Garching bei München

Max-Planck-Institut für extraterrestrische Physik

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0 Allgemeines

Die wissenschaftlichen Aktivitäten am MPE sind organisatorisch in vier große Arbeitsbereiche aufgeteilt, die jeweils von einem Direktor geleitet werden: (1) Infrarotund Submm/mm Astronomie (Prof. Dr. Reinhard Genzel und Prof. Dr. Frank Eisenhauer), (2) Optische und Interpretative Astronomie (Prof. Dr. Ralf Bender), (3) Hochenergie-Astrophysik (Prof. Dr. Kirpal Nandra) und (4) Zentrum für Astrochemische Studien (Prof. Dr. Paola Caselli). Diese vier Arbeitsbereiche, sowie noch zusätzlich eine unabhängige Forschungsgruppe (Dr. Silvia Spezzano), beschäftigen sich – oft bereichsübergreifend – mit unseren acht großen Forschungsthemen. Dabei werden überwiegend experimentelle Methoden angewandt, aber auch theoretische Untersuchungen durchgeführt. Der Name des Instituts bezieht sich einerseits auf den Gegenstand der Forschung: die Physik des Weltraums, andererseits auf die Forschungsmethoden: viele unserer Experimente werden notwendigerweise oberhalb der dichten, absorbierenden Erdatmosphäre mit Flugzeugen, Satelliten und Raumsonden durchgeführt. In zunehmendem Maße setzen wir aber, vor allem im optischen, im Infrarotbereich und in der Astrochemie, auch Instrumente an erdgebundenen Teleskopen ein. Methodisch lassen sich die Forschungsaktivitäten des MPE in mehrere Bereiche einteilen. In der beobachtenden Astrophysik werden am MPE innovative Instrumente vollständig oder zum Teil gebaut. Damit wird die Strahlung entfernter Objekte in den Millimeter/Submillimeter-, Infrarot-, Optischen-, Röntgen und Gammaspektralbereichen gemessen. Der hierbei überdeckte Teil des elektromagnetischen Spektrums umfasst mehr als zwölf Dekaden. Die untersuchten Objekte reichen von nahen Kometen bis zu den fernsten Quasaren, von winzigen Neutronensternen bis zu Galaxienhaufen, den größten bekannten Formationen im Kosmos. Theoretische Arbeiten liefern die Grundlagen zum Verständnis und Interpretation der Beobachtungen und Messungen. Die direkte Wechselwirkung von Beobachtern, Experimentatoren und Theoretikern im Hause ist ein Merkmal unseres Arbeitsstils und führt oft im direkten Wechselspiel von Hypothesen und Beobachtungstatsachen zu einem frühen Erkennen von Zusammenhängen und damit zu einer frühzeitigen Identifikation vielversprechender neuer Forschungsrichtungen. Ergänzt werden unsere Forschungsaktivitäten durch Experimente im Labor, mit denen sowohl die aus Theorie und Beobachtungen gewonnenen Ergebnisse überprüft als auch Informationen und Erkenntnisse gewonnen werden, die wiederum in theoretische Modelle und die Dateninterpretation einfliessen. Eine externe technologische Einrichtung des MPE ist von besonderer Bedeutung: Die 130 m lange Vakuumanlage Panter zum Test von Röntgenteleskopen in Neuried bei München. Fast alle röntgenastronomischen Experimente oder Teile davon wurden in dieser Anlage getestet. Unter

anderem durch diese Einrichtung findet ein Transfer von neuen Verfahren und Methoden in die industrielle Anwendung statt. Im Rahmen unserer Transferaktivitäten hielt das MPE 13 Patente am Ende von 2023. Neben der Forschung nimmt unser Institut auch universitäre Ausbildungsaufgaben wahr. Mehr als zehn MPE-Wissenschaftler sind als Hochschullehrer an zahlreichen Universitäten tätig und betreuen studentische Forschungsarbeiten, wie z.B. Bachelor-, Masterund Doktorarbeiten. Die Mehrzahl davon an den beiden Münchner Universitäten, aber auch an anderen deutschen Hochschulen und im Ausland. Darüber hinaus veranstalten wir spezielle Seminare und Symposien zu den im Institut behandelten Forschungsgebieten, häufig in Zusammenarbeit mit Universitätsinstituten. Durch unsere sehr erfolgreiche „International Max Planck Research School (IMPRS) on Astrophysics“ an der Ludwig-Maximilians-Universität (LMU) München wurde die Doktorandenausbildung im Raum Garching/München intensiviert. An dieser im Jahre 2000 gegründeten „Graduate School“ sind neben unserem Institut und dem Max-Planck-Institut für Astrophysik (MPA) noch das Institut für Astronomie und Astrophysik der LMU und die Europäische Südsternwarte (ESO) beteiligt. Mit typisch 80 Doktorandinnen und Doktoranden in diesem Programm, wovon etwa 30 am MPE arbeiten, gehört die IMPRS on Astrophysics zu den größten Einrichtungen dieser Art weltweit. Das MPE präsentiert seine Arbeit und die Ergebnisse seiner Forschung auch einem breiten Publikum. Regelmäßige Meldungen über die Wissenschaft, Projekte und Menschen am Institut werden ergänzt durch eine Vielzahl an Veranstaltungen sowohl im Hause als auch außerhalb, wie Führungen für Gruppen (meist Schulklassen), Teilnahme am jährlichen „Girls' Day“, dem zweijährig stattfindenden „Tag der offenen Tür“ sowie der Anleitung von Schüler und Hochschulpraktikanten. Darüber hinaus halten MPE Wissenschaftler regelmäßig populär-wissenschaftliche Vorträge außer Haus.

1 Personal und Ausstattung

1.1 Personalstand

Direktoren und Professoren: 8

Prof. Dr. R. Bender, Optische und Interpretative Astronomie
Prof. Dr. P. Caselli, Zentrum für Astrochemische Studien
Prof. Dr. R. Genzel, Infrarot- und Submillimeter-Astronomie
Prof. Dr. Frank Eisenhauer, Infrarot- und Submillimeter-Astronomie
Prof. Dr. K. Nandra, Hochenergie-Astrophysik (Geschäftsführung)
Prof. Dr. G. Haerendel (emeritiertes wiss. Mitglied)
Prof. Dr. G. Morfill (emeritiertes wiss. Mitglied)
Prof. Dr. J. Trümper (emeritiertes wiss. Mitglied)

SelbststaendugeNachwuchsgruppen:

Dr. S. Spezzano

MivervaFastTrack:

Dr. E. Redaelli

Direktionsassisten:

Dr. D. Lutz

Pressesprecherin:

Dr. H. Hämmerle

Wissenschaftliche Mitarbeiter:

Prof. Dr. E. van Dishoeck, Leiden Observatory (Niederlande), MPE
Prof. Dr. J. Kormendy, Univ. of Texas at Austin (USA)
Prof. Dr. R. Z. Sagdeev, Univ. of Maryland (USA)

Dr. K. Schuster, IRAM, Grenoble (Frankreich)
Prof. Dr. A. Sternberg, Tel Aviv University (Israel)

Kuratorium:

Prof. Dr. A. Bode, Leibniz-Rechenzentrum der Bayerischen Akademie der Wissenschaften, Garching
MdB Dr. A. Christmann, Deutscher Bundestag, Berlin
MdL A. Franke, Bayerischer Landtag, München
MdB F. Hahn, Deutscher Bundestag, Berlin
Prof. Dr. B. Huber, Präsident der Ludwig-Maximilians-Universität, München
Prof. Dr. A. Kaysser-Pyzalla, Vorstandsvorsitze Deutsches Zentrum für Luft und Raumfahrt (DLR), Köln
Prof. Dr. D. Kranzlmüller, Direktoriumsvorsitzender Leibniz- Rechenzentrum, Garching
Dr. F. Merkle, ehemaliges Vorstandsmitglied OHB System AG, Eching
Dr. U. von Rauchhaupt, Frankfurter Allgemeine Zeitung, Frankfurt/Main
Prof. R. Rodenstock, Rodenstock Geschäftsführungs GmbH, München
Dr. J. Rubner, Vice President Global Communication and Public Engagement, Technische Universität München, München
Dr. M. Weiß, Ressortleiterin Wissen, Süddeutsche Zeitung, München
MDirig Dr. M. Wolter, Abteilungsleiter Bayer. Staatsministerium für Wirtschaft, Energie und Technologie, München

Fachbeirat:

Prof. Dr. J. Bland-Hawthorn, University of Sydney, Sydney Institute of Astronomy (Australia)
Prof. Dr. C. Canizares, MIT, Kavli Institute, Cambridge (USA)
Prof. Dr. A. Celotti, SISSA, Trieste (Italien)
Prof. Dr. R. Davies, University of Oxford, Department of Physics (UK)
Prof. Dr. N. Evans, The University of Texas at Austin, Austin (USA)
Prof. Dr. A. Goodman, Harvard-Smithsonian Center for Astrophysics, Cambridge (USA)
Prof. Dr. K. Kuijken, Universiteit Leiden, Leiden (Niederlande)
Prof. Dr. E. Sadler, University of Sydney, Sydney (Australia)
Prof. Dr. R. Sari, The Hebrew University of Jerusalem, Jerusalem (Israel)
Prof. Dr. B. Wilkes, Chandra X-Ray Center, Cambridge (USA)

Fachübergreifende Fachbeiräte:

Prof. Dr. C. Cesarsky, Commissariat á l'Energie Atomique, France, Sacley-Paris (Frankreich)
Prof. Dr. J. Peacock, Universität Edinburg (UK)

Wissenschaftliche Auszeichnungen, Berufungen:

Eisenhauer, F.: Außerplanmäßiger Professor, Technische Universität München, München, Germany, 01/2023.
Sanchez, A. G. as part of the SDSS/BOSS/eBOSS collaborations: Giuseppe and Vanna Cocconi Prize 2023, European Physical Society, Mulhouse, France, 08/2023
Eisenhauer, F.: Instrument Development Award, German Astronomical Society, Berlin, Germany, 09/2023.
Genzel, R.: Ehrendoktorwürde der Universität Grenoble, Université Grenoble Alpes, Grenoble, France, 10/2023

2 Wissenschaftliche Arbeiten

2.1 Wissenschaftliche Arbeitsgruppen

a) Infrarot- und Submillimeter-Astronomie

a_1) *Sekretariat:* Richter, A.

a_2) *Teamassistentinnen:* Dengler, S.; Herfert, B. (seit 01.04.); Kleiser, A.; Simonis, E. (bis 15.01.); Zanker-Smith, J.

a_3) Biondi, Dr. F.; Bourdarot, Dr. G.; Cao, Dr. Y.; Chen, Dr. J. (seit 01.09.); Davies, Dr. R.; Eisenhauer, Dr. F.; Espejo Salcedo, Dr. J. (seit 15.04.); Feuchtgruber, Dipl.-Phys. H.; Förster Schreiber, Dr. N.; Gillessen, Dr. S.; Gopinath, V. (seit 16.10.); Grant, Dr. S.; Jolly, Dr. J.-B.; Kravchenko, Dr. K.; Kurtovic, Dr. N. (seit 01.09.); Liu, Dr. D.; Lutz, Dr. D.; More, N.; Ott, Dr. T.; Pulsoni, Dr. C.; Rabien, Dr. S.; Shangguan, Dr, J.; Shimizu, Dr. T.; Sturm, Dr. E.; Tacconi, Dr. L.; Widmann, Dr. F.; Yazici, S.

a_4) *Doktoranden (D.) / Master (M.)*

Barféty, C. (D., Förster Schreiber); Bordoni, M.S. (D., Genzel/ Gillessen); Drescher, A. (D., Eisenhauer); Lee, L. Y.-L., (D., Tacconi, Förster-Schreiber); Mang, F. (D., Eisenhauer); Pastras, S. (D., Genzel/Förster Schreiber); Ribeiro, D.(D., Genzel/Gillessen); Santos, D. (D., Shimizu)

b) Hochenergie-Astrophysik

b_1) *Sekretariat:* Boller, B.

b_2) *Teamassistentin:* Frankenhuizen, W. (bis 31.10.)

b_3) Altmann, A.; Andritschke, Dr. R.; Antonelli, V.; Artis, Dr. E.; Becker, Dr. W.; Behrens, Dr. A.; Boller, Prof. Dr. Th.; Brunner, Dr. H. (bis 30.06.); Buchner, Dr. J.; Bulbul, Dr. E.; Burgess, Dr. M.J. (bis 30.09.); Burkert, Dr. W.; Burwitz, Dr. V.; Compa¬rat, Dr., J.; Dennerl, Dr. K.; Eder, Dipl.-Ing. J.; Emberger, V.; Freyberg, Dr. M.; Friedrich, Dr. P.; Friedrich, Dr. S.; Gaida, R.; Gatuzz, Dr. E.; Garell, Dr. C. (seit 22.02.); Ghirardini, Dr. V.; Gueguen, Dr. A.; Greiner, Dr. J.; Haberl, Dr. F.; Hartner, Dipl. Math. G.; Haase, Dr. J. (bis 31.01.); Hauser, G.; Keil, Dr. I (bis 31.03.); Kienlin von, Dr. A; Kluge, Dr. M.; Liu, Dr. A.; Laas, Dr. J.; Liu, Dr. T. (bis 31.07.); Liu, Dr. Z.; Locatelli, N. (bis 30.04.); Maitra, Dr. Ch.; Meidinger, Dr. N.; Mayr, A.; Merloni, Dr. A.; Müller, T.; Müller-Seidlitz, Dr. J.; Ni, Dr. Q.; Osterhage, Dr. S.; Pietschner, D.; Predehl, Dr. P.; Rachovitis, G. (seit 15.03.); Ramos Ceja, Dr. M.; Rau, Dr. A.; Rukdee, Dr. S.; Salvato, Dr. M.; Sanders, Dr. J.; Schmidt, T.; Schnetler, Dr., H. (seit 01.04.); Schweingruber, A.; Shirley, Dr. R. (seit 17.04.); Stieglitz, V.; Stanke, Dr. Th.; Stewart, Dr. I.; Thi, Dr. W.-F. (bis 31.05.); Trümper, Prof. Dr. J.; Zhang, Dr. X.

b_4) *Doktoranden (D.) / Master (M.)*

Aydar, C. (D., Merloni); Bacelj, A. (D., Greiner); Bahar, E. (D., Bulbul); Biltzinger, B. (bis 30.04., D., Greiner); Bock, K. (M. Greiner); Camilloni, F. (D., Becker); Fresco, A. (bis 31.07., D., Merloni); Gauger, I. (D., Buchner); Goswami, D.K. (M, Salvato); Grotova, I. (D., A. Rau); Hecker, Y. (bis 30.04., M., Greiner); Hecker, C. (bis 31.05., M, Greiner); Kaltenberger, D. (D., Haberl); Khrokriakova, A. (D., Becker); Igo, Z. (D., Merloni); Mayer, M. (bis 31.05., D., Becker); Olechovska, A., (seit 01.01., M, Salvato); Preis, T., (seit 01.10., M., Greiner); Roster, W. (D., Salvato); Schmidt, L. (bis 31.08., M., Greiner); Shreeram, S., (D., Bulbul); Seppi, R. (bis 30.06., D., Comparat); Temourzadeh, S. (seit 06.04., M. Comparat); Waddell, S. (D., Nandra, Boller); Willer, R. (D., Greiner); Wolf, J. (bis 30.06., D., Salvato); Yeung, H.F., (D., Becker); Zhang, Y., (D, Ponti); Zelmer, S. (seit 01.07. D, Bulbul); Zheng, X. (D. Ponti)

c) Optische und Interpretative Astronomie

c_1) *Sekretariat:* Ingram, C.

c_2) Blana Diaz, Dr. M. (seit 07.03.); Bodendorf, Dr. C.; Bohnet, Dipl. Phys. A.; Burkert, Prof. Dr. A.; Contarini, Dr S. (seit 01.11.); Correa, Dr. C.; DeNicola, Dr. S.; Erhardt,J. (seit 15.06.); Escartin, Dr. J. (bis 31.12.); Fabricius, Dr. M.; Finkbeiner, L. (seit 07.11.); Gerhard, Prof. Dr. O.; Gracia Carpio, Dr. J.; Grupp, Dr. F.; Haase, J; Hou, Dr. J. (seit 01.06.); Hopp, Dr. U.; Kluge, Dr. M.; Kruk, Dr. S. (bis 31.01.23); Lange, J. (seit 01.10.); Maleubre Molinero Dr. S. (bis 10.09.); Masoumzadeh Jouzdani Dr. N. (seit 01.11.); Mehrgan, Dr. K. (seit 01.12.); Neureither, Dr. B. (seit 01.08.); Paech, Dr. K.; Parikh, Dr. T. (bis 31.3.); Pezzotta, Dr. A.; Raison, Dr. F.; Saglia, PD. Dr. R.; Sanchez, Dr. A.; Saulder, Dr. C. (seit 01.07.); Snigula, Dr. J.; Steinwagner, Dr. J.; Subramanian, Dr. S.(bis 30.04.); Thomas, Dr. J.; Weller, Prof. Dr. J.; Wetzstein, Dr. M.; Wylie, Dr. S. (bis 31.10.)

c_3) *Doktoranden (D.) / Master (M.)*

Anetjärvi, M. (D., Saglia); Balzer, F. (D., Saglia); Bolze, R. (M., Bender); Blumhof, M. (M., Bender); Delley, D. (seit 15.09., D., Saglia); Ding H. (seit 01.07., D., Saglia); Esposito, M. (D., Saglia); Fiorilli, A. (D., Saglia); Finkbeiner, L. (M., Fabricius); Gong, L. (D., Bender); Ding, H. (M., Fabricius); Koc, A. (bis 01.10., M., Saglia); Langgassner, F. (seit 15.09.; D., Fabricius); Lipka, M. (D., Saglia); Luis, T. (D., Saglia); Merghan, K. (bis 31.11., D., Bender); Neureither B. (bis 31.07., D., Thomas); Pandey, A. (D., Gerhard); Pippert, J. (seit 01.12., D., Bender); Perez Fernandez A. (seit 01.09., D. Sanchez); Shahriyar, M. (seit 01.06., M., Saglia); Seménaite, A. (bis 31.10., D., Sanchez); Thikonenko, I. (D., Saglia); Wessely, P. (bis 19.05., M.; Fabricius)

d) Zentrum für astrochemische Studien

d_1) *Sekretariat:* Langer, A.

d_2) Almeida Ribeiro, Dr. F.; Araki, Dr. M.; Bunn, Dr. H.; Endres, Dr. Ch.; Giuliano, Dr. B.M.; Gieser, Dr. C.; Gong, Dr. M.; Hsieh, Dr. T.-H.; Ivlev, Dr. A.; Jensen, Dr. S.; Jiménez Redondo, Dr. M.; Jusko, Dr. P.; Küffmeier, Dr. M. (bis 31.08.); Lattanzi, Dr. V.; Lin, Dr. Y.; Maureira Pinochet, Dr. M.J.; Pineda Fornerod, Dr. J.; Redaelli, Dr. E.; Sipilä, Dr. O.; Spezzano, Dr. S. .

d_3) *Doktoranden (D.) / Master (M.)*

Alberton, D. (D., Caselli); Bethlehem, J. (seit 01.09., D., Caselli), Ferrada Chamorro, S., (bis 31.03, D., Caselli); Ferrer Asensio, J., (D., Caselli, Spezzano); Giers, K. (D., Caselli, Spezzano); Kakkenpara Suresh, S., (D., Caselli); Obolentseva, M. (D., Caselli, Ivlev); Riedel, W. (D., Caselli, Redaelli); Tabatabaei Mazraeh No, F.S. (D., Caselli, Redaelli); Valdivia Mena, M. T. (D., Caselli, Pineda Fornerod); Vyjidak, A. (seit 01.07., D., Caselli, Giuliano); Zamponi Fuentealba, J. (D., Caselli, Maureira Pinochet)

e) Working Group van Dishoeck

van Dishoeck, Prof. Dr. E.; Grant, Dr. S., Kurtovic, Dr. N. (seit 01.09.)

a) Elektronische Entwicklung

Albrecht, Dipl.-Ing. S. (Leitung)

Barl, Dipl.-Ing. (FH) L.; Bechteler, Dr. T.; Bornemann, Dipl.- Ing. (FH) W.; Burghardt, Dipl.-Ing. (FH) T.; Dickfeld, M.Sc. (FH) F.; Graf, M.Sc. (FH) J (seit 01.09.); Hälker, Dipl.-Ing. (FH) O.; Hans, O.; Hartmann, K.; Jilg, Dipl.-Ing. (FH) T.; Kink, Dipl.-Ing. (FH) W. (bis 31.01.); Kshirsagar, M.Sc. T. (bis 30.06.); Lederhuber, M.Sc. A. (seit 01.11.); Müller, Dipl.-Ing. (FH) S.; Neumeier, M.Sc. L.; Öncü, M.Sc. E. (bis 30.06.); Rau, M.Sc. C.; Reiffers, Dipl.-Ing. (FH) J.; Spallek, B.Sc. (FH) L. (seit 11.09.); Uysal, M.Sc. S. (bis 30.11.); Zanker-Smith, J.; Ziegleder, Dipl.-Ing. (FH) J.

a_1) *Elektronische Werkstatt und Haustechnik*

Oberauer, F. (Leitung)
Bachhuber, M.; Berger A.; Cibooglu, H.; Greßmann, R.; Kreibich, I.; Langer, P.; Özdemir,

H.; Schneider R.

a_2) *Doktoranden (D.) / Master (M.)*
Graf, J. (M., Neumeier) (von 01.02. bis 31.08.)

b) Mechanik und Testlabor

Lang, Dipl-Phys. F. (Leitung)
Antonelli, Dr.-Ing. V.; Deysenroth, C.; Deysenroth, M.; Dittrich, Dipl.- Ing. (FH) K.; Emslander, B. Eng. A.; Hartl, Dr. M.; Haußmann, F.; Huber, Dipl.-Ing. H.; Mican, Dipl.-Ing. B.; Möller, M. Eng. J.-P.; Mügge, M.Sc., J. (seit 01.10.2023); Paßlack, Dipl.-Ing. (FH) S.; Pflüger, Dipl.-Ing. (FH) A.; Pietschner, Dipl.-Ing. (FH) D.; Rohe, C.; Saraf, M.Sc., A. M.; Sönmez, M. Sc. A.; Strecker, R.; Yazici Dipl.-Phy. S.

b_1) *Mechanische Werkstatt*

Werkstattleitung: Czempiel, S (bis 28.02.); Brara, A. (ab 01.03.)
Bayer, R.; Bergner, K.; Eibl, J.; Feldmeier, P.; Folek L.; Furchtsam, C.; Furchtsam, S. (seit 01.02.) Goldbrunner, A.; Hartwig, J.; Heckmair, S. (bis 11.09.); Honsberg, M.; Huber, D.; Kestler, H.-J.; Knapp, S.; Loichinger, L.; Sandmair, R.; Schunn, W.; Schuppe, D.; Soller, F.; Stadler, B. (seit 01.07.) Waldhör, F.

b_2) *Auszubildende*

Beck, A.; Fokken M.; Greis, N. (seit 01.09.); Kellerer, L. (seit 01.09.); Schaefer, T.; Stübing, M.; Weber, G.

Zentrale Bereiche

c) Zentrale IT-Gruppe

Bohnet, Dipl. Phys. A. (Leitung)
Agudo Berbel, A.; Baumgartner, Greck, G (seit 1.10.); H.; Grassi, Dr. T.; Kleiser, A.; Klose, L.; Kollmer, C.; Oberauer, A.; Ott, Dr. T.; Piemonte, A.; Elsner, C.; Snigula, Dr. J.; Wieprecht, Dipl.-Ing. E.

d) Öffentlichkeitsarbeit

Hämmerle, Dr. H.; (Leitung)

Herrmann, T.; Niebisch, B.

e) Bibliothek

Bartels, C. (Leitung)

Blank, E. (bis 30.10.), Balicevic, M.

f) IMPRS

Hilbert, A.

g) Verwaltung

Fischhaber, P. (Leitung VAD) Sekretariat: Hesseler, G. (bis 31.08.), Friedrich, F. (seit 01.09.)
Arturo, A.; Ayari, S.; Bauer, T.; Brara, S. (seit 01.09.); Cziasto, U.; Eder, A. (bis 31.07.); Eicher, C.; Faust, T. (bis 31.08.); Gareva, L.; Goldbrunner, S.; Grohmann, M.; Hartung, I.; Hausmann, S.; Hidasi, R.; Jäkel, T.; Jirsch, Y.; Kaps, S.; Keil, M.; Kestler, L.; Konan, E. (seit 01.09.); Krapivina, A.; Kuhwald, E. (bis 31.07.); Maier, E.; Mandl, E.; Nagy, A.; Neun, A. (BR); Paschou, J.; Preisler, C.; Rosenberger, S.; Sacher, A.; Schmidt, A.; Schwaiger, S.; Seyfarth, B.; Stock, C.; Stöckl, D.; Stricker, C.; Studier, S.; Thiess, F.; Thiess, L.; (bis 31.10.); Zubanova, E.

3 Lehrtätigkeit, Prüfungen und Gremientätigkeit

3.1 Lehrveranstaltungen / Seminare

Boller, Th.: Johann Wolfgang Goethe University (Frankfurt am Main, Germany), Astrophysikalische Beschreibung von Strahlung und Materie. (WS 23/24), AGN Physics. (SS 23).

Boller, Th.: Instituto de Cibernética, Matemática y Física Havanna (Havanna, Cuba), Observational and theoretical progress in AGN Physics. (WS 23/24).

Bourdarot, G.: MPE (Garching, Germany), IR/Optical Interferometry, Series CAS@MPE Lecture, (WS 22/23).

Caselli, P.: Kapteyn Astronomical Institute, University of Groningen (Groningen, The Netherlands), From atoms to seeds of life: the astrochemical journey (SS 23), Protostellar Chemistry (SS 23), Planet formation and chemistry (SS 23).

Caselli, P.: Chalmers University of Technology (Gothenburg, Sweden), From atoms to seeds of life: the astrochemical journey (SS 23).

Eisenhauer, F.: Technical University of Munich (Munich, Germany), Introduction to Astrophysics (WS 22/23), Introduction to Astrophysics (WS 23/24), High Angular Resolution Astronomy (SS 23).

Saglia, R.: LMU (Munich, Germany), Essential Astrophysics (SS23).

Spezzano, S.: LMU (Munich, Germany), Astrochemistry (WS 23/24).

3.2 Organisation von wissenschaftlichen Seminaren / Konferenzen

Users Meeting of Cavity Spectroscopy. Wako, Saitama, 21.12.2023, Organisation: M. Araki, T. Oyama, K. Suma, K. Iwakuni.

Blaauw workshop: The (geo)chemistry of terrestrial planet formation and evolution. Groningen, 27.03- 29.03.2023, Organisation: C. Dominik , Inge Loes Kate, T. Lichtenberg, A. Patrignani, F. van der Tak.

Second Workshop on German Science Opportunities for the ngVLA. Leipzig, 27.09-28.09.2023, Organisation: D. Riechers (co-Chair), P. Caselli, M. Flock, K. Kreckel, S. Vegetti.

799. Wilhelm and Else Heraeus Seminar on Laboratory Astrophysics in the Age of ALMA and JWST. Heidelberg, 18.09-21.09.2023, Organisation: P. Caselli, M. Schnell.

Astrochemistry at high resolution Faraday Discussion. Meryland, USA, 31.05-02.06.2023, Organisation: P. Caselli, A.J.H.M. Meijer, N. Reid, I.R. Sims, N. Walker, S. Widicus Weaver.

EAS Annual Meeting 2023, SS10, The edge of galaxies from field to cluster environment: the build-up of stellar halos. Krakow, 14.07.2023, Organisation: M. Spavone, E. Iodice, A. P. Cooper, D. A. Forbes, C. Pulsoni, R. Remus, I. Trujillo, G. van de Ven.

EAS Symposium S7: One year of JWST: photodissociation regions, protostars, disks, and planets. Krakow Poland, 10.07.-14.07.2023, Organisation: M. Audard, M. Samland, O. Dionatos , C. Gieser, J. Green, A. Kospal, E. Habart.

The James Webb Space Telescope Turns One: The Birth and Growth of Galaxies. Sesto, Italy, 10.07. - 14.07.2023, Organisation: A. Adamo, M. Castellano, M. Dickinson, H. Ferguson, N. M. Forster Schreiber, A. Fontana, L. Pentericci, P. Rosati, P. Santini, A. Shapley, M. Tosi, T. Treu, E. Vanzella.

OPINAS seminar (weekly seminar). MPE - Seminar Room 368, Mondays, 11:30am, Organisation: A. Pezzotta, S. de Nicola. I

SSI workshop Active Galactic Nuclei in Next Generation Surveys. Berne, Switzerland, 27.11. - 30.11. 2023, Organisation: S. Fotopoulou, M. Salvato, V. Allevato, A. Bongiorno,

M. Bolzonella, B. Lusso. F. La Franca, M. Mignoli, M. Talia, F. Ricci, S. Paltani

SDSS-V Collaboration meeting. New York, USA, 31.07. – 04.08. 2023, Organisation: K. Hwkins, S. Sanchez, B. Trakhtenbrot, B. Gaensicke, M. Salvato, M. Eracleous, M. Ness, M. Kumari, L. Chao, D. Horta.

3.3 Bachelorarbeiten

Abgeschlossen: 10

Lindmeir, M.: Cores von hochrotverschobenen brightest cluster galaxies. LMU, 2023.

Naether, L.: Vorteile der Nutzung des Mikrolinseneffekts bei der Entdeckung von Eis- und Gasriesen um Rote Zwerge hinter der Schneegrenze. LMU, 2023.

Prey, M.: Die Entwicklung der Größe von Spiralgalaxien. LMU, 2023.

Regner, C.: Geometrie von Exoplanetensystemen: Ein Überblick der Orbit-Neigungen heißer Jupiter mit Hilfe des Rossiter-McLaughlin-Effekts. LMU, 2023.

Reichel, V.: Bestimmung kinematischer Parameter von elliptischen Galaxien. TU Bergakademie Freiberg, 2023.

Selimi, A.: Das galaktische Bulge der Milchstraße - Strukturelle Hinweise zur chemodynamischen Evolution. LMU, 2023.

Wechselberger, B.: SMBH Massenabschätzung von Brightest Cluster Galaxies mittels der Break-Radien ihrer Cores. LMU, 2023.

Weger, A.: Die Cores von lokalen Brightest-Cluster-Galaxies (BCGs). LMU, 2023.

Yang, C.: The Development of the Size of Galaxies: Tracing Star Formation in Galaxy Disks with spatially resolved H alpha Maps from 3D-HST and KMOS3D Survey. LMU, 2023.

Zhang, D.: The different measurements of the supermassive black hole mass at the center of M87 via stellar kinematics, ionized gas dynamics, and radio imaging. LMU, 2023.

3.4 Masterarbeiten

Abgeschlossen: 5

Bolzer, M.-L.: High Contrast Imaging Algorithms for Circumstellar Environments and Exoplanets Charaterization with SPHERE/VLT Data. TUM, 2023.

Ding, H.: Optimizing the Smoothing in Non-Parametric Deprojections of Galaxies. LMU, 2023.

Koc, A.: Dark matter in brightest cluster galaxies. LMU, 2023.

Sauter, J.: GRAVITY Wide: Differential Optical Pathlength Compensation Control Architecture and Improved Visibility Prediction. TUM, 2023.

Wessely, P.: GRAVITY + WIDE Implementation of System Control and Metrology for an Optical Differential Pathlength Correction. TUM, 2023.

3.5 Dissertationen

Abgeschlossen: 8

Espejo Salcedo, J. M.: The role of angular momentum in the evolution of star-forming galaxies. Swinburne University of Technology, 2023.

Fresco, A. Y.: Multiphase Probes of Baryon Cycle using Bid Data Quasar Spectroscopy. MPE, 2023.

Mayer, M.: Connecting core-collapse supernova remnants and their central neutrons stars - An Xray study using Chandra and SRG/eROSITA. MPE, 2023.

Mehrgan, K.: The mass composition of massive earlytype galaxies. LMU, 2023.

Neureiter, B.: Accurate Recovery of the Dynamics and Masses of Triaxial Galaxies. LMU, 2023.

Seminaite, A.: Cosmological Implications of Galaxy Clustering in BOSS and eBOSS. MPE, LMU, 2023.

Seppi, R.: Cosmology with clusters of galaxies in the eROSITA era. MPE, 2023.

Wolf, J.: Tracing the Evolution of Super-Massive Black Holes through Cosmic Time with luminous Active Galactic Nuclei. MPE, 2023.

4 Veröffentlichungen

4.1 In referierten Zeitschriften

Abbott T., M. Aguena, A. Alarcon, [. . .], T.N. Varga, J. Weller, DES, SPT Collaborations: Joint analysis of Dark Energy Survey Year 3 data and CMB lensing from SPT and Planck. III. Combined cosmological constraints. Physical Review D 107, 2 (2023).

Abbott T., M. Aguena, A. Alarcon, [. . .], T.N. Varga, J. Weller, DES Collaboration: Dark Energy Survey Year 3 results: Constraints on extensions to A CDM with weak lensing and galaxy clustering. Physical Review D 107, 8 (2023).

Abuter, R., GRAVITY Collaboration, R. Abuter, N. Aimar, P. Amaro Seoane, A. Amorim, M. Bauböck, J. P. Berger, H. Bonnet, G. Bourdarot, W. Brandner, V. Cardoso, Y. Clénet, R. Davies, P. T. de Zeeuw, J. Dexter, A. Drescher, A. Eckart, F. Eisenhauer, H. Feuchtgruber, G. Finger, N. M. Förster Schreiber, A. Foschi, P. Garcia, F. Gao, Z. Gelles, E. Gendron, R. Genzel, S. Gillessen, M. Hartl, X. Haubois, F. Haussmann, G. Heißel, T. Henning, S. Hippler, M. Horrobin, L. Jochum, L. Jocou, A. Kaufer, P. Kervella, S. Lacour, V. Lapeyrère, J.-B. Le Bouquin, P. Léna, D. Lutz, F. Mang, N. More, T. Ott, T. Paumard, K. Perraut, G. Perrin, O. Pfuhl, S. Rabien, D. C. Ribeiro, M. Sadun Bordoni, S. Scheithauer, J. Shangguan, T. Shimizu, J. Stadler, O. Straub, C. Straubmeier, E. Sturm, L. J. Tacconi, F. Vincent, S. von Fellenberg, F. Widmann, M. Wielgus, E. Wieprecht, E. Wiezorrek and J. Woillez: Polarimetry and astrometry of NIR flares as event horizon scale, dynamical probes for the mass of Sgr A*. Astron. Astrophys. 677, L10 (2023).

Acero F., A. Aguasca-Cabot, J. Buchner, et al.: Gammapy: Python toolbox for gamma-ray astronomy. Astron. Astrophys. 678, A157 (2023).

Adamek J., R. E. Angulo, C. Arnold, [. . .], R. Saglia et al.: Euclid: modelling massive neutrinos in cosmology - a code comparison. JCAP, 6, 35-27 (2023).

Agudo I., L. Amati, T. An, [. . .] A. Rau, et al.: Panning for gold, but finding helium: Discovery of the ultra-stripped supernova SN 2019wxt from gravitational-wave followup observations. Astron. Astrophys. 675, A201 (2023).

Agüí Fernández J., C. Thöne, D. Kann, A. de Ugarte Postigo, J. Selsing, P. Schady, R. Yates, J. Greiner, S. Oates, D. Malesani, D. Xu, A. Klotz, S. Campana, A. Rossi, D. Perley, M. Blažek, P. D'Avanzo, A. Giunta, D. Hartmann, K. Heintz, P. Jakobsson, Kirkpatrick, C. C., IV, C. Kouveliotou, A. Melandri, G. Pugliese, R. Salvaterra, R. Starling, N. Tanvir, S. Vergani, K. Wiersema: GRB 160410A: The first chemical study of the interstellar medium of a short GRB. Mon. Not. R. Astron. Soc. 520, 1 (2023).

Ahmadi A., H. Beuther, F. Bosco, C. Gieser, S. Suri, J. Mottram, R. Kuiper, T. Henning, Á. Sánchez-Monge, H. Linz, R. Pudritz, D. Semenov, J. Winters, T. Möller, M. Beltrán, T. Csengeri, R. Galván-Madrid, K. Johnston, E. Keto, P. Klaassen, S. Leurini, S. Longmore, S. Lumsden, L. Maud, L. Moscadelli, A. Palau, T. Peters, S. Ragan, J. Urquhart, Q. Zhang, H. Zinnecker: Kinematics and stability of highmass protostellar disk candidates at sub-arcsecond resolution. Insights from the IRAM NOEMA large

programme CORE. Astron. Astrophys. 677, A171 (2023).

Akimkin V., A.V. Ivlev, P. Caselli, M. Gong, K. Silsbee: Coagulation- Fragmentation Equilibrium for Charged Dust: Abundance of Submicron Grains Increases Dramatically in Protoplanetary Disks. Ap. J. 953, 1 (2023).

Akins H.B., C.M. Casey, N. Allen, [. . .], D. Liu, [. . .], Cosmos- Web Team, Ceers Team: Two Massive, Compact, and Dust-obscured Candidate z 8 Galaxies Discovered by JWST. Ap. J. 956, 1 (2023).

Alberton D., L. Bizzocchi, N. Jiang, M. Melosso, V. Rivilla, A.P. Charmet, B. Giuliano, P. Caselli, C. Puzzarini, S. Alessandrini, L. Dore, I. Jiménez-Serra, J. Martín-Pintado: Laboratory spectroscopy of allylimine and tentative detection towards the G+0.693-0.027 molecular cloud. Astron. Astrophys. 669, A93 (2023).

Alberton D., V. Lattanzi, C. Endres, V. Rivilla, J. Guillemin, P. Caselli, I. Jiménez-Serra, J. Martín-Pintado: A Highresolution Spectroscopic Analysis of Aminoacrylonitrile and an Interstellar Search toward G+0.693. Ap. J. 951, 2 (2023).

Alig C., A. Prieto, M. Blaña, M. Frischman, C. Metzl, A. Burkert, O. Zier, A. Streblyanska: The Accretion Mode in Sub-Eddington Supermassive Black Holes: Getting into the Central Parsecs of Andromeda. Ap. J. 953, 1 (2023).

Almeida A., S.F. Anderson, M. Argudo-Fernández, C. Badenes, K. Barger, J.K. Barrera-Ballesteros, C.F. Bender, E. Benitez, F. Besser, J.C. Bird, D. Bizyaev, M.R. Blanton, J. Bochanski, J. Bovy, W.N. Brandt, J.R. Brownstein, J. Buchner, E. Bulbul et al.: The Eighteenth Data Release of the Sloan Digital Sky Surveys: Targeting and First Spectra from SDSS-V. Ap. J. Supp. Ser. 267, 2 (2023).

Alonso Herrero A., S. García-Burillo, M. Pereira-Santaella, T. Shimizu, F. Combes, E. Hicks, R. Davies, C. Ramos Almeida, I. García-Bernete, S. Hönig, N. Levenson, C. Packham, E. Bellocchi, L. Hunt, M. Imanishi, C. Ricci, P. Roche: AGN feedback in action in the molecular gas ring of the Seyfert galaxy NGC 7172. Astron. Astrophys. 675, A88 (2023).

Amon A., N. Robertson, H. Miyatake, C. Heymans, M. White, J. DeRose, S. Yuan, R. Wechsler, T. Varga, et al.: Consistent lensing and clustering in a low-S8 Universe with BOSS, DES Year 3, HSC Year 1, and KiDS-1000. Mon. Not. R. Astron. Soc. 518, 1 (2023).

Anastasopoulou K., G. Ponti, M. Sormani, N. Locatelli, F. Haberl, M. Morris, E. Churazov, R. Schödel, C. Maitra, S. Campana, E. Di Teodoro, C. Jin, I. Khabibullin, S. Mondal, M. Sasaki, Y. Zhang, X. Zheng: Study of the excess Fe XXV line emission in the central degrees of the Galactic centre using XMM-Newton data. Astron. Astrophys. 671, A55 (2023).

Andreon S., A. Moretti, H. Böhringer, F. Castagna: The flat entropy profile at the outskirts of the Abell 2244 galaxy cluster. Mon. Not. R. Astron. Soc. 519, 2 (2023).

Arabsalmani M., L. Garratt-Smithson, N. Wijers, J. Schaye, A. Burkert, C. Lagos, E. Le Floc'h, D. Obreschkow, C. Peroux, B. Schneider: A Comprehensive Study on the Relation between the Metal Enrichment of Ionized and Atomic Gas in Star-forming Galaxies. Ap. J. 952, 1 (2023).

Arslan Ö., S. Hocuk, P. Caselli, İ. Küçük: The cosmic-ray induced sputtering process on icy grains. Mon. Not. R. Astron. Soc. 518, 2 (2023).

Avison A., G. Fuller, N.A. Frimpong, S. Etoka, M. Hoare, B. Jones, N. Peretto, A. Traficante, F. van der Tak, J. Pineda, M. Beltrán, F. Wyrowski, M. Thompson, S. Lumsden, Z. Nagy, T. Hill, S. Viti, F. Fontani, P. Schilke: Tracing Evolution in Massive Protostellar Objects - I. Fragmentation and emission properties of massive star-forming clumps in a luminosity-limited ALMA sample. Mon. Not. R. Astron. Soc. 526, 2 (2023).

Backs F., J. Poorta, C. Rab, A. Derkink, A. de Koter, L. Kaper, M. Ramírez-Tannus,

I. Kamp: Massive pre-mainsequence stars in M17. Modelling hydrogen and dust in MYSO disks. Astron. Astrophys. 671, A13 (2023).

Bajaj P., A. Ivlev, C. Räth, M. Schwabe: Studying turbulence in a fluid with background damping. Physical Review E 107, 6 (2023).

Balduin T., P. Woitke, U. Jørgensen, W.-. Thi, Y. Narita: Size-dependent charging of dust particles in protoplanetary disks. Can turbulence cause charge separation and lightning?. Astron. Astrophys. 678, A192 (2023).

Ball B.D., R. Kothes, E. Rosolowsky, J. West, W. Becker, M.D. Filipović, B. Gaensler, A.M. Hopkins, B. Koribalski, T. Landecker, D. Leahy, J. Marvil, X. Sun, F. Bufano, E. Carretti, A. Ingallinera, C.L. Van Eck, T. Willis: A catalogue of radio supernova remnants and candidate supernova remnants in the EMU/POSSUM Galactic pilot field. Mon. Not. R. Astron. Soc. 524, 1 (2023).

Balmer W.O., L. Pueyo, T. Stolker, H. Reggiani, A.-. Maire, S. Lacour, P. Mollière, M. Nowak, D. Sing, N. Pourré, S. Blunt, J. Wang, E. Rickman, J. Kammerer, T. Henning, K. Ward-Duong, R. Abuter, A. Amorim, R. Asensio-Torres, M. Benisty, J.-. Berger, H. Beust, A. Boccaletti, A. Bohn, M. Bonnefoy, H. Bonnet, G. Bourdarot, W. Brandner, F. Cantalloube, P. Caselli, B. Charnay, G. Chauvin, A. Chavez, E. Choquet, V. Christiaens, Y. Clénet, V. Coudé Du Foresto, A. Cridland, R. Dembet, J. Dexter, A. Drescher, G. Duvert, A. Eckart, F. Eisenhauer, F. Gao, P. Garcia, R. Garcia Lopez, E. Gendron, R. Genzel, S. Gillessen, J. Girard, X. Haubois, G. Heißel, S. Hinkley, S. Hippler, M. Horrobin, M. Houllé, Z. Hubert, L. Jocou, M. Keppler, P. Kervella, L. Kreidberg, A.-. Lagrange, V. Lapeyrère, J.-. Le Bouquin, P. Léna, D. Lutz, J. Monnier, D. Mouillet, E. Nasedkin, T. Ott, G. Otten, C. Paladini, T. Paumard, K. Perraut, G. Perrin, O. Pfuhl, J. Rameau, L. Rodet, G. Rousset, Z. Rustamkulov, J. Shangguan, T. Shimizu, J. Stadler, O. Straub, C. Straubmeier, E. Sturm, L. Tacconi, E. van Dishoeck, A. Vigan, F. Vincent, S. von Fellenberg, F. Widmann, E. Wieprecht, E. Wiezorrek, T. Winterhalder, J. Woillez, S. Yazici, A. Young, Gravity Collaboration: VLTI/GRAVITY Observations and Characterization of the Brown Dwarf Companion HD 72946 B. Ap. J. 956, 99 (2023).

Banzatti A., K.M. Pontoppidan, J.S. Carr, E. Jellison, I. Pascucci, J.R. Najita, C.E. Muñoz-Romero, K.I. Öberg, A. Kalyaan, P. Pinilla, S. Krijt, F. Long, M. Lambrechts, G. Rosotti, G.J. Herczeg, C. Salyk, K. Zhang, E.A. Bergin, N.P. Ballering, M.R. Meyer, S. Bruderer, Jdiscs Collaboration: JWST Reveals Excess Cool Water near the Snow Line in Compact Disks, Consistent with Pebble Drift. Ap. J. Lett. 957, 2 (2023).

Banzatti A., K.M. Pontoppidan, J. Pére Chávez, C. Salyk, L. Diehl, S. Bruderer, G.J. Herczeg, A. Carmona, I. Pascucci, S. Brittain, S. Jensen, S. Grant, E.F. van Dishoeck, I. Kamp, A.D. Bosman, K.I. Öberg, G.A. Blake, M.R. Meyer, E. Gaidos, A. Boogert, J.T. Rayner, C. Wheeler: The Kinematics and Excitation of Infrared Water Vapor Emission from Planet-forming Disks: Results from Spectrally Resolved Surveys and Guidelines for JWST Spectra. Astron. J. 165, 2 (2023).

Barnes A., J. Liu, Q. Zhang, J. Tan, F. Bigiel, P. Caselli, G. Cosentino, F. Fontani, J. Henshaw, I. Jiménez-Serra, D.-. Kalb, C. Law, S. Longmore, R. Parker, J. Pineda, A. Sánchez-Monge, W. Lim, K. Wang: Mother of dragons. A massive, quiescent core in the dragon cloud (IRDC G028.37+00.07). Astron. Astrophys. 675, A53 (2023).

Barnes A.T., E.J. Watkins, S.E. Meidt, [. . .], D. Liu, L.A. Lopez, E.J. Murphy, L. Neumann, J. Pety, F. Pinna, M. Querejeta, F. Renaud, T. Saito, S.K. Sarbadhicary, A. Sardone, R.J. Smith, S.K. Stuber, J. Sun, D.A. Thilker, A. Usero, B.C. Whitmore, T.G. Williams: PHANGS-JWST First Results: Multiwavelength View of Feedback-driven Bubbles (the Phantom Voids) across NGC 628. Ap. J. Lett. 944, 2 (2023).

Baron D., H. Netzer, K.D. French, D. Lutz, R.I. Davies, J.X. Prochaska: Star formation and molecular gas properties of post-starburst galaxies. Mon. Not. R. Astron. Soc. 524, 2 (2023).

Barrena R., G. Chon, H. Böhringer, J. Méndez-Abreu, A. Ferragamo: RXCJ1111.6+4050 galaxy cluster: Observational evidence of a transitional fossil group. Astron. Astrophys. 679, A147 (2023).

Belfiore F., A.K. Leroy, J. Sun, A.T. Barnes, M. Boquien, Y. Cao, E. Congiu, D.A. Dale, O.V. Egorov, C. Eibensteiner, S.C. Glover, K. Grasha, B. Groves, R.S. Klessen, K. Kreckel, L. Neumann, M. Querejeta, P. Sanchez-Blazquez, E. Schinnerer, T.G. Williams: Calibration of hybrid resolved star formation rate recipes based on PHANGS-MUSE H alpha and H beta maps. Astron. Astrophys. 670, A67 (2023).

Belfiore F., A.K. Leroy, T.G. Williams, A.T. Barnes, F. Bigiel, M. Boquien, Y. Cao, J. Chastenet, E. Congiu, D.A. Dale, O.V. Egorov, C. Eibensteiner, E. Emsellem, S.C. Glover, B. Groves, H. Hassani, R.S. Klessen, K. Kreckel, L. Neumann, J. Neumann, M. Querejeta, E. Rosolowsky, P. Sanchez- Blazquez, K. Sandstrom, E. Schinnerer, J. Sun, J. Sutter, E.J. Watkins: Calibrating mid-infrared emission as a tracer of obscured star formation on H II-region scales in the era of JWST. Astron. Astrophys. 678, A129 (2023).

Bender V., G. De Canio, M. Freyberg, M. Kirsch: Analysis of minimum ionising particles and soft protons using XMM-Newton EPIC pn-CCD as a particle detector. Astron. Astrophys. 670, A78 (2023).

Beraldo e Silva L., V.P. Debattista, S.R. Anderson, M. Valluri, P. Erwin, K.J. Daniel, N. Deg: Orbital Support and Evolution of Flat Profiles of Bars (Shoulders). Ap. J. 955, 1 (2023).

Beuther H., E. van Dishoeck, L. Tychoniec, C. Gieser, P. Kavanagh, G. Perotti, M. van Gelder, P. Klaassen, A. Caratti o Garatti, L. Francis, W. Rocha, K. Slavicinska, T. Ray, K. Justtanont, H. Linnartz, C. Waelkens, L. Colina, T. Greve, M. Güdel, T. Henning, P.-. Lagage, B. Vandenbussche, G. Östlin, G. Wright: JWST Observations of Young proto- Stars (JOYS). Outflows and accretion in the high-mass star-forming region IRAS 23385+6053. Astron. Astrophys. 673, A121 (2023).

Bhargava S., C. Garrel, E. Koulouridis, M. Pierre, I. Valtchanov, N. Cerardi, B.J. Maughan, M. Aguena, C. Benoist, C. Baguley, M.E. Ramos-Ceja, C. Adami, L. Chiappetti, C. Vignali, J.P. Willis: The XXL Survey. L. Active galactic nucleus contamination in galaxy clusters: Detection and cosmological impact. Astron. Astrophys. 673, A92 (2023).

Bhattacharya S., M. Arnaboldi, F. Hammer, Y. Yang, O. Gerhard, N. Caldwell, K.C. Freeman: The survey of planetary nebulae in Andromeda (M 31) VI. Kinematics of M 31 inner-halo substructures and comparison with majormerger simulation predictions. Mon. Not. R. Astron. Soc. 522, 4 (2023).

Bianchi E., A. Remijan, C. Codella, C. Ceccarelli, F. Lique, S. Spezzano, N. Balucani, P. Caselli, E. Herbst, L. Podio, C. Vastel, B. McGuire: Cyanopolyyne Chemistry in the L1544 Prestellar Core: New Insights from GBT Observations. Ap. J. 944, 2 (2023).

Biltzinger B., J.M. Burgess, J. Greiner: Time-resolved spectral catalogue of INTEGRAL/SPI gamma-ray bursts. Astron. Astrophys. 675, A175 (2023).

Bing L., M. Béthermin, G. Lagache, R. Adam, P. Ade, H. Ajeddig, P. André, E. Artis, H. Aussel, A. Beelen, A. Benoît, S. Berta, N. Billot, O. Bourrion, M. Calvo, A. Catalano, M. De Petris, F.-. Désert, S. Doyle, E. Driessen, D. Elbaz, A. Gkogkou, A. Gomez, J. Goupy, C. Hanser, F. Kéruzoré, C. Kramer, B. Ladjelate, D. Liu, S. Leclercq, J.-. Lestrade, P. Lustig, J. Macías-Pérez, A. Maury, P. Mauskopf, F. Mayet, A. Monfardini, M. Muñoz-Echeverría, L. Perotto, G. Pisano, N. Ponthieu, V. Revéret, A. Rigby, A. Ritacco, C. Romero, H. Roussel, F. Ruppin, K. Schuster, A. Sievers, C. Tucker, R. Zylka: NIKA2 Cosmological Legacy Survey. Survey description and galaxy number counts. Astron. Astrophys. 677, A66 (2023).

Bisbas T.G., E.F. van Dishoeck, C. Hu, A. Schruba: PDFCHEM: A new fast method

to determine ISM properties and infer environmental parameters using probability distributions. Mon. Not. R. Astron. Soc. 519, 1 (2023).

Blunt S., W. Balmer, J. Wang, S. Lacour, S. Petrus, G. Bourdarot, J. Kammerer, N. Pourré, E. Rickman, J. Shangguan, T. Winterhalder, R. Abuter, A. Amorim, R. Asensio-Torres, M. Benisty, J.-. Berger, H. Beust, A. Boccaletti, A. Bohn, M. Bonnefoy, H. Bonnet, W. Brandner, F. Cantalloube, P. Caselli, B. Charnay, G. Chauvin, A. Chavez, E. Choquet, V. Christiaens, Y. Clénet, V.C. Du Foresto, A. Cridland, R. Dembet, A. Drescher, G. Duvert, A. Eckart, F. Eisenhauer, H. Feuchtgruber, P. Garcia, R. Garcia Lopez, E. Gendron, R. Genzel, S. Gillessen, J. Girard, X. Haubois, G. Heißel, T. Henning, S. Hinkley, S. Hippler, M. Horrobin, M. Houllé, Z. Hubert, L. Jocou, M. Keppler, P. Kervella, L. Kreidberg, A.-. Lagrange, V. Lapeyrère, J.-. Le Bouquin, P. Léna, D. Lutz, A.-. Maire, F. Mang, G.-. Marleau, A. Mérand, P. Mollière, J. Monnier, C. Mordasini, D. Mouillet, E. Nasedkin, M. Nowak, T. Ott, G. Otten, C. Paladini, T. Paumard, K. Perraut, G. Perrin, O. Pfuhl, L. Pueyo, J. Rameau, L. Rodet, Z. Rustamkulov, T. Shimizu, D. Sing, T. Stolker, C. Straubmeier, E. Sturm, L. Tacconi, E. van Dishoeck, A. Vigan, F. Vincent, K. Ward-Duong, F. Widmann, E. Wieprecht, E. Wiezorrek, J. Woillez, S. Yazici, A. Young, Exogravity Collaboration: First VLTI/GRAVITY Observations of HIP 65426 b: Evidence for a Low or Moderate Orbital Eccentricity. Astron. J. 166, 6, 257 (2023).

Blánquez-Sesé D., C. Gómez-Guijarro, G. Magdis, B. Magnelli, R. Gobat, E. Daddi, M. Franco, K. Whitaker, F. Valentino, S. Adscheid, E. Schinnerer, A. Zanella, M. Xiao, T. Wang, D. Liu, V. Kokorev, D. Elbaz: The gas mass reservoir of quiescent galaxies at cosmic noon. Astron. Astrophys. 674, A166 (2023).

Boller T., : Unraveling the enigmatic soft x-ray excess: Current understanding and future perspectives. Astron. Nachr. 344, 6 (2023).

Bonici M., C. Carbone, S. Davini, [. . .], J. Weller, G. Zamorani, J. Zoubian, S. Andreon: Euclid: Forecasts from the void-lensing cross-correlation. Astron. Astrophys. 670, A47 (2023).

Bourdarot G., J.-. Berger, G. Lesur, K. Perraut, F. Malbet, R. Millan-Gabet, J.-. Le Bouquin, R. Garcia-Lopez, J. Monnier, A. Labdon, S. Kraus, L. Labadie, A. Aarnio: FU Orionis disk outburst: Evidence for a gravitational instability scenario triggered in a magnetically dead zone. Astron. Astrophys. 676, A124 (2023).

Bozzetto L.M., M.D. Filipović, H. Sano, R. Alsaberi, L. Barnes, I. Bojičić, R. Brose, L. Chomiuk, E. Crawford, S. Dai, M. Ghavam, F. Haberl, T. Hill, A. Hopkins, A. Ingallinera, T. Jarrett, P. Kavanagh, B. Koribalski, R. Kothes, D. Leahy, E. Lenc, I. Leonidaki, P. Maggi, C. Maitra, C. Matthew, J. Payne, C. Pennock, S. Points, W. Reid, S. Riggi, G. Rowell, M. Sasaki, S. Safi-Harb, J.T. van Loon, N. Tothill, D. Urošević, F. Zangrandi: New ASKAP radio supernova remnants and candidates in the Large Magellanic Cloud. Mon. Not. R. Astron. Soc. 518, 2 (2023).

Brinch M., T.R. Greve, J.R. Weaver, G. Brammer, O. Ilbert, M. Shuntov, S. Jin, D. Liu, C. Giménez-Arteaga, C.M. Casey, I. Davidson, S. Fujimoto, A.M. Koekemoer, V. Kokorev, G. Magdis, H. McCracken, C.J. McPartland, B. Mobasher, D.B. Sanders, S. Toft, F. Valentino, G. Zamorani, J. Zavala, Cosmos Team: COSMOS2020: Identification of High-z Protocluster Candidates in COSMOS. Ap. J. 943, 2 (2023).

Brunn V., A. Marcowith, C. Sauty, M. Padovani, C. Rab, C. Meskini: Ionization of inner T Tauri star discs: effects of in situ energetic particles produced by strong magnetic reconnection events. Mon. Not. R. Astron. Soc. 519, 4 (2023).

Buchner J.: AGN Sub-populations Important for Black Hole Mass Growth: A Rule of Thumb. Res. Notes AAS 7, 70 7, 4 (2023).

Böckmann K., M. Brüggen, B. Koribalski, A. Veronica, T. Reiprich, E. Bulbul, Y. Bahar, F. Balzer, J. Comparat, C. Garrel, V. Ghirardini, G. Gürkan, M. Kluge, D. Leahy,

A. Merloni, A. Liu, M. Ramos-Ceja, M. Salvato, J. Sanders, S. Shabala, X. Zhang: Central radio galaxies in galaxy clusters: Joint surveys by eROSITA and ASKAP. Astron. Astrophys. 677, A188 (2023).

Cabayol L., M. Eriksen, J. Carretero, [. . .] R. Bender et al: The PAU Survey and Euclid: Improving broadband photometric redshifts with multi-task learning. Astron. Astrophys. 671, A153 (2023).

Cacciapuoti L., E. Macias, A. Maury, C. Chandler, N. Sakai, Ł. Tychoniec, S. Viti, A. Natta, M. De Simone, A. Miotello, C. Codella, C. Ceccarelli, L. Podio, D. Fedele, D. Johnstone, Y. Shirley, B. Liu, E. Bianchi, Z. Zhang, J. Pineda, L. Loinard, F. Ménard, U. Lebreuilly, R. Klessen, P. Hennebelle, S. Molinari, L. Testi, S. Yamamoto: FAUST. IX. Multiband, multiscale dust study of L1527 IRS. Evidence for variations in dust properties within the envelope of a class 0/I young stellar object. Astron. Astrophys. 676, A4 (2023).

Camarena D., V. Marra, Z. Sakr, [. . .], R. Saglia, et al: Euclid: Testing the Copernican principle with next-generation surveys. Astron. Astrophys. 671, A68 (2023).

Camilloni F., W. Becker: G189.6+03.3: The first complete X-ray view provided by SRG/ eROSITA. Astron. Astrophys. 680, A83 (2023).

Camilloni F., W. Becker, P. Predehl, K. Dennerl, M. Freyberg, M.G. Mayer, M. Sasaki: SRG/eROSITA and XMMNewton observations of Vela Jr. Astron. Astrophys. 673, A45 (2023).

Caminha G., C. Grillo, P. Rosati, A. Liu, A. Acebron, P. Bergamini, K. Caputi, A. Mercurio, P. Tozzi, E. Vanzella, R. Demarco, B. Frye, G. Rosani, K. Sharon: A MUSE view of the massive merging galaxy cluster ACT-CL J0102-4915 (El Gordo) at z = 0.87. Robust strong lensing model and data release. Astron. Astrophys. 678, A3 (2023).

Cao Y., T. Wong, A.D. Bolatto, A.K. Leroy, E. Rosolowsky, D. Utomo, S.F. Sánchez, J.K. Barrera-Ballesteros, R.C. Levy, D. Colombo, L. Blitz, S.N. Vogel, J. Puschnig, V. Villanueva, M. Rubio: The EDGE-CALIFA Survey: Spatially Resolved 13CO(1-0) Observations and Variations in 12CO(1-0)/13CO(1-0) in Nearby Galaxies on Kiloparsec Scales. Ap. J. Supp. Ser. 268, 1 (2023).

Capuzzo-Dolcetta R., M. Sadun-Bordoni: Orbital precession of stars in the Galactic Centre. Mon. Not. R. Astron. Soc. 522, 4 (2023).

Caravano A., E. Komatsu, K.D. Lozanov, J. Weller: Lattice simulations of axion-U(1) inflation. Physical Review D 108, 4 (2023).

Casey C.M., J.S. Kartaltepe, N.E. Drakos, [. . .] D. Liu, et al.: COSMOS-Web: An Overview of the JWST Cosmic Origins Survey. Ap. J. 954, 1 (2023).

Chang C., Y. Omori, E. Baxter, [. . .], T.N. Varga, J. Weller, DES, SPT Collaborations: Joint analysis of Dark Energy Survey Year 3 data and CMB lensing from SPT and P l a n c k . II. Cross-correlation measurements and cosmological constraints. Physical Review D 107, 2 (2023).

Chastenet J., J. Sutter, K. Sandstrom, F. Belfiore, O.V. Egorov, K.L. Larson, A.K. Leroy, D. Liu, E. Rosolowsky, D.A. Thilker, E.J. Watkins, T.G. Williams, A.T. Barnes, F. Bigiel, M. Boquien, M. Chevance, D.A. Dale, J.D. Kruijssen, E. Emsellem, K. Grasha, B. Groves, H. Hassani, A. Hughes, K. Kreckel, S.E. Meidt, H. Pan, M. Querejeta, E. Schinnerer, C.M. Whitcomb: PHANGS-JWST First Results: Measuring Polycyclic Aromatic Hydrocarbon Properties across the Multiphase Interstellar Medium. Ap. J. Lett. 944, 2 (2023).

Chastenet J., J. Sutter, K. Sandstrom, F. Belfiore, O.V. Egorov, K.L. Larson, A.K. Leroy, D. Liu, E. Rosolowsky, D.A. Thilker, E.J. Watkins, T.G. Williams, A.T. Barnes, F. Bigiel, M. Boquien, M. Chevance, I. Chiang, D.A. Dale, J.D. Kruijssen, E. Emsellem, K. Grasha, B. Groves, H. Hassani, A. Hughes, K. Kreckel, S.E. Meidt, R.J. Rickards

Vaught, A. Sardone, E. Schinnerer: PHANGS-JWST First Results: Variations in PAH Fraction as a Function of ISM Phase and Metallicity. Ap. J. Lett. 944, 2 (2023).

Chatzikos M., S. Bianchi, F. Camilloni, P. Chakraborty, C. Gunasekera, F. Guzmán, J. Milby, A. Sarkar, G. Shaw, P. van Hoof, G. Ferland: The 2023 Release of Cloudy. Revista Mexicana de Astronomia y Astrofisica 59 (2023).

Chen A., G. Aricò, D. Huterer, [. . .], T.N. Varga, DES Collaboration: Constraining the baryonic feedback with cosmic shear using the DES Year-3 small-scale measurements. Mon. Not. R. Astron. Soc. 518, 4 (2023).

Chen Y., M. van Gelder, P. Nazari, C. Brogan, E. van Dishoeck, H. Linnartz, J. Jørgensen, T. Hunter, O. Wilkins, G. Blake, P. Caselli, K.-. Chuang, C. Codella, I. Cooke, M. Drozdovskaya, R. Garrod, S. Ioppolo, M. Jin, B. Kulterer, N. Ligterink, A. Lipnicky, R. Loomis, M. Rachid, S. Spezzano, B. McGuire: CoCCoA: Complex Chemistry in hot Cores with ALMA. Selected oxygen-bearing species. Astron. Astrophys. 678, A137 (2023).

Chernyshov, D.O., A.V. Ivlev, E.A. Kulik: Effect of the Self- Modulation of Cosmic Rays on Galactic Diffuse Gamma- Ray Emissions. Bulletin of the Russian Academy of Sciences: Physics, 87, 7, 887-889 (2023).

Chiu I.-., M. Klein, J. Mohr, S. Bocquet: Cosmological constraints from galaxy clusters and groups in the eROSITA final equatorial depth survey. Mon. Not. R. Astron. Soc. 522, 2 (2023).

Chávez Ortiz Ó.A., S.L. Finkelstein, D. Davis, G. Leung, E. Mentuch Cooper, M. Bagley, R. Larson, C.M. Casey, A.P. McCarron, K. Gebhardt, Y. Guo, C. Liu, I. Laseter, J. Rhodes, R. Bender, M. Fabricius, A.G. Sánchez, C. Scarlata, P. Capak, L. Zalesky, D. Sanders, I. Szapudi, E. Baxter, C. McPartland, J.R. Weaver, S. Toft, B. Mobasher, N. Suzuki, N. Chartab: Introducing the Texas Euclid Survey for Lya (TESLA) Survey: Initial Study Correlating Galaxy Properties to Lya Emission. Ap. J. 952, 2 (2023).

Clark C., R. Breton, E. Barr, M. Burgay, T. Thongmeearkom, L. Nieder, S. Buchner, B. Stappers, M. Kramer, W. Becker, M. Mayer, A. Phosrisom, A. Ashok, M. Bezuidenhout, F. Calore, I. Cognard, P. Freire, M. Geyer, J.-. Grießmeier, R. Karuppusamy, L. Levin, P. Padmanabh, A. Possenti, S. Ransom, M. Serylak, V. Venkatraman Krishnan, L. Vleeschower, J. Behrend, D. Champion, W. Chen, D. Horn, E. Keane, L. Künkel, Y. Men, A. Ridolfi, V. Dhillon, T. Marsh, M. Papa: The TRAPUM L-band survey for pulsars in Fermi- LAT gamma-ray sources. Mon. Not. R. Astron. Soc. 519, 4 (2023).

Cojocari I., M. Meier, P. Laurent, A. Laviron, M. Arrigucci, M. Carminati, G. Deda, C. Fiorini, K. Geigenberger, C. Glas, J. Greiner, P. Hindenberger, P. King, P. Lechner, M. Losekamm, S. Mertens, D. Meßmann, S. Rückerl, L. Toscano, U. Walter, M. Willers: Calorimeter calibration of the ComPol CubeSat gamma-ray polarimeter. Nucl. Instrum. Methods Phys. Res. (A) 1046 (2023).

Comparat J., W. Luo, A. Merloni, S. More, M. Salvato, M. Krumpe, T. Miyaji, W. Brandt, A. Georgakakis, M. Akiyama, J. Buchner, T. Dwelly, T. Kawaguchi, T. Liu, T. Nagao, K. Nandra, J. Silverman, Y. Toba, S.F. Anderson, J. Kollmeier: The cosmic web of X-ray active galactic nuclei seen through the eROSITA Final Equatorial Depth Survey (eFEDS). Astron. Astrophys. 673, A122 (2023).

Coogan R.T., M.T. Sargent, A. Cibinel, I. Prandoni, A. Bonaldi, E. Daddi, M. Franco: Looking ahead to the sky with the Square Kilometre Array: simulating flux densities and resolved radio morphologies of $0 < z < 2.5$ starforming galaxies. Mon. Not. R. Astron. Soc. 525, 3 (2023).

Correa, C. M., Cosmic voids as cosmological laboratories. Boletín de la Asociación Argentina de Astronomía, 64 159-165 (2023).

Cosentino G., J. Tan, I. Jiménez-Serra, F. Fontani, P. Caselli, J. Henshaw, A. Barnes, C.-.

Law, S. Viti, R. Fedriani, C.-. Hsu, P. Gorai, S. Zeng: Deuterium fractionation across the infrared-dark cloud G034.77-00.55 interacting with the supernova remnant W44. Astron. Astrophys. 675, A190 (2023).

Cuciti V., R. Cassano, M. Sereno, G. Brunetti, A. Botteon, T. Shimwell, L. Bruno, F. Gastaldello, M. Rossetti, X. Zhang, A. Simionescu, M. Brüggen, R. van Weeren, A. Jones, H. Akamatsu, A. Bonafede, F. De Gasperin, G. Di Gennaro, T. Pasini, H. Röttgering: The Planck clusters in the LOFAR sky. V. LoTSS-DR2: Mass-radio halo power correlation at low frequency. Astron. Astrophys. 680, A30 (2023).

Czesla S., P. Schneider, J. Schmitt, S. Freund, M. Salvato, J. Buchner, J. Robrade: Likelihood of the sky. Bayesian treatment of the geometric two-catalog matching problem. Astron. Astrophys. 674, A136 (2023).

D'Ago G., C. Spiniello, L. Coccato, C. Tortora, F. La Barbera, M. Arnaboldi, D. Bevacqua, A. Ferré-Mateu, A. Gallazzi, J. Hartke, L. Hunt, I. Martín-Navarro, N. Napolitano, C. Pulsoni, M. Radovich, P. Saracco, D. Scognamiglio, S. Zibetti: INSPIRE: INvestigating Stellar Population In RElics. III. Second data release (DR2): testing the systematics on the stellar velocity dispersion. Astron. Astrophys. 672, A17 (2023).

Dahlmann, F., D. Dinu, P. Jusko , C. Lochmann, T. Gstir , A. Marimuthu, K. Liedl, S. Brünken, R. Wester: Vibrational Predissociation Spectra of C2N– and C3N– : Bending and Stretching Vibrations. ChemPhysChem, 24, 15, e202300262 (2023).

Dale D.A., M. Boquien, A.T. Barnes, F. Belfiore, F. Bigiel, Y. Cao, R. Chandar, J. Chastenet, M. Chevance, S. Deger, O.V. Egorov, K. Grasha, B. Groves, H. Hassani, K.F. Henny, R.S. Klessen, K. Kreckel, J.D. Kruijssen, K.L. Larson, J.C. Lee, A.K. Leroy, D. Liu, E.J. Murphy, E. Rosolowsky, K. Sandstrom, E. Schinnerer, J. Sutter, D.A. Thilker, E.J. Watkins, B.C. Whitmore, T.G. Williams: PHANGS-JWST First Results: The Influence of Stellar Clusters on Polycyclic Aromatic Hydrocarbons in Nearby Galaxies. Ap. J. Lett. 944, 2 (2023).

Damsted S., A. Finoguenov, N. Clerc, I. Davalgaitė, C. Kirkpatrick, G. Mamon, J. Ider Chitham, K. Kiiveri, J. Comparat, C. Collins: CODEX: Role of velocity substructure in the scaling relations of galaxy clusters. Astron. Astrophys. 676, A127 (2023).

Davies R., O. Absil, G. Agapito, A. Agudo Berbel, A. Baruffolo, V. Biliotti, M. Black, M. Bonaglia, M. Bonse, R. Briguglio, P. Campana, Y. Cao, L. Carbonaro, A. Cortes, G. Cresci, Y. Dallilar, F. Dannert, R. De Rosa, M. Deysenroth, I. Di Antonio, A. Di Cianno, G. Di Rico, D. Doelman, M. Dolci, R. Dorn, F. Eisenhauer, S. Esposito, D. Fantinel, D. Ferruzzi, H. Feuchtgruber, G. Finger, N. Förster Schreiber, X. Gao, H. Gemperlein, R. Genzel, S. Gillessen, C. Ginski, A. Glauser, A. Glindemann, P. Grani, M. Hartl, J. Hayoz, M. Heida, D. Henry, R. Hofmann, H. Huber, M. Kasper, C. Keller, M. Kenworthy, K. Kravchenko, H. Kuntschner, S. Lacour, J. Lightfoot, D. Lunney, D. Lutz, M. Macintosh, F. Mannucci, M. Marsset, A. Modigliani, M. Neeser, G. Orban de Xivry, T. Ott, L. Pallanca, P. Patapis, D. Pearson, E. Peña, I. Percheron, A. Puglisi, S. Quanz, S. Rabien, C. Rau, A. Riccardi, B. Salasnich, H.-. Schmid, J. Schubert, B. Serra, T. Shimizu, F. Snik, E. Sturm, L. Tacconi, W. Taylor, A. Valentini, C. Waring, E. Wiezorrek, M. Xompero: The Enhanced Resolution Imager and Spectrograph for the VLT. Astron. Astrophys. 674, A207 (2023).

Davis D., K. Gebhardt, E.M. Cooper, W.P. Bowman, B. Garcia Castanheira, J. Chisholm, R. Ciardullo, M. Fabricius, D.J. Farrow, S.L. Finkelstein, C. Gronwall, E. Gawiser, G.J. Hill, U. Hopp, L.R. House, D. Jeong, W. Kollatschny, E. Komatsu, C. Liu, M.L. Niemeyer, A. Saldana-Lopez, S. Saito, D.P. Schneider, J. Snigula, S. Tuttle, L.H. Weiss, L. Wisotzki, G. Zeimann: HETDEX Public Source Catalog 1-Stacking 50,000 Lyman Alpha Emitters. Ap. J. 954, 2 (2023).

Davis D., K. Gebhardt, E.M. Cooper, R. Ciardullo, M. Fabricius, D.J. Farrow, J.J. Feldmeier, S.L. Finkelstein, E. Gawiser, C. Gronwall, G.J. Hill, U. Hopp, L.R. House, D. Jeong, W. Kollatschny, E. Komatsu, M. Landriau, C. Liu, S. Saito, S. Tuttle, I.G.

Wold, G.R. Zeimann, Y. Zhang: The HETDEX Survey Emission-line Exploration and Source Classification. Ap. J. 946, 2 (2023).

den Brok J., A. Leroy, A. Usero, E. Schinnerer, E. Rosolowsky, E. Koch, M. Querejeta, D. Liu, F. Bigiel, A. Barnes, M. Chevance, D. Colombo, D. Dale, S. Glover, M. Jimenez-Donaire, Y.-. Teng, T. Williams: Resolved low-J12CO excitation at 190 parsec resolution across NGC 2903 and NGC 3627. Mon. Not. R. Astron. Soc. 526, 4 (2023).

Dohnal P., P. Jusko, M. Jiménez-Redondo, P. Caselli: Measurements of rate coefficients of CN+, HCN+, and HNC+ collisions with H2 at cryogenic temperatures. Journal of Chemical Physics 158, 24 (2023).

Donath A., R. Terrier, Q. Remy, A. Sinha, C. Nigro, F. Pintore, B. Khélifi, L. Olivera-Nieto, J.E. Ruiz, K. Brügge, M. Linhoff, J.L. Contreras, F. Acero, A. Aguasca-Cabot, D. Berge, P. Bhattacharjee, J. Buchner, C. Boisson, D. Carreto Fidalgo, A. Chen, M. de Bony de Lavergne, J.V. de Miranda Cardoso, C. Deil, M. Füßling, S. Funk, L. Giunti, J. Hinton, L. Jouvin, J. King, J. Lefaucheur, M. Lemoine- Goumard, J. Lenain, R. López-Coto, L. Mohrmann, D. Morcuende, S. Panny, M. Regeard, L. Saha, H. Siejkowski, A. Siemiginowska, B.M. Sipőcz, T. Unbehaun, C. van Eldik, T. Vuillaume, R. Zanin: Gammapy: A Python package for gamma-ray astronomy. Astron. Astrophys. 678, A157 (2023).

Dong Y., Z. Liu, X. Cao: NuSTAR View of the R - r Correlation in the Hard State of Black Hole Low-mass X-Ray Binaries. Research in Astron. and Astrophys. 23, 7 (2023).

Dubey D., F. Grübel, R. Arenales-Lope, K. Molaverdikhani, B. Ercolano, C. Rab, O. Trapp: Polycyclic aromatic hydrocarbons in exoplanet atmospheres. I. Thermochemical equilibrium models. Astron. Astrophys. 678, A53 (2023).

Edler H., F. de Gasperin, T. Shimwell, M. Hardcastle, A. Boselli, V. Heesen, H. McCall, D. Bomans, M. Brüggen, E. Bulbul, K. Chyży, A. Ignesti, A. Merloni, F. Pacaud, T. Reiprich, I. Roberts, H. Rottgering, R. van Weeren: VICTORIA project: The LOFAR HBA Virgo Cluster Survey. Astron. Astrophys. 676, A24 (2023).

Edwards B., Q. Changeat, A. Tsiaras, A. Allan, P. Behr, S.R. Hagey, M.D. Himes, S. Ma, K.G. Stassun, L. Thomas, A. Thompson, A. Boley, L. Booth, J. Bouwman, K. France, N. Lowson, A. Meech, C.L. Phillips, A.A. Vidotto, K.H. Yip, M. Bieger, A. Gressier, E. Janin, I. Jiang, P. Leonardi, S. Sarkar, N. Skaf, J. Taylor, M. Yang, D. Ward-Thompson: Characterizing a World Within the Hot-Neptune Desert: Transit Observations of LTT 9779 b with the Hubble Space Telescope/WFC3. Astron. J. 166, 4 (2023).

Eggemeier A., B. Camacho-Quevedo, A. Pezzotta, M. Crocce, R. Scoccimarro, A.G. Sánchez: COMET: Clustering observables modelled by emulated perturbation theory. Mon. Not. R. Astron. Soc. 519, 2 (2023).

Egorov O.V., K. Kreckel, K.M. Sandstrom, A.K. Leroy, S.C. Glover, B. Groves, J.D. Kruijssen, A.T. Barnes, F. Belfiore, F. Bigiel, G.A. Blanc, M. Boquien, Y. Cao, J. Chastenet, M. Chevance, E. Congiu, D.A. Dale, E. Emsellem, K. Grasha, R.S. Klessen, K.L. Larson, D. Liu, E.J. Murphy, H. Pan, I. Pessa, J. Pety, E. Rosolowsky, F. Scheuermann, E. Schinnerer, J. Sutter, D.A. Thilker, E.J. Watkins, T.G. Williams: PHANGS-JWST First Results: Destruction of the PAH Molecules in H II Regions Probed by JWST and MUSE. Ap. J. Lett. 944, 2 (2023).

Eisenhauer F., J.D. Monnier, O. Pfuhl: Advances in Optical/ Infrared Interferometry. Annual Review of Astron. Astrophys. 61 (2023).

El-Badry K., H. Rix, Y. Cendes, A.C. Rodriguez, C. Conroy, E. Quataert, K. Hawkins, E. Zari, M. Hobson, K. Breivik, A. Rau, E. Berger, S. Shahaf, R. Seeburger, K.B. Burdge, D.W. Latham, L.A. Buchhave, A. Bieryla, D. Bashi, T. Mazeh, S. Faigler: A red giant orbiting a black hole. Mon. Not. R. Astron. Soc. 521, 3 (2023).

Elvin-Poole J., N. MacCrann, S. Everett, [. . .], T.N. Varga, DES Collaboration: Dark Energy Survey Year 3 results: magnification modelling and impact on cosmological constraints from galaxy clustering and galaxy-galaxy lensing. Mon. Not. R. Astron. Soc. 523, 3 (2023).

Erwin P.: The Frequency and Sizes of Inner Bars and Nuclear Rings in Barred Galaxies and Their Dependence on Galaxy Properties. Mon. Not. R. Astron. Soc. 528, 2, p. 3613-3628 (2023).

Esplugues G., M. Rodríguez-Baras, D. San Andrés, D. Navarro-Almaida, A. Fuente, P. Rivière-Marichalar, Á. Sánchez-Monge, M. Drozdovskaya, S. Spezzano, P. Caselli: Evolution of Chemistry in the envelope of HOt corinoS (ECHOS). I. Extremely young sulphur chemistry in the isolated Class 0 object B 335. Astron. Astrophys. 678, A199 (2023).

Euclid Collaboration, V. Ajani, M. Baldi, A. Barthelemy, [. . .], F. Raison, [. . .], R. Saglia, et al.: Euclid preparation. XXVIII. Forecasts for ten different higher-order weak lensing statistics. Astron. Astrophys. 675, A120 (2023).

Euclid Collaboration, L. Bisigello, C. Conselice, M. Baes, [. . .], F. Grupp, [. . .], R. Saglia, et al.: Euclid preparation - XXIII. Derivation of galaxy physical properties with deep machine learning using mock fluxes and H-band images. Mon. Not. R. Astron. Soc. 520, 3529 (2023).

Euclid Collaboration, H. Bretonnière, U. Kuchner, M. Huertas-Company, [. . .], F. Grupp, [. . .], R. Saglia, et al.: Euclid preparation. XXVI. The Euclid Morphology Challenge: Towards structural parameters for billions of galaxies. Astron. Astrophys. 671, A102 (2023).

Euclid Collaboration, T. Castro, A. Fumagalli, R. Angulo, S. Bocquet, S. Borgani, C. Carbone, J. Dakin, K. Dolag, C. Giocoli, P. Monaco, A. Ragagnin, A. Saro, E. Sefusatti, M. Costanzi, A. Le Brun, P.-. Corasaniti, A. Amara, L. Amendola, M. Baldi, R. Bender, C. Bodendorf, E. Branchini, M. Brescia, S. Camera, V. Capobianco, J. Carretero, M. Castellano, S. Cavuoti, A. Cimatti, R. Cledassou, G. Congedo, L. Conversi, Y. Copin, L. Corcione, F. Courbin, A. Da Silva, H. Degaudenzi, M. Douspis, F. Dubath, C. Duncan, X. Dupac, S. Farrens, S. Ferriol, P. Fosalba, M. Frailis, E. Franceschi, S. Galeotta, B. Garilli, B. Gillis, A. Grazian, F. Grupp, S. Haugan, F. Hormuth, A. Hornstrup, P. Hudelot, K. Jahnke, S. Kermiche, T. Kitching, M. Kunz, H. Kurki-Suonio, P. Lilje, I. Lloro, O. Mansutti, O. Marggraf, F. Marulli, M. Meneghetti, E. Merlin, G. Meylan, M. Moresco, L. Moscardini, E. Munari, S. Niemi, C. Padilla, S. Paltani, F. Pasian, K. Pedersen, V. Pettorino, S. Pires, G. Polenta, M. Poncet, L. Popa, L. Pozzetti, F. Raison, R. Rebolo, A. Renzi, J. Rhodes, G. Riccio, E. Romelli, R. Saglia, D. Sapone, B. Sartoris, P. Schneider, G. Seidel, G. Sirri, L. Stanco, P. Tallada Crespí, A. Taylor, R. Toledo-Moreo, F. Torradeflot, I. Tutusaus, E. Valentijn, L. Valenziano, T. Vassallo, Y. Wang, J. Weller, A. Zacchei, G. Zamorani, S. Andreon, S. Bardelli, E. Bozzo, C. Colodro-Conde, D. Di Ferdinando, M. Farina, J. Graciá-Carpio, V. Lindholm, C. Neissner, V. Scottez, M. Tenti, E. Zucca, C. Baccigalupi, A. Balaguera-Antolínez, M. Ballardini, F. Bernardeau, A. Biviano, A. Blanchard, A. Borlaff, C. Burigana, R. Cabanac, A. Cappi, C. Carvalho, S. Casas, G. Castignani, A. Cooray, J. Coupon, H. Courtois, S. Davini, G. De Lucia, G. Desprez, H. Dole, J. Escartin, S. Escoffier, F. Finelli, K. Ganga, J. Garcia-Bellido, K. George, G. Gozaliasl, H. Hildebrandt, I. Hook, S. Ilić, V. Kansal, E. Keihanen, C. Kirkpatrick, A. Loureiro, J. Macias-Perez, M. Magliocchetti, R. Maoli, S. Marcin, M. Martinelli, N. Martinet, S. Matthew, M. Maturi, R. Metcalf, G. Morgante, S. Nadathur, A. Nucita, L. Patrizii, A. Peel, V. Popa, C. Porciani, D. Potter, A. Pourtsidou, M. Pöntinen, A. Sánchez, Z. Sakr, M. Schirmer, M. Sereno, A. Spurio Mancini, R. Teyssier, J. Valiviita, A. Veropalumbo, M. Viel: Euclid preparation. XXIV. Calibration of the halo mass function in A(v) CDM cosmologies. Astron. Astrophys. 671, A100 (2023).

Euclid Collaboration, L. Gabarra, C. Mancini, L. Rodriguez Muñoz, G. Rodighiero, C. Sirignano, M. Scodeggio, M. Talia, S. Dusini, W. Gillard, B. Granett, E. Maiorano, M. Moresco, L. Paganin, E. Palazzi, L. Pozzetti, A. Renzi, E. Rossetti, D. Vergani, V. Allevato, L. Bisigello, G. Castignani, B. De Caro, M. Fumana, K. Ganga, B. Garilli, M. Hirschmann, F. La Franca, C. Laigle, F. Passalacqua, M. Schirmer, L. Stanco, A. Troja, L. Yung, G. Zamorani, J. Zoubian, S. Anselmi, F. Oppizzi, G. Verza, N. Aghanim, A. Amara, N. Auricchio, M. Baldi, R. Bender, C. Bodendorf, D. Bonino, E. Branchini, M. Brescia, J. Brinchmann, S. Camera, V. Capobianco, C. Carbone, J. Carretero, F. Castander, M. Castellano, S. Cavuoti, R. Cledassou, G. Congedo, C. Conselice, L. Conversi, Y. Copin, L. Corcione, A. Costille, F. Courbin, A. Da Silva, H. Degaudenzi, J. Dinis, F. Dubath, X. Dupac, A. Ealet, S. Farrens, S. Ferriol, M. Frailis, E. Franceschi, P. Franzetti, S. Galeotta, B. Gillis, C. Giocoli, A. Grazian, F. Grupp, L. Guzzo, W. Holmes, A. Hornstrup, P. Hudelot, K. Jahnke, M. Kümmel, S. Kermiche, A. Kiessling, M. Kilbinger, T. Kitching, R. Kohley, B. Kubik, M. Kunz, H. Kurki-Suonio, S. Ligori, P. Lilje, I. Lloro, O. Mansutti, O. Marggraf, K. Markovic, F. Marulli, R. Massey, S. Maurogordato, S. Mei, M. Meneghetti, G. Meylan, L. Moscardini, E. Munari, R. Nichol, S.-. Niemi, J. Nightingale, C. Padilla, S. Paltani, F. Pasian, K. Pedersen, W. Percival, V. Pettorino, G. Polenta, M. Poncet, F. Raison, J. Rhodes, G. Riccio, E. Romelli, M. Roncarelli, R. Saglia, D. Sapone, P. Schneider, A. Secroun, G. Seidel, S. Serrano, G. Sirri, C. Surace, P. Tallada-Crespí, D. Tavagnacco, A. Taylor, I. Tereno, R. Toledo-Moreo, F. Torradeflot, M. Trifoglio, I. Tutusaus, E. Valentijn, L. Valenziano, T. Vassallo, Y. Wang, J. Weller, A. Zacchei, S. Andreon, H. Aussel, S. Bardelli, M. Bolzonella, A. Boucaud, E. Bozzo, C. Colodro- Conde, D. Di Ferdinando, M. Farina, J. Graciá-Carpio, E. Keihänen, V. Lindholm, D. Maino, N. Mauri, Y. Mellier, C. Neissner, V. Scottez, M. Tenti, E. Zucca, Y. Akrami, C. Baccigalupi, M. Ballardini, F. Bernardeau, A. Biviano, A. Borlaff, E. Borsato, C. Burigana, R. Cabanac, A. Cappi, C. Carvalho, S. Casas, T. Castro, K. Chambers, A. Cooray, J. Coupon, H. Courtois, S. Davini, S. de la Torre, G. De Lucia, G. Desprez, H. Dole, J. Escartin, S. Escoffier, I. Ferrero, F. Finelli, S. Fotopoulou, J. Garcia-Bellido, K. George, F. Giacomini, G. Gozaliasl, H. Hildebrandt, I. Hook, O. Ilbert, A. Jimenez Muñoz, J. Kajava, V. Kansal, C. Kirkpatrick, L. Legrand, A. Loureiro, J. Macias-Perez, M. Magliocchetti, G. Mainetti, R. Maoli, S. Marcin, M. Martinelli, N. Martinet, C. Martins, S. Matthew, L. Maurin, R. Metcalf, G. Morgante, S. Nadathur, A. Nucita, L. Patrizii, V. Popa, C. Porciani, D. Potter, M. Pöntinen, A. Sánchez, Z. Sakr, A. Schneider, E. Sefusatti, M. Sereno, A. Shulevski, A. Spurio Mancini, J. Stadel, J. Steinwagner, R. Teyssier, J. Valiviita, A. Veropalumbo, M. Viel, I. Zinchenko: Euclid preparation. XXX. Performance assessment of the NISP red grism through spectroscopic simulations for the wide and deep surveys. Astron. Astrophys. 676, A34 (2023).

Euclid Collaboration, A. Humphrey, L. Bisigello, P. Cunha, M. Bolzonella, S. Fotopoulou, K. Caputi, C. Tortora, G. Zamorani, P. Papaderos, D. Vergani, J. Brinchmann, M. Moresco, A. Amara, N. Auricchio, M. Baldi, R. Bender, D. Bonino, E. Branchini, M. Brescia, S. Camera, V. Capobianco, C. Carbone, J. Carretero, F. Castander, M. Castellano, S. Cavuoti, A. Cimatti, R. Cledassou, G. Congedo, C. Conselice, L. Conversi, Y. Copin, L. Corcione, F. Courbin, M. Cropper, A. Da Silva, H. Degaudenzi, M. Douspis, F. Dubath, C. Duncan, X. Dupac, S. Dusini, S. Farrens, S. Ferriol, M. Frailis, E. Franceschi, M. Fumana, P. Gómez- Alvarez, S. Galeotta, B. Garilli, W. Gillard, B. Gillis, C. Giocoli, A. Grazian, F. Grupp, L. Guzzo, S. Haugan, W. Holmes, F. Hormuth, K. Jahnke, M. Kümmel, S. Kermiche, A. Kiessling, M. Kilbinger, T. Kitching, R. Kohley, M. Kunz, H. Kurki-Suonio, S. Ligori, P. Lilje, I. Lloro, E. Maiorano, O. Mansutti, O. Marggraf, K. Markovic, F. Marulli, R. Massey, S. Maurogordato, H. McCracken, E. Medinaceli, M. Melchior, M. Meneghetti, E. Merlin, G. Meylan, L. Moscardini, E. Munari, R. Nakajima, S. Niemi, J. Nightingale, C. Padilla, S. Paltani, F. Pasian, K. Pedersen, V. Pettorino, S. Pires, M. Poncet, L. Popa, L. Pozzetti, F. Raison, A. Renzi, J. Rhodes, G. Riccio, E. Romelli, M. Roncarelli, E. Rossetti, R. Saglia, D. Sapone, B. Sartoris, R. Scaramella, P. Schneider, M. Scodeggio, A. Secroun, G.

Seidel, C. Sirignano, G. Sirri, L. Stanco, P. Tallada-Crespí, D. Tavagnacco, A. Taylor, I. Tereno, R. Toledo-Moreo, F. Torradeflot, I. Tutusaus, L. Valenziano, T. Vassallo, Y. Wang, J. Weller, A. Zacchei, J. Zoubian, S. Andreon, S. Bardelli, A. Boucaud, R. Farinelli, J. Graciá-Carpio, D. Maino, N. Mauri, S. Mei, N. Morisset, F. Sureau, M. Tenti, A. Tramacere, E. Zucca, C. Baccigalupi, A. Balaguera-Antolínez, A. Biviano, A. Blanchard, S. Borgani, E. Bozzo, C. Burigana, R. Cabanac, A. Cappi, C. Carvalho, S. Casas, G. Castignani, C. Colodro-Conde, A. Cooray, J. Coupon, H. Courtois, O. Cucciati, S. Davini, G. De Lucia, H. Dole, J. Escartin, S. Escoffier, M. Fabricius, M. Farina, F. Finelli, K. Ganga, J. Garcia-Bellido, K. George, F. Giacomini, G. Gozaliasl, I. Hook, M. Huertas-Company, B. Joachimi, V. Kansal, A. Kashlinsky, E. Keihanen, C. Kirkpatrick, V. Lindholm, G. Mainetti, R. Maoli, S. Marcin, M. Martinelli, N. Martinet, M. Maturi, R. Metcalf, G. Morgante, A. Nucita, L. Patrizii, A. Peel, J. Pollack, V. Popa, C. Porciani, D. Potter, P. Reimberg, A. Sánchez, M. Schirmer, M. Schultheis, V. Scottez, E. Sefusatti, J. Stadel, R. Teyssier, C. Valieri, J. Valiviita, M. Viel, F. Calura, H. Hildebrandt: Euclid preparation. XXII. Selection of quiescent galaxies from mock photometry using machine learning. Astron. Astrophys. 671, A99 (2023).

Euclid Collaboration, E. Merlin, M. Castellano, H. Bretonnière, M. Huertas-Company, U. Kuchner, D. Tuccillo, F. Buitrago, J. Peterson, C. Conselice, F. Caro, P. Dimauro, L. Nemani, A. Fontana, M. Kümmel, B. Häußler, W. Hartley, A. Alvarez Ayllon, E. Bertin, P. Dubath, F. Ferrari, L. Ferreira, R. Gavazzi, D. Hernández-Lang, G. Lucatelli, A. Robotham, M. Schefer, C. Tortora, N. Aghanim, A. Amara, L. Amendola, N. Auricchio, M. Baldi, R. Bender, C. Bodendorf, E. Branchini, M. Brescia, S. Camera, V. Capobianco, C. Carbone, J. Carretero, F. Castander, S. Cavuoti, A. Cimatti, R. Cledassou, G. Congedo, L. Conversi, Y. Copin, L. Corcione, F. Courbin, M. Cropper, A. Da Silva, H. Degaudenzi, J. Dinis, M. Douspis, F. Dubath, C. Duncan, X. Dupac, S. Dusini, S. Farrens, S. Ferriol, M. Frailis, E. Franceschi, P. Franzetti, S. Galeotta, B. Garilli, B. Gillis, C. Giocoli, A. Grazian, F. Grupp, S. Haugan, H. Hoekstra, W. Holmes, F. Hormuth, A. Hornstrup, P. Hudelot, K. Jahnke, S. Kermiche, A. Kiessling, T. Kitching, R. Kohley, M. Kunz, H. Kurki-Suonio, S. Ligori, P. Lilje, I. Lloro, O. Mansutti, O. Marggraf, K. Markovic, F. Marulli, R. Massey, H. Mc- Cracken, E. Medinaceli, M. Melchior, M. Meneghetti, G. Meylan, M. Moresco, L. Moscardini, E. Munari, S. Niemi, C. Padilla, S. Paltani, F. Pasian, K. Pedersen, W. Percival, G. Polenta, M. Poncet, L. Popa, L. Pozzetti, F. Raison, R. Rebolo, A. Renzi, J. Rhodes, G. Riccio, E. Romelli, E. Rossetti, R. Saglia, D. Sapone, B. Sartoris, P. Schneider, A. Secroun, G. Seidel, C. Sirignano, G. Sirri, J. Skottfelt, J.-. Starck, P. Tallada-Crespí, A. Taylor, I. Tereno, R. Toledo- Moreo, I. Tutusaus, L. Valenziano, T. Vassallo, Y. Wang, J. Weller, A. Zacchei, G. Zamorani, J. Zoubian, S. Andreon, S. Bardelli, A. Boucaud, C. Colodro-Conde, D. Di Ferdinando, J. Graciá-Carpio, V. Lindholm, N. Mauri, S. Mei, C. Neissner, V. Scottez, A. Tramacere, E. Zucca, C. Baccigalupi, A. Balaguera-Antolínez, M. Ballardini, F. Bernardeau, A. Biviano, S. Borgani, A. Borlaff, C. Burigana, R. Cabanac, A. Cappi, C. Carvalho, S. Casas, G. Castignani, A. Cooray, J. Coupon, H. Courtois, O. Cucciati, S. Davini, G. De Lucia, G. Desprez, J. Escartin, S. Escoffier, M. Farina, K. Ganga, J. Garcia-Bellido, K. George, G. Gozaliasl, H. Hildebrandt, I. Hook, O. Ilbert, S. Ilić, B. Joachimi, V. Kansal, E. Keihanen, C. Kirkpatrick, A. Loureiro, J. Macias-Perez, M. Magliocchetti, G. Mainetti, R. Maoli, S. Marcin, M. Martinelli, N. Martinet, S. Matthew, M. Maturi, R. Metcalf, P. Monaco, G. Morgante, S. Nadathur, A. Nucita, L. Patrizii, V. Popa, C. Porciani, D. Potter, A. Pourtsidou, M. Pöntinen, P. Reimberg, A. Sánchez, Z. Sakr, M. Schirmer, M. Sereno, J. Stadel, R. Teyssier, C. Valieri, J. Valiviita, S. van Mierlo, A. Veropalumbo, M. Viel, J. Weaver, D. Scott: Euclid preparation. XXV. The Euclid Morphology Challenge: Towards model-fitting photometry for billions of galaxies. Astron. Astrophys. 671, A101 (2023).

Euclid Collaboration, K. Paterson, M. Schirmer, Y. Copin, [. . .], R. Bender, C. Bodendorf, [. . .], F. Grupp, [. . .], R. Saglia, et al.: Euclid preparation. XXVII. A UV-NIR spectral atlas of compact planetary nebulae for wavelength calibration. Astron. Astrophys. 674,

A172 (2023).

Euclid Collaboration, M. Schirmer, K. Thürmer, B. Bras, M. Cropper, J. Martin-Fleitas, Y. Goueffon, R. Kohley, A. Mora, M. Portaluppi, G. Racca, A. Short, S. Szmolka, L.G. Venancio, M. Altmann, Z. Balog, U. Bastian, M. Biermann, D. Busonero, C. Fabricius, F. Grupp, C. Jordi, W. Löffler, A.S. Sellés, N. Aghanim, A. Amara, L. Amendola, M. Baldi, C. Bodendorf, D. Bonino, E. Branchini, M. Brescia, J. Brinchmann, S. Camera, G. Candini, V. Capobianco, C. Carbone, J. Carretero, M. Castellano, S. Cavuoti, A. Cimatti, R. Cledassou, G. Congedo, C. Conselice, L. Conversi, Y. Copin, L. Corcione, F. Courbin, A. Da Silva, H. Degaudenzi, A. Di Giorgio, J. Dinis, F. Dubath, X. Dupac, S. Dusini, S. Farrens, S. Ferriol, M. Frailis, E. Franceschi, M. Fumana, S. Galeotta, B. Garilli, W. Gillard, B. Gillis, C. Giocoli, S. Haugan, H. Hoekstra, W. Holmes, F. Hormuth, A. Hornstrup, K. Jahnke, S. Kermiche, A. Kiessling, M. Kilbinger, T. Kitching, M. Kunz, H. Kurki-Suonio, S. Ligori, P. Lilje, I. Lloro, E. Maiorano, O. Mansutti, O. Marggraf, K. Markovic, F. Marulli, R. Massey, E. Medinaceli, S. Mei, Y. Mellier, M. Meneghetti, E. Merlin, G. Meylan, M. Moresco, L. Moscardini, E. Munari, R. Nakajima, S.-. Niemi, J. Nightingale, T. Nutma, C. Padilla, S. Paltani, F. Pasian, V. Pettorino, S. Pires, G. Polenta, M. Poncet, L. Popa, F. Raison, A. Renzi, J. Rhodes, G. Riccio, E. Romelli, M. Roncarelli, E. Rossetti, R. Saglia, D. Sapone, B. Sartoris, P. Schneider, A. Secroun, G. Seidel, S. Serrano, C. Sirignano, G. Sirri, J. Skottfelt, L. Stanco, P. Tallada-Crespí, A. Taylor, I. Tereno, R. Toledo-Moreo, I. Tutusaus, E. Valentijn, L. Valenziano, T. Vassallo, Y. Wang, J. Weller, A. Zacchei, J. Zoubian, S. Andreon, S. Bardelli, P. Battaglia, E. Bozzo, C. Colodro- Conde, M. Farina, J. Graciá-Carpio, E. Keihänen, V. Lindholm, D. Maino, N. Mauri, N. Morisset, V. Scottez, M. Tenti, E. Zucca, Y. Akrami, C. Baccigalupi, M. Ballardini, A. Biviano, A. Blanchard, A. Borlaff, C. Burigana, R. Cabanac, A. Cappi, C. Carvalho, S. Casas, G. Castignani, T. Castro, K. Chambers, A. Cooray, J. Coupon, H. Courtois, J.-. Cuby, S. Davini, G. De Lucia, G. Desprez, S. Di Domizio, H. Dole, J. Escartin, S. Escoffier, I. Ferrero, L. Gabarra, K. Ganga, J. Garcia-Bellido, K. George, F. Giacomini, G. Gozaliasl, H. Hildebrandt, J. Kajava, V. Kansal, C. Kirkpatrick, L. Legrand, P. Liebing, A. Loureiro, G. Maggio, M. Magliocchetti, G. Mainetti, R. Maoli, S. Marcin, M. Martinelli, N. Martinet, C. Martins, S. Matthew, M. Maturi, L. Maurin, R. Metcalf, P. Monaco, G. Morgante, S. Nadathur, A. Nucita, L. Patrizii, J. Pollack, V. Popa, D. Potter, M. Pöntinen, A. Sánchez, Z. Sakr, A. Schneider, M. Sereno, A. Shulevski, P. Simon, J. Steinwagner, R. Teyssier, J. Valiviita: Euclid preparation. XXIX. Water ice in spacecraft Part I: The physics of ice formation and contamination. Astron. Astrophys. 675, A142 (2023).

Evans L., F. Fontani, C. Vastel, C. Ceccarelli, P. Caselli, A. López-Sepulcre, R. Neri, F. Alves, L. Chahine, C. Favre, V. Lattanzi: SOLIS. XIII. Nitrogen fractionation towards the protocluster OMC-2 FIR4 (Corrigendum). Astron. Astrophys. 671, C4 (2023).

Evans L., C. Vastel, F. Fontani, J. Pineda, I. Jiménez-Serra, F. Alves, T. Sakai, M. Bouvier, P. Caselli, C. Ceccarelli, C. Chandler, B. Svoboda, L. Maud, C. Codella, N. Sakai, R. Le Gal, A. López-Sepulcre, G. Moellenbrock, S. Yamamoto: FAUST. X. Formaldehyde in the protobinary system [BHB2007] 11: Small-scale deuteration. Astron. Astrophys. 678, A160 (2023).

Evans, Neal J., II, Y. Yang, J.D. Green, B. Zhao, J. Di Francesco, J. Lee, J.K. Jørgensen, M. Choi, P.C. Myers, D. Mardones: Models of Rotating Infall for the B335 Protostar. Ap. J. 943, 2 (2023).

Fabian A., J. Sanders, G. Ferland, B. McNamara, C. Pinto, S. Walker: Hidden cooling flows in clusters of galaxies - III. Accretion on to the central black hole. Mon. Not. R. Astron. Soc. 524, 1 (2023).

Fabian A., J. Sanders, G. Ferland, B. McNamara, C. Pinto, S. Walker: Hidden Cooling Flows in clusters of Galaxies II: a wider sample. Mon. Not. R. Astron. Soc. 521, 2 (2023).

Fadda D., S. Colditz, C. Fischer, W.D. Vacca, J. Chu, M. Clarke, R. Klein, A. Krabbe, R. Minchin, A. Poglitsch: Characterization and Absolute Calibration of the Far-infrared Field Integral Line Spectrometer for SOFIA. Astron. J. 166, 6 (2023).

Fan Z., G. Zhao, W. Wang, J. Zheng, J. Zhao, C. Li, Y. Chen, H. Yuan, H. Li, K. Tan, Y. Song, F. Zuo, Y. Huang, A. Luo, A. Esamdin, L. Ma, B. Li, N. Song, F. Grupp, H. Zhao, S.A. Ehgamberdiev, O.A. Burkhonov, G. Feng, C. Bai, X. Zhang, H. Niu, A.S. Khodjaev, B.M. Khafizov, I.M. Asfandiyarov, A.M. Shaymanov, R.G. Karimov, Q. Yuldashev, H. Lu, G. Zhaori, R. Hong, L. Hu, Y. Liu, Z. Xu: The Stellar Abundances and Galactic Evolution Survey (SAGES). I. General Description and the First Data Release (DR1). Ap. J. Supp. Ser. 268, 1 (2023).

Federman S., S.T. Megeath, J.J. Tobin, P.D. Sheehan, R. Pokhrel, N. Habel, A.M. Stutz, W.J. Fischer, L. Hartmann, T. Stanke, M. Narang, M. Osorio, P. Atnagulov, R. Rahatgaonkar: 300: An ACA 870 micrometer Continuum Survey of Orion Protostars and Their Evolution. Ap. J. 944, 1 (2023).

Fei Q., R. Wang, J. Molina, J. Shangguan, L.C. Ho, F.E. Bauer, E. Treister: Dynamics of Molecular Gas in the Central Region of the Quasar I Zwicky 1. Ap. J. 946, 1 (2023).

von Fellenberg S., G. Witzel, M. Bauböck, H.-. Chung, N. Aimar, M. Bordoni, A. Drescher, F. Eisenhauer, R. Genzel, S. Gillessen, N. Marchili, T. Paumard, G. Perrin, T. Ott, D. Ribeiro, E. Ros, F. Vincent, F. Widmann, S. Willner, J. Anton Zensus: General relativistic effects and the near-infrared and X-ray variability of Sgr A* I. Astron. Astrophys. 669, L17 (2023).

Ferrer Asensio J., S. Spezzano, L. Coudert, V. Lattanzi, C. Endres, J. Jørgensen, P. Caselli: Millimetre and sub-millimetre spectroscopy of doubly deuterated acetaldehyde (CHD2CHO) and first detection towards IRAS 16293- 2422. Astron. Astrophys. 670, A177 (2023).

Fetherolf T., N.A. Reddy, A.E. Shapley, M. Kriek, B. Siana, A.L. Coil, B. Mobasher, W.R. Freeman, S.H. Price, R.L. Sanders, I. Shivaei, M. Azadi, L. de Groot, G.C. Leung, T.O. Zick: The MOSDEF survey: probing resolved stellar populations at z 2 Using a new bayesian-defined morphology metric called patchiness. Mon. Not. R. Astron. Soc. 518, 3 (2023).

Filipović M.D., S. Dai, B. Arbutina, N. Hurley-Walker, R. Brose, W. Becker, H. Sano, D. Urošević, T. Jarrett, A.M. Hopkins, R.Z. Alsaberi, R. Alsulami, C. Bordiu, B. Ball, F. Bufano, C. Burger-Scheidlin, E. Crawford, J. English, F. Haberl, A. Ingallinera, A.D. Kapinska, P.J. Kavanagh, B.S. Koribalski, R. Kothes, S. Lazarević, J. Mackey, G. Rowell, D. Leahy, S. Loru, P.J. Macgregor, L. Nicastro, R.P. Norris, S. Riggi, M. Sasaki, M. Stupar, C. Trigilio, G. Umana, T. Vernstrom, B. Vukotić: EMU Detection of a Large and Low Surface Brightness Galactic SNR G288.8-6.3. Astron. J. 166, 4 (2023).

Fontani F., E. Roueff, L. Colzi, P. Caselli: The evolution of sulphur-bearing molecules in high-mass star-forming cores. Astron. Astrophys. 680, A58 (2023).

Foschi A., R. Abuter, N. Aimar, P. Amaro Seoane, A. Amorim, M. Bauböck, J. Berger, H. Bonnet, G. Bourdarot, W. Brandner, V. Cardoso, Y. Clénet, Y. Dallilar, R. Davies, P. de Zeeuw, D. Defrère, J. Dexter, A. Drescher, A. Eckart, F. Eisenhauer, M. Ferreira, N. Förster Schreiber, P. Garcia, F. Gao, E. Gendron, R. Genzel, S. Gillessen, T. Gomes, M. Habibi, X. Haubois, G. Heißel, T. Henning, S. Hippler, S. Hönig, M. Horrobin, L. Jochum, L. Jocou, A. Kaufer, P. Kervella, L. Kreidberg, S. Lacour, V. Lapeyrère, J.-. Le Bouquin, P. Léna, D. Lutz, F. Millour, T. Ott, T. Paumard, K. Perraut, G. Perrin, O. Pfuhl, S. Rabien, D. Ribeiro, M. Sadun Bordoni, S. Scheithauer, J. Shangguan, T. Shimizu, J. Stadler, O. Straub, C. Straubmeier, E. Sturm, C. Sykes, L. Tacconi, F. Vincent, S. von Fellenberg, F. Widmann, E. Wieprecht, E. Wiezorrek, J. Woillez, Gravity Collaboration: Using the motion of S2 to constrain scalar clouds around Sgr A*. Mon. Not. R. Astron. Soc. 524, 1, p. 1075-1086 (2023).

Franchini A., M. Bonetti, A. Lupi, G. Miniutti, E. Bortolas, M. Giustini, M. Dotti, A. Sesana, R. Arcodia, T. Ryu: Quasiperiodic eruptions from impacts between the secondary and a rigidly precessing accretion disc in an extreme mass-ratio inspiral system. Astron. Astrophys. 675, A100 (2023).

Frank J., M. Zimmermann: On the derivation of inequality constraints for independent component optimization maintaining a minimum system eigenfrequency. Journal of Sound Vibration 565, 117892 (2023).

Fries L.B., J.R. Trump, M.C. Davis, C. Grier, Y. Shen, S.F. Anderson, T. Dwelly, M. Eracleous, Y. Homayouni, K. Horne, M. Krumpe, S. Morrison, J.C. Runnoe, B. Trakhtenbrot, R.J. Assef, W. Brandt, J. Brownstein, C. Dabbieri, A. Fix, G. Fonseca Alvarez, S. Frederick, P. Hall, A.M. Koekemoer, J.I.-. Li, X. Liu, M.L. Martínez-Aldama, C. Ricci, D.P. Schneider, H.W. Sharp, M.J. Temple, Q. Yang, G. Zeltyn, D. Bizyaev: The SDSS-V Black Hole Mapper Reverberation Mapping Project: Unusual Broad-line Variability in a Luminous Quasar. Ap. J. 948, 1 (2023).

Fuente A., P. Rivière-Marichalar, L. Beitia-Antero, P. Caselli, V. Wakelam, G. Esplugues, M. Rodríguez-Baras, D. Navarro-Almaida, M. Gerin, C. Kramer, R. Bachiller, J. Goicoechea, I. Jiménez-Serra, J. Loison, A. Ivlev, R. Martín- Doménech, S. Spezzano, O. Roncero, G. Muñoz-Caro, S. Cazaux, N. Marcelino: Gas phase Elemental abundances in Molecular cloudS (GEMS). VII. Sulfur elemental abundance. Astron. Astrophys. 670, A114 (2023).

Garai Z., H. Osborn, D. Gandolfi, [. . .], F. Biondi, et al.: Refined parameters of the HD 22946 planetary system and the true orbital period of planet d. Astron. Astrophys. 674, A44 (2023).

García-Rodríguez A., A. Usero, A. Leroy, F. Bigiel, M. Jiménez- Donaire, D. Liu, M. Querejeta, T. Saito, E. Schinnerer, A. Barnes, F. Belfiore, I. Bešlić, Y. Cao, M. Chevance, D. Dale, J. den Brok, C. Eibensteiner, S. García-Burillo, S. Glover, R. Klessen, J. Pety, J. Puschnig, E. Rosolowsky, K. Sandstrom, M. Sormani, Y.-. Teng, T. Williams: Subkiloparsec empirical relations and excitation conditions of HCN and HCO+ J = 3-2 in nearby star-forming galaxies. Astron. Astrophys. 672, A96 (2023).

Garland I.L., M.J. Fahey, B.D. Simmons, R.J. Smethurst, C.J. Lintott, J. Shanahan, M.S. Silcock, J. Smith, W.C. Keel, A. Coil, T. Géron, S. Kruk, K.L. Masters, D. O'Ryan, M.R. Thorne, K. Wiersema: The most luminous, mergerfree AGNs show only marginal correlation with bar presence. Mon. Not. R. Astron. Soc. 522, 1 (2023).

Gasman D., E.F. van Dishoeck, S.L. Grant, M. Temmink, B. Tabone, T. Henning, I. Kamp, M. Güdel, P. Lagage, G. Perotti, V. Christiaens, M. Samland, A.M. Arabhavi, I. Argyriou, A. Abergel, O. Absil, D. Barrado, A. Boccaletti, J. Bouwman, A. Caratti o Garatti, V. Geers, A.M. Glauser, R. Guadarrama, H. Jang, J. Kanwar, F. Lahuis, M. Morales- Calderón, M. Mueller, C. Nehmé, G. Olofsson, É. Pantin, N. Pawellek, T.P. Ray, D. Rodgers-Lee, S. Scheithauer, J. Schreiber, K. Schwarz, B. Vandenbussche, M. Vlasblom, R.L. Waters, G. Wright, L. Colina, T.R. Greve, G. Östlin: MINDS. Abundant water and varying C/O across the disk of Sz 98 as seen by JWST/MIRI. Astron. Astrophys. 679, A117 (2023).

Gatuzz E., J.A. García, E. Churazov, T. Kallman: Searching for the warm-hot intergalactic medium using XMM-Newton high-resolution X-ray spectra. Mon. Not. R. Astron. Soc. 521, 2 (2023).

Gatuzz E., R. Mohapatra, C. Federrath, J. Sanders, A. Liu, S. Walker, C. Pinto: Measuring the hot ICM velocity structure function using XMM-Newton observations. Mon. Not. R. Astron. Soc. 524, 2 (2023).

Gatuzz E., J. Sanders, K. Dennerl, A. Liu, A. Fabian, C. Pinto, D. Eckert, H. Russell, T. Tamura, S. Walker, J. ZuHone: Measuring the ICM velocity structure in the Ophiuchus cluster. Mon. Not. R. Astron. Soc. 522, 2 (2023).

Gatuzz E., J. Sanders, K. Dennerl, A. Liu, A. Fabian, C. Pinto, D. Eckert, H. Russell, T. Tamura, S. Walker, J. ZuHone: Chemical enrichment of the ICM within the virgo cluster - I. Radial profiles. Mon. Not. R. Astron. Soc. 520, 3 (2023).

Gatuzz E., J. Sanders, K. Dennerl, A. Liu, A. Fabian, C. Pinto, D. Eckert, S. Walker, J. ZuHone: Chemical enrichment of ICM within the Centaurus cluster - I. Radial profiles. Mon. Not. R. Astron. Soc. 525, 4 (2023).

Gatuzz E., J. Sanders, K. Dennerl, A. Liu, A. Fabian, C. Pinto, D. Eckert, S. Walker, J. ZuHone: Chemical enrichment of ICM within the Ophiuchus cluster I: radial profiles. Mon. Not. R. Astron. Soc. 526, 1 (2023).

Genzel R., J. Jolly, D. Liu, S. Price, L. Lee, N. Förster Schreiber, L. Tacconi, R. Herrera-Camus, C. Barfety, A. Burkert, Y. Cao, R. Davies, A. Dekel, M. Lee, D. Lutz, T. Naab, R. Neri, A. Nestor Shachar, S. Pastras, C. Pulsoni, A. Renzini, K. Schuster, T. Shimizu, F. Stanley, A. Sternberg, H. Übler: Evidence for Large-scale, Rapid Gas Inflows in z 2 Star-forming Disks. Ap. J. 957, 48 (2023).

Giers K., S. Spezzano, P. Caselli, E. Wirström, O. Sipilä, J. Pineda, E. Redaelli, C. Bop, F. Lique: Similar levels of deuteration in the pre-stellar core L1544 and the protostellar core HH211. Astron. Astrophys. 676, A78 (2023).

Gieser C., H. Beuther, D. Semenov, A. Ahmadi, T. Henning, M. Wells: Physical and chemical complexity in high-mass star-forming regions with ALMA. I. Overview and evolutionary trends of physical properties. Astron. Astrophys. 674, A160 (2023).

Gieser C., H. Beuther, E. van Dishoeck, L. Francis, M. van Gelder, L. Tychoniec, P. Kavanagh, G. Perotti, A. Caratti o Garatti, T. Ray, P. Klaassen, K. Justtanont, H. Linnartz, W. Rocha, K. Slavicinska, L. Colina, M. Güdel, T. Henning, P.-. Lagage, G. Östlin, B. Vandenbussche, C. Waelkens, G. Wright: JOYS: Disentangling the warm and cold material in the high-mass IRAS 23385+6053 cluster. Astron. Astrophys. 679, A108 (2023).

Giustini M., P. Rodríguez Hidalgo, J. Reeves, G. Matzeu, V. Braito, M. Eracleous, G. Chartas, N. Schartel, C. Vignali, P. Hall, T. Waters, G. Ponti, D. Proga, M. Dadina, M. Cappi, G. Miniutti, L. de Vries: Coordinated X-ray and UV absorption within the accretion disk wind of the active galactic nucleus PG 1126-041. Astron. Astrophys. 679, A73 (2023).

Golden-Marx J.B., Y. Zhang, R. Ogando, [. . .], J. Mohr, [. . .], DES Collaboration: Characterizing the intracluster light over the redshift range $0.2 < z < 0.8$ in the DES-ACT overlap. Mon. Not. R. Astron. Soc. 521, 1 (2023).

Gong M., K.W. Ho, J.M. Stone, E.C. Ostriker, P. Caselli, T. Grassi, C. Kim, J. Kim, G. Halevi: Implementation of Chemistry in the Athena++ Code. Ap. J. Supp. Ser. 268, 2 (2023).

Gong Z., A. Halder, A. Barreira, S. Seitz, O. Friedrich: Cosmology from the integrated shear 3-point correlation function: simulated likelihood analyses with machinelearning emulators. J. of Cosmology and Astroparticle Phys. 2023, 7 (2023).

González-Torà G., M. Wittkowski, B. Davies, B. Plez, K. Kravchenko: The effect of winds on atmospheric layers of red supergiants. I. Modelling for interferometric observations. Astron. Astrophys. 669, A76 (2023).

Graham J., P. Schady, A. Fruchter: A Surprising Lack of Metallicity Evolution with Redshift in the Long Gamma- Ray Burst Host Galaxy Population. Ap. J. 954, 1 (2023).

Grant S.L., L.M. Stapper, M.R. Hogerheijde, E.F. van Dishoeck, S. Brittain, M. Vioque: The M -Mdisk Relationship for Herbig Ae/Be Stars: A Lifetime Problem for Disks with Low Masses?. Astron. J. 166, 4 (2023).

Grant S.L., E.F. van Dishoeck, B. Tabone, D. Gasman, T. Henning, I. Kamp, M. Güdel,

P. Lagage, G. Bettoni, G. Perotti, V. Christiaens, M. Samland, A.M. Arabhavi, I. Argyriou, A. Abergel, O. Absil, D. Barrado, A. Boccaletti, J. Bouwman, A.C. o Garatti, V. Geers, A.M. Glauser, R. Guadarrama, H. Jang, J. Kanwar, F. Lahuis, M. Morales-Calderón, M. Mueller, C. Nehmé, G. Olofsson, E. Pantin, N. Pawellek, T.P. Ray, D. Rodgers-Lee, S. Scheithauer, J. Schreiber, K. Schwarz, M. Temmink, B. Vandenbussche, M. Vlasblom, L. Waters, G. Wright, L. Colina, T.R. Greve, K. Justannont, G. Östlin: MINDS. The Detection of 13CO2 with JWST-MIRI Indicates Abundant CO2 in a Protoplanetary Disk. Ap. J. Lett. 947, 1 (2023).

Gravity Collaboration, R. Abuter, N. Aimar, P. Amaro Seoane, A. Amorim, M. Bauböck, J. Berger, H. Bonnet, G. Bourdarot, W. Brandner, V. Cardoso, Y. Clénet, R. Davies, P. de Zeeuw, J. Dexter, A. Drescher, A. Eckart, F. Eisenhauer, H. Feuchtgruber, G. Finger, N. Förster Schreiber, A. Foschi, P. Garcia, F. Gao, Z. Gelles, E. Gendron, R. Genzel, S. Gillessen, M. Hartl, X. Haubois, F. Haussmann, G. Heißel, T. Henning, S. Hippler, M. Horrobin, L. Jochum, L. Jocou, A. Kaufer, P. Kervella, S. Lacour, V. Lapeyrère, J.-. Le Bouquin, P. Léna, D. Lutz, F. Mang, N. More, T. Ott, T. Paumard, K. Perraut, G. Perrin, O. Pfuhl, S. Rabien, D. Ribeiro, M. Sadun Bordoni, S. Scheithauer, J. Shangguan, T. Shimizu, J. Stadler, O. Straub, C. Straubmeier, E. Sturm, L. Tacconi, F. Vincent, S. von Fellenberg, F. Widmann, M. Wielgus, E. Wieprecht, E. Wiezorrek, J. Woillez: Polarimetry and astrometry of NIR flares as event horizon scale, dynamical probes for the mass of Sgr A*. Astron. Astrophys. 677, L10 (2023).

Gravity Collaboration, A. Amorim, G. Bourdarot, W. Brandner, Y. Cao, Y. Clénet, R. Davies, P. de Zeeuw, J. Dexter, A. Drescher, A. Eckart, F. Eisenhauer, M. Fabricius, N. Förster Schreiber, P. Garcia, R. Genzel, S. Gillessen, D. Gratadour, S. Hönig, M. Kishimoto, S. Lacour, D. Lutz, F. Millour, H. Netzer, T. Ott, T. Paumard, K. Perraut, G. Perrin, B. Peterson, P. Petrucci, O. Pfuhl, M. Prieto, D. Rouan, D. Santos, J. Shangguan, T. Shimizu, A. Sternberg, C. Straubmeier, E. Sturm, L. Tacconi, K. Tristram, F. Widmann, J. Woillez: Toward measuring supermassive black hole masses with interferometric observations of the dust continuum. Astron. Astrophys. 669, A14 (2023).

Gravity Collaboration, A. Soulain, K. Perraut, J. Bouvier, G. Pantolmos, A. Caratti O Garatti, P. Caselli, P. Garcia, R.G. Lopez, N. Aimar, A. Amorin, M. Benisty, J.-. Berger, G. Bourdarot, W. Brandner, Y. Clénet, T. de Zeeuw, R. Davies, A. Drescher, A. Eckart, F. Eisenhauer, N.F. Schreiber, E. Gendron, R. Genzuel, S. Gillessen, G. Heißel, T. Henning, S. Hippler, M. Horrobin, L. Jocou, P. Kervella, L. Labadie, S. Lacour, V. Lapeyrere, J.-. Le Bouquin, P. Léna, D. Lutz, F. Mang, T. Ott, T. Paumard, G. Perrin, J. Sanchez, S. Scheithauer, J. Shangguan, T. Shimizu, O. Straub, C. Straubmeier, E. Sturm, L. Tacconi, F. Vincent, E. van Dishoeck, F. Widmann, E. Wieprecht, E. Wiezorrek: The GRAVITY young stellar object survey. X. Probing the inner disk and magnetospheric accretion region of CI Tau. Astron. Astrophys. 674, A203 (2023).

Gravity Collaboration, O. Straub, M. Bauböck, R. Abuter, N. Aimar, P. Amaro Seoane, A. Amorim, J. Berger, H. Bonnet, G. Bourdarot, W. Brandner, V. Cardoso, Y. Clénet, Y. Dallilar, R. Davies, P. de Zeeuw, J. Dexter, A. Drescher, F. Eisenhauer, N. Förster Schreiber, A. Foschi, P. Garcia, F. Gao, E. Gendron, R. Genzel, S. Gillessen, M. Habibi, X. Haubois, G. Heißel, T. Henning, S. Hippler, M. Horrobin, L. Jochum, L. Jocou, A. Kaufer, P. Kervella, S. Lacour, V. Lapeyrère, J.-. Le Bouquin, P. Léna, D. Lutz, T. Ott, T. Paumard, K. Perraut, G. Perrin, O. Pfuhl, S. Rabien, D. Ribeiro, M. Sadun Bordoni, S. Scheithauer, J. Shangguan, T. Shimizu, J. Stadler, C. Straubmeier, E. Sturm, L. Tacconi, F. Vincent, S. von Fellenberg, F. Widmann, E. Wieprecht, E. Wiezorrek, J. Woillez: Where intermediate-mass black holes could hide in the Galactic Centre. A full parameter study with the S2 orbit. Astron. Astrophys. 672, A63 (2023).

Gravity Collaboration, J. Wojtczak, L. Labadie, K. Perraut, B. Tessore, A. Soulain, V. Ganci, J. Bouvier, C. Dougados, E. Alécian, H. Nowacki, G. Cozzo, W. Brandner, A.

Caratti O Garatti, P. Garcia, R. Garcia Lopez, J. Sanchez- Bermudez, A. Amorim, M. Benisty, J.-. Berger, G. Bourdarot, P. Caselli, Y. Clénet, P. de Zeeuw, R. Davies, A. Drescher, G. Duvert, A. Eckart, F. Eisenhauer, F. Eupen, N. Förster-Schreiber, E. Gendron, S. Gillessen, S. Grant, R. Grellmann, G. Heißel, T. Henning, S. Hippler, M. Horrobin, Z. Hubert, L. Jocou, P. Kervella, S. Lacour, V. Lapeyrère, J.-. Le Bouquin, P. Léna, D. Lutz, F. Mang, T. Ott, T. Paumard, G. Perrin, S. Scheithauer, J. Shangguan, T. Shimizu, S. Spezzano, O. Straub, C. Straubmeier, E. Sturm, E. van Dishoeck, F. Vincent, F. Widmann: The GRAVITY young stellar object survey. IX. Spatially resolved kinematics of hot hydrogen gas in the star-disk interaction region of T Tauri stars. Astron. Astrophys. 669, A59 (2023).

Grayling M., C. Gutiérrez, M. Sullivan, [...]. T. Varga, DES Collaboration: Core-collapse supernovae in the Dark Energy Survey: luminosity functions and host galaxy demographics. Mon. Not. R. Astron. Soc. 520, 1 (2023).

Greiner J., C. Maitra, F. Haberl, R. Willer, J. Burgess, N. Langer, J. Bodensteiner, D. Buckley, I. Monageng, A. Udalski, H. Ritter, K. Werner, P. Maggi, R. Jayaraman, R. Vanderspek: A helium-burning white dwarf binary as a supersoft X-ray source. Nature 615, 7953 (2023).

Grünwald G., T. Boller, S. Rakshit, J. Buchner, T. Dauser, M. Freyberg, T. Liu, M. Salvato, A. Schichtel: The first look at narrow-line Seyfert 1 galaxies with eROSITA. Astron. Astrophys. 669, A37 (2023).

Guerrero A., N. Nagar, K. Kohno, S. Fujimoto, V. Kokorev, G. Brammer, J. Jolly, K. Knudsen, F. Sun, F.E. Bauer, G.B. Caminha, K. Caputi, G. Neumann, G. Orellana-González, P. Cerulo, J. González-López, N. Laporte, A.M. Koekemoer, Y. Ao, D. Espada, A.M.M. Arancibia: ALMA Lensing Cluster Survey: average dust, gas, and star-formation properties of cluster and field galaxies from stacking analysis. Mon. Not. R. Astron. Soc. 526, 2 (2023).

Gupta A., A. Miotello, C. Manara, J. Williams, S. Facchini, G. Beccari, T. Birnstiel, C. Ginski, A. Hacar, M. Küffmeier, L. Testi, L. Tychoniec, H.-. Yen: Reflections on nebulae around young stars. A systematic search for late-stage infall of material onto Class II disks. Astron. Astrophys. 670, L8 (2023).

Gutiérrez-Vera N., T. Grassi, S. Bovino, A. Lupi, D. Galli, D.R. Schleicher: Non-ideal magnetohydrodynamics of self-gravitating filaments. Astron. Astrophys. 670, A38 (2023).

Géron T., R.J. Smethurst, C. Lintott, S. Kruk, K.L. Masters, B. Simmons, K.B. Mantha, M. Walmsley, L. Garma-Oehmichen, N. Drory, R.R. Lane: Galaxy Zoo: kinematics of strongly and weakly barred galaxies. Mon. Not. R. Astron. Soc. 521, 2 (2023).

Haberl F., C. Maitra, D. Kaltenbrunner, D. Buckley, I. Monageng, A. Udalski, V. Doroshenko, L. Ducci, I. Kreykenbohm, P. Maggi, A. Rau, G. Vasilopoulos, P. Weber, J. Wilms: SRG/eROSITA-triggered XMM-Newton observations of three Be/X-ray binaries in the LMC: Discovery of X-ray pulsations. Astron. Astrophys. 671, A90 (2023).

Haberl F., G. Vasilopoulos, C. Maitra, F. Valdes, D. Lang, V. Doroshenko, L. Ducci, I. Kreykenbohm, A. Rau, P. Weber, J. Wilms, P. Maggi, C. Bailyn, G. Jaisawal, P. Ray, H. Treiber: eRASSt J040515.6 - 745202, an X-ray burster in the Magellanic Bridge. Astron. Astrophys. 669, A66 (2023).

Hahn C., M. Eickenberg, S. Ho, J. Hou, P. Lemos, E. Massara, C. Modi, A. Moradinezhad Dizgah, B. Régaldo-Saint Blancard, M.M. Abidi: SIMBIG: mock challenge for a forward modeling approach to galaxy clustering. J. of Cosmology and Astroparticle Phys. 2023, 4 (2023).

Halder A., Z. Gong, A. Barreira, O. Friedrich, S. Seitz, D. Gruen: Beyond 3×2-point cosmology: the integrated shear and galaxy 3-point correlation functions. J. of Cosmology and Astroparticle Phys. 2023, 10 (2023).

Hamanowicz A., M.A. Zwaan, C. Péroux, C.d.P. Lagos, A. Klitsch, R.J. Ivison, A.D. Biggs,

R. Szakacs, A. Fresco: ALMACAL VIII: a pilot survey for untargeted extragalactic CO emission lines in deep ALMA calibration data. Mon. Not. R. Astron. Soc. 519, 1 (2023).

Harre J., A. Smith, S. Barros, [. . .], F. Biondi, et al.: Examining the orbital decay targets KELT-9 b, KELT-16 b, and WASP-4b, and the transit-timing variations of HD 97658 b. Astron. Astrophys. 669, A124 (2023).

Hassani H., E. Rosolowsky, A.K. Leroy, M. Boquien, J.C. Lee, A.T. Barnes, F. Belfiore, F. Bigiel, Y. Cao, M. Chevance, D.A. Dale, O.V. Egorov, E. Emsellem, C.M. Faesi, K. Grasha, J. Kim, R.S. Klessen, K. Kreckel, J.D. Kruijssen, K.L. Larson, S.E. Meidt, K.M. Sandstrom, E. Schinnerer, D.A. Thilker, E.J. Watkins, B.C. Whitmore, T.G. Williams: PHANGS-JWST First Results: The 21 micrometer Compact Source Population. Ap. J. Lett. 944, 2 (2023).

He Z., G. Li, A. Burkert: Mapping gravity in stellar nurseries - establishing the effectiveness of 2D acceleration maps. Mon. Not. R. Astron. Soc. 526, 1 (2023).

Hernández-Lang D., M. Klein, J. Mohr, S. Grandis, J.-. Melin, P. Tarrío, M. Arnaud, G. Pratt, T. Abbott, M. Aguena, O. Alves, F. Andrade-Oliveira, D. Bacon, E. Bertin, D. Brooks, D. Burke, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, F. Castander, M. Costanzi, L. da Costa, M. Pereira, S. Desai, H. Diehl, P. Doel, S. Everett, I. Ferrero, B. Flaugher, J. Frieman, J. García-Bellido, D. Gruen, R. Gruendl, J. Gschwend, G. Gutierrez, S. Hinton, D. Hollowood, K. Honscheid, D. James, K. Kuehn, N. Kuropatkin, O. Lahav, C. Lidman, P. Melchior, J. Mena-Fernández, F. Menanteau, R. Miquel, A. Palmese, F. Paz-Chinchón, A. Pieres, A. Plazas Malagón, M. Raveri, M. Rodriguez-Monroy, A. Romer, V. Scarpine, I. Sevilla-Noarbe, M. Smith, E. Suchyta, G. Tarle, D. Thomas, N. Weaverdyck, (DES Collaboration): The PSZ-MCMF catalogue of Planck clusters over the DES region. Mon. Not. R. Astron. Soc. 525, 1 (2023).

Hinkley S., S. Lacour, G.-. Marleau, [. . .], G. Bourdarot, W. Brandner, F. Cantalloube, P. Caselli, B[. . .], A. Drescher, G. Duvert, A. Eckart, F. Eisenhauer, H. Feuchtgruber, F. Galland, P. Garcia, R. Garcia Lopez, T. Gardner, E. Gendron, R. Genzel, S. Gillessen, [. . .], D. Lutz, A. Maire, F. Mang, A. Mérand, N. Meunier, J. Monnier, D. Mouillet, E. Nasedkin, T. Ott, G. Otten, C. Paladini, T. Paumard, K. Perraut, G. Perrin, F. Philipot, O. Pfuhl, N. Pourré, L. Pueyo, J. Rameau, E. Rickman, P. Rubini, Z. Rustamkulov, M. Samland, J. Shangguan, T. Shimizu, D. Sing, C. Straubmeier, E. Sturm, L. Tacconi, E. van Dishoeck, A. Vigan, F. Vincent, K. Ward-Duong, F. Widmann, E. Wieprecht, E. Wiezorrek, J. Woillez, S. Yazici, A. Young, N. Zicher: Direct discovery of the inner exoplanet in the HD 206893 system. Evidence for deuterium burning in a planetary-mass companion. Astron. Astrophys. 671, L5 (2023).

Hoang D., M. Brüggen, X. Zhang, A. Bonafede, A. Liu, T. Liu, T. Shimwell, A. Botteon, G. Brunetti, E. Bulbul, G.D. Gennaro, S. O'Sullivan, T. Pasini, H. Röttgering, T. Vernstrom, R. van Weeren: A search for intercluster filaments with LOFAR and eROSITA. Mon. Not. R. Astron. Soc. 523, 4 (2023).

Hoemann E., S. Heigl, A. Burkert: Filament collapse: a two phase process. Mon. Not. R. Astron. Soc. 521, 4 (2023).

Hoemann E., S. Heigl, A. Burkert: Filament fragmentation: density gradients suppress end-dominated collapse. Mon. Not. R. Astron. Soc. 525, 3 (2023).

Homan D., M. Krumpe, A. Markowitz, T. Saha, A. Gokus, E. Partington, G. Lamer, A. Malyali, Z. Liu, A. Rau, I. Grotova, E. Cackett, D. Buckley, S. Ciroi, F. Di Mille, K. Gendreau, M. Gromadzki, S. Krishnan, M. Schramm, J. Steiner: Discovery of the luminous X-ray ignition eRASSt J234402.9- 352640. I. Tidal disruption event or a rapid increase in accretion in an active galactic nucleus?. Astron. Astrophys. 672, A167 (2023).

Hou J., A. Moradinezhad Dizgah, C. Hahn, E. Massara: Cosmological information in skew

spectra of biased tracers in redshift space. J. of Cosmology and Astroparticle Phys. 2023, 3 (2023).

Hoyer N., F. Pinna, A.W. Kamlah, F. Nogueras-Lara, A. Feldmeier-Krause, N. Neumayer, M.C. Sormani, M. Boquien, E. Emsellem, A.C. Seth, R.S. Klessen, T.G. Williams, E. Schinnerer, A.T. Barnes, A.K. Leroy, S. Bonoli, J.D. Kruijssen, J. Neumann, P. Sánchez-Blázquez, D.A. Dale, E.J. Watkins, D.A. Thilker, E. Rosolowsky, F. Bigiel, K. Grasha, O.V. Egorov, D. Liu, K.M. Sandstrom, K.L. Larson, G.A. Blanc, H. Hassani: PHANGS-JWST First Results: A Combined HST and JWST Analysis of the Nuclear Star Cluster in NGC 628. Ap. J. Lett. 944, 2 (2023).

Hrodmarsson H., E. van Dishoeck: Photodissociation and photoionization of molecules of astronomical interest. Updates to the Leiden photodissociation and photoionization cross section database. Astron. Astrophys. 675, A25 (2023).

Hsieh C., H.G. Arce, Z. Li, M. Dunham, S. Offner, I.W. Stephens, A. Stutz, T. Megeath, S. Kong, A. Plunkett, J.J. Tobin, Y. Zhang, D. Mardones, J.E. Pineda, T. Stanke, J. Carpenter: The Evolution of Protostellar Outflow Cavities, Kinematics, and Angular Distribution of Momentum and Energy in Orion A: Evidence for Dynamical Cores. Ap. J. 947, 1 (2023). Hsieh T.-., D. Segura-Cox, J. Pineda, P. Caselli, L. Bouscasse, R. Neri, A. Lopez-Sepulcre, M. Valdivia-Mena, M. Maureira, T. Henning, G. Smirnov-Pinchukov, D. Semenov, T. Möller, N. Cunningham, A. Fuente, S. Marino, A. Dutrey, M. Tafalla, E. Chapillon, C. Ceccarelli, B. Zhao: PRODIGE - envelope to disk with NOEMA. II. Small-scale temperature structure and streamer feeding the SVS13A protobinary based on CH3CN and DCN. Astron. Astrophys. 669, A137 (2023).

Hu C., M.C. Smith, R. Teyssier, G.L. Bryan, R. Verbeke, A. Emerick, R.S. Somerville, B. Burkhart, Y. Li, J.C. Forbes, T. Starkenburg: Code Comparison in Galaxy-scale Simulations with Resolved Supernova Feedback: Lagrangian versus Eulerian Methods. Ap. J. 950, 2 (2023).

Hu C., A. Sternberg, E.F. van Dishoeck: Coevolution of Dust and Chemistry in Galaxy Simulations with a Resolved Interstellar Medium. Ap. J. 952, 2 (2023).

Huang, H., A.V. Ivlev, V. Nosenko, W. Yang, C.-G. Du: Dissipative solitary waves in a two-dimensional complex plasma: Amorphous versus crystalline. Physical Review (e) 107, 4, 0452052023).Huang J., B. Luo, W. Brandt, P. Du, G.P. Garmire, C. Hu, H. Liu, Q. Ni, J. Wang: Strong and Rapid X-Ray Variability of the Super-Eddington Accreting Quasar SDSS J081456.10+532533.5. Ap. J. 950, 1 (2023).

Huang R., J. Li, W. Cui, J.N. Bregman, X. Li, G. Ponti, Z. Qu, Q.D. Wang, Y. Zhang: An XMM-Newton View of the Andromeda Galaxy as Explored in a Legacy Survey (New- ANGELS). I. The X-Ray Source Catalog. Ap. J. Supp. Ser. 268, 1 (2023).

Härer L., M. Parker, I. El Mellah, V. Grinberg, R. Ballhausen, Z. Igo, A. Joyce, J. Wilms: Stellar-wind variability in Cygnus X-1 from high-resolution excess variance spectroscopy with Chandra. Astron. Astrophys. 680, A72 (2023).

Ichikawa K., T. Yamashita, A. Merloni, J. Li, T. Liu, M. Salvato, M. Akiyama, R. Arcodia, T. Dwelly, X. Chen, M. Imanishi, K. Inayoshi, T. Kawaguchi, T. Kawamuro, M. Kokubo, Y. Matsuoka, T. Nagao, M. Schramm, H. Suh, M. Tanaka, Y. Toba, Y. Ueda: eROSITA Final Equatorial-Depth Survey (eFEDS). eFEDS X-ray view of WERGS radio galaxies selected by the Subaru/HSC and VLA/FIRST survey. Astron. Astrophys. 672, A171 (2023).

Imbrogno M., G. Israel, G. Rodríguez Castillo, D. Buckley, F. Coti Zelati, N. Rea, I. Monageng, P. Casella, L. Stella, F. Haberl, P. Esposito, F. Tombesi, A. De Luca, A. Tiengo: Discovery of a magnetar candidate X-ray pulsar in the Large Magellanic Cloud. Mon. Not. R. Astron. Soc. 524, 4 (2023).

Ivlev A.V., B.M. Giuliano, Z. Juhász, P. Herczku, B. Sulik, D.V. Mifsud, S.T. Kovács, K. Rahul, R. Rácz, S. Biri, I. Rajta, I. Vajda, N.J. Mason, S. Ioppolo, P. Caselli: Bom-

bardment of CO Ice by Cosmic Rays. I. Experimental Insights into the Microphysics of Molecule Destruction and Sputtering. Ap. J. 944, 2 (2023).

Izquierdo A., L. Testi, S. Facchini, G. Rosotti, E. van Dishoeck, L. Wölfer, T. Paneque-Carreño: The Disc Miner. II. Revealing gas substructures and kinematic signatures from planet-disc interaction through line profile analysis. Astron. Astrophys. 674, A113 (2023).

Jacob A.M., K.M. Menten, F. Wyrowski, O. Sipilä: First detection of deuterated methylidyne (CD) in the interstellar medium. Astron. Astrophys. 675, A69 (2023).

Jaisawal G., G. Vasilopoulos, S. Naik, C. Maitra, C. Malacaria, B. Chhotaray, K. Gendreau, S. Guillot, M. Ng, A. Sanna: On the cyclotron absorption line and evidence of the spectral transition in SMC X-2 during 2022 giant outburst. Mon. Not. R. Astron. Soc. 521, 3 (2023).

Jensen S., S. Spezzano, P. Caselli, T. Grassi, T. Haugbølle: 3D physico-chemical model of a pre-stellar core. I. Environmental and structural impact on the distribution of CH3OH and c-C3H2. Astron. Astrophys. 675, A34 (2023).

Jones O., P. Kavanagh, M. Barlow, T. Temim, C. Fransson, J. Larsson, J. Blommaert, M. Meixner, R. Lau, B. Sargent, P. Bouchet, J. Hjorth, G. Wright, A. Coulais, O. Fox, R. Gastaud, A. Glasse, N. Habel, A. Hirschauer, J. Jaspers, O. Krause, L. Lenkić, O. Nayak, A. Rest, T. Tikkanen, R. Wesson, L. Colina, E. van Dishoeck, M. Güdel, T. Henning, P.-. Lagage, G. Östlin, T. Ray, B. Vandenbussche: Ejecta, Rings, and Dust in SN 1987A with JWST MIRI/MRS. Ap. J. 958, 1 (2023).

Jovanovic N., P. Gatkine, N. Anugu, R. Amezcua-Correa, R. Basu Thakur, C. Beichman, C.F. Bender, J. Berger, A. Bigioli, J. Bland-Hawthorn, G. Bourdarot, C.M. Bradford, R. Broeke, J. Bryant, K. Bundy, R. Cheriton, N. Cvetojevic, M. Diab, S.A. Diddams, A.N. Dinkelaker, J. Duis, S. Eikenberry, S. Ellis, A. Endo, D.F. Figer, M.P. Fitzgerald, I. Gris- Sanchez, S. Gross, L. Grossard, O. Guyon, S.Y. Haffert, S. Halverson, R.J. Harris, J. He, T. Herr, P. Hottinger, E. Huby, M. Ireland, R. Jenson-Clem, J. Jewell, L. Jocou, S. Kraus, L. Labadie, S. Lacour, R. Laugier, K. Ławniczuk, J. Lin, S. Leifer, S. Leon-Saval, G. Martin, F. Martinache, M. Martinod, B.A. Mazin, S. Minardi, J.D. Monnier, R. Moreira, D. Mourard, A.S. Nayak, B. Norris, E. Obrzud, K. Perraut, F. Reynaud, S. Sallum, D. Schiminovich, C. Schwab, E. Serbayn, S. Soliman, A. Stoll, L. Tang, P. Tuthill, K. Vahala, G. Vasisht, S. Veilleux, A.B. Walter, E.J. Wollack, Y. Xin, Z. Yang, S. Yerolatsitis, Y. Zhang, C. Zou: 2023 Astrophotonics Roadmap: pathways to realizing multi-functional integrated astrophotonic instruments. J. Phys. Photon. 5, 042501 (2023).

Jusko, P., M. Jiménez-Redondo, P. Caselli: Cold CAS ion trap – 22 pole trap with ring electrodes for astrochemistry. Molecular Physics, e2217744 (2023).

Jáquez-Domínguez J.M., R. Galván-Madrid, J. Fritz, M. Zamora-Avilés, P. Camps, G. Bruzual, M. Baes, Y. Lin, E. Vázquez-Semadeni: Simulated Observations of Star Formation Regions: Infrared Evolution of Globally Collapsing Clouds. Ap. J. 950, 2 (2023).

Kammoun E., Z. Igo, J. Miller, A. Fabian, M. Reynolds, A. Merloni, D. Barret, E. Nardini, P. Petrucci, E. Piconcelli, S. Barnier, J. Buchner, T. Dwelly, I. Grotova, M. Krumpe, T. Liu, K. Nandra, A. Rau, M. Salvato, T. Urrutia, J. Wolf: The first X-ray look at SMSS J114447.77-430859.3: the most luminous quasar in the last 9 Gyr. Mon. Not. R. Astron. Soc. 522, 4 (2023).

Karki A., V.P. Kulkarni, S. Weng, C. Péroux, R. Augustin, M. Hayes, M. Ayromlou, G.G. Kacprzak, J.C. Howk, R. Szakacs, A. Klitsch, A. Hamanowicz, A. Fresco, M.A. Zwaan, A.D. Biggs, A.J. Fox, S. Kassin, H. Kuntschner: MUSE-ALMA Haloes - IX. Morphologies and stellar properties of gas-rich galaxies. Mon. Not. R. Astron. Soc. 524, 4 (2023).

Katsioli S., E. Xilouris, C. Kramer, [. . .], F. Tabatabaei, C. Tucker, N. Ysard, R. Zylka: The

stratification of ISM properties in the edge-on galaxy NGC 891 revealed by NIKA2. Astron. Astrophys. 679, A7 (2023).

Katz D., P. Sartoretti, A. Guerrier, P. Panuzzo, G. Seabroke, F. Thévenin, M. Cropper, K. Benson, R. Blomme, R. Haigron, O. Marchal, M. Smith, S. Baker, L. Chemin, Y. Damerdji, M. David, C. Dolding, Y. Frémat, E. Gosset, K. Janßen, G. Jasniewicz, A. Lobel, G. Plum, N. Samaras, O. Snaith, C. Soubiran, O. Vanel, T. Zwitter, T. Antoja, F. Arenou, C. Babusiaux, N. Brouillet, E. Caffau, P. Di Matteo, C. Fabre, C. Fabricius, F. Fragkoudi, M. Haywood, H. Huckle, C. Hottier, Y. Lasne, N. Leclerc, A. Mastrobuono-Battisti, F. Royer, D. Teyssier, J. Zorec, F. Crifo, A. Jean-Antoine Piccolo, C. Turon, Y. Viala: Gaia Data Release 3. Properties and validation of the radial velocities. Astron. Astrophys. 674, A5 (2023).

Kawamuro T., C. Ricci, R.F. Mushotzky, M. Imanishi, F.E. Bauer, F. Ricci, M.J. Koss, G.C. Privon, B. Trakhtenbrot, T. Izumi, K. Ichikawa, A.F. Rojas, K.L. Smith, T. Shimizu, K. Oh, J.S. den Brok, S. Baba, M. Baloković, C. Chang, D. Kakkad, R.W. Pfeifle, M.J. Temple, Y. Ueda, F. Harrison, M.C. Powell, D. Stern, M. Urry, D.B. Sanders: BASS. XXXIV. A Catalog of the Nuclear Millimeter-wave Continuum Emission Properties of AGNs Constrained on Scales $<$ 100-200 pc. Ap. J. Supp. Ser. 269, 1 (2023).

Keyte L., M. Kama, A.S. Booth, E.A. Bergin, L.I. Cleeves, E.F. van Dishoeck, M.N. Drozdovskaya, K. Furuya, J. Rawlings, O. Shorttle, C. Walsh: Azimuthal C/O variations in a planet-forming disk. Nature Astronomy 7 (2023).

Kim C., J. Kim, M. Gong, E.C. Ostriker: Introducing TIGRESS- NCR. I. Coregulation of the Multiphase Interstellar Medium and Star Formation Rates. Ap. J. 946, 1 (2023).

Kim J., M. Chevance, J.D. Kruijssen, A.T. Barnes, F. Bigiel, G.A. Blanc, M. Boquien, Y. Cao, E. Congiu, D.A. Dale, O.V. Egorov, C.M. Faesi, S.C. Glover, K. Grasha, B. Groves, H. Hassani, A. Hughes, R.S. Klessen, K. Kreckel, K.L. Larson, J.C. Lee, A.K. Leroy, D. Liu, S.N. Longmore, S.E. Meidt, H. Pan, J. Pety, M. Querejeta, E. Rosolowsky, T. Saito, K. Sandstrom, E. Schinnerer, R.J. Smith, A. Usero, E.J. Watkins, T.G. Williams: PHANGS-JWST First Results: Duration of the Early Phase of Massive Star Formation in NGC 628. Ap. J. Lett. 944, 2 (2023).

Kim J., M. Gong, C. Kim, E.C. Ostriker: Photochemistry and Heating/Cooling of the Multiphase Interstellar Medium with UV Radiative Transfer for Magnetohydrodynamic Simulations. Ap. J. Supp. Ser. 264, 1 (2023).

Klein M., D. Hernández-Lang, J.J. Mohr, S. Bocquet, A. Singh: RASS-MCMF: a full-sky X-ray selected galaxy cluster catalogue. Mon. Not. R. Astron. Soc. 526, 3 (2023).

Kluge M., R. Bender: Minor Mergers Are Not Enough: The Importance of Major Mergers during Brightest Cluster Galaxy Assembly. Ap. J. Supp. Ser. 267, 2 (2023).

Kluge M., R. Remus, I.V. Babyk, D.A. Forbes, A. Dolfi: A trail of the invisible: blue globular clusters trace the radial density distribution of the dark matter - case study of NGC 4278. Mon. Not. R. Astron. Soc. 521, 4 (2023).

Kobayashi C., S. Bhattacharya, M. Arnaboldi, O. Gerhard: On the a/Fe Bimodality of the M31 Disks. Ap. J. Lett. 956, 1 (2023).

Kodra D., B.H. Andrews, J.A. Newman, S.L. Finkelstein, A. Fontana, N. Hathi, M. Salvato, T. Wiklind, S. Wuyts, A. Broussard, N. Chartab, C. Conselice, M. Cooper, A. Dekel, M. Dickinson, H.C. Ferguson, E. Gawiser, N.A. Grogin, K. Iyer, J. Kartaltepe, S. Kassin, A.M. Koekemoer, D.C. Koo, R.A. Lucas, K.B. Mantha, D.H. McIntosh, B. Mobasher, C. Pacifici, P.G. Pérez-González, P. Santini: Optimized Photometric Redshifts for the Cosmic Assembly Near-infrared Deep Extragalactic Legacy Survey (CANDELS). Ap. J. 942, 1 (2023).

Kokorev V., S. Jin, C. Gómez-Guijarro, G.E. Magdis, F. Valentino, M.M. Lee, E. Daddi, D. Liu, M.T. Sargent, M. Trebitsch, J.R. Weaver: Dust giant: Extended and clumpy

star-formation in a massive dusty galaxy at z = 1.38. Astron. Astrophys. 677, A172 (2023).

Kong S., H.G. Arce, J.J. Tobin, Y. Zhang, M.J. Maureira, K.M. Kratter, T.G. Pillai: Binary Formation in a 100 micrometer Dark Massive Core. Ap. J. 950, 2 (2023).

Koss M.J., E. Treister, D. Kakkad, J.A. Casey-Clyde, T. Kawamuro, J. Williams, A. Foord, B. Trakhtenbrot, F.E. Bauer, G.C. Privon, C. Ricci, R. Mushotzky, L. Barcos-Munoz, L. Blecha, T. Connor, F. Harrison, T. Liu, M. Magno, C.M. Mingarelli, F. Muller-Sanchez, K. Oh, T.T. Shimizu, K.L. Smith, D. Stern, M.P. Tello, C.M. Urry: UGC 4211: A Confirmed Dual Active Galactic Nucleus in the Local Universe at 230 pc Nuclear Separation. Ap. J. Lett. 942, 1 (2023).

Kravchenko K., H. Feuchtgruber, A. Riccardi: A new versatile infrared facility at the VLT. Nature Astronomy 7 (2023).

Kruk S., P. García-Martín, M. Popescu, B. Aussel, S. Dillmann, M.E. Perks, T. Lund, B. Merín, R. Thomson, S. Karadag, M.J. McCaughrean: The impact of satellite trails on Hubble Space Telescope observations. Nature Astronomy 7 (2023).

Krumpe M., T. Miyaji, A. Georgakakis, A. Schulze, A.L. Coil, T. Dwelly, D. Coffey, J. Comparat, H. Aceves, M. Salvato, A. Merloni, C. Maraston, K. Nandra, J.R. Brownstein, D.P. Schneider, SDSS-Iv Team, Spiders Team: The Spatial

Clustering of ROSAT All-Sky Survey Active Galactic Nuclei. V. The Evolution of Broad-line AGN Clustering Properties in the Last 6 Gyr. Ap. J. 952, 2 (2023).

Kuffmeier M., S.S. Jensen, T. Haugbølle: Rejuvenating infall: a crucial yet overlooked source of mass and angular momentum. European Physical Journal Plus 138, 3 (2023).

Kurpas J., A. Schwope, A. Pires, F. Haberl, D. Buckley: Discovery of two promising isolated neutron star candidates in the SRG/eROSITA All-Sky Survey. Astron. Astrophys. 674, A155 (2023).

Kóspál Á., P. Ábrahám, L. Diehl, A. Banzatti, J. Bouwman, L. Chen, F. Cruz-Sáenz de Miera, J.D. Green, T. Henning, C. Rab: JWST/MIRI Spectroscopy of the Disk of the Young Eruptive Star EX Lup in Quiescence. Ap. J. Lett. 945, 1 (2023).

Lahén N., T. Naab, G. Kauffmann, D. Szécsi, J.M. Hislop, A. Rantala, A. Kozyreva, S. Walch, C. Hu: Formation of star clusters and enrichment by massive stars in simulations of low-metallicity galaxies with a fully sampled initial stellar mass function. Mon. Not. R. Astron. Soc. 522, 2 (2023).

Laird A., M. Lugaro, A. Kankainen, P. Adsley, D. Bardayan, H. Brinkman, B. Côté, C. Deibel, R. Diehl, F. Hammache, J. den Hartogh, J. José, D. Kurtulgil, C. Lederer-Woods, G. Lotay, G. Meynet, S. Palmerini, M. Pignatari, R. Reifarth, N. de Séréville, A. Sieverding, R. Stancliffe, T. Trueman, T. Lawson, J. Vink, C. Massimi, A. Mengoni: Progress on nuclear reaction rates affecting the stellar production of 26Al. J. Phys. G. Nucl. Phys. 50, 3 (2023).

Laloux B., A. Georgakakis, C. Andonie, D.M. Alexander, A. Ruiz, D.J. Rosario, J. Aird, J. Buchner, F.J. Carrera, A. Lapi, C. Ramos Almeida, M. Salvato, F. Shankar: The demographics of obscured AGN from X-ray spectroscopy guided by multiwavelength information. Mon. Not. R. Astron. Soc. 518, 2 (2023).

Lančová D., A. Yilmaz, M. Wielgus, M. Dovčiak, O. Straub, G. Török: Spectra of puffy accretion discs: the kynbb fit. Astron. Nachr. 344, 4 (2023).

Larson K.L., J.C. Lee, D.A. Thilker, B.C. Whitmore, S. Deger, J. Lilly, R. Chandar, D.A. Dale, F. Bigiel, K. Grasha, B. Groves, S. Hannon, R.S. Klessen, K. Kreckel, J.D. Kruijssen, A.K. Leroy, H. Pan, E. Rosolowsky, E. Schinnerer, A. Schruba, E.J. Watkins, T.G. Williams: Multiscale stellar associations across the star formation hierarchy in PHANGS-HST nearby galaxies: methodology and properties. Mon. Not. R. Astron. Soc. 523, 4 (2023).

Lattanzi V., F. Alves, M. Padovani, F. Fontani, P. Caselli, C. Ceccarelli, A. López-Sepulcre, C. Favre, R. Neri, L. Chahine, C. Vastel, L. Evans: SOLIS. XVII. Jet candidate unveiled in OMC-2 and its possible link to the enhanced cosmic-ray ionisation rate. Astron. Astrophys. 671, A35 (2023).

Lee J.C., K.M. Sandstrom, A.K. Leroy, D.A. Thilker, E. Schinnerer, E. Rosolowsky, K.L. Larson, O.V. Egorov, T.G. Williams, J. Schmidt, E. Emsellem, G.S. Anand, A.T. Barnes, F. Belfiore, I. Bešlić, F. Bigiel, G.A. Blanc, A.D. Bolatto, M. Boquien, J. den Brok, Y. Cao, R. Chandar, J. Chastenet, M. Chevance, I. Chiang, E. Congiu, D.A. Dale, S. Deger, C. Eibensteiner, C.M. Faesi, S.C. Glover, K. Grasha, B. Groves, H. Hassani, K.F. Henny, J.D. Henshaw, N. Hoyer, A. Hughes, S. Jeffreson, M.J. Jiménez-Donaire, J. Kim, H. Kim, R.S. Klessen, E.W. Koch, K. Kreckel, J.D. Kruijssen, J. Li, D. Liu, L.A. Lopez, D. Maschmann, N.M. Chen, S.E. Meidt, E.J. Murphy, J. Neumann, N. Neumayer, H. Pan, I. Pessa, J. Pety, M. Querejeta, F. Pinna, M.J. Rodríguez, T. Saito, P. Sánchez-Blázquez, F. Santoro, A. Sardone, R.J. Smith, M.C. Sormani, F. Scheuermann, S.K. Stuber, J. Sutter, J. Sun, Y. Teng, R.G. Treß, A. Usero, E.J. Watkins, B.C. Whitmore, A. Razza: The PHANGS-JWST Treasury Survey: Star Formation, Feedback, and Dust Physics at High Angular Resolution in Nearby GalaxieS. Ap. J. Lett. 944, 2 (2023).

Lee K., K. Kohno, B. Hatsukade, F. Egusa, T. Yamashita, M. Schramm, K. Ichikawa, M. Imanishi, T. Izumi, T. Nagao, Y. Toba, H. Umehata: Massive Molecular Gas Companions Uncovered by Very Large Array CO(1-0) Observations of the z = 5.2 Radio Galaxy TN J0924-2201. Ap. J. 944, 1 (2023).

Leemker M., A. Booth, E. van Dishoeck, N. van der Marel, B. Tabone, N. Ligterink, N. Brunken, M. Hogerheijde: A major asymmetric ice trap in a planet-forming disk. IV. Nitric oxide gas and a lack of CN tracing sublimating ices and a C/O ratio <1. Astron. Astrophys. 673, A7 (2023).

Lei H., F. Valentino, G.E. Magdis, V. Kokorev, D. Liu, D. Rigopoulou, S. Jin, E. Daddi: Molecular gas content and high excitation of a massive main-sequence galaxy at z = 3. Astron. Astrophys. 673, L13 (2023).

Lemos P., N. Weaverdyck, R. Rollins, [...], T.N. Varga, J. Weller, DES Collaboration: Robust sampling for weak lensing and clustering analyses with the Dark Energy Survey. Mon. Not. R. Astron. Soc. 521, 1 (2023).

Leroy A.K., A.D. Bolatto, K. Sandstrom, E. Rosolowsky, A.T. Barnes, F. Bigiel, M. Boquien, J.S. den Brok, Y. Cao, J. Chastenet, M. Chevance, I. Chiang, R. Chown, D. Colombo, S.L. Ellison, E. Emsellem, K. Grasha, J.D. Henshaw, A. Hughes, R.S. Klessen, E.W. Koch, J. Kim, K. Kreckel, J.D. Kruijssen, K.L. Larson, J.C. Lee, R.C. Levy, L. Lin, D. Liu, S.E. Meidt, J. Pety, M. Querejeta, M. Rubio, T. Saito, S. Salim, E. Schinnerer, M.C. Sormani, J. Sun, D.A. Thilker, A. Usero, S.N. Vogel, E.J. Watkins, C.M. Whitcomb, T.G. Williams, C.D. Wilson: PHANGS-JWST First Results: A Global and Moderately Resolved View of Mid-infrared and CO Line Emission from Galaxies at the Start of the JWST Era. Ap. J. Lett. 944, 2 (2023).

Leroy A.K., K. Sandstrom, E. Rosolowsky, F. Belfiore, A.D. Bolatto, Y. Cao, E.W. Koch, E. Schinnerer, A.T. Barnes, I. Bešlić, F. Bigiel, G.A. Blanc, J. Chastenet, N.M. Chen, M. Chevance, R. Chown, E. Congiu, D.A. Dale, O.V. Egorov, E. Emsellem, C. Eibensteiner, C.M. Faesi, S.C. Glover, K. Grasha, B. Groves, H. Hassani, J.D. Henshaw, A. Hughes, M.J. Jiménez-Donaire, J. Kim, R.S. Klessen, K. Kreckel, J.D. Kruijssen, K.L. Larson, J.C. Lee, R.C. Levy, D. Liu, L.A. Lopez, S.E. Meidt, E.J. Murphy, J. Neumann, I. Pessa, J. Pety, T. Saito, A. Sardone, J. Sun, D.A. Thilker, A. Usero, E.J. Watkins, C.M. Whitcomb, T.G. Williams: PHANGS JWST First Results: Mid-infrared Emission Traces Both Gas Column Density and Heating at 100 pc Scales. Ap. J. Lett. 944, 2 (2023).

Lesage S., P. Veres, M. Briggs, [...], A. von Kienlin et al.: Fermi-GBM Discovery of GRB

221009A: An Extraordinarily Bright GRB from Onset to Afterglow. Ap. J. Lett. 952, 2 (2023).

Li Y.A., L.C. Ho, J. Shangguan: The Subtle Effects of Mergers on Star Formation in Nearby Galaxies. Ap. J. 953, 1 (2023).

Li Y.A., L.C. Ho, J. Shangguan, M. Zhuang, R. Li: Panchromatic Photometry of Low-redshift, Massive Galaxies Selected from SDSS Stripe 82. Ap. J. Supp. Ser. 267, 1 (2023).

Lin S., J.L. Tinker, M.R. Blanton, H. Guo, A. Raichoor, J. Comparat, J.R. Brownstein: Abundance matching analysis of the emission-line galaxy sample in the extended Baryon Oscillation Spectroscopic Survey. Mon. Not. R. Astron. Soc. 519, 3 (2023).

Lin Y., S. Spezzano, P. Caselli: First detection of CHD2OH towards pre-stellar cores. Astron. Astrophys. 669, L6 (2023).

Lin Y., S. Spezzano, J. Pineda, J. Harju, A. Schmiedeke, S. Jiao, H. Liu, P. Caselli: Initial conditions of star formation at <2000 au: Physical structure and NH3 depletion of three early-stage cores. Astron. Astrophys. 680, A43 (2023).

Liu A., E. Bulbul, M. Ramos-Ceja, J. Sanders, V. Ghirardini, Y. Bahar, M. Yeung, E. Gatuzz, M. Freyberg, C. Garrel, X. Zhang, A. Merloni, K. Nandra: X-ray analysis of JWST's first galaxy cluster lens SMACS J0723.3-7327. Astron. Astrophys. 670, A96 (2023).

Liu D., N. Förster Schreiber, R. Genzel, D. Lutz, S. Price, L. Lee, A.J. Baker, A. Burkert, R. Coogan, R. Davies, R. Davies, R. Herrera-Camus, T. Kodama, M.M. Lee, A. Nestor, C. Pulsoni, A. Renzini, C.E. Sharon, T. Shimizu, L. Tacconi, K. Tadaki, H. Übler: An 600 pc View of the Strongly Lensed, Massive Main-sequence Galaxy J0901: A Baryon-dominated, Thick Turbulent Rotating Disk with a Clumpy Cold Gas Ring at z = 2.259. Ap. J. 942, 98 (2023).

Liu D., E. Schinnerer, Y. Cao, A. Leroy, A. Usero, E. Rosolowsky, J.D. Kruijssen, M. Chevance, S.C. Glover, M.C. Sormani, A.D. Bolatto, J. Sun, S.K. Stuber, Y. Teng, F. Bigiel, I. Bešlić, K. Grasha, J.D. Henshaw, A.T. Barnes, J.S. den Brok, T. Saito, D.A. Dale, E.J. Watkins, H. Pan, R.S. Klessen, E. Emsellem, G.S. Anand, S. Deger, O.V. Egorov, C.M. Faesi, H. Hassani, K.L. Larson, J.C. Lee, L.A. Lopez, J. Pety, K. Sandstrom, D.A. Thilker, B.C. Whitmore, T.G. Williams: PHANGS-JWST First Results: Stellar-feedbackdriven Excitation and Dissociation of Molecular Gas in the Starburst Ring of NGC 1365?. Ap. J. Lett. 944, 2 (2023).

Liu D., E. Schinnerer, T. Saito, E. Rosolowsky, A. Leroy, A. Usero, K. Sandstrom, R.S. Klessen, S.C. Glover, Y. Ao, I. Bešlić, F. Bigiel, Y. Cao, J. Chastenet, M. Chevance, D.A. Dale, Y. Gao, A. Hughes, K. Kreckel, J.D. Kruijssen, H. Pan, J. Pety, D. Salak, F. Santoro, A. Schruba, J. Sun, Y. Teng, T. Williams: C I and CO in nearby spiral galaxies. I. Line ratio and abundance variations at 200 pc scales. Astron. Astrophys. 672, A36 (2023).

Liu Z., A. Malyali, M. Krumpe, D. Homan, A. Goodwin, I. Grotova, A. Kawka, A. Rau, A. Merloni, G. Anderson, J. Miller-Jones, A. Markowitz, S. Ciroi, F. Di Mille, M. Schramm, S. Tang, D. Buckley, M. Gromadzki, C. Jin, J. Buchner: Deciphering the extreme X-ray variability of the nuclear transient eRASSt J045650.3-203750. A likely repeating partial tidal disruption event. Astron. Astrophys. 669, A75 (2023).

Long K., J. Dexter, Y. Cao, R. Davies, F. Eisenhauer, D. Lutz, D. Santos, J. Shangguan, T. Shimizu, E. Sturm: Erratum: "Confronting a Thin Disk-wind Launching Mechanism of Broad-line Emission in Active Galactic Nuclei with GRAVITY Observations of Quasar 3C 273" (2023, ApJ, 953, 184). Ap. J. 955, 1 (2023).

Long K., J. Dexter, Y. Cao, R. Davies, F. Eisenhauer, D. Lutz, D. Santos, J. Shangguan, T. Shimizu, E. Sturm: Confronting a Thin Disk-wind Launching Mechanism of Broad-

line Emission in Active Galactic Nuclei with GRAVITY Observations of Quasar 3C 273. Ap. J. 953, 2 (2023).

Luparello H.E., E.F. Boero, M. Lares, A.G. Sánchez, D. Garcia Lambas: The cosmic shallows - I. Interaction of CMB photons in extended galaxy haloes. Mon. Not. R. Astron. Soc. 518, 4 (2023).

Lustig P., V. Strazzullo, R. Remus, C. D'Eugenio, E. Daddi, A. Burkert, G. De Lucia, I. Delvecchio, K. Dolag, F. Fontanot, R. Gobat, J.J. Mohr, M. Onodera, M. Pannella, A. Pillepich: Massive quiescent galaxies at z 3: A comparison of selection, stellar population, and structural properties with simulation predictions. Mon. Not. R. Astron. Soc. 518, 4 (2023).

López-Navas E., P. Sánchez-Sáez, P. Arévalo, S. Bernal, M. Graham, L. Hernández-García, D. Homan, M. Krumpe, G. Lamer, P. Lira, M. Martínez-Aldama, A. Merloni, S. Ríos, M. Salvato, D. Stern, D. Tubín-Arenas: Improving the selection of changing-look AGNs through multiwavelength photometric variability. Mon. Not. R. Astron. Soc. 524, 1 (2023).

Maitra C., D. Kaltenbrunner, F. Haberl, D. Buckley, I. Monageng, A. Udalski, S. Carpano, J. Coley, V. Doroshenko, L. Ducci, C. Malacaria, O. König, A. Santangelo, G. Vasilopoulos, J. Wilms: Broadband study and the discovery of pulsations from the Be/X-ray binary eRASSU J052914.9- 662446 in the Large Magellanic Cloud. Astron. Astrophys. 669, A30 (2023).

Maleubre S., D.J. Eisenstein, L.H. Garrison, M. Joyce: Constraining accuracy of the pairwise velocities in Nbody simulations using scale-free models. Mon. Not. R. Astron. Soc. 525, 1 (2023).

Mallaby-Kay M., S. Amodeo, J. Hill, [. . .], T.N. Varga, J. Weller: Kinematic Sunyaev-Zel'dovich effect with ACT, DES, and BOSS: A novel hybrid estimator. Physical Review D 108, 2 (2023).

Malyali A., Z. Liu, A. Merloni, A. Rau, J. Buchner, S. Ciroi, F. Di Mille, I. Grotova, T. Dwelly, K. Nandra, M. Salvato, D. Homan, M. Krumpe: eRASSt J074426.3 + 291606: prompt accretion disc formation in a 'faint and slow' tidal disruption event. Mon. Not. R. Astron. Soc. 520, 3 (2023).

Malyali A., Z. Liu, A. Rau, I. Grotova, A. Merloni, A. Goodwin, G. Anderson, J. Miller-Jones, A. Kawka, R. Arcodia, J. Buchner, K. Nandra, D. Homan, M. Krumpe: The rebrightening of a ROSAT-selected tidal disruption event: repeated weak partial disruption flares from a quiescent galaxy?. Mon. Not. R. Astron. Soc. 520, 3 (2023).

Mannucci F., M. Scialpi, A. Ciurlo, S. Yeh, C. Marconcini, G. Tozzi, G. Cresci, A. Marconi, A. Amiri, F. Belfiore, S. Carniani, C. Cicone, E. Nardini, E. Pancino, K. Rubinur, P. Severgnini, L. Ulivi, G. Venturi, C. Vignali, M. Volonteri, E. Pinna, F. Rossi, A. Puglisi, G. Agapito, C. Plantet, E. Ghose, L. Carbonaro, M. Xompero, P. Grani, S. Esposito, J. Power, J. Guerra Ramon, M. Lefebvre, A. Cavallaro, R. Davies, A. Riccardi, M. Macintosh, W. Taylor, M. Dolci, A. Baruffolo, H. Feuchtgruber, K. Kravchenko, C. Rau, E. Sturm, E. Wiezorrek, Y. Dallilar, M. Kenworthy: GMP-selected dual and lensed AGNs: Selection function and classification based on near-IR colors and resolved spectra from VLT/ ERIS, Keck/OSIRIS, and LBT/LUCI. Astron. Astrophys. 680, A53 (2023).

Martín-Navarro I., C. Spiniello, C. Tortora, L. Coccato, G. D'Ago, A. Ferré-Mateu, C. Pulsoni, J. Hartke, M. Arnaboldi, L. Hunt, N. Napolitano, D. Scognamiglio, M. Spavone: INSPIRE: INvestigating Stellar Population In RElics - IV. The initial mass function slope in relics. Mon. Not. R. Astron. Soc. 521, 1 (2023).

Matzeu G., M. Brusa, G. Lanzuisi, M. Dadina, S. Bianchi, G. Kriss, M. Mehdipour, E. Nardini, G. Chartas, R. Middei, E. Piconcelli, V. Gianolli, A. Comastri, A. Longinotti, Y. Krongold, F. Ricci, P. Petrucci, F. Tombesi, A. Luminari, L. Zappacosta, G.

Miniutti, M. Gaspari, E. Behar, M. Bischetti, S. Mathur, M. Perna, M. Giustini, P. Grandi, E. Torresi, C. Vignali, G. Bruni, M. Cappi, E. Costantini, G. Cresci, B. De Marco, A. De Rosa, R. Gilli, M. Guainazzi, J. Kaastra, S. Kraemer, F. La Franca, A. Marconi, F. Panessa, G. Ponti, D. Proga, F. Ursini, P. Baldini, F. Fiore, A. King, R. Maiolino, G. Matt, A. Merloni: Supermassive Black Hole Winds in Xrays: SUBWAYS. I. Ultra-fast outflows in quasars beyond the local Universe. Astron. Astrophys. 670, A182 (2023).

Maucó K., C. Manara, M. Ansdell, G. Bettoni, R. Claes, J. Alcala, A. Miotello, S. Facchini, T. Haworth, G. Lodato, J. Williams: Testing external photoevaporation in the o-Orionis cluster with spectroscopy and disk mass measurements. Astron. Astrophys. 679, A82 (2023).

Maucó K., C. Manara, M. Ansdell, G. Bettoni, R. Claes, J. Alcala, A. Miotello, S. Facchini, T. Haworth, G. Lodato, J. Williams: Testing external photoevaporation in the o-Orionis cluster with spectroscopy and disk mass measurements (Corrigendum). Astron. Astrophys. 680, C1 (2023).

Mayer M.G., W. Becker, P. Predehl, M. Sasaki: A detailed look at the thermal and nonthermal X-ray emission from the Vela supernova remnant with SRG/eROSITA. Astron. Astrophys. 676, A68 (2023).

McClure M., W. Rocha, K. Pontoppidan, N. Crouzet, L. Chu, E. Dartois, T. Lamberts, J. Noble, Y. Pendleton, G. Perotti, D. Qasim, M. Rachid, Z. Smith, F. Sun, T.L. Beck, A. Boogert, W. Brown, P. Caselli, S. Charnley, H.M. Cuppen, H. Dickinson, M. Drozdovskaya, E. Egami, J. Erkal, H. Fraser, R. Garrod, D. Harsono, S. Ioppolo, I. Jiménez-Serra, M. Jin, J. Jørgensen, L. Kristensen, D. Lis, M. McCoustra, B.A. McGuire, G. Melnick, K.I. Ã-berg, M. Palumbo, T. Shimonishi, J. Sturm, E. van Dishoeck, H. Linnartz: An Ice Age JWST inventory of dense molecular cloud ices. Nature Astronomy 7 (2023).

McKinney J., S.M. Manning, O.R. Cooper, A.S. Long, H. Akins, C.M. Casey, A.L. Faisst, M. Franco, C.C. Hayward, E. Lambrides, G. Magdis, K.E. Whitaker, M. Yun, J.B. Champagne, N.E. Drakos, F. Gentile, S. Gillman, G. Gozaliasl, O. Ilbert, S. Jin, A.M. Koekemoer, V. Kokorev, D. Liu, R.M. Rich, B.E. Robertson, F. Valentino, J.R. Weaver, J.A. Zavala, N. Allen, J.S. Kartaltepe, H.J. McCracken, L. Paquereau, J. Rhodes, M. Shuntov, S. Toft: A Near-infrared- faint, Far-infrared-luminous Dusty Galaxy at z 5 in COSMOS-Web. Ap. J. 956, 2 (2023).

Megías A., I. Jiménez-Serra, J. Martín-Pintado, A. Vasyunin, S. Spezzano, P. Caselli, G. Cosentino, S. Viti: The complex organic molecular content in the L1517B starless core. Mon. Not. R. Astron. Soc. 519, 2, p. 1601-1617 (2023).

Mehdipour M., G. Kriss, M. Brusa, G. Matzeu, M. Gaspari, S. Kraemer, S. Mathur, E. Behar, S. Bianchi, M. Cappi, G. Chartas, E. Costantini, G. Cresci, M. Dadina, B. De Marco, A. De Rosa, J. Dunn, V. Gianolli, M. Giustini, J. Kaastra, A. King, Y. Krongold, F. La Franca, G. Lanzuisi, A. Longinotti, A. Luminari, R. Middei, G. Miniutti, E. Nardini, M. Perna, P.-. Petrucci, E. Piconcelli, G. Ponti, F. Ricci, F. Tombesi, F. Ursini, C. Vignali, L. Zappacosta: Supermassive Black Hole Winds in X-rays: SUBWAYS. II. HST UV spectroscopy of winds at intermediate redshifts. Astron. Astrophys. 670, A183 (2023).

Mehrgan K., J. Thomas, R. Saglia, T. Parikh, R. Bender: Detailed Shapes of the Line-of-sight Velocity Distributions in Massive Early-type Galaxies from Nonparametric Spectral Models. Ap. J. 948, 79 (2023).

Meidt S.E., E. Rosolowsky, J. Sun, E.W. Koch, R.S. Klessen, A.K. Leroy, E. Schinnerer, A.T. Barnes, S.C. Glover, J.C. Lee, A. van der Wel, E.J. Watkins, T.G. Williams, F. Bigiel, M. Boquien, G.A. Blanc, Y. Cao, M. Chevance, D.A. Dale, O.V. Egorov, E. Emsellem, K. Grasha, J.D. Henshaw, J.D. Kruijssen, K.L. Larson, D. Liu, E.J. Murphy, J. Pety, M. Querejeta, T. Saito, K.M. Sandstrom, R.J. Smith, M.C. Sormani,

D.A. Thilker: PHANGS-JWST First Results: Interstellar Medium Structure on the Turbulent Jeans Scale in Four Disk Galaxies Observed by JWST and the Atacama Large Millimeter/submillimeter Array. Ap. J. Lett. 944, 2 (2023).

Meldorf C., A. Palmese, D. Brout, [. . .], T. Varga, DES Collaboration: The Dark Energy Survey Supernova Program results: type Ia supernova brightness correlates with host galaxy dust. Mon. Not. R. Astron. Soc. 518, 2 (2023).

Mentuch Cooper E., K. Gebhardt, D. Davis, D.J. Farrow, C. Liu, G. Zeimann, R. Ciardullo, J.J. Feldmeier, N. Drory, D. Jeong, B. Benda, W.P. Bowman, M. Boylan-Kolchin, Ó.A. Chávez Ortiz, M.H. Debski, M. Dentler, M. Fabricius, R. Farooq, S.L. Finkelstein, E. Gawiser, C. Gronwall, G.J. Hill, U. Hopp, L.R. House, S. Janowiecki, H. Khoraminezhad, W. Kollatschny, E. Komatsu, M. Landriau, M.L. Niemeyer, H. Lee, P. MacQueen, K. Mawatari, B. McKay, M. Ouchi, J. Poppe, S. Saito, D.P. Schneider, J. Snigula, B.P. Thomas, S. Tuttle, T. Urrutia, L. Weiss, L. Wisotzki, Y. Zhang, HETDEX Collaboration: HETDEX Public Source Catalog 1: 220 K Sources Including Over 50 K Lya Emitters from an Untargeted Wide-area Spectroscopic Survey. Ap. J. 943, 2 (2023).

Mercimek S., L. Podio, C. Codella, L. Chahine, A. López- Sepulcre, S. Ohashi, L. Loinard, D. Johnstone, F. Menard, N. Cuello, P. Caselli, J. Zamponi, Y. Aikawa, E. Bianchi, G. Busquet, J. Pineda, M. Bouvier, M. De Simone, Y. Zhang, N. Sakai, C. Chandler, C. Ceccarelli, F. Alves, A. Durán, D. Fedele, N. Murillo, I. Jiménez-Serra, S. Yamamoto: FAUST - VIII. The protostellar disc of VLA 1623-2417W and its streamers imaged by ALMA. Mon. Not. R. Astron. Soc. 522, 2 (2023).

Meuris A., A. Arhancet, D. Bachet, F. Ceraudo, E. Doumayrou, L. Dumaye, A. Goetschy, D. Götz, B. Horeau, D.-. Huynh, T. Lavanant, M. Lortholary, I.L. Mer, F. Nico, F. Pinsard, M. Prieur, L. Provost, D. Renaud, N. Renault-Tinacci, B. Schneider, T. Tourrette, F. Visticot, K. Mercier, N. Meidinger: Design and performance of the camera of the Micro-channel X-ray Telescope on-board the SVOM mission. Nucl. Instrum. Methods Phys. Res. (A) 1049 (2023).

Michiyama T., M. Zhuang, J. Shangguan, H.M. Yesuf, H. Kaneko, L.C. Ho: Nobeyama 45 m CO J = 1-0 observations of luminous type 1 AGNs at z 0.3. Publ. Astron. Soc. Jpn. 75, 4 (2023).

Miniutti G., M. Giustini, R. Arcodia, R. Saxton, A. Read, S. Bianchi, K. Alexander: Repeating tidal disruptions in GSN 069: Long-term evolution and constraints on quasiperiodic eruptions' models. Astron. Astrophys. 670, A93 (2023).

Miret-Roig N., J. Alves, D. Barrado, A. Burkert, S. Ratzenböck, R. Konietzka: Insights into star formation and dispersal from the synchronization of stellar clocks. Nature Astronomy 8, p. 216–222 (2023).

Molina J., L.C. Ho, R. Wang, J. Shangguan, F.E. Bauer, E. Treister: Enhanced Star Formation Efficiency in the Central Regions of Nearby Quasar Hosts. Ap. J. 944, 1 (2023).

Molina J., J. Shangguan, R. Wang, L.C. Ho, F.E. Bauer, E. Treister: Lack of Correlations between Cold Molecular Gas and AGN Properties in Type 1 AGNs at z $<$ 0.5. Ap. J. 950, 1 (2023).

Mondal S., G. Ponti, F. Haberl, K. Mori, N. Rea, M.R. Morris, S. Campana, K. Anastasopoulou: Discovery of periodicities in two highly variable intermediate polars towards the Galactic centre. Astron. Astrophys. 671, A120 (2023).

Morgan R., B. Nord, K. Bechtol, [. . .], T. Varga: DeepZipper. II. Searching for Lensed Supernovae in Dark Energy Survey Data with Deep Learning. Ap. J. 943, 1 (2023).

Mountrichas G., G. Yang, V. Buat, B. Darvish, M. Boquien, Q. Ni, D. Burgarella, L. Ciesla: The relation of cosmic environment and morphology with the star formation and stellar populations of AGN and non-AGN galaxies. Astron. Astrophys. 675, A137

(2023).

Musiimenta B., M. Brusa, T. Liu, M. Salvato, J. Buchner, Z. Igo, S. Waddell, Y. Toba, R. Arcodia, J. Comparat, D. Alexander, F. Shankar, A. Lapi, C. Ramos Almeida, A. Georgakakis, A. Merloni, T. Urrutia, J. Li, Y. Terashima, Y. Shen, Q. Wu, T. Dwelly, K. Nandra, J. Wolf: A new discovery space opened by eROSITA. Ionised AGN outflows from X-ray selected samples. Astron. Astrophys. 679, A84 (2023).

Myles J., D. Gruen, A. Amon, A. Alarcon, J. DeRose, S. Everett, S. Dodelson, G. Bernstein, A. Campos, I. Harrison, N. MacCrann, J. McCullough, M. Raveri, C. Sánchez, M. Troxel, B. Yin, T. Abbott, S. Allam, O. Alves, F. Andrade- Oliveira, E. Bertin, D. Brooks, D. Burke, A.C. Rosell, M.C. Kind, J. Carretero, R. Cawthon, M. Costanzi, L. da Costa, M. Pereira, S. Desai, P. Doel, I. Ferrero, B. Flaugher, J. Frieman, J. García-Bellido, M. Gatti, D. Gerdes, R. Gruendl, J. Gschwend, G. Gutierrez, W. Hartley, S. Hinton, D. Hollowood, K. Honscheid, D. James, K. Kuehn, O. Lahav, P. Melchior, J. Mena-Fernández, F. Menanteau, R. Miquel, J. Mohr, A. Palmese, F. Paz-Chinchón, A. Pieres, A.P. Malagón, J. Prat, M. Rodriguez-Monroy, E. Sanchez, V. Scarpine, I. Sevilla-Noarbe, M. Smith, E. Suchyta, M. Swanson, G. Tarle, D. Tucker, M. Vincenzi, N. Weaverdyck, DES Collaboration: Mapping variations of redshift distributions with probability integral transforms. Mon. Not. R. Astron. Soc. 519, 2 (2023).

Müller T., M. Micheli, T. Santana-Ros, P. Bartczak, D. Oszkiewicz, S. Kruk: Asteroids seen by JWST-MIRI: Radiometric size, distance, and orbit constraints. Astron. Astrophys. 670, A53 (2023).

Naidoo K., H. Johnston, B. Joachimi, [. . .], R. Bender, C. Bodendorf, et al.: Euclid: Calibrating photometric redshifts with spectroscopic cross-correlations. Astron. Astrophys. 670, A149 (2023).

Navarro-Almaida D., C. Bop, F. Lique, G. Esplugues, M. Rodríguez-Baras, C. Kramer, C. Romero, A. Fuente, P. Caselli, P. Rivière-Marichalar, J. Kirk, A. Chacón-Tanarro, E. Roueff, T. Mroczkowski, T. Bhandarkar, M. Devlin, S. Dicker, I. Lowe, B. Mason, C. Sarazin, J. Sievers: Linking the dust and chemical evolution: Taurus and Perseus. New collisional rates for HCN, HNC, and their C, N, and H isotopologues. Astron. Astrophys. 670, A110 (2023).

Nazari P., B. Tabone, M.L. van't Hoff, J.K. Jørgensen, E.F. van Dishoeck: Evidence for Ubiquitous Carbon Grain Destruction in Hot Protostellar Envelopes. Ap. J. Lett. 951, 2 (2023).

Nelissen M., A. Natta, P. McGinnis, C. Pittman, C. Delvaux, T. Ray: Correlation between the optical veiling and accretion properties. A case study of the classical T Tauri star DK Tau. Astron. Astrophys. 677, A64 (2023).

Nelson E.J., K.A. Suess, R. Bezanson, S.H. Price, P. van Dokkum, J. Leja, B. Wang, K.E. Whitaker, I. Labbé, L. Barrufet, G. Brammer, D.J. Eisenstein, J. Gibson, A.I. Hartley, B.D. Johnson, K.E. Heintz, E. Mathews, T.B. Miller, P.A. Oesch, L. Sandles, D.J. Setton, J.S. Speagle, S. Tacchella, K. Tadaki, H. Übler, J.R. Weaver: JWST Reveals a Population of Ultrared, Flattened Galaxies at $2 < z < 6$ Previously Missed by HST. Ap. J. Lett. 948, 2 (2023).

Nestor Shachar A., S. Price, N. Förster Schreiber, R. Genzel, T. Shimizu, L. Tacconi, H. Übler, A. Burkert, R. Davies, A. Dekel, R. Herrera-Camus, L. Lee, D. Liu, D. Lutz, T. Naab, R. Neri, A. Renzini, R. Saglia, K. Schuster, A. Sternberg, E. Wisnioski, S. Wuyts: RC100: Rotation Curves of 100 Massive Star-forming Galaxies at $z = 0.6$-2.5 Reveal Little Dark Matter on Galactic Scales. Ap. J. 944, 74 (2023).

Neumann L., M.J. Gallagher, F. Bigiel, A.K. Leroy, A.T. Barnes, A. Usero, J.S. den Brok, F. Belfiore, I. Bešlić, Y. Cao, M. Chevance, D.A. Dale, C. Eibensteiner, S.C. Glover, K. Grasha, J.D. Henshaw, M.J. Jiménez-Donaire, R.S. Klessen, J.D. Kruijssen, D. Liu, S. Meidt, J. Pety, J. Puschnig, M. Querejeta, E. Rosolowsky, E. Schinnerer, A. Schruba,

M.C. Sormani, J. Sun, Y. Teng, T.G. Williams: The ALMOND survey: molecular cloud properties and gas density tracers across 25 nearby spiral galaxies with ALMA. Mon. Not. R. Astron. Soc. 521, 3 (2023).

Neureiter, B., S. de Nicola, J. Thomas, R.P. Saglia, R. Bender: Accuracy and precision of triaxial orbit models I: SMBH mass, stellar mass and dark matter halo. Mon. Not. R. Astron. Soc. 519, 2004-2016 (2023).

Neureiter B., J. Thomas, A. Rantala, T. Naab, K. Mehrgan, R. Saglia, S. de Nicola, R. Bender: The Isotropic Center of NGC 5419-A Core in Formation?. Ap. J. 950, 15 (2023).

Ni Q., J. Aird, A. Merloni, K. Birchall, J. Buchner, M. Salvato, G. Yang: The incidence of AGN in galaxies with different stellar population ages. Mon. Not. R. Astron. Soc. 524, 3 (2023).

Nolan C., B. Zhao, P. Caselli, Z. Li: On the importance of disc chemistry in the formation of protoplanetary disc rings. Mon. Not. R. Astron. Soc. 525, 4 (2023).

Nowrouzi N., L. Kistler, K. Zhao, E. Lund, C. Mouikis, G. Payne, B. Klecker: The Variation of Ionospheric O+ and H+ Outflow on Storm Timescales. J. Geophys. Res. (Space Phys.) 128, 11 (2023).

O'Ryan D., B. Merín, B.D. Simmons, A. Vojteková, A. Anku, M. Walmsley, I.L. Garland, T. Géron, W. Keel, S. Kruk, C.J. Lintott, K.B. Mantha, K.L. Masters, J. Reerink, R.J. Smethurst, M.R. Thorne: Harnessing the Hubble Space Telescope Archives: A Catalog of 21,926 Interacting Galaxies. Ap. J. 948, 1 (2023).

Oberg N., S. Cazaux, I. Kamp, T.-. Bründl, W. Thi, C. Immerzeel: Circumplanetary disk ices. II. Composition. Astron. Astrophys. 672, A142 (2023).

Oberg N., I. Kamp, S. Cazaux, C. Rab, O. Czoske: Observing circumplanetary disks with METIS. Astron. Astrophys. 670, A74 (2023).

Okoda Y., Y. Oya, L. Francis, D. Johnstone, C. Ceccarelli, C. Codella, C.J. Chandler, N. Sakai, Y. Aikawa, F.O. Alves, E. Herbst, M.J. Maureira, M. Bouvier, P. Caselli, S. Choudhury, M. De Simone, I. Jímenez-Serra, J. Pineda, S. Yamamoto: FAUST. VII. Detection of a Hot Corino in the Prototypical Warm Carbon-chain Chemistry Source IRAS 15398-3359. Ap. J. 948, 2 (2023).

Omori Y., E. Baxter, C. Chang, [. . .], T.N. Varga, J. Weller, DES, SPT Collaborations: Joint analysis of Dark Energy Survey Year 3 data and CMB lensing from SPT and Planck. I. Construction of CMB lensing maps and modeling choices. Physical Review D 107, 2 (2023).

Osborn H., G. Nowak, G. Hébrard, [. . .], F. Biondi, et al.: Two warm Neptunes transiting HIP 9618 revealed by TESS and Cheops. Mon. Not. R. Astron. Soc. 523, 2 (2023).

Ota N., N. Nguyen-Dang, I. Mitsuishi, M. Oguri, M. Klein, N. Okabe, M. Ramos-Ceja, T. Reiprich, F. Pacaud, E. Bulbul, M. Brüggen, A. Liu, K. Migkas, I. Chiu, V. Ghirardini, S. Grandis, Y.-. Lin, H. Miyatake, S. Miyazaki, J. Sanders: The eROSITA Final Equatorial-Depth Survey (eFEDS). Xray properties of Subaru's optically selected clusters. Astron. Astrophys. 669, A110 (2023).

Pandhi A., R. Friesen, L. Fissel, J. Pineda, P. Caselli, M.-. Chen, J. Di Francesco, A. Ginsburg, H. Kirk, P. Myers, S. Offner, A. Punanova, F. Quan, E. Redaelli, E. Rosolowsky, S. Scibelli, Y. Seo, Y. Shirley: Alignment of dense molecular core morphology and velocity gradients with ambient magnetic fields. Mon. Not. R. Astron. Soc. 525, 1 (2023).

Paneque-Carreño T., A. Miotello, E. van Dishoeck, B. Tabone, A. Izquierdo, S. Facchini: Directly tracing the vertical stratification of molecules in protoplanetary disks. Astron. Astrophys. 669, A126 (2023).

Paz D.J., C.M. Correa, S.R. Gualpa, A.N. Ruiz, C.S. Bederián, R.D. Graña, N.D. Padilla: Guess the cheese flavour by the size of its holes: a cosmological test using the abundance of popcorn voids. Mon. Not. R. Astron. Soc. 522, 2 (2023).

Peralta de Arriba L., A. Alonso-Herrero, S. García-Burillo, I. García-Bernete, M. Villar-Martín, B. García-Lorenzo, R. Davies, D. Rosario, S. Hönig, N. Levenson, C. Packham, C. Ramos Almeida, M. Pereira-Santaella, A. Audibert, E. Bellocchi, E. Hicks, A. Labiano, C. Ricci, D. Rigopoulou: A radio-jet-driven outflow in the Seyfert 2 galaxy NGC 2110?. Astron. Astrophys. 675, A58 (2023).

Perotti G., V. Christiaens, T. Henning, B. Tabone, L. Waters, I. Kamp, G. Olofsson, S. Grant, D. Gasman, J. Bouwman, M. Samland, R. Franceschi, E. van Dishoeck, K. Schwarz, M. Güdel, P.-. Lagage, T. Ray, B. Vandenbussche, A. Abergel, O. Absil, A. Arabhavi, I. Argyriou, D. Barrado, A. Boccaletti, A. Caratti o Garatti, V. Geers, A. Glauser, K. Justannont, F. Lahuis, M. Mueller, C. Nehmé, E. Pantin, S. Scheithauer, C. Waelkens, R. Guadarrama, H. Jang, J. Kanwar, M. Morales-Calderón, N. Pawellek, D. Rodgers-Lee, J. Schreiber, L. Colina, T. Greve, G. Östlin, G. Wright: Water in the terrestrial planet-forming zone of the PDS 70 disk. Nature 620, 7974 (2023).

Petrosian V., E. Orlando, A. Strong: Transport of Cosmic- Ray Electrons from 1 au to the Sun. Ap. J. 943, 1 (2023).

Picogna, G., C. Schäfer, B. Ercolano, Ch. Rab, R. Franz, M. Gárate: Observability of photoevaporation signatures in the dust continuum emission of transition discs. Mon. Not. R. Astron. Soc. 523, 3, 3318-3327 (2023).

Pleintinger M.M., R. Diehl, T. Siegert, J. Greiner, M.G. Krause: 26Al gamma rays from the Galaxy with INTEGRAL/SPI. Astron. Astrophys. 672, A53 (2023).

Pokhrel, R., S.T. Megeath, R.A. Gutermuth, E. Furlan, W.J. Fischer, S. Federman, J.J. Tobin, A.M. Stutz, L. Hartmann, M. Osorio, D.M. Watson, T. Stanke, P. Manoj, M. Narang, P. Atnagulov, N. Habel, W. Zakri: Extension of HOPS out to 500 pc (eHOPS). I. Identification and Modeling of Protostars in the Aquila Molecular Clouds. Astrophysical Journal Supplement Series 266, 2, 32 (2023).

Ponti G., J. Sanders, N. Locatelli, X. Zheng, Y. Zhang, M. Yeung, M. Freyberg, K. Dennerl, J. Comparat, A. Merloni, E. Di Teodoro, M. Sasaki, T. Reiprich: Characterizing the patchy appearance of the circumgalactic medium and the influence of foreground absorption. Astron. Astrophys. 670, A99 (2023).

Ponti G., X. Zheng, N. Locatelli, S. Bianchi, Y. Zhang, K. Anastasopoulou, J. Comparat, K. Dennerl, M. Freyberg, F. Haberl, A. Merloni, T. Reiprich, M. Salvato, J. Sanders, M. Sasaki, A. Strong, M. Yeung: Abundance and temperature of the outer hot circumgalactic medium. The SRG/ eROSITA view of the soft X-ray background in the eFEDS field. Astron. Astrophys. 674, A195 (2023).

Ponti G., : Echo-tomography of the heart of the Milky Way. Nature Astronomy 7 (2023).

Porter L.E., B.W. Holwerda, S. Kruk, M. Lara-López, K.A. Pimbblet, C.P. Henry, S. Casura, L.S. Kelvin: The loneliest galaxies in the Universe: a GAMA and Galaxy Zoo study on void galaxy morphology. Mon. Not. R. Astron. Soc. 524, 4 (2023).

Portilla-Revelo B., I. Kamp, S. Facchini, E. van Dishoeck, C. Law, C. Rab, J. Bae, M. Benisty, K. Öberg, R. Teague: Constraining the gas distribution in the PDS 70 disc as a method to assess the effect of planet-disc interactions. Astron. Astrophys. 677, A76 (2023).

Posch L., N. Miret-Roig, J. Alves, S. Ratzenböck, J. Großschedl, S. Meingast, C. Zucker, A. Burkert: The Corona Australis star formation complex is accelerating away from the Galactic plane. Astron. Astrophys. 679, L10 (2023).

Pradhan P., C. Ferrigno, B. Paul, E. Bozzo, I. El Mellah, D.P. Huenemoerder, J.F. Steiner, V. Grinberg, F. Furst, C. Maitra, P. Romano, P. Kretschmar, J. Kennea, D.

Chakrabarty: Clumpy Wind Studies and the Nondetection of a Cyclotron Line in OAO 1657-415. Ap. J. 945, 1 (2023).

Prat J., G. Zacharegkas, Y. Park, [. . .], T.N. Varga, J. Weller, DES Collaboration: Non-local contribution from small scales in galaxy-galaxy lensing: comparison of mitigation schemes. Mon. Not. R. Astron. Soc. 522, 1 (2023).

Pulsoni C., O. Gerhard, S.M. Fall, M. Arnaboldi, A.I. Ennis, J. Hartke, L. Coccato, N.R. Napolitano: The extended Planetary Nebula Spectrograph (ePN.S) early-type galaxy survey: The specific angular momentum of ETGs. Astron. Astrophys. 674, A96 (2023).

Pöntinen M., M. Granvik, A. Nucita, [. . .], J. Weller, G. Zamorani, J. Zoubian, V. Scottez: Euclid: Identification of asteroid streaks in simulated images using deep learning. Astron. Astrophys. 679, A135 (2023).

Querejeta M., J. Pety, A. Schruba, A.K. Leroy, C.N. Herrera, I. Chiang, S.E. Meidt, E. Rosolowsky, E. Schinnerer, K. Schuster, J. Sun, K.A. Herrmann, A.T. Barnes, I. Bešlić, F. Bigiel, Y. Cao, M. Chevance, C. Eibensteiner, E. Emsellem, C.M. Faesi, A. Hughes, J. Kim, R.S. Klessen, K. Kreckel, J.D. Kruijssen, D. Liu, N. Neumayer, H. Pan, T. Saito, K. Sandstrom, Y. Teng, A. Usero, T.G. Williams, A. Zakardjian: A sensitive, high-resolution, wide-field IRAM NOEMA CO(1-0) survey of the very nearby spiral galaxy IC 342. Astron. Astrophys. 680, A4 (2023).

Rab C., M.L. Weber, G. Picogna, B. Ercolano, J.E. Owen: High-resolution [O I] Line Spectral Mapping of TW Hya Consistent with X-Ray-driven Photoevaporation. Ap. J. Lett. 955, 1 (2023).

Radinović S., S. Nadathur, H.-. Winther, [. . .], J. Weller, G. Zamorani, J. Zoubian, V. Scottez: Euclid: Cosmology forecasts from the void-galaxy cross-correlation function with reconstruction. Astron. Astrophys. 677, A78 (2023).

Ramírez-Tannus M.C., A. Bik, L. Cuijpers, R. Waters, C. Göppl, T. Henning, I. Kamp, T. Preibisch, K.V. Getman, G. Chaparro, P. Cuartas-Restrepo, A. de Koter, E.D. Feigelson, S.L. Grant, T.J. Haworth, S. Hernández, M.A. Kuhn, G. Perotti, M.S. Povich, M. Reiter, V. Roccatagliata, E. Sabbi, B. Tabone, A.J. Winter, A.F. McLeod, R. van Boekel, S.E. van Terwisga: XUE: Molecular Inventory in the Inner Region of an Extremely Irradiated Protoplanetary Disk. Ap. J. Lett. 958, 2 (2023).

Rana D., S. More, H. Miyatake, S. Grandis, M. Klein, E. Bulbul, I.-. Chiu, S. Miyazaki, N. Bahcall: The eROSITA Final Equatorial-Depth Survey (eFEDS) - Splashback radius of X-ray galaxy clusters using galaxies from HSC survey. Mon. Not. R. Astron. Soc. 522, 3 (2023).

Ray T., M. McCaughrean, A. Caratti o Garatti, P. Kavanagh, K. Justtanont, E. van Dishoeck, M. Reitsma, H. Beuther, L. Francis, C. Gieser, P. Klaassen, G. Perotti, L. Tychoniec, M. van Gelder, L. Colina, T.R. Greve, M. Güdel, T. Henning, P. Lagage, G. Östlin, B. Vandenbussche, C. Waelkens, G. Wright: Outflows from the youngest stars are mostly molecular. Nature 622, 7981 (2023).

Ray T., M. McCaughrean, A. Caratti o Garatti, P. Kavanagh, K. Justtanont, E. van Dishoeck, M. Reitsma, H. Beuther, L. Francis, C. Gieser, P. Klaassen, G. Perotti, L. Tychoniec, M. van Gelder, L. Colina, T.R. Greve, M. Güdel, T. Henning, P. Lagage, G. Östlin, B. Vandenbussche, C. Waelkens, G. Wright: Author Correction: Outflows from the youngest stars are mostly molecular. Nature 623, 7985 (2023).

Redaelli E., L. Bizzocchi, P. Caselli, J. Pineda: Nitrogen fractionation in ammonia and its insights into nitrogen chemistry. Astron. Astrophys. 674, L8 (2023).

Riaz B., W.-. Thi, M. Machida: First observations of warm and cold methanol in Class 0/I proto-brown dwarfs. Mon. Not. R. Astron. Soc. 522, 4 (2023).

Richard-Laferrière A., H. Russell, A. Fabian, U. Chadayammuri, C. Reynolds, R. Canning, A. Edge, J. Hlavacek- Larrondo, L. King, B. McNamara, P. Nulsen, J. Sanders:

Constraints on thermal conductivity in the merging cluster Abell 2146. Mon. Not. R. Astron. Soc. 526, 4 (2023).

Riedel W., O. Sipilä, E. Redaelli, P. Caselli, A. Vasyunin, F. Dulieu, N. Watanabe: Modelling deuterated isotopologues of methanol towards the pre-stellar core L1544. Astron. Astrophys. 680, A87 (2023).

Riffel R., T. Storchi-Bergmann, R. Riffel, M. Bianchin, N. Zakamska, D. Ruschel-Dutra, M. Bentz, L. Burtscher, D. Crenshaw, L. Dahmer-Hahn, N. Dametto, R. Davies, M. Diniz, T. Fischer, C. Harrison, V. Mainieri, M. Revalski, A. Rodriguez-Ardila, D. Rosario, A. Schönell: The AGNIFS survey: spatially resolved observations of hot molecular and ionized outflows in nearby active galaxies. Mon. Not. R. Astron. Soc. 521, 2 (2023).

Rocha C.M., O. Roncero, N. Bulut, P. Zuchowski, D. Navarro- Almaida, A. Fuente, V. Wakelam, J. Loison, E. Roueff, J.R. Goicoechea, G. Esplugues, L. Beitia-Antero, P. Caselli, V. Lattanzi, J. Pineda, R. Le Gal, M. Rodríguez-Baras, P. Riviere-Marichalar: Gas phase Elemental abundances in Molecular cloudS (GEMS). VIII. Unlocking the CS chemistry: The CH + S CS + H and C2 + S CS + C reactions. Astron. Astrophys. 677, A41 (2023).

Rocha W., P. Woitke, S. Pilling, W.-. Thi, J. Jørgensen, L. Kristensen, G. Perotti, I. Kamp: Simulation of CH3OH ice UV photolysis under laboratory conditions. Astron. Astrophys. 673, A70 (2023).

Rodríguez M.J., J.C. Lee, B. Whitmore, D.A. Thilker, D. Maschmann, R. Chandar, S. Deger, M. Boquien, D.A. Dale, K.L. Larson, T.G. Williams, H. Kim, E. Schinnerer, E. Rosolowsky, A.K. Leroy, E. Emsellem, K.M. Sandstrom, J.D. Kruijssen, K. Grasha, E.J. Watkins, A.T. Barnes, M.C. Sormani, J. Kim, G.S. Anand, M. Chevance, F. Bigiel, R.S. Klessen, H. Hassani, D. Liu, C.M. Faesi, Y. Cao, F. Belfiore, I. Pessa, K. Kreckel, B. Groves, J. Pety, R. Indebetouw, O.V. Egorov, G.A. Blanc, T. Saito, A. Hughes: PHANGSJWST First Results: Dust-embedded Star Clusters in NGC 7496 Selected via 3.3 micrometer PAH Emission. Ap. J. Lett. 944, 2 (2023).

Rodríguez-Baras M., G. Esplugues, A. Fuente, S. Spezzano, P. Caselli, J. Loison, E. Roueff, D. Navarro-Almaida, R. Bachiller, R. Martín-Doménech, I. Jiménez-Serra, L. Beitia-Antero, R. Le Gal: Gas phase Elemental abundances in Molecular cloudS (GEMS). IX. Deuterated compounds of H2S in starless cores. Astron. Astrophys. 679, A120 (2023).

Rommel F., F. Braga-Ribas, J. Ortiz, [. . .] , T. G. Müller, et al.: A large topographic feature on the surface of the trans-Neptunian object (307261) 2002 MS4 measured from stellar occultations. Astron. Astrophys. 678, A167 (2023).

Rukdee S., S. Ben-Ami, M. López-Morales, A. Szentgyorgyi, D. Charbonneau, J. García-Mejía, J. Buchner: First on-sky results of a Fabry-Perot Instrument for Oxygen Searches (FIOS) prototype. Astron. Astrophys. 678, A114 (2023).

Rupke D.S., D. Wylezalek, N.L. Zakamska, S. Veilleux, C. Bertemes, Y. Ishikawa, W. Liu, S. Sankar, A. Vayner, H.X. Grace Lim, R. McCrory, G. Murphree, L. Whitesell, L. Shen, G. Liu, J.K. Barrera-Ballesteros, H. Chen, N. Diachenko, A.D. Goulding, J.E. Greene, K.N. Hainline, F. Hamann, T. Heckman, S.D. Johnson, D. Lutz, N. Lützgendorf, V. Mainieri, N.P. Nesvadba, P. Ogle, E. Sturm: First Results from the JWST Early Release Science Program Q3D: Benchmark Comparison of Optical and Mid-infrared Tracers of a Dusty, Ionized Red Quasar Wind at z = 0.435. Ap. J. Lett. 953, 2 (2023).

Sabatini G., S. Bovino, E. Redaelli: First ALMA Maps of Cosmic-Ray Ionization Rate in High-mass Star-forming Regions. Ap. J. Lett. 947, 1 (2023).

Sanders R.L., A.E. Shapley, T. Jones, I. Shivaei, G. Popping, N.A. Reddy, R. Davé, S.H. Price, B. Mobasher, M. Kriek, A.L. Coil, B. Siana: CO Emission, Molecular Gas, and Metallicity in Main-sequence Star-forming Galaxies at z 2.3. Ap. J. 942, 1 (2023).

Sandstrom K.M., J. Chastenet, J. Sutter, A.K. Leroy, O.V. Egorov, T.G. Williams, A.D. Bolatto, M. Boquien, Y. Cao, D.A. Dale, J.C. Lee, E. Rosolowsky, E. Schinnerer, A.T. Barnes, F. Belfiore, F. Bigiel, M. Chevance, K. Grasha, B. Groves, H. Hassani, A. Hughes, R.S. Klessen, J.D. Kruijssen, K.L. Larson, D. Liu, L.A. Lopez, S.E. Meidt, E.J. Murphy, M.C. Sormani, D.A. Thilker, E.J. Watkins: PHANGS-JWST First Results: Mapping the 3.3 micrometer Polycyclic Aromatic Hydrocarbon Vibrational Band in Nearby Galaxies with NIRCam Medium Bands. Ap. J. Lett. 944, 2 (2023).

Sandstrom K.M., E.W. Koch, A.K. Leroy, E. Rosolowsky, E. Emsellem, R.J. Smith, O.V. Egorov, T.G. Williams, K.L. Larson, J.C. Lee, E. Schinnerer, D.A. Thilker, A.T. Barnes, F. Belfiore, F. Bigiel, G.A. Blanc, A.D. Bolatto, M. Boquien, Y. Cao, J. Chastenet, M. Chevance, I. Chiang, D.A. Dale, C.M. Faesi, S.C. Glover, K. Grasha, B. Groves, H. Hassani, J.D. Henshaw, A. Hughes, J. Kim, R.S. Klessen, K. Kreckel, J.D. Kruijssen, L.A. Lopez, D. Liu, S.E. Meidt, E.J. Murphy, H. Pan, M. Querejeta, T. Saito, A. Sardone, M.C. Sormani, J. Sutter, A. Usero, E.J. Watkins: PHANGS-JWST First Results: Tracing the Diffuse Interstellar Medium with JWST Imaging of Polycyclic Aromatic Hydrocarbon Emission in Nearby Galaxies. Ap. J. Lett. 944, 2 (2023).

Sarkar A., S. Randall, Y. Su, G.E. Alvarez, C.L. Sarazin, C. Jones, E. Blanton, P. Nulsen, P. Chakraborty, E. Bulbul, J. Zuhone, F. Andrade-Santos, R.E. Johnson: Gas Sloshing and Cold Fronts in Pre-merging Galaxy Cluster A98. Ap. J. 944, 2 (2023).

Sartoretti P., O. Marchal, C. Babusiaux, C. Jordi, A. Guerrier, P. Panuzzo, D. Katz, G. Seabroke, F. Thévenin, M. Cropper, K. Benson, R. Blomme, R. Haigron, M. Smith, S. Baker, L. Chemin, M. David, C. Dolding, Y. Frémat, K. Janßen, G. Jasniewicz, A. Lobel, G. Plum, N. Samaras, O. Snaith, C. Soubiran, O. Vanel, T. Zwitter, N. Brouillet, E. Caffau, F. Crifo, C. Fabre, F. Fragkoudi, A. Jean-Antoine Piccolo, H. Huckle, Y. Lasne, N. Leclerc, A. Mastrobuono- Battisti, F. Royer, Y. Viala, J. Zorec: Gaia Data Release 3. GRVS photometry from the RVS spectra. Astron. Astrophys. 674, A6 (2023).

Savić Đ.V., I. Jankov, W. Yu, V. Petrecca, M.J. Temple, Q. Ni, R. Shirley, A.B. Kovačević, M. Nikolić, D. Ilić, L.Č. Popović, M. Paolillo, S. Panda, A. Ćiprijanović, G.T. Richards: The LSST AGN Data Challenge: Selection Methods. Ap. J. 953, 2 (2023).

Scheck D., J.S. Sanders, V. Biffi, K. Dolag, E. Bulbul, A. Liu: Hydrostatic mass profiles of galaxy clusters in the eROSITA survey. Astron. Astrophys. 670, A33 (2023).

Schiappucci E., F. Bianchini, M. Aguena, [. . .], J. Weller, N. Whitehorn, W. Wu, V. Yefremenko, M. Young, SPT-3G, DES Collaborations: Measurement of the mean central optical depth of galaxy clusters via the pairwise kinematic Sunyaev-Zel'dovich effect with SPT-3G and DES. Physical Review D 107, 4 (2023).

Schinnerer E., E. Emsellem, J.D. Henshaw, D. Liu, S.E. Meidt, M. Querejeta, F. Renaud, M.C. Sormani, J. Sun, O.V. Egorov, K.L. Larson, A.K. Leroy, E. Rosolowsky, K.M. Sandstrom, T. Williams, A.T. Barnes, F. Bigiel, M. Chevance, Y. Cao, R. Chandar, D.A. Dale, C. Eibensteiner, S.C. Glover, K. Grasha, S. Hannon, H. Hassani, J. Kim, R.S. Klessen, J.D. Kruijssen, E.J. Murphy, J. Neumann, H. Pan, J. Pety, T. Saito, S.K. Stuber, R.G. Treß, A. Usero, E.J. Watkins, B.C. Whitmore, Phangs: PHANGS-JWST First Results: Rapid Evolution of Star Formation in the Central Molecular Gas Ring of NGC 1365. Ap. J. Lett. 944, 2 (2023).

Schmidt T., T. Treu, S. Birrer, [. . .], T. Varga, DES Collaboration: STRIDES: automated uniform models for 30 quadruply imaged quasars. Mon. Not. R. Astron. Soc. 518, 1 (2023).

Schmitt-Kopplin P., N. Hertkorn, M. Harir, et al.: Soluble organic matter Molecular atlas of Ryugu reveals cold hydrothermalism on C-type asteroid parent body. Nature Communications 14, 6525 (2023).

Schuster N., N. Hamaus, K. Dolag, J. Weller: Why cosmic voids matter: nonlinear structure and linear dynamics. J. of Cosmology and Astroparticle Phys. 2023, 5 (2023).

Scibelli S., Y. Shirley, A. Schmiedeke, B. Svoboda, A. Singh, J. Lilly, P. Caselli: 3D radiative transfer modelling and virial analysis of starless cores in the B10 region of the Taurus molecular cloud. Mon. Not. R. Astron. Soc. 521, 3, p. 4579–4597 (2023).

Semenaite, A., A.G. Sánchez, A. Pezzotta, J. Hou, A. Eggemeier, M. Crocce, C. Zhao, J.R. Brownstein, G. Rossi, D.P. Schneider: Beyond - QCDM constraints from the full shape clustering measurements from BOSS and eBOSS. Mon. Not. R. Astron. Soc. 521, 4, (2023).

Seppi R., J. Comparat, K. Nandra, K. Dolag, V. Biffi, E. Bulbul, A. Liu, V. Ghirardini, J. Ider-Chitham: Offset between X-ray and optical centers in clusters of galaxies: Connecting eROSITA data with simulations. Astron. Astrophys. 671, A57 (2023).

Shields J.V., P. Arunachalam, W. Kerzendorf, J.P. Hughes, S. Biriouk, H. Monk, J. Buchner: No Surviving SN Ia Companion in SNR 0509-67.5: Stellar Population Characterization and Comparison to Models. Ap. J. Lett. 950, 2 (2023).

Sidoli L., G. Ponti, V. Sguera, P. Esposito: Capturing the lowest luminosity state of the supergiant fast X-ray transient XTE J1739-302. Astron. Astrophys. 671, A150 (2023).

Siegert T., M.M. Pleintinger, R. Diehl, M.G. Krause, J. Greiner, C. Weinberger: Galactic population synthesis of radioactive nucleosynthesis ejecta. Astron. Astrophys. 672, A54 (2023).

Silverman J.D., V. Mainieri, X. Ding, D. Liu, K. Jahnke, M. Hirschmann, J. Kartaltepe, E. Lambrides, M. Onoue, B. Trakhtenbrot, E. Vardoulaki, A. Bongiorno, C. Casey, F. Civano, A. Faisst, M. Franco, S. Gillman, G. Gozaliasl, C.C. Hayward, A.M. Koekemoer, V. Kokorev, G. Magdis, S. Marchesi, R.M. Rich, M. Sparre, H. Suh, T. Tanaka, F. Valentino: Resolving Galactic-scale Obscuration of XRay AGNs at z $>$ 1 with COSMOS-Web. Ap. J. Lett. 951, 2 (2023).

Sipilä O., L. Colzi, E. Roueff, P. Caselli, F. Fontani, E. Wirström: Combined model for 15N, 13C, and spin-state chemistry in molecular clouds. Astron. Astrophys. 678, A120 (2023).

Skretas I., A. Karska, F. Wyrowski, K. Menten, H. Beuther, A. Ginsburg, A. Hernández-Gómez, C. Gieser, S. Li, W.-. Kim, D. Semenov, L. Bouscasse, I. Christensen, J. Winters, A. Hacar: The Cygnus Allscale Survey of Chemistry and Dynamical Environments: CASCADE. II. A detailed kinematic analysis of the DR21 Main outflow. Astron. Astrophys. 679, A66 (2023).

Slavicinska K., M. Rachid, W. Rocha, K.-. Chuang, E. van Dishoeck, H. Linnartz: The hunt for formamide in interstellar ices. A toolkit of laboratory infrared spectra in astronomically relevant ice mixtures and comparisons to ISO, Spitzer, and JWST observations. Astron. Astrophys. 677, A13 (2023).

Smith S.E., R. Friesen, A. Marchal, J.E. Pineda, P. Caselli, M.C. Chen, S. Choudhury, J. Di Francesco, A. Ginsburg, H. Kirk, C. Matzner, A. Punanova, S. Scibelli, Y. Shirley: Velocity-coherent substructure in TMC-1: inflow and fragmentation. Mon. Not. R. Astron. Soc. 519, 1 (2023).

Šrámková E., M. Matuszková, K. Klimovičová, J. Horák, O. Straub, G. Urbancová, M. Urbanec, V. Karas, G. Török, D. Lančová: Oscillations of fluid tori around neutron stars. Astron. Nachr. 344, 1-2 (2023).

Stapper L., M. Hogerheijde, E. van Dishoeck, T. Paneque- Carreño: A dichotomy in group II Herbig disks. ALMA gas disk height measurements show both shadowed large vertically extended disks and compact flat disks. Astron. Astrophys. 669, A158 (2023).

Stein M., V. Heesen, R.-. Dettmar, Y. Stein, M. Brüggen, R. Beck, B. Adebahr, T. Wiegert, C. Vargas, D. Bomans, J. Li, J. English, K. Chyży, R. Paladino, F. Tabatabaei, A.

Strong: CHANG-ES. XXVI. Insights into cosmic-ray transport from radio halos in edge-on galaxies. Astron. Astrophys. 670, A158 (2023).

Stel G., G. Ponti, F. Haardt: Iron K alpha echoes from the circumnuclear disk orbiting Sgr A* Astron. Astrophys. 679, A44 (2023).

Strazzullo V., M. Pannella, J. Mohr, A. Saro, M. Ashby, M. Bayliss, R. Canning, B. Floyd, A. Gonzalez, G. Khullar, K. Kim, M. McDonald, C. Reichardt, K. Sharon, T. Somboonpanyakul: Galaxy populations in the most distant SPT-SZ clusters. II. Galaxy structural properties in massive clusters at $1.4 < z < 1.7$. Astron. Astrophys. 669, A131 (2023).

Stuber S.K., J. Pety, E. Schinnerer, F. Bigiel, A. Usero, I. Bešlić, M. Querejeta, M.J. Jiménez-Donaire, A. Leroy, J. den Brok, L. Neumann, C. Eibensteiner, Y. Teng, A. Barnes, M. Chevance, D. Colombo, D.A. Dale, S.C. Glover, D. Liu, H. Pan: Surveying the Whirlpool at Arcseconds with NOEMA (SWAN). I. Mapping the HCN and N2H+ 3mm lines. Astron. Astrophys. 680, L20 (2023).

Stuber S.K., E. Schinnerer, T.G. Williams, M. Querejeta, S. Meidt, É. Emsellem, A. Barnes, R.S. Klessen, A.K. Leroy, J. Neumann, M.C. Sormani, F. Bigiel, M. Chevance, D. Dale, C. Faesi, S.C. Glover, K. Grasha, J.D. Kruijssen, D. Liu, H. Pan, J. Pety, F. Pinna, T. Saito, A. Usero, E.J. Watkins: The gas morphology of nearby star-forming galaxies. Astron. Astrophys. 676, A113 (2023).

Sturm J., M. McClure, T. Beck, D. Harsono, J. Bergner, E. Dartois, A. Boogert, J. Chiar, M. Cordiner, M. Drozdovskaya, S. Ioppolo, C. Law, H. Linnartz, D. Lis, G. Melnick, B. McGuire, J. Noble, K. Öberg, M. Palumbo, Y. Pendleton, G. Perotti, K. Pontoppidan, D. Qasim, W. Rocha, H. Terada, R. Urso, E. van Dishoeck: A JWST inventory of protoplanetary disk ices. The edge-on protoplanetary disk HH 48 NE, seen with the Ice Age ERS program. Astron. Astrophys. 679, A138 (2023).

Sun D., K. Mawatari, M. Ouchi, Y. Ono, H. Yajima, Y. Zhang, M. Abe, W.P. Bowman, E.M. Cooper, D. Davis, D.J. Farrow, K. Gebhardt, G.J. Hill, C. Liu, D.P. Schneider: Cosmological- scale Lya Forest Absorption around Galaxies and AGNs Probed with the HETDEX and SDSS Spectroscopic Data. Ap. J. 951, 1 (2023).

Sun J., A.K. Leroy, E.C. Ostriker, S. Meidt, E. Rosolowsky, E. Schinnerer, C.D. Wilson, D. Utomo, F. Belfiore, G.A. Blanc, E. Emsellem, C. Faesi, B. Groves, A. Hughes, E.W. Koch, K. Kreckel, D. Liu, H. Pan, J. Pety, M. Querejeta, A. Razza, T. Saito, A. Sardone, A. Usero, T.G. Williams, F. Bigiel, A.D. Bolatto, M. Chevance, D.A. Dale, J. Gensior, S.C. Glover, K. Grasha, J.D. Henshaw, M.J. Jiménez-Donaire, R.S. Klessen, J.D. Kruijssen, E.J. Murphy, L. Neumann, Y. Teng, D.A. Thilker: Star Formation Laws and Efficiencies across 80 Nearby Galaxies. Ap. J. Lett. 945, 2 (2023).

Sun J., A.K. Leroy, E. Schinnerer, A. Hughes, E. Rosolowsky, M. Querejeta, A. Schruba, D. Liu, T. Saito, C.N. Herrera, C. Faesi, A. Usero, J. Pety, J.D. Kruijssen, E.C. Ostriker, F. Bigiel, G.A. Blanc, A.D. Bolatto, M. Boquien, M. Chevance, D.A. Dale, S. Deger, E. Emsellem, S.C. Glover, K. Grasha, B. Groves, J. Henshaw, M.J. Jimenez-Donaire, J.J. Kim, R.S. Klessen, K. Kreckel, J.C. Lee, S. Meidt, K. Sandstrom, A.E. Sardone, D. Utomo, T.G. Williams: Erratum: "Molecular Gas Properties on Cloud Scales across the Local Star-forming Galaxy Population" (2020, ApJL, 901, L8). Ap. J. Lett. 946, 2 (2023).

Sunseri J., Z. Slepian, S. Portillo, J. Hou, S. Kahraman, D.P. Finkbeiner: SARABANDE: 3/4 point correlation functions with fast Fourier transforms. RAS Techniques and Instruments 2, 1, p. 62- 77 (2023).

Sureshkumar U., A. Durkalec, A. Pollo, M. Bilicki, M. Cluver, S. Bellstedt, D. Farrow, J. Loveday, E. Taylor, J. Bland-Hawthorn: Galaxy and Mass Assembly (GAMA). Mid-infrared properties as tracers of galaxy environment. Astron. Astrophys. 669, A27 (2023).

Szakacs R., C. Péroux, D. Nelson, M.A. Zwaan, D. Grün, S. Weng, A.Y. Fresco, V. Bollo, B. Casavecchia: The BarYon Cycle project (ByCycle): identifying and localizing Mg II metal absorbers with machine learning. Mon. Not. R. Astron. Soc. 526, 3 (2023).

Szakáts R., C. Kiss, J. Ortiz, N. Morales, A. Pál, T. Müller, J. Greiner, P. Santos-Sanz, G. Marton, R. Duffard, P. Sági, E. Forgács-Dajka: Tidally locked rotation of the dwarf planet (136199) Eris discovered via long-term groundbased and space photometry. Astron. Astrophys. 669, L3 (2023).

Sánchez J., Y. Omori, C. Chang, [. . .] J. Mohr, [. . .], DES Collaboration, SPT Collaboration: Mapping gas around massive galaxies: cross-correlation of DES Y3 galaxies and Compton-y maps from SPT and Planck. Mon. Not. R. Astron. Soc. 522, 2 (2023).

Sánchez-Sierras J., T. Muñoz-Darias, J. Casares, G. Panizo-Espinar, M. Armas Padilla, J. Corral-Santana, V. Cúneo, D. Mata Sánchez, S. Motta, G. Ponti, D. Steeghs, M. Torres, F. Vincentelli: Optical and near-infrared spectroscopy of the black hole transient 4U 1543-47 during its 2021 ultra-luminous state. Astron. Astrophys. 673, A104 (2023).

Tabatabaei F.S., E. Redaelli, P. Caselli, F.O. Alves: The kinematics of the magnetized protostellar core IRAS15398- 3359. Astron. Astrophys. 672, A72 (2023).

Tabone B., G. Bettoni, E. van Dishoeck, A. Arabhavi, S. Grant, D. Gasman, T. Henning, I. Kamp, M. Güdel, P. Lagage, T. Ray, B. Vandenbussche, A. Abergel, O. Absil, I. Argyriou, D. Barrado, A. Boccaletti, J. Bouwman, A. Caratti o Garatti, V. Geers, A. Glauser, K. Justannont, F. Lahuis, M. Mueller, C. Nehmé, G. Olofsson, E. Pantin, S. Scheithauer, C. Waelkens, L. Waters, J. Black, V. Christiaens, R. Guadarrama, M. Morales-Calderón, H. Jang, J. Kanwar, N. Pawellek, G. Perotti, A. Perrin, D. Rodgers-Lee, M. Samland, J. Schreiber, K. Schwarz, L. Colina, G. Östlin, G. Wright: A rich hydrocarbon chemistry and high C to O ratio in the inner disk around a very low-mass star. Nature Astronomy 7 (2023).

Tamura Y., T.J. C. Bakx, A.K. Inoue, T. Hashimoto, T. Tokuoka, C. Imamura, B. Hatsukade, M.M. Lee, K. Moriwaki, T. Okamoto, K. Ota, H. Umehata, N. Yoshida, E. Zackrisson, M. Hagimoto, H. Matsuo, I. Shimizu, Y. Sugahara, T.T. Takeuchi: The 300 pc Resolution Imaging of a z = 8.31 Galaxy: Turbulent Ionized Gas and Potential Stellar Feedback 600 Million Years after the Big Bang. Ap. J. 952, 1 (2023).

Taniguchi K., L. Majumdar, P. Caselli, S. Takakuwa, T. Hsieh, M. Saito, Z. Li, K. Dobashi, T. Shimoikura, F. Nakamura, J.C. Tan, E. Herbst: Chemical Differentiation around Five Massive Protostars Revealed by ALMA: Carbon- chain Species and Oxygen/Nitrogen-bearing Complex Organic Molecules. Ap. J. Supp. Ser. 267, 1 (2023).

Tardugno Poleo V., S.L. Finkelstein, G. