

## Bonn

### Argelander–Institut für Astronomie Rheinische Friedrich-Wilhelms-Universität Bonn

Auf dem Hügel 71, 53121 Bonn  
Tel. (0228) 73-3658, Telefax: (0228) 73-1775  
E-Mail: [aifa@astro.uni-bonn.de](mailto:aifa@astro.uni-bonn.de)  
WWW: <http://www.astro.uni-bonn.de/>

#### 0 Allgemeines

Die wissenschaftliche Mitarbeiterin Dr. Kirsten Knudsen trat im Berichtsjahr eine Stelle als „Assistant Professor“ an der Chalmers University of Technology in Göteborg, Schweden an, Dr. Wouter Vlemmings trat eine Stelle als „Associate Professor“ an der Chalmers University of Technology in Göteborg und als Leiter des nordischen ALMA Regional Center (ARC) Knotens am Onsala Space Observatory an. Die langjährigen Sekretariatsleiterinnen Elisabeth Danne und Kathy Schrüfer gingen in den Ruhestand. Ihre Aufgaben werden nun von Ulrike Hamacher (Abt. Sternwarte) und Ellen Vasters (Abt. Astrophysik) wahrgenommen.

Das AIfA ist Gastgeber von zwei Emmy-Noether-Nachwuchsgruppen: Dr. Andrea Stolte leitet die Gruppe „Evolution of starburst clusters in the Milky Way“, Dr. Olaf Wucknitz die Gruppe „Utilising the new generation of radio telescopes for gravitational lens research.“

Prof. Peter Schneider dient seit 1.10.2010 als Vorsitzender der Fachgruppe Physik / Astronomie.

Das AIfA und die Universitätsleitung beschlossen die Schließung des Observatoriums Hoher List zum 1.7.2012, wenn sich bis dahin kein neuer Träger zur Finanzierung des Betriebs findet.

Das AIfA ist an der durch die Exzellenz-Initiative geförderten *Bonn-Cologne Graduate School for Physics and Astronomy* (BCGS) zentral beteiligt, welche über 150 Studierende umfasst. Weiterhin ist das AIfA gemeinsam mit der Universität zu Köln an der *International Max-Planck Research School in Astronomy and Astrophysics* (IMPRS) beteiligt, die im benachbarten MPIfR beheimatet ist. Die *Bonn International Graduate School* (BIGS) rekrutiert und unterstützt Master Studenten und Doktoranden der Physik und Astrophysik seit 2001.

Wissenschaftler des AIfA sind in eine große Zahl von Kooperationen eingebunden. Das AIfA leitet die DFG-Forschergruppe FOR 1254 „Magnetisation of Interstellar and Intergalactic Media: The Prospects of Low-Frequency Radio Observations“ (Sprecher: U. Klein) und beteiligt sich mit fünf ortsübergreifenden Teilprojekten im Transregionalen Sonderforschungsbereich TR33 „The Dark Universe“ (gemeinsam mit Kollegen aus Heidelberg und München/Garching), sowie mit drei wissenschaftlichen Projekten am DFG SFB 956 „Conditions and Impact of Star Formation - Astrophysics, Instrumentation and Laboratory Research“ (Sprecher J. Stutzki, Köln). Zudem ist das AIfA an neun verschiedenen

Projekten im DFG-Schwerpunktprogramm 1177 „Galaxienentwicklung“ beteiligt, mit drei Projekten am DFG SPP 1573 „Physics of the Interstellar Medium,“ sowie am Marie Curie RTN-Netzwerk „DUEL.“ Zu den weiteren Kooperationen gehört der Betrieb des deutschen *ALMA Regional Center* (ARC) Node und eines der OmegaCAM Datenzentren, sowie die Beteiligung am Betrieb des NANTEN2 Submillimeter-Teleskops in Chile und an der Vorbereitung des CCAT (Cerro Chajnantor Atacama Telescope) Projekts, der Vorbereitung der eROSITA und EUCLID Weltraummissionen, sowie die Beteiligung am zukünftigen „after Sloan-II“ Spiders Projekt. Für CCAT wurde von den Universitäten Bonn und Köln im Grossgeräte-Programm der DFG/BMBF ein substanzieller Beitrag zu Finanzierung eingeworben.

Im Berichtsjahr 2011 wurden von der Instrumentierungsgruppe - mit der Werkstatt am Observatorium Hoher List und dem Elektroniklabor in Bonn - mehrere „Bonn-Shutter“ fertiggestellt und ausgeliefert: Zwei Shutter (125mm x 125mm) für das Optical Detector Department (ODT) der ESO in Garching/ München, zwei Shutter (200mm x 100mm) für den MUSE-Spektrographen des ESO VLT, ein Shutter (100mm x 100mm) für das Calar Alto Observatorium in Spanien, ein Shutter (125mm x 125mm) für das T80 Teleskop des J-PAS (Javalambre Physics of the Accelerating Universe Astrophysical Survey) Projekts, ein Shutter (200mm x 200mm) für das AIP/PEPSI am LBT, vier Shutter (200mm x 200mm) für den AAO-HERMES Spektrographen (Australien). Für das Physikalische Institut wurde ein rechnergesteuertes Nanoamperemeter für den Betrieb von Photodioden entwickelt. Der Bachelor Praktikums Versuch wurde mit einem DADOS Spektrographen ausgerüstet (50 cm Hausteleskop). Die Gruppe beteiligte sich zudem am Aufbau des CCD-Praktikumsversuchs. Zu den weiteren Aktivitäten der Instrumentierungsgruppe gehört die Entwicklung eines neuen Verfahrens zur absoluten Flusskalibration des SNIFS-Spektrographen des „Near Supernova Factory“ Konsortiums.

Im Berichtsjahr waren Mitarbeiter/innen des AIfA durch populärwissenschaftliche Vorträge (u.a. 30 Abendvorträge) und andere Aktivitäten an der Öffentlichkeitsarbeit engagiert. Schwerpunkte lagen dabei auf den Themen Astronomie und Schule, Astronomie für Frauen und dem interdisziplinären Austausch mit fachfremden Disziplinen. Im Rahmen des Projekts „Astronomie/vor Ort“ besuchten Institutsmitarbeiter mehr als 50 Schulklassen im Großraum Köln/Bonn. Dreissig Schülerinnen und Schüler leisteten 2011 ihr Berufspraktikum im AIfA ab. Mit Unterstützung des NRW-Landesprojekts „Zukunft durch Innovation“ entstand im Institut das „Schülerlabor Küstner“, das im Rahmen der Physikwerkstatt Rheinland den Schulen Praktikumsplätze anbietet. Besondere Highlights waren die „Türöffner-Aktion“ der „Sendung mit Maus,“ bei der mehr als 1000 Kinder das AIfA besuchten und die Beteiligung beim Deutschland-Fest im Rahmen des Angebots der Bonner Universität und die Teilnahme an der „Einstiegs-Abi“ Messe in Köln. MitarbeiterInnen des AIfAs beteiligten sich an dem „Bonner Sternhimmel,“ einem Projekt der Bonner Amateurastronomen. Um besonders dem weiblichen Nachwuchs den Zugang zur Astronomie attraktiv zu gestalten beteiligte sich das AIfA an dem tasteMINT Projekt der Bonner Universität. Mit der Präsentation historischer Kometenaufnahmen gemeinsam mit Mondbildern des Kölner Künstlers H. Tholen im neuen Ausstellungsraum wurde der Dialog der Astronomie mit der Kunst am Observatorium Hoher List fortgesetzt. Drei interdisziplinäre Wochenendseminare (Kunst, Musik im Dialog mit der Astronomie), ein Chorkonzert und zahlreiche Führungen rundeten den Dialog der Astronomie mit anderen Disziplinen ab. Auch der Förderverein am Hohen List beteiligte sich mit zahlreichen Führungen an den monatlichen Vortragsveranstaltungen.

Aktuelle Forschungsarbeiten sowie weitere Information über das AIfA sind auf dem Internet (etwa durch den arXiv-Preprintserver und der Home-Page des Instituts) leicht verfügbar. Deshalb werden nachfolgend nur noch referierte Publikationen und Lehrbücher/Monographien aufgeführt.

## 1 Personal und Ausstattung

### 1.1 Personalstand

#### *Professoren*

F. Bertoldi (Geschäftsführender Direktor), R. Izzard, U. Klein, P. Kroupa, N. Langer (stellv. Geschäftsf. Direktor), C. Porciani, T. Reiprich (Heisenberg-Professor), P. Schneider

#### *Emeritierte Professoren*

P.W. Blum, P. Brosche, K.S. de Boer, H.J. Fahr, E.H. Geyer, W. Kundt, U. Mebold, G. Prölk, M. Römer, W. Seggewiß, H. Volland

#### *Wissenschaftliche Mitarbeiter:*

Dr. M. Albrecht, Dr. F. Alves, Dr. A. Balaguera Antolinez, Dr. S. Banerjee, Dr. K. Basu, Dr. N. Ben Bekhti, Dr. P. Bett, Dr. J. Braithwaite, Dr. M. Cantiello (AIfA Fellow), Dr. O. Cordes, Dr. T. Dermine, Dr. V. Duez (AIfA Fellow), Dr. T. Erben, Dr. B. Famaey (Humboldt Fellow), Dr. R. Franco Hernández, Dr. M. Geffert, Dr. I. Georgiev, Prof. Dr. R. González Lópezlira, Dr. J. Hartlap, Dr. P. Heraudeau, Dr. H. Hildebrandt, Dr. S. Hilbert, Dr. K. Holhjem, Dr. H. Israel, Dr. J. Jasche, Dr. P. Kalberla, Priv.-Doz. Dr. J. Kerp, Dr. K. K. Knudsen (AR), Dr. R. Kuiper, Dr. A. Küpper, Dr. H. Lau, Dr. L. Lovisari, Dr. A. Ludlow, Dr. J. Mackey (Humboldt Fellow), Dr. M. Maercker (ESO Fellow), Dr. O. Marggraf, Dr. L. Marian, Dr. T. Maschberger, Dr. C. McCain, Dr. S. Mohamed (AIfA Fellow), Dr. E. Moreno Mendez (AIfA Fellow), Dr. S. Mühle, Dr. R. Nakajima, Dr. U. Naß, Dr. H. Neilson (Humboldt Fellow), Dr. F. Pacaud, Dr. G. Parmentier, Dr. J. Pflamm-Altenburg, Dr. S. Ramstedt, Dr. K. Reif, Dr. E. Romano-Diaz, Dr. R. Schaaf, Dr. M. Schirmer, Dr. T. Schrabback-Krahe, Dr. Y. Schuberth, Dr. X. Shi, Dr. M. Siewert, Dr. P. Simon, Dr. D. Sluse, Dr. R. Smith (Humboldt Fellow), Dr. V. Smolčić (ESO Fellow), Dr. M. Sommer (Nord), Dr. A. Stolte (DFG/Emmy-Noether), Dr. T. Tauris, Dr. I. Thies, Dr. R. Torres Lopez, Dr. W. Vlemmings (DFG/Emmy-Noether), Prof. Dr. C. Watts (DAAD Fellow), Dr. B. Winkel, Dr. X. Wu, Dr. O. Wucknitz (DFG/Emmy-Noether), Dr. D. Xu (AIfA Fellow), Dr. S.-C. Yoon, Dr. Y. Zhang, Dr. J. Zörnchen

#### *Doktoranden:*

S. Anderl, L. Boldt, M. Brockamp, C. Brüns, S. Burkutean, E. Carrillo, M. Compostella, J. Dabringhausen, V. Darmstädter, M. de Lima Leal Ferreira, M. den Heijer, H. Eckmiller, A. Elia, S. Faridani, L. Flöer, P. Greskovic, P. Günster, M. Habibi, B. Hußmann, F. Kirsten, M. Klein, K. Köhler, A. Kozyreva, S. Kühnrich, F. Lüghausen, H. Mahmoudian, M. Marks, S. Martin, D. Meyer, B. Miranda Ocejó, A. Nagarajan, A. Najafi, S. Nasoudi Shoar, S. Oh, E. Pastor Mira, M. Pawlowski, A. Pérez Sánchez, J. Piel, J. Pollack, A. Purkayastha, M. Ramos Ceja, N. Roth, H. Saghiha, S. Salim, P. Schmidt, F. Schneider, Z. Shafiee, Z. Sheikhabaee, X. Shi, M. Sokaliwska, G. Surcis, M. Tomassetti, M. Trasatti, B. Vijaysarathy, F. Volino, P. Wilking, D. Wuttke

#### *Diplomanden, Bachelor- und Masterstudenten:*

A. Damm, A. Dierks, K. Enders-Brehm, M. Hofmann, M. Huhnen-Venedey, A. Ippendorf, V. Jaritz, L. Klarmann, D. Kübler, C. Schulz, M. Venzmer

#### *Master of Science in Astrophysik (1st year)*

M. Badea, T. Badescu, A. Bemis, C. Fletcher, N. Gupta, M. Kierdorf, D. Klaes, M. Kruckow, P. Lieberz, O. Lux, D. Mülheims, Y. Ordenes Briceno, R. Pandit, C. Saliba, K. Sendlinger, S. Sreenivasan, S. Thölken, R. Wollmann

#### *Master of Science in Astrophysik (2nd year)*

M. Asgari, J. Barrera Ballesteros, K. Borm, M. Borzyszkowski, R. Hanson, J. Ibañez Mejía, D. Keller, I. Mohammed, T. Röhser, R. Röseler, G. Schellenberger, S. Sengupta, R. Toma,

## A. Tudorica

### *Sekretariat und Verwaltung:*

E. Danne, U. Hamacher, E. Kramer, S. Polder (Hoher List), K. Schrüfer, K. Sörgel, C. Stein-Schmitz (Geschäftsführung), E. Vasters

### *Technische Mitarbeiter:*

A. Bödewig, M. Polder (Hoher List), Dipl.-Ing. H. Poschmann, Dipl.-Phys. P. Müller, H. Saxler (Hoher List), F.-J. Willems (Hoher List)

### *Studentische Mitarbeiter:*

D. Elsen, J. Erler, T. Guttenberger, D. Markus, D. Mülheims, V. Thiel, C. Weigelt, S. Werner

## 1.2 Personelle Veränderungen

### *Ausgeschieden:*

M. Asgari, J. Barrera Ballesteros, Dr. P. Bett, Dr. M. Cantiello, E. Danne, A. Damm, A. Dierks, Dr. R. Franco Hernández, P. Günster, T. Guttenberger, R. Hanson, Dr. J. Hartlap, Dr. P. Heraudeau, Dr. S. Hilbert, M. Hofmann, Dr. K. Holhjem, M. Huhnen-Venedey, A. Ippendorf, V. Jaritz, Dr. J. Jasche, Dr. K. K. Knudsen, D. Kübler, Dr. R. Kuiper, Dr. T. Maschberger, B. Miranda Ocejo, Dr. E. Moreno Mendez, A. Najafi, E. Pastor Mira, S. Polder, Dr. M. Schirmer, P. Schmidt, K. Schrüfer, Dr. Y. Schuberth, K. Sörgel, G. Surcis, Dr. R. Torres Lopez, M. Venzmer Dr. W. Vlemmings, Dr. F. Volino, Prof. Dr. C. Watts (DAAD Fellow), F.-J. Willems, D. Wuttke

### *Neueinstellungen und Änderungen des Anstellungsverhältnisses:*

Dr. F. Alves, Dr. T. Dermine, U. Hamacher, Dr. H. Lau, Dr. L. Lovisari, Dr. C. McCain, Dr. S. Mohamed, Dr. S. Mühle, Dr. R. Nakajima, Dr. E. Romano-Diaz, Dr. T. Schrabbach-Krahe, Dr. D. Sluse, Dr. E. van Uitert, E. Vasters, Dr. X. Wu

## 2 Lehrtätigkeit, Prüfungen und Gremientätigkeit

### 2.1 Lehrtätigkeiten

Die Vorlesungsverzeichnisse können eingesehen werden unter <http://www.astro.uni-bonn.de/students/lecture/>.

## 3 Akademische Abschlussarbeiten

### 3.1 Diplomarbeiten

#### *Abgeschlossen:*

M. den Heijer: The Tully-Fisher relation for early-type galaxies with Westerbork HI data

V. Jaritz: Chandra X-ray Study of a Galaxy Cluster Sample: Intracluster Gas Temperature Profiles

M. Venzmer: Wechselwirkung von Gezeiten-Gas des Magellanschen Systems mit dem Halo der Milchstrasse

#### *Laufend:*

L. Klarmann: Heating of a disk of satellite galaxies around a major host galaxy

C. Schulz: The frequency of star formation rates in a galaxy cluster assembly

### 3.2 Masterarbeiten

*Abgeschlossen:*

- M. Asgari: Generalizing a cosmic shear analysis method, COSEBIs, to higher dimensions in parameter space and tomography
- R. Hanson: Decomposition of the matter power spectrum
- M. Ramos Ceja: Constraints on the universal pressure profile through the Sunyaev-Zel'dovich power spectrum
- H. Saghiha: Third-order aperture measures with the Millennium Simulation
- B. Vijaysarathy: AGN heating in galaxy groups

*Laufend:*

- K. Borm: X-ray galaxy cluster observations with eROSITA
- M. Borzyszkowski: Investigating the correspondence of dark matter halos and linear density peaks
- J. Ibañez Mejía: The Tayler instability in stars
- D. Keller: Population synthesis of planetary nebulae
- D. Lenz: Interaction of high-velocity clouds with the Milky Way galaxy
- I. Mohammed: Cosmological constraints from galaxy cluster surveys
- T. Röhser: The Milky Way windows to the distant universe
- R. Röseler: Constrained correlation functions in multi-dimensions
- G. Schellenberger: Chandra X-ray study of a galaxy cluster sample
- S. Sengupta: Nova re-accretion model for J-type carbon stars: a population synthesis study
- A. Tudorica: Star formation history of the IKN dwarf spheroidal from optical-NIR photometry of its globular clusters

### 3.3 Dissertationen

*Abgeschlossen:*

- K. Holhjem: Shear-selection of galaxy clusters in the KIDS survey
- A. Küpper: Dynamical evolution of massive star clusters
- T. Maschberger: The formation, dynamics and stellar content of star clusters
- E. Pastor-Mira: Aperture statistics for Virgo simulation
- G. Surcis: High resolution magnetic field measurements in high-mass star forming regions
- I. Thies: Induced planet formation in star clusters
- F. Volino: Observations and modelling of radio lenses

*Laufend:*

- S. Anderl: Modelling shocks in the interstellar medium
- L. Boldt: Magnetohydrodynamics in stars
- M. Brockamp: Massive black holes in galaxies
- C. Brüns: Untersuchung der Struktur von elliptischen Galaxien mit Hilfe numerischer Simulationen
- S. Burkutean: The Sunyaev-Zel'dovich effect in galaxy clusters with interferometry
- E. Carrillo: The dense gas in the Magellanic Clouds

- M. Compostella: The intergalactic medium and reionization: a numerical perspective
- J. Dabringhausen: The stellar initial mass function in massive star clusters
- V. Darmstädter: Searching for compact high-velocity clouds in the northern and southern sky using EBHIS and GASS data
- H. Eckmiller: Testing X-Ray Scaling Relations with a Sample of Galaxy Groups and Detailed Analysis of Abell 2244 with Chandra and Suzaku
- A. Elia: Large scale structure and dark energy
- S. Faridani: The baryon budget of nearby galaxies
- M. Ferreira: Magnetic Fields and the Formation of A-spherical of Planetary Nebulae
- L. Fløer: Exploration of the Local Universe in HI
- M. Habibi: Starburst clusters near the centre of the Galaxy
- B. Hußmann: The mass function of the Quintuplet cluster
- F. Kirsten: Pulsar Astrometry with VLBI
- M. Klein: A joint mass analysis of galaxy clusters from weak gravitational lensing and Sunyaev-Zel'dovich measurements
- K. Köhler (Friedrich): Massive stars on the main sequence
- A. Kozyreva: Pre-supernova evolution of massive stars
- S. Kühnrich: Evolutionary models of interacting massive close binary stars
- F. Lüghausen: Numerical N-body computations of galaxies in Milgromian dynamics
- H. Mahmoudian: HST observations of gravitational lens B0218+357
- M. Marks: Dynamical fingerprints of star cluster formation
- S. Martin: Galaxy-galaxy-galaxy lensing to investigate common dark matter halos of galaxies
- D. Meyer: Models for the circumstellar medium of massive runaway stars
- B. Miranda Oejo: Study of the outskirts of galaxy clusters with X-rays
- A. Nagarajan: The structure and properties of intra cluster gas in galaxy clusters
- A. Najafi: Weak lensing and photometric analysis of the supercluster field A266/268
- S. Nasoudi Shoar: Small-scale studies of the Milky Way disc and halo gas with absorption-line spectroscopy
- F. Navarrete Avendano: The far-infrared-radio correlation in the COSMOS survey data
- S. Oh: Massive stars in young star clusters
- M. Pawlowski: Formation of Tidal Dwarf Galaxies in Galaxy Encounters
- A. Pérez Sánchez: Molecular line emission in asymmetric envelopes of evolved stars
- J. Piel: Investigating galaxy clusters with weak gravitational lensing and X-rays
- J. Pollack: The bispectrum as a probe into halo bias
- A. Purkayastha: Magnetization of the IGM: Role of starburst dwarf galaxies
- M. Ramos Ceja: Cosmology with X-ray galaxy cluster surveys
- N. Roth: Cosmology and large scale structure
- H. Saghiha: Quantitative analysis of galaxy-galaxy-galaxy lensing
- S. Salim: Star formation in high redshift galaxies
- P. Schmidt: Searching for Direct Disk-Satellite Interaction in the Warped Spiral Galaxies

NGC 4013 and NGC 5907

F. Schneider: The effects of stellar and close binary evolution on the present day mass function

Z. Shafiee: Lensing studies in the Kilo Degree Survey

Z. Sheikhabaee: Mass and light in the Abell 226/228 supercluster

X. Shi: Elimination of alignment systematics in higher-order shear correlations

M. Sokaliwska: Nuclear star clusters

M. Tomassetti: Numerical simulations of galaxy formation

M. Trasatti: Exploring the nature of radio halos and relics in galaxy clusters

B. Vijaysarathy: Detailed X-ray properties of galaxy groups and fossil groups

U. Wernick: Pulsarwind Dynamik

D. Wuttke: Strong and weak lensing analysis of the mass distribution in massive clusters

## 4 Veröffentlichungen

### 4.1 In Zeitschriften und Büchern

Adami, C., Mazure, A., Pierre, M., Sprimont, P. G., Libbrecht, C., and 27 colleagues: The XMM-LSS survey: optical assessment and properties of different X-ray selected cluster classes, *A&A* **526** (2011), A18

Alves, F. O., Acosta-Pulido, J. A., Girart, J. M., Franco, G. A. P., López, R.: Infrared and Optical Polarimetry around the Low-mass Star-forming Region NGC 1333 IRAS 4A, *AJ* **142** (2011), 33

Alves, F. O., Girart, J. M., Lai, S. -P., Rao, R., and Zhang, Q: The Magnetic Field in the NGC 2024 FIR 5 Dense Core, *ApJ* **726** (2011), 63A

Amiri, N., Vlemmings, W., van Langevelde, H. J.: The kinematics and magnetic fields in water-fountain sources based on OH maser observations, *A&A* **532** (2011), A149

Angus, G. W., Diaferio, A., Kroupa, P.: Using dwarf satellite proper motions to determine their origin, *MNRAS* **416** (2011), 1401–1409

Ao, Y., Henkel, C., Braatz, J. A., Weiß, A., Menten, K. M., Mühle, S.: Ammonia (J,K)=(1,1) to (4,4) and (6,6) inversion lines detected in the Seyfert 2 galaxy NGC 1068, *A&A* **526** (2011), A154

Aravena, M., Wagg, J., Papadopoulos, P. P., Feain, I. J.: Unveiling the Mask on the ULIRG-to-QSO Transition Object [H89]1821+643 at  $z = 0.3$ : A Gas-poor/Gas-rich Galaxy Merger and the Implications for Co-based Dynamical Mass Estimates, *ApJ* **737** (2011), 64

Assmann, P., Fellhauer, M., Kroupa, P., Brüns, R. C., Smith, R.: Popping star clusters as building blocks of the Milky Way's thick disc, *MNRAS* **415** (2011), 1280–1289

Bagchi, J., van Weeren, R. J., Raychaudhury, S., Röttgering, H. J. A., Intema, H. T., and 4 colleagues: A deep radio and X-ray view of cluster formation at the crossroads of filaments, *Mem. Soc. Astron. Italiana* **82** (2011), 561

Balaguera-Antolínez, A.; Sánchez, Ariel G.; Böhringer, H.; Collins, C.; Guzzo, L.; Phleps, S.: The REFLEX II galaxy cluster survey: power spectrum analysis, *MNRAS* **413** (2011), 386-400.

Banerjee, S., Kroupa, P.: A New Type of Compact Stellar Population: Dark Star Clusters, *ApJ* **741** (2011), L12

Bertacca, D., Raccanelli, A., Piattella, O. F., Pietrobon, D., Bartolo, N., and 2 col-

- leagues: CMB-galaxy correlation in Unified Dark Matter scalar field cosmologies, *J. Cosm. Astrop. Phys.* **3** (2011), 39
- Bestenlehner, J. M., Vink, J. S., Gräfener, G., Najarro, F., Evans, C. J., and 15 colleagues: The VLT-FLAMES Tarantula Survey. III. A very massive star in apparent isolation from the massive cluster R136, *A&A* **530** (2011), L14
- Bielby, R. M., Shanks, T., Weilbacher, P. M., Infante, L., Crighton, N. H. M., and 9 colleagues: The VLT LBG Redshift Survey - I. Clustering and dynamics of  $\approx 1000$  galaxies at  $z \approx 3$ , *MNRAS* **414** (2011), 2–27
- Biggs, A. D., Ivison, R. J., Ibar, E., Wardlow, J. L., Dannerbauer, H., and 11 colleagues: The LABOCA survey of the Extended Chandra Deep Field-South - radio and mid-infrared counterparts to submillimetre galaxies, *MNRAS* **413** (2011), 2314–2338
- Boselli, A., Boissier, S., Heinis, S., Cortese, L., Ilbert, O., and 48 colleagues: The GALEX Ultraviolet Virgo Cluster Survey (GUViCS). I. The UV luminosity function of the central 12 sq. deg, *A&A* **528** (2011), A107
- Bothwell, M. S., Chapman, S. C., Tacconi, L., Smail, I., Ivison, R. J., and 12 colleagues: High-resolution CO and radio imaging of ULIRGs: extended CO structures and implications for the universal star formation law, *MNRAS* **405** (2010), 219–233
- Bracco, A., Cooray, A., Veneziani, M., Amblard, A., Serra, P., and 33 colleagues: Herschel-ATLAS: statistical properties of Galactic cirrus in the GAMA-9 Hour Science Demonstration Phase Field, *MNRAS* **412** (2011), 1151–1161
- Brockamp, M., Baumgardt, H., Kroupa, P.: Tidal disruption rate of stars by supermassive black holes obtained by direct N-body simulations, *MNRAS* **418** (2011), 1308–1324
- Brüns, R. C., Kroupa, P.: A New Formation Scenario for the Milky Way Cluster NGC 2419, *ApJ* **729** (2011), 69
- Brüns, R. C., Kroupa, P., Fellhauer, M., Metz, M., Assmann, P.: A parametric study on the formation of extended star clusters and ultra-compact dwarf galaxies, *A&A* **529** (2011), A138
- Brott, I., de Mink, S. E., Cantiello, M., Langer, N., de Koter, A., and 4 colleagues: Rotating massive main-sequence stars. I. Grids of evolutionary models and isochrones, *A&A* **530** (2011), A115
- Cantalupo, S., Porciani, C.: RADAMESH: cosmological radiative transfer for Adaptive Mesh Refinement simulations, *MNRAS* **411** (2011), 1678–1694
- Cantiello, M., Braithwaite, J.: Magnetic spots on hot massive stars, *A&A* **534** (2011), A140
- Casey, C. M., Chapman, S. C., Neri, R., Bertoldi, F., Smail, I., and 10 colleagues: Molecular gas in submillimetre-faint, star-forming ultraluminous galaxies at  $z > 1$ , *MNRAS* **415** (2011), 2723–2743
- Casey, C. M., Chapman, S. C., Daddi, E., Dannerbauer, H., Pope, A., and 13 colleagues: A search for neutral carbon towards two  $z = 4.05$  submillimetre galaxies, GN20 and GN20.2, *MNRAS* **400** (2009), 670–676
- Castangia, P., Impellizzeri, C. M. V., McKean, J. P., Henkel, C., Brunthaler, A., and 4 colleagues: Water vapour at high redshift: Arecibo monitoring of the megamaser in MG J0414+0534, *A&A* **529** (2011), A150
- Chalov, S. V., Fahr, H. J.: Spatial variation of the supersonic thermal plasma flow downstream of the termination shock, *Advances in Space Research* **47** (2011), 1523–1528
- Claeys, J. S. W., de Mink, S. E., Pols, O. R., Eldridge, J. J., Baes, M.: Binary progenitor models of type IIb supernovae, *A&A* **528** (2011), A131
- Clark, J. S., Ritchie, B. W., Negueruela, I., Crowther, P. A., Damineli, A., and 2 colleagues: A VLT/FLAMES survey for massive binaries in Westerlund 1. III. The WC9d binary



- W239 and implications for massive stellar evolution, *A&A* **531** (2011), A28
- Courtois, H. M., Tully, R. B., Héraudeau, P.: Cosmic flows: University of Hawaii 2.2-m I-band photometry, *MNRAS* **415** (2011), 1935–1942
- Croll, B., Albert, L., Jayawardhana, R., Miller-Ricci Kempton, E., Fortney, J. J., and 2 colleagues: Broadband Transmission Spectroscopy of the Super-Earth GJ 1214b Suggests a Low Mean Molecular Weight Atmosphere, *ApJ* **736** (2011), 78
- Da Rocha, C., Mieske, S., Georgiev, I. Y., Hilker, M., Ziegler, B. L., and 1 colleagues: Two formation channels of ultra-compact dwarf galaxies in Hickson compact groups, *A&A* **525** (2011), A86
- de la Torre, S., Le Fèvre, O., Porciani, C., Guzzo, L., Meneux, B., and 51 colleagues: The zCOSMOS-Bright survey: the clustering of early and late galaxy morphological types since  $z \simeq 1$ , *MNRAS* **412** (2011), 825–834
- Dessart, L., Hillier, D. J., Livne, E., Yoon, S.-C., Woosley, S., and 2 colleagues: Core-collapse explosions of Wolf-Rayet stars and the connection to Type IIb/Ib/Ic supernovae, *MNRAS* **414** (2011), 2985–3005
- Duez, V.: Numerical simulations of magnetic relaxation in rotating stellar radiation zones, *Astronomische Nachrichten* **332** (2011), 983
- Dufton, P. L., Dunstall, P. R., Evans, C. J., Brott, I., Cantiello, M., and 10 colleagues: The VLT-FLAMES Tarantula Survey: The Fastest Rotating O-type Star and Shortest Period LMC Pulsar–Remnants of a Supernova Disrupted Binary?, *ApJ* **743** (2011), L22
- Dzib, S., Loinard, L., Rodríguez, L. F., Mioduszewski, A. J., Torres, R. M.: VLBA Determination of the Distance to Nearby Star-forming Regions. VI. The Distance to the Young Stellar Object HW 9 in Cepheus A, *ApJ* **733** (2011), 71
- Eckmiller, H. J., Hudson, D. S., Reiprich, T. H.: Testing the low-mass end of X-ray scaling relations with a sample of Chandra galaxy groups, *A&A* **535** (2011), A105
- Eldridge, J. J., Langer, N., Tout, C. A.: Runaway stars as progenitors of supernovae and gamma-ray bursts, *MNRAS* **414** (2011), 3501–3520
- Elia, A., Kulkarni, S., Porciani, C., Pietroni, M., Matarrese, S.: Modelling the clustering of dark matter haloes in resummed perturbation theories, *MNRAS* **416** (2011), 1703–1716
- Er, X., Schneider, P.: Estimate of dark halo ellipticity by lensing flexion, *A&A* **528** (2011), A52
- Evans, C. J., Taylor, W. D., Hénault-Brunet, V., Sana, H., de Koter, A., and 37 colleagues: The VLT-FLAMES Tarantula Survey. I. Introduction and observational overview, *A&A* **530** (2011), A108
- Fahr, H. J., Fichtner, H.: Pick-up ion transport under conservation of particle invariants: how important are velocity diffusion and cooling processes?, *A&A* **533** (2011), A92
- Fahr, H.-J., Siewert, M.: Isotropic ion distribution functions triggered by consecutive solar wind bulk velocity jumps: a new equilibrium state, *A&A* **527** (2011), A125
- Fahr, H.-J., Siewert, M., McComas, D. J., Schwadron, N. A.: The inner heliospheric source for keV-energetic IBEX ENAs. The anomalous cosmic ray-induced component, *A&A* **531** (2011), A77
- Faure, C., Sluse, D., Cantale, N., Tewes, M., Courbin, F., and 2 colleagues: VLT adaptive optics search for luminous substructures in the lens galaxy towards SDSS J0924+0219, *A&A* **536** (2011), A29
- Fichtner, H., Effenberger, F., Scherer, K., Büsching, I., Strauss, R. D., and 4 colleagues: Cosmic ray transport in the heliosphere and its connection to the interstellar proton

- spectrum, *Mem. Soc. Astron. Italiana* **82** (2011), 852
- Freire, P. C. C., Abdo, A. A., Ajello, M., Allafort, A., Ballet, J., and 148 colleagues: Fermi Detection of a Luminous Gamma-Ray Pulsar in a Globular Cluster, *Science* **334** (2011), 1107
- Gennaro, M., Brandner, W., Stolte, A., Henning, T.: Mass segregation and elongation of the starburst cluster Westerlund 1, *MNRAS* **412** (2011), 2469–2488
- Gentile, G., Famaey, B., de Blok, W. J. G.: THINGS about MOND, *A&A* **527** (2011), A76
- Gräfener, G., Vink, J. S., de Koter, A., Langer, N.: The Eddington factor as the key to understand the winds of the most massive stars. Evidence for a  $\gamma$ -dependence of Wolf-Rayet type mass loss, *A&A* **535** (2011), A56
- Gvaramadze, V. V., Kniazev, A. Y., Kroupa, P., Oh, S.: Search for OB stars running away from young star clusters. II. The NGC 6357 star-forming region, *A&A* **535** (2011), A29
- Gvaramadze, V. V., Pflamm-Altenburg, J., Kroupa, P.: Massive runaway stars in the Small Magellanic Cloud, *A&A* **525** (2011), A17
- Haas, J., Šubr, L., Kroupa, P.: The coupling of a young stellar disc with the molecular torus in the Galactic Centre, *MNRAS* **412** (2011), 1905–1912
- Haghi, H., Baumgardt, H., Kroupa, P.: Distant star clusters of the Milky Way in MOND, *A&A* **527** (2011), A33
- Hartlap, J., Hilbert, S., Schneider, P., Hildebrandt, H.: A bias in cosmic shear from galaxy selection: results from ray-tracing simulations, *A&A* **528** (2011), A51
- Heald, G., Bell, M. R., Horneffer, A., Offringa, A. R., Pizzo, R., and 25 colleagues: LOFAR: Recent Imaging Results and Future Prospects, *Journal of Astrophysics and Astronomy* **32** (2011), 589–598
- Hilbert, S., Hartlap, J., Schneider, P.: Cosmic shear covariance: the log-normal approximation, *A&A* **536** (2011), A85
- Hilbert, S., Gair, J. R., King, L. J.: Reducing distance errors for standard candles and standard sirens with weak-lensing shear and flexion maps, *MNRAS* **412** (2011), 1023–1037
- Hildebrandt, H., Muzzin, A., Erben, T., Hoekstra, H., Kuijken, K., and 4 colleagues: Lensing Magnification: A Novel Method to Weigh High-redshift Clusters and its Application to SpARCS, *ApJ* **733** (2011), L30
- Hoekstra, H., Hartlap, J., Hilbert, S., van Uitert, E.: Effects of distant large-scale structure on the precision of weak lensing mass measurements, *MNRAS* **412** (2011), 2095–2103
- Hopwood, R., Wardlow, J., Cooray, A., Khostovan, A. A., Kim, S., and 47 colleagues: Spitzer Imaging of Herschel-atlas Gravitationally Lensed Submillimeter Sources, *ApJ* **728** (2011), L4
- Horesh, A., Maoz, D., Hilbert, S., Bartelmann, M.: Lensed arc statistics: comparison of Millennium simulation galaxy clusters to Hubble Space Telescope observations of an X-ray selected sample, *MNRAS* **418** (2011), 54–63
- Hubrig, S., Schöller, M., Kharchenko, N. V., Langer, N., de Wit, W. J., and 5 colleagues: Exploring the origin of magnetic fields in massive stars: a survey of O-type stars in clusters and in the field, *A&A* **528** (2011), A151
- Iverson, R. J., Papadopoulos, P. P., Smail, I., Greve, T. R., Thomson, A. P., and 2 colleagues: Tracing the molecular gas in distant submillimetre galaxies via CO(1-0) imaging with the Expanded Very Large Array, *MNRAS* **412** (2011), 1913–1925

- Irwin, J. A., Wilson, C. D., Wiegert, T., Bendo, G. J., Warren, B. E., et al.: The JCMT Nearby Galaxies Legacy Survey — V. The CO(J= 3–2) distribution and molecular outflow in NGC 4631, *MNRAS* **410** (2011), 1423–1440
- Jacobs, B. A., Sanders, D. B., Rupke, D. S. N., Aussel, H., Frayer, D. T., and 11 colleagues: Identification of a Complete 160  $\mu\text{m}$  Flux-limited Sample of Infrared Galaxies in the ISO Lockman Hole 1 deg<sup>2</sup> Deep Fields: Source Properties and Evidence for Strong Evolution in the FIR Luminosity Function for ULIRGs, *AJ* **141** (2011), 110
- Joachimi, B., Mandelbaum, R., Abdalla, F. B., Bridle, S. L.: Constraints on intrinsic alignment contamination of weak lensing surveys using the MegaZ-LRG sample, *A&A* **527** (2011), A26
- Jørgensen, J. K., Bourke, T. L., Nguyen Luong, Q., Takakuwa, S.: Arcsecond resolution images of the chemical structure of the low-mass protostar IRAS 16293-2422. An overview of a large molecular line survey from the Submillimeter Array, *A&A* **534** (2011), A100
- Küpper, A. H. W., Maschberger, T., Kroupa, P., Baumgardt, H.: Mass segregation and fractal substructure in young massive clusters - I. The McCluster code and method calibration, *MNRAS* **417** (2011), 2300–2317
- Küpper, A. H. W., Mieske, S., Kroupa, P.: The curious case of Palomar 13: the influence of the orbital phase on the appearance of galactic satellites, *MNRAS* **413** (2011), 863–877
- Karim, A., Schinnerer, E., Martínez-Sansigre, A., Sargent, M. T., van der Wel, A., and 8 colleagues: The Star Formation History of Mass-selected Galaxies in the COSMOS Field, *ApJ* **730** (2011), 61
- Kauffmann, J., Bertoldi, F., Bourke, T. L., Myers, P. C., Lee, C. W., and 1 colleagues: Confirmation of the VeLLO L1148-IRS: star formation at very low (column) density, *MNRAS* **416** (2011), 2341–2358
- Keitel, D., Schneider, P.: Constrained probability distributions of correlation functions, *A&A* **534** (2011), A76
- Kerp, J., Winkel, B., Ben Bekhti, N., Flöer, L., Kalberla, P. M. W.: The Effelsberg Bonn H I Survey (EBHIS), *Astronomische Nachrichten* **332** (2011), 637
- Kovač, K., Porciani, C., Lilly, S. J., Marinoni, C., Guzzo, L., and 53 colleagues: The Nonlinear Biasing of the zCOSMOS Galaxies up to  $z = 1$  from the 10k Sample, *ApJ* **731** (2011), 102
- Kroupa, P., Petr-Gotzens, M. G.: The initial period function of late-type binary stars and its variation, *A&A* **529** (2011), A92
- Kroupa, P.: The universality hypothesis: binary and stellar populations in star clusters and galaxies, *Computational Star Formation* **270** (2011), 141–149
- Kuiper, R., Klahr, H., Beuther, H., Henning, T.: The role of accretion disks in the formation of massive stars, *Computational Star Formation* **270** (2011), 215–218
- Kuiper, R., Klahr, H., Beuther, H., Henning, T.: Three-dimensional Simulation of Massive Star Formation in the Disk Accretion Scenario, *ApJ* **732** (2011), 20
- Kuiper, R., Klahr, H., Beuther, H., Henning, T.: Radiation pressure feedback in the formation of massive stars, *Bulletin de la Societe Royale des Sciences de Liege* **80** (2011), 211–216
- Laganá, T. F., Zhang, Y.-Y., Reiprich, T. H., Schneider, P.: XMM-Newton/Sloan Digital Sky Survey: Star Formation Efficiency in Galaxy Clusters and Constraints on the Matter-density Parameter, *ApJ* **743** (2011), 13
- Larsen, S. S., de Mink, S. E., Eldridge, J. J., Langer, N., Bastian, N., and 4 colleagues:

- Resolved photometry of extragalactic young massive star clusters, *A&A* **532** (2011), A147
- Lau, H. H. B., Potter, A. T., Tout, C. A.: Spin-down of massive rotating stars, *MNRAS* **415** (2011), 959–963
- Lazaridis, K., Verbiest, J. P. W., Tauris, T. M., Stappers, B. W., Kramer, M., and 9 colleagues: Evidence for gravitational quadrupole moment variations in the companion of PSR J2051-0827, *MNRAS* **414** (2011), 3134–3144
- Lépine, J. R. D., Cruz, P., Scarano, S., Jr., Barros, D. A., Dias, W. S., and 4 colleagues: Overlapping abundance gradients and azimuthal gradients related to the spiral structure of the Galaxy, *MNRAS* **417** (2011), 698–708
- Lestrade, J.-F., Carilli, C. L., Thanjavur, K., Kneib, J.-P., Riechers, D. A., and 3 colleagues: A Molecular Einstein Ring Toward the  $z = 3.93$  Submillimeter Galaxy MM18423+5938, *ApJ* **739** (2011), L30
- Lindner, R. R., Baker, A. J., Omont, A., Beelen, A., Owen, F. N., and 8 colleagues: A Deep 1.2 mm Map of the Lockman Hole North Field, *ApJ* **737** (2011), 83
- Ludlow, A. D., Navarro, J. F., White, S. D. M., Boylan-Kolchin, M., Springel, V., and 2 colleagues: The density and pseudo-phase-space density profiles of cold dark matter haloes, *MNRAS* **415** (2011), 3895–3902
- Ludlow, A. D., Porciani, C.: The peaks formalism and the formation of cold dark matter haloes, *MNRAS* **413** (2011), 1961–1972
- Mackey, J., Lim, A. J.: Effects of magnetic fields on photoionized pillars and globules, *MNRAS* **412** (2011), 2079–2094
- Marian, L., Hilbert, S., Smith, R. E., Schneider, P., Desjacques, V.: Measuring Primordial Non-gaussianity Through Weak-lensing Peak Counts, *ApJ* **728** (2011), L13
- Marks, M., Kroupa, P.: Dynamical population synthesis: constructing the stellar single and binary contents of galactic field populations, *MNRAS* **417** (2011), 1702–1714
- Marks, M., Kroupa, P., Oh, S.: An analytical description of the evolution of binary orbital-parameter distributions in N-body computations of star clusters, *MNRAS* **417** (2011), 1684–1701
- Maschberger, T., Clarke, C. J.: Global mass segregation in hydrodynamical simulations of star formation, *MNRAS* **416** (2011), 541–546
- Maschberger, T., Kroupa, P.: The star formation history of the Large Magellanic Cloud as seen by star clusters and stars, *MNRAS* **411** (2011), 1495–1502
- Mayer, A., Jorissen, A., Kerschbaum, F., Mohamed, S., van Eck, S., and 7 colleagues: Herschel’s view into Mira’s head, *A&A* **531** (2011), L4
- McKean, J. P., Berciano Alba, A., Volino, F., Tudose, V., Garrett, M. A., and 3 colleagues: A new perspective on the submillimetre galaxy MM 18423+5938 at redshift 3.9296 from radio continuum imaging, *MNRAS* **414** (2011), L11–L15
- McKean, J. P., Impellizzeri, C. M. V., Roy, A. L., Castangia, P., Samuel, F., and 3 colleagues: A search for gravitationally lensed water masers in dusty quasars and star-forming galaxies, *MNRAS* **410** (2011), 2506–2515
- Melinder, J., Dahlen, T., Mencía-Trinchant, L., Östlin, G., Mattila, S., and 4 colleagues: The discovery and classification of 16 supernovae at high redshifts in ELAIS-S1. The Stockholm VIMOS Supernova Survey II, *A&A* **532** (2011), A29
- Misgeld, I., Mieske, S., Hilker, M., Richtler, T., Georgiev, I. Y., and 1 colleagues: A large population of ultra-compact dwarf galaxies in the Hydra I cluster, *A&A* **531** (2011), A4

- Minchev, I., Famaey, B., Combes, F., Di Matteo, P., Mouhcine, M., and 1 colleagues: Radial migration in galactic disks caused by resonance overlap of multiple patterns: Self-consistent simulations, *A&A* **527** (2011), A147–
- Mittal, R., Hicks, A., Reiprich, T. H., Jaritz, V.: The  $L_X - T_{v,ir}$  relation in galaxy clusters: effects of radiative cooling and AGN heating, *A&A* **532** (2011), A133
- Moreno Méndez, E.: The need for hypercritical accretion in massive black hole binaries with large Kerr parameters, *MNRAS* **413** (2011), 183–189
- Moreno Méndez, E., Brown, G. E., Lee, C.-H., Walter, F. M.: Kerr Parameters for Stellar Mass Black Holes and Their Consequences for Gamma-ray Bursts and Hypernovae, *ApJ* **727** (2011), 29
- Muijres, L. E., de Koter, A., Vink, J. S., Krtićka, J., Kubát, J., and 1 colleagues: Predictions of the effect of clumping on the wind properties of O-type stars, *A&A* **526** (2011), A32
- Neilson, H. R., Cantiello, M., Langer, N.: The Cepheid mass discrepancy and pulsation-driven mass loss, *A&A* **529** (2011), L9
- Neilson, H. R., Lester, J. B.: Limb darkening in spherical stellar atmospheres, *A&A* **530** (2011), A65
- Noyola, E., Baumgardt, H.: Testing Photometric Diagnostics for the Dynamical State and Possible Intermediate-mass Black Hole Presence in Globular Clusters, *ApJ* **743** (2011), 52
- Oklopčić, A., Smolčić, V., Giodini, S., Zamorani, G., Bhatirzan, L., and 6 colleagues: A wide-angle tail galaxy at  $z = 0.53$  in the COSMOS field, *Mem. Soc. Astron. Italiana* **82** (2011), 161
- Omont, A., Neri, R., Cox, P., Lupu, R., Guélin, M., and 52 colleagues: Observation of  $H_2O$  in a strongly lensed Herschel-ATLAS source at  $z = 2.3$ , *A&A* **530** (2011), L3
- Padovani, M., Jørgensen, J. K., Bertoldi, F., Brinch, C., Frau, P., and 6 colleagues: Adaptable Radiative Transfer Innovations for Submillimeter Telescopes (ARTIST), *Computational Star Formation* **270** (2011), 451–454
- Parmentier, G.: From the molecular-cloud- to the embedded-cluster-mass function with a density threshold for star formation, *MNRAS* **413** (2011), 1899–1912
- Parmentier, G., Kauffmann, J., Pillai, T., Menten, K. M.: Volume density thresholds for overall star formation imply mass-size thresholds for massive star formation, *MNRAS* **416** (2011), 783–789
- Parmentier, G., Kroupa, P.: The puzzle of the cluster-forming core mass-radius relation and why it matters, *MNRAS* **411** (2011), 1258–1270
- Pastor Mira, E., Hilbert, S., Hartlap, J., Schneider, P.: Probing the dark-matter halos of cluster galaxies with weak lensing, *A&A* **531** (2011), A169
- Pätzold, M., Andert, T. P., Asmar, S. W., Anderson, J. D., Barriot, J.-P., and 7 colleagues: Asteroid 21 Lutetia: Low Mass, High Density, *Science* **334** (2011), 491
- Pawlowski, M. S., Kroupa, P., de Boer, K. S.: Making counter-orbiting tidal debris. The origin of the Milky Way disc of satellites?, *A&A* **532** (2011), A118
- Penner, K., Pope, A., Chapin, E. L., Greve, T. R., Bertoldi, F., and 11 colleagues: Origins of the extragalactic background at 1 mm from a combined analysis of the AzTEC and MAMBO data in GOODS-N, *MNRAS* **410** (2011), 2749–2759
- Pérez-Sánchez, A. F., Vlemmings, W. H. T., Chapman, J. M.: Water maser polarization of the water fountains IRAS 15445-5449 and IRAS 18043-2116, *MNRAS* **418** (2011), 1402–1407
- Pierre, M., Picaud, F., Juin, J. B., Melin, J. B., Valageas, P., and 2 colleagues: Precision

- cosmology with a wide area XMM cluster survey, *MNRAS* **414** (2011), 1732–1746
- Pimblet, K. A., Andernach, H., Fishlock, C. K., Roseboom, I. G., Owers, M. S.: The architecture of Abell 1386 and its relationship to the Sloan Great Wall, *MNRAS* **410** (2011), 1837–1848
- Pompéia, L., Masseron, T., Famaey, B., van Eck, S., Jorissen, A., and 17 colleagues: Chemically tagging the Hyades stream: does it partly originate from the Hyades cluster?, *MNRAS* **415** (2011), 1138–1154
- Prössl, G.W.: Density perturbations in the upper atmosphere caused by the dissipation of solar wind energy, *Surv. Geophys.* **32** (2011), 101–195
- Ramstedt, S., Maercker, M., Olofsson, G., Olofsson, H., Schöier, F. L.: Imaging the circumstellar dust around AGB stars with PolCor, *A&A* **531** (2011), A148
- Richtler, T., Famaey, B., Gentile, G., Schubert, Y.: Remarks on the properties of elliptical galaxies in modified Newtonian dynamics, *A&A* **531** (2011), A100
- Richtler, T., Salinas, R., Misgeld, I., Hilker, M., Hau, G. K. T., and 3 colleagues: The dark halo of the Hydra I galaxy cluster: core, cusp, cosmological? Dynamics of NGC 3311 and its globular cluster system, *A&A* **531** (2011), A119
- Riechers, D. A., Carilli, L. C., Walter, F., Weiss, A., Wagg, J., and 4 colleagues: Imaging the Molecular Gas Properties of a Major Merger Driving the Evolution of a  $z = 2.5$  Submillimeter Galaxy, *ApJ* **733** (2011), L11
- Riechers, D. A., Hodge, J., Walter, F., Carilli, C. L., Bertoldi, F.: Extended Cold Molecular Gas Reservoirs in  $z = 3.4$  Submillimeter Galaxies, *ApJ* **739** (2011), L31
- Riechers, D. A., Walter, F., Carilli, C. L., Cox, P., Weiss, A., and 2 colleagues: Dense Molecular Gas Excitation at High Redshift: Detection of  $\text{HCO}^+(J = 4 \rightarrow 3)$  Emission in the Cloverleaf Quasar, *ApJ* **726** (2011), 50
- Rochau, B., Brandner, W., Stolte, A., Henning, T., Da Rio, N., and 4 colleagues: A benchmark for multiconjugated adaptive optics: VLT-MAD observations of the young massive cluster Trumpler 14, *MNRAS* **418** (2011), 949–959
- Roellig, M., Kramer, C., Rajbahak, C., Minamidani, T., Sun, K., and 30 colleagues: Photon dominated regions in NGC 3603. [CI] and mid-J CO line emission, *A&A* **525** (2011), A8
- Romano-Díaz, E., Choi, J.-H., Shlosman, I., Trenti, M.: Galaxy Formation in Heavily Overdense Regions at  $z \sim 10$ : The Prevalence of Disks in Massive Halos, *ApJ* **738** (2011), L19
- Roth, N., Porciani, C.: Testing standard perturbation theory and the Eulerian local biasing scheme against N-body simulations, *MNRAS* **415** (2011), 829–844
- Salinas, R., Richtler, T., West, M. J., Romanowsky, A. J., Lloyd-Davies, E., and 1 colleague: Crazy heart: kinematics of the star pile in Abell 545, *A&A* **528** (2011), A61
- Schöier, F. L., Maercker, M., Justtanont, K., Olofsson, H., Black, J. H., and 3 colleagues: A chemical inventory of the S-type AGB star  $\chi$  Cygni based on Herschel/HIFI observations of circumstellar line emission. The importance of non-LTE chemical processes in a dynamical region, *A&A* **530** (2011), A83
- Schöller, M., Hubrig, S., Ilyin, I., Kharchenko, N. V., Briquet, M., and 4 colleagues: Magnetic field studies of massive main sequence stars, *Astronomische Nachrichten* **332** (2011), 994
- Scherer, K., Fichtner, H., Strauss, R. D., Ferreira, S. E. S., Potgieter, M. S., and 1 colleague: On Cosmic Ray Modulation beyond the Heliopause: Where is the Modulation Boundary?, *ApJ* **735** (2011), 128
- Schirmer, M., Hildebrandt, H., Kuijken, K., Erben, T.: Mass, light and colour of the cosmic

- web in the supercluster SCL2243-0935 ( $z = 0.447$ ), *A&A* **532** (2011), A57
- Schwan, D., Ade, P. A. R., Basu, K., Bender, A. N., Bertoldi, F., and 32 colleagues: Invited Article: Millimeter-wave bolometer array receiver for the Atacama pathfinder experiment Sunyaev-Zel'dovich (APEX-SZ) instrument, *Review of Scientific Instruments* **82** (2011), 091301
- Semboloni, E., Schrabback, T., van Waerbeke, L., Vafaei, S., Hartlap, J., and 1 colleagues: Weak lensing from space: first cosmological constraints from three-point shear statistics, *MNRAS* **410** (2011), 143–160
- Shi, X., Schneider, P., Joachimi, B.: Relations between three-point configuration space shear and convergence statistics, *A&A* **533** (2011), A48
- Smith, R. E., Desjacques, V., Marian, L.: Nonlinear clustering in models with primordial non-Gaussianity: The halo model approach, *Phys. Rev. D* **83** (2011), 043526
- Smith, R. E., Marian, L.: What do cluster counts really tell us about the Universe?, *MNRAS* **418** (2011), 729–746
- Smith, R. E., Markovic, K.: Testing the warm dark matter paradigm with large-scale structures, *Phys. Rev. D* **84** (2011), 063507
- Smolčić, V., Capak, P., Ilbert, O., Blain, A. W., Salvato, M., and 34 colleagues: The Redshift and Nature of AzTEC/COSMOS 1: A Starburst Galaxy at  $z = 4.6$ , *ApJ* **731** (2011), L27
- Smolčić, V., Finoguenov, A., Zamorani, G., Schinnerer, E., Tanaka, M., and 2 colleagues: On the occupation of X-ray-selected galaxy groups by radio active galactic nuclei since  $z = 1.3$ , *MNRAS* **416** (2011), L31–L35
- Smolčić, V., Riechers, D. A.: The Molecular Gas Content of  $z < 0.1$  Radio Galaxies: Linking the Active Galactic Nucleus Accretion Mode to Host Galaxy Properties, *ApJ* **730** (2011), 64
- Sommer, M. W., Basu, K., Pacaud, F., Bertoldi, F., Andernach, H.: Redshift evolution of the 1.4 GHz volume averaged radio luminosity function in clusters of galaxies, *A&A* **529** (2011), A124
- Stappers, B. W., Hessels, J. W. T., Alexov, A., Anderson, K., Coenen, T., and 89 colleagues: Observing pulsars and fast transients with LOFAR, *A&A* **530** (2011), A80
- Stritzinger, M. D., Phillips, M. M., Boldt, L. N., Burns, C., Campillay, A., and 18 colleagues: The Carnegie Supernova Project: Second Photometry Data Release of Low-redshift Type Ia Supernovae, *AJ* **142** (2011), 156
- Suh, H., Yoon, S.-c., Jeong, H., Yi, S. K.: Early-type Host Galaxies of Type II and Ib Supernovae, *ApJ* **730** (2011), 110
- Surcis, G., Vlemmings, W. H. T.: Magnetic fields along massive protostellar jets. The case of W75N & Cepheus A, *Mem. Soc. Astron. Italiana* **82** (2011), 154
- Surcis, G., Vlemmings, W. H. T., Curiel, S., Hutawarakorn Kramer, B., Torrelles, J. M., and 1 colleagues: The structure of the magnetic field in the massive star-forming region W75N, *A&A* **527** (2011), A48
- Surcis, G., Vlemmings, W. H. T., Torres, R. M., van Langevelde, H. J., Hutawarakorn Kramer, B.: The properties and polarization of the H<sub>2</sub>O and CH<sub>3</sub>OH maser environment of NGC 7538-IRS 1, *A&A* **533** (2011), A47
- Tarchi, A., Castangia, P., Henkel, C., Surcis, G., Menten, K. M.: New H<sub>2</sub>O masers in Seyfert and FIR bright galaxies. IV. Interferometric follow-ups, *A&A* **525** (2011), A91
- Tauris, T. M., Langer, N., Kramer, M.: Formation of millisecond pulsars with CO white dwarf companions - I. PSR J1614-2230: evidence for a neutron star born massive,

- MNRAS **416** (2011), 2130–2142
- Taylor, W. D., Evans, C. J., Sana, H., Walborn, N. R., de Mink, S. E., and 20 colleagues: The VLT-FLAMES Tarantula Survey. II. R139 revealed as a massive binary system, *A&A* **530** (2011), L10
- Thies, I., Kroupa, P., Goodwin, S. P., Stamatellos, D., Whitworth, A. P.: A natural formation scenario for misaligned and short-period eccentric extrasolar planets, *MNRAS* **417** (2011), 1817–1822
- Torrelles, J. M., Patel, N. A., Curiel, S., Estalella, R., Gómez, J. F., and 7 colleagues: A wide-angle outflow with the simultaneous presence of a high-velocity jet in the high-mass Cepheus A HW2 system, *MNRAS* **410** (2011), 627–640
- Torstensson, K. J. E., van der Tak, F. F. S., van Langevelde, H. J., Kristensen, L. E., Vlemmings, W. H. T.: Distribution and excitation of thermal methanol in 6.7 GHz maser bearing star-forming regions. I. The nearby source Cepheus A, *A&A* **529** (2011), A32
- Torstensson, K. J. E., van Langevelde, H. J., Vlemmings, W. H. T., Bourke, S.: Dynamics of the 6.7 and 12.2 GHz methanol masers around Cepheus A HW2, *A&A* **526** (2011), A38
- Tziamtzis, A., Lundqvist, P., Gröningsson, P., Nasoudi-Shoar, S.: The outer rings of SN 1987A, *A&A* **527** (2011), A35
- Vaduvescu, O., Birlan, M., Tudorica, A., Sonka, A., Pozo, F. N., and 16 colleagues: EURONEAR–Recovery, follow-up and discovery of NEAs and MBAs using large field 1-2 m telescopes, *Planet. Space Sci.* **59** (2011), 1632–1646
- Valageas, P., Clerc, N., Pacaud, F., Pierre, M.: Covariance matrices for halo number counts and correlation functions, *A&A* **536** (2011), A95
- van Veelen, B., Langer, N., Vink, J., Garcia-Segura, G., van Marle, A. J.: The hydrodynamics of the supernova remnant Cassiopeia A. The influence of the progenitor evolution on the velocity structure and clumping, *A&A* **503** (2009), 495–503
- Vink, J. S., Muijres, L. E., Anthonisse, B., de Koter, A., Gräfener, G., and 1 colleagues: Wind modelling of very massive stars up to 300 solar masses, *A&A* **531** (2011), A132
- Vlemmings, W. H. T., Humphreys, E. M. L., Franco-Hernández, R.: Magnetic Fields in Evolved Stars: Imaging the Polarized Emission of High-frequency SiO Masers, *ApJ* **728** (2011), 149
- Vlemmings, W. H. T., Torres, R. M., Dodson, R.: Zeeman splitting of 6.7 GHz methanol masers. On the uncertainty of magnetic field strength determinations, *A&A* **529** (2011), A95
- Wang, J., Navarro, J. F., Frenk, C. S., White, S. D. M., Springel, V., and 4 colleagues: Assembly history and structure of galactic cold dark matter haloes, *MNRAS* **413** (2011), 1373–1382
- Wang, R., Wagg, J., Carilli, C. L., Neri, R., Walter, F., and 8 colleagues: Far-infrared and Molecular CO Emission from the Host Galaxies of Faint Quasars at  $z \sim 6$ , *AJ* **142** (2011), 101
- Wang, R., Wagg, J., Carilli, C. L., Walter, F., Riechers, D. A., and 10 colleagues: CO (2-1) Line Emission in Redshift 6 Quasar Host Galaxies, *ApJ* **739** (2011), L34
- Wardlow, J. L., Smail, I., Coppin, K. E. K., Alexander, D. M., Brandt, W. N., and 21 colleagues: The LABOCA survey of the Extended Chandra Deep Field-South: a photometric redshift survey of submillimetre galaxies, *MNRAS* **415** (2011), 1479–1508
- Weidner, C., Kroupa, P., Pflamm-Altenburg, J.: Top-heavy integrated galactic stellar initial mass functions in starbursts, *MNRAS* **412** (2011), 979–986



- Williams, C. C., Giavalisco, M., Porciani, C., Yun, M. S., Pope, A., and 12 colleagues: On the Clustering of Submillimeter Galaxies, *ApJ* **733** (2011), 92
- Wilson, C. D., Warren, B. E., Irwin, J., Knapen, J. H., Israel, F. P., et al.: The JCMT Nearby Galaxies Legacy Survey — IV. Velocity dispersions in the molecular interstellar medium in spiral galaxies, *MNRAS* **410,3** (2011), 1409–1422
- Winkel, B., Ben Bekhti, N., Darmstädter, V., Flöer, L., Kerp, J., and 1 colleagues: The high-velocity cloud complex Galactic center negative as seen by EBHIS and GASS. I. Cloud catalog and global properties, *A&A* **533** (2011), A105
- Wong, T., Hughes, A., Ott, J., Muller, E., Pineda, J. L., and 13 colleagues: The Magellanic Mopra Assessment (MAGMA). I. The Molecular Cloud Population of the Large Magellanic Cloud, *ApJS* **197** (2011), 16
- Xin, Y., Deng, L., de Grijs, R., Kroupa, P.: Simple stellar population models including blue stragglers, *MNRAS* **411** (2011), 761–775
- Zhang, Y.-Y., Andernach, H., Caretta, C. A., Reiprich, T. H., Böhringer, H., and 3 colleagues: HIFLUGCS: Galaxy cluster scaling relations between X-ray luminosity, gas mass, cluster radius, and velocity dispersion, *A&A* **526** (2011), A105
- Zhang, Y.-Y., Finoguenov, A., Böhringer, H., Kneib, J.-P., Smith, G. P., and 3 colleagues: LoCuSS: comparison of observed X-ray and lensing galaxy cluster scaling relations with simulations (Corrigendum), *A&A* **527** (2011), 3
- Zhang, Y.-Y., Laganá, T. F., Pierini, D., Puchwein, E., Schneider, P., and 1 colleagues: Star-formation efficiency and metal enrichment of the intracluster medium in local massive clusters of galaxies, *A&A* **535** (2011), A78
- Zoennchen, J.H., Bailey, J. J., Nass U., Gruntman M., Fahr H. J., Goldstein J.: The TWINS exospheric neutral H-density distribution under solar minimum conditions, *Ann. Geophys.*, **29** (2011), 2211–2217
- Zonoozi, A. H., Küpper, A. H. W., Baumgardt, H., Haghi, H., Kroupa, P., and 1 colleagues: Direct N-body simulations of globular clusters - I. Palomar 14, *MNRAS* **411** (2011), 1989–2001

Frank Bertoldi