wissenschaften von Holland (NWO), VICI (Auswahlkomitee)

A. Weiss: Ausschussmitglied vom ESO Beobachtungskomitee

3.4 Dissertationen

Abgeschlossen:

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

Xiang Fei: “Impact of AGN on the gas in clusters of galaxies” Ludwig Maximilians Universität München.

Stephan Hilbert: “Gravitational Lensing with the Millennium Run” Ludwig Maximilians Universität München.

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

Manfred Kitzbichler: “Galaxy Formation Modelling in the Millennium Simulation” Ludwig-Maximilians-Universität, München.

Umberto Maio: “Switching on the first light in the Universe” Ludwig Maximilians Universität München.

Martin Obergaulinger: “Astrophysical magnetohydrodynamics and radiative transfer: numerical methods and applications” Technische Universität München.

Mattia Righi: “Observational consequences of the chemical elements production in the epoch of reionization of the universe” Ludwig-Maximilians-Universität, München.

Stefan Taubenberger: “Interpretation of lightcurves and spectra of Type Ia supernovae.” Technische Universität München.

Jie Wang: “Simulating structure formation with N-body and semi-analytic models”. Ludwig Maximilians Universität München.

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

Laufend:

M. Alves-Cruz: “S-process in extremely metal-poor stars” Ludwig-Maximilians-Universität, München.

M. Baldi: “Interactions between Dark Energy and Dark Matter” Ludwig-Maximilians-Universität, München.

A. Bauswein: “Verschmelzende Neutronensterne und nukleare Zustandsgleichungen und Konsequenzen fuer Elemententstehung” Technische Universität, München.

- A. Bogdan: “Populations of X-ray binaries in nearby galaxies” Ludwig-Maximilians-Universität, München.
- S. Bonoli: “Supermassive Black Holes, Quasars and Galaxy formation” Ludwig-Maximilians-Universität, München.
- P. Bottino: “Component separation methods for Cosmic Microwave Background studies” Ludwig-Maximilians-Universität, München.
- M. A. Campisi: “Gamma-Ray Bursts and Cosmology” Ludwig-Maximilians-Universität, München.
- F. Ciaraldi-Schoolmann: “Stochastische Modellierung von Typ Ia Supernovasimulationen” Technische Universität, München.
- C. D’Angelo: “Investigating ordered magnetic fields in black hole accretion disks”, Ludwig-Maximilians-Universität, München.
- E. Donoso: “Evolution of Radio Galaxies and its Effect on the Galaxy Population” Ludwig-Maximilians-Universität, München.
- F. Elsner: “Search for non-Gaussian signatures in Cosmic Microwave Background” Ludwig-Maximilians-Universität, München.
- M. Fink: “Thermonuclear Detonations in White Dwarfs” Technische Universität, München.
- M. Frommert: “Constraining Cosmological Scenarios” Ludwig-Maximilians-Universität, München.
- M. Gabler: “Coupled core-crust-magnetosphere oscillations of magnetars” Technische Universität, München.
- L. Graziani: “Cosmological Radiative Transfer through metals with CRASH” Ludwig-Maximilians-Universität, München.
- M. Grossi: “Cosmological simulations of non-standard dark energy models as a tool to predict their observational implications”, Ludwig-Maximilians-Universität, München.
- Qi Guo: “Cosmological Semi-Analytical Models” Ludwig-Maximilians-Universität, München.
- S. Hachinger: “Quantitative Analyse von Typ Ia - Supernovaspektren” Technische Universität, München.
- N. Hammer: “Axis-free methods for hydrodynamical simulations using spherical grids” Technische Universität, München.
- S. Hess: “Tesselation Hydrodynamics” Ludwig-Maximilians-Universität, München
- F. Iannuzzi: “Studying the survival of galaxies in hydrodynamical simulations of clusters” Ludwig-Maximilians-Universität, München.
- A. Jeesson-Daniel: “Study of Re-ionization using Ly-alpha emitters” Ludwig-Maximilians-Universität, München.
- P. Jofre-Pfeil: Bestimmung der Eigenschaften galaktischer Sternpopulationen aus dem Sloan Digital Sky survey. Ludwig-Maximilians-Universität, München.
- M. Kromer: “Synthetic spectra and lightcurves of type Ia supernovae”, Technische Universität, München.
- T. Mädler: “Simulation of a Rotating Core Collaps in Characteristic Formulation in General Relativity” Technische Universität, München.
- I. Maurer: “Gamma Ray Bursts and their Super Novae” Technische Universität, München.
- F. Miczek: “Simulation of low Mach number astrophysical flow” Technische Universität, München.
- S. Mineo: “X-ray emission from star-forming galaxies” Ludwig-Maximilians-Universität,

München.

R. Moll: “Magnetic Acceleration of Gamma-Ray Bursts”, Universität Amsterdam.

M. Mocak: “An Investigation of Dynamic Phases of Stellar Evolution” Technische Universität, München.

M. Petkova: “Implementation of radiative transfer into the cosmological simulation code Gadget”, Ludwig-Maximilians-Universität, München.

M. Pierleoni: “Lyalpha/continuum radiative transfer: cosmological applications” Ludwig-Maximilians-Universität, München.

R. Pakmor: “Verschmelzende Weiße Zwerge als Vorläufer von Typ Ia Supernovae” Technische Universität, München.

F. Stasyszyn: “Smoothed particle magneto-hydro-dynamics for cosmological applications” Ludwig-Maximilians-Universität, München.

M. Vogelsberger: “Internal structure of dark matter halos” Ludwig-Maximilians-Universität, München.

M. Wadepuhl: “Simulating the formation of a Milky Way like galaxy” Technische Universität München.

A. Waelkens: “Studying MHD turbulence using radio astronomical tools” Ludwig-Maximilians-Universität, München.

A. Wongwathanarat: “Multidimensional simulations of core collapse supernovae using a two-patch overset grid in spherical coordinates” Technische Universität München.

F. Zaussinger: “Modeling of diffusiv and double-diffusiv convection” Universität Wien.

Z. Zhang: “Populations of Dynamically Formed X-ray Binaries in Globular Clusters and Galactic Centers” Ludwig-Maximilians-Universität, München.

I. Zhuravleva: “Radiative transfer in hot gas of galaxy clusters” Ludwig-Maximilians-Universität, München.

4 Tagungen, Projekte am Institut und Beobachtungszeiten

M. Asplund: Konferenz “A Stellar Journey”, Uppsala, Sweden, June 23.6.-27.6.

M. Asplund: Workshop “Stellar Astrophysics and Galactic Archeology”, Wildbad Kreuth, 27.10.-18.10.

M. Baldi, C. Byrnes, T. Koivisto, et al.: Zweite Transregio Kosmologie Winterschule “Theory for Observers and Observations for Theorists”, 7.12.-12.12.

P. Cerdá-Durán (Hauptorganisator) “CoCoNuT School”, 4.11.-11.11.

E. Churazov and S. Sazonov (SOC), “High Energy Astrophysics 2008”, Moscow, Russia, 24.12-26.12.

B. Ciardi: “Astrophysics with E-LOFAR”, 16.9.-19.9.

B. Ciardi: “Far Away: Light in the young universe at redshift beyond 3”, 7.7.-11.7.

B. Ciardi: “SKADS Marie Curie Conference”, 14.4.-18.4.

T. Foglizzo and H.-Th. Janka, Konferenz “Asymmetric Instabilities in Stellar Core Collapse”, 30.6.-11.7.

C. Hernandez-Monteagudo: Mitorganisator des Workshops “The Physics of Cosmological Recombination”, MPA Garching, 9.7.-11.7.

W. Hillebrandt, E. Müller: Organisatoren des Workshops “Nuclear Astrophysics XIV” Schloß Ringbert, Tegernsee, 10.3.-15.3.

W. Hillebrandt, E. S. Oran: Workshop on Prospects for DDT in Unconfined Terrestrial Systems and Supernovae, SIAM International Conference on Numerical Combustion, Monterey, California, USA, 30.3.–2.4.

G. Kauffmann: “The First Two Billion Years of Galaxy Formation: The Reionization Epoch and Beyond”, Aspen, 11.2.–15.2.

G. Kauffmann: “Aspen Summer workshop: Co-evolution of Black Holes and Galaxies”, Aspen, 7.7.–27.7.

F. Kupka: Mitglied des SOC – IAU Symposium 252 “The Art of Modelling Stars in the 21st century” Sanya, China, 6.4.–11.4.

– Symposium 7 “Grand Challenges in Computational Astrophysics” of JENAM 2008, Vienna, Austria, 8.9.–12.9.,

– the “Workshop on Turbulence and Hydrodynamical Instabilities”, organized in the framework of the German Excellence Cluster “Origin and Structure of the Universe”, Garching, Germany, 17.11.–19.11.

A. Weiss: IAU Symposium 252 “The art of modelling stars in the 21st century”, April 6–11.

A. Weiss: Garching Joint Astronomy Conference 2008 “Chemical Evolution of Dwarf Galaxies and Stellar Clusters”, July 21–25.

4.1 Beobachtungszeiten

L. Casagrande, M. Asplund, J. Meléndez (CAUP), I. Ramírez, S. Sousa (CAUP), 22 hours, VLT, Paranal, Chile, UVES, The metallicity scale at the bottom of the main sequence

L. Casagrande, A. Chiavassa, M. Asplund, J. Meléndez (CAUP), I. Ramírez, 36 hours, TNG, La Palma, Spain, SARG, Towards an accurate metallicity scale for M dwarfs

B. Catinella: 19.3.–10.10. (62 hours divided into 20 blocks over the 7-month period) Arecibo radiotelescope, PR, USA (observations carried out from MPA) Measuring the HI content of massive galaxies (GALEX Arecibo SDSS Survey)

D. Zaritsky, D. Christlein, D. Just, 23.6.–27.6., Magellan II Telescope, Las Campanas Observatory, Chile: “Science with rotating slits: Spectroscopic outer-disk H-alpha emission profiles of disk galaxies“

D. Gadotti (MPA), E. Athanassoula (LAM/OAMP), A. Bosma (LAM/OAMP): 2.10.–6.10., Calar Alto 3.5-m telescope, Granada, Spain, PPAK, Unraveling the Stellar Dynamics in Barred Galaxies;

R. Overzier: 29.01.,30.03.,05.06.,20.09., Apache Point Observatory 3.5m, New Mexico, USA, Optical spectroscopy of starburst galaxies

R. Overzier: 30.11.–31.12., Very Large Telescope, Paranal, Chile, Resolved Ha kinematics of local Lyman break galaxy analogs with FLAMES

F. Patat (ESO), W. Hillebrandt, P. Mazzali et al.: 1.4.2008–31.3.2009, ESO VLT, “Pinning Down the Nature of Type Ia Supernovae Progenitors“ (30h)

N. Przybilla (Bamberg), M.F. Nieva (MPA), M. Farnstein (Bamberg), 21.11.–23.11. 3.5m/TWIN, Calar Alto, Massive Stars as Tracers of the Chemical Evolution of the Galaxy

P. Mazzali, CoIs: Pian, Cappellaro, Patat et al. Title: Late-time spectrophotometry of Type Ib/c Supernovae: diagnostics on energies, asphericities, and progenitors Instrument: ESO VLT FORS Time: 12 hours:

S. Sazonov: 23.07.,3.10.,4.12., INTernational Gamma-Ray Astrophysics Laboratory, Gamma-ray burst studies (GRB080723B, GRB081003B, GRB081204);

S. Sazonov: 1.5.–31.12., Spitzer Space Telescope, Testing the unified model with a complete sample of hard X-ray selected AGN;

H. Spruit (MPA), G. Scharmer (Stockholm): 5.7.–17.7., Swedish 1-m Solar Telescope, La

Palma, Magnetic fields of the new solar cycle

D. Zaritsky (ESO), D. Christlein, D. Just, 23.6.-27.6., Magellan II Telescope, Las Campanas Observatory, Chile: “Science with rotating slits: Spectroscopic outer-disk H-alpha emission profiles of disk galaxies”

4.2 Vorträge und Gastaufenthalte

4.3 Übersichtsvorträge

M. Asplund:

- “Nuclear astrophysics” (Ringberg, March 10-14)
- “IAU Symposium 252: The art of modelling stars in the 21st century” (Sanya, China, April 7 -11)
- “Origin of the elements heavier than Fe” (Torino, Italy, Sept. 25-27)
- Invited review, “Isotopic anomalies” (Paris, France, Oct. 16-17)

M. Boylan-Kolchin:

- “The Future of Supercomputing: A German View” (München, 8.9-13.9)

P. Cerdá-Durán:

- “CoCoNuT school” workshop, MPA, Garching, Germany, (04.11-06.11)
- “Whisky Retreat 2008” workshop, Parma, Italy, (07.04-08.04)
- “Numerical modelling of astrophysical sources of gravitational radiation” workshop, Valencia, Spain, (8.09-12.09)

B. Catinella:

- “Pushing Arecibo to the limit: detection of HI emission from galaxies at redshift $z \sim 0.2$ ” (Arecibo, PR, USA, 01.02.-03.02.)
- “HI observations of gas-rich galaxies at redshift $z \sim 0.2$ ” (Socorro, NM, USA, 16.12.-18.12.)

E. Churazov:

- AAS/HEAD meeting, (Austin, USA, 07.01-11.01)
- “Putting Gravity to Work” conference, (Cambridge, UK, 21.07-25.07)

B. Ciardi:

- “XXIVth IAP Colloquium. Far Away: Light in the young universe at redshift beyond 3” (Paris, France, 7.7-11.7)
- “The Impact of Simulations in Cosmology and Galaxy Formation” (Trieste, Italy, 20.10-22.10)
- “Astrophysics with E-LOFAR” (Hamburg, Germany, 16.9-19.9)
- “VLBI and high resolution astronomy in the next decade” (Garching, Germany, 26.6)
- “21cm Cosmology” (Cambridge, USA, 12.5-15.)

G. De Lucia:

- “Probing Stellar Populations out to the Distant Universe”, invited review (Cefalu', Italy, 7.09-19.09)
- National Radio Astronomy Observatory (Socorro, USA, 12.11)

K. Dolag:

- Invited Review at “Magnetic fields in the Universe II”, Cozumel, Mexico
- Invited Review at COSPAR(E13), “Astrophysical Shocks: Space Observ. vs. Modelling”, Montreal, Canada

T. Enßlin:

- “Magnetic fields in the Universe II: From Laboratory and Stars to the Primordial Universe” Conference, (Cozumel, Mexico, 28.01.-01.02)

M. Gilfanov:

- “Cool disks, hot flows” (Fuenas dalen, Sweden, 25.03.-30.03)
- Astronomy Symposium, Crafoord days 2008 (Stockholm, Sweden, 22.04.-23.04.)

- “Ultraviolet Universe” (Moscow, Russia, 19.05.–20.05.)
- “Astrophysics of Neutron Stars” (Istanbul, Turkey, 30.06.-4.07)
- “HEA-2007” (Moscow, Russia, 24.12.-26.12.)

S. Hachinger:

- “SNe Ia: Links between spectral signatures, physics and abundances”, 14th Workshop on “Nuclear Astrophysics”, (Ringberg, 14.3.)
- “Spectroscopic Luminosity Indicators in SNe Ia”, International Astronomy Meeting, (Cefalù, 19.9.)

W. Hillebrandt:

- “Turbulent Flames in Type Ia Supernovae”, SIAM International Conference on Numerical Combustion (Monterey, USA, 30.3.-2.4.)
- “Multidimensional Simulations of Type Ia Supernova Explosions”, 3rd Biennial Leopoldins Conference on “Dark Energy“ (Munich, 17.10.-11.10.)
- “Recent Progress in Type Ia Supernova Modeling and its Implication for Cosmology”, RESCEU Symposium on “Astroparticle Physics and Cosmology” (Tokyo, Japan, 11.11.-14.11.)

H.-Th. Janka:

- “Supernovae, neutrinos and gravitational waves” Workshop, (Cascina, Italy, 26.11.)
- “Fireworks 2008” Workshop, (Tel Aviv, Israel, 14.12.–21.12.)
- “Next Generation Nucleon Decay and Neutrino Detectors (NNN08)” Workshop, (Paris, France, 11.9.–13.9.)
- “2008 APS April Meeting and HEDP/HEDLA Meeting”, (St. Louis, Missouri, 11.4.–15.4.)

G. Kauffmann:

- “The Evolution of Galaxies through the Neutral Hydrogen Window” (Arecibo Observatory, Puerto Rico , 1.2.-3.2.)
- “Galactic Structure and the Structure of Galaxies” (Ensenada, Baja California, Mexico, 17.3.-21.3.)
- “AAS High Energy Astrophysics Division Meeting - HEAD2008” (Los Angeles, California, 31.3.-3.4.)
- “The Sloan Digital Sky Survey: Asteroids to Cosmology” (Chicago, Illinois, 15.8.-18.8.)
- “Galaxies in Real Life and Simulations”, (Lorentz Center, Leiden, 15.9.-19.9.)
- “The Starburst-AGN Connection Conference”, (Shanghai, China, 27.10.-31.10.).

P. Mazzali:

- Properties of SNe Ia“ at the meeting “SN Rates” (Florence, Italy, 19.5.–23.5.).
- “Type Ia SNe and their progenitors” at the meeting “AM CVn Stars” (Cape Town, So. Africa, 1.9.–5.9.).
- “SNe and Gamma-Ray Bursts” at the meeting “High Energy Astrophysics” (Kathmandu, Nepal, 29.9.–3.10.).
- “Properties of SNe Ia from the observations” at the meeting Fireworks Weizmann Inst. of Science, (Israel 14.12.–19.12.)

R. Moll:

- “The high-energy astrophysics of outflows from compact objects” Workshop, (Ringberg Castle, 7.12.–13.12.)

M. Obergaulinger:

- Numerical modelling of astrophysical sources of gravitational radiation, (Valencia, 8.9.–12.9.)
- Workshop on Turbulence and Hydrodynamical Instabilities, Excellence Cluster Universe, (Munich 17.11.–19.11.)

H. Ritter:

- Invited review talk at the School of Astrophysics “F. Lucchin”, Advanced Stellar Evolutionary Phases (Tarquinia, Italy, 08.06-14.06)

J. Schaefer:

- “Zero-phonon emission bands of solid hydrogen at 6 - 12 um wavelength: An astrophysical phenomenon” Conference on Cryocrystals and Quantum Crystals 2008 (Wroclaw 31.7.-5.8.)

A. Serenelli:

- The Standard Solar Model. The Physics of the Sun and the Solar Neutrinos: an update, (L’Aquila, Italy, 16.10–17.10.)

V. Springel:

- JENAM 2008, “New challenges to European Astronomy” (Vienna, Austria, 7.-12.9.)
- “Galactic structure and the structure of galaxies” (Ensenada, Mexico, 17.-21.3.)

H. Spruit:

- Invited review, IAU Symposium 259 “Cosmic magnetic fields”, (Tenerife, 3.11.-7.11.)

A. Waelkens:

- “CMB Polarization workshop: theory and foregrounds” Workshop, (Fermilab, Chicago, US, 23.06.-26.06)

A. Weiss:

- “A Stellar Journey” symposium, (Uppsala, Sweden, 23.06.–27.06.)

S. White:

- Invited Discourse, American Astronomical Society, (Austin, Texas, 8.1.-10.1.)
- Surveys & Simulations, (Berkeley, USA, 12.1.-18.1.)
- IPMU Opening Symposium, (Tokyo, Japan, 9.3.-13.3.)

Galactic Structure and the Structure of Galaxies, (Ensenada, Mexico, 15.3.-21.3.)

- SPIE Annual Conference, (Marseille, France, 24.6.-26.6.)
- KIAA Opening Symposium, (Beijing, China, 26.6.-29.6.)
- Putting Gravity to Work, (Cambridge, UK, 21.7.-25.7.)
- SDSS Symposium From Asteroids to Cosmology, (Chicago, 13.8.-20.8.)
- Academia Europea Annual Meeting, (Liverpool, 18.9.-20.9.)
- New Vision 400, Beijing, (China, 11.10.-17.10.)

4.4 Kolloquiums Vorträge

M. Asplund:

- Kolloquium, Geneva Observatory (Geneva, March 4)
- Kolloquium, Leiden University (Leiden, March 6)
- Kolloquium, MPIfR (Bonn, July 4)
- Kolloquium, LMU (Munich, July 7)
- Kolloquium, MPIA/Univ. Heidelberg (Heidelberg, July 8)
- Kolloquium, Australian National University (Canberra, Australia, Aug. 15)
- Kolloquium, Australian National University (Canberra, Australia, Aug. 20)

J.S. Bolton:

- Astrophysics seminar, Department of Physics, UCSB, (Santa Barbara, USA, 15.02.08)

E. Churazov:

- Colloquium at the Institute of High Energy Physics (Protvino, Russia, 02.10)

B. Ciardi:

- “XXIVth IAP Kolloquium Far Away: Light in the young universe at redshift beyond 3” (Paris, France, 7.7–11.7)
- Invited Colloquium (ITA Heidelberg; 22.1)

G. De Lucia:

- Eingeladenes Kolloquium, Osservatorio Astronomico di Brera (Milano, Italy, 26.05)

D. Gadotti:

- Max Planck Institute for Astronomy (Heidelberg, Germany, 16.12.)
- University of Ghent (Ghent, Belgium, 15.7.)

- Institut d’Astrophysique de Paris (Paris, France, 2.7.)
- Max Planck Institute for Astrophysics (Garching, Germany, 16.6.)
- Max Planck Institute for Extraterrestrial Physics (Garching, Germany, 5.6.)

W. Hillebrandt:

- “Viel Lärm um das Nichts - Neues von der dunklen Seite des Universums”, Kolloquium, Research Center Jülich (Juelich, 19.9.)

H.-Th. Janka:

- University Colloquium (Aachen, 28.4.)
- University Colloquium (New York, NY, 17.4.)

R.B. Metcalf:

- Kolloquium, University of St. Andrews, 22.4.
- Kolloquium, Royal Observatory Edinburgh, 23.4.
- Kolloquium, University of Durham, 29.4.

R. Overzier:

- Kolloquium, (Berkeley, USA, 05.02.)
- Kolloquium, (Santiago, Chile, 27.11.)

V. Springel:

- Astrophysikalisches Kolloquium (IAP, Paris, 5.12.)
- Physikerkolloquium (Heidelberg, 24.10.)
- Astrophysikalisches Kolloquium (Harvard-CfA, 30.10.)
- Astrophysikalisches Kolloquium (ARI, Heidelberg, 14.1.)

4.5 Kooperationen

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

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

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

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

4.6 EU Netzwerke - 2008 aktiv:

- “Planck Surveyor” (S. White);
- Early Stage Training Site (Marie Curie Program) in the European Association for research in Astronomy (EARA). (S. White, H. Spruit)
- Joint Research Activity High Time Resolution Astronomy in the Optical-Infrared Coordination Network for Astronomy in OPTICON II(FP6 I3 Program) (H. Spruit)
- “Multi-wavelength Analysis of Galaxy Populations (MAGPOP)”, – (G. Kauffmann)
- “Marie Curie Site at the IMPRS in Astrophysics (International Max-Planck Research School) S. White.

4.7 Andere Netzwerke

“Alfa-Lenac” Latein-Amerikanisch-Europäisches Netzwerk für Astrophysik und Kosmologie (S. White)

IKYDA - DAAD Projektbezogener Personenaustausch mit Griechenland (E. Müller)

G.I.F. Forschungsaustausch mit Israel (S. White)

PROALAR (DAAD Programm mit Argentinien) - S. White

4.8 Sonstige Reisen

M. Asplund: Australian National University, Canberra (Aug. 7-29)

J.S. Bolton: University of Melbourne, Australia (16.11.07- 21.01.08.)

J.S. Bolton: Kavli Institute for Theoretical Physics, Santa Barbara, USA (05.02.08 - 26.02.08)

S. Bonoli: Canadian Institute for Theoretical Astrophysics. Toronto (01.05.08–04.06.08)

E. Churazov: Space Research Institute, Moscow (09.05.–03.06.,01.08.–20.08).

R. Collet: Niels Bohr Institute, University of Copenhagen, (19.05–31.05)

G. De Lucia: Kavli Institute for Theoretical Physics, Santa Barbara, USA (27.10–21.11)

F. Elsner: University of Illinois at Urbana-Champaign, (10.03.–08.04.).

M.Gilfanov: Space Research Institute, Moskau (12.09.–26.09.)

E. Müller: Univ. Tokyo, Japan (24.04.–24.05.).

G. Kauffmann: Aspen Center for Physics, Colorado (02.07.–27.07.).

W. Kraemer: Steacie Institute for Molecular Sciences, NRCC, Ottawa (25.3.-26.4.2008).

W. Kraemer: Center for Complex Systems, Academy of Sciences, Prague (3.11.-22.11.2008).

P. Mazzali: Research Centre for the Early Universe, Univ. of Tokyo Visting Professor, 1.1.–31.3.

P. Mazzali: Dark Cosmology Centre, U. Copenhagen, Denmark, june

P. Mazzali: Weizmann Inst of Science, Israel, dec: 2 weeks, talk.

I. Seitzzahl: University of Chicago, (3.10.–19.10.)

H. Spruit: Astronomy department, Pontificia Universidad Catolica de Chile, Santiago (14.1.–6.2).

F. Zaussinger: 1st MetStröm Summer School on multiscale problems in fluid dynamics and meteorology at the FU Berlin (18.8.-12.9.)

5 Veröffentlichungen

5.1 In Zeitschriften und Büchern

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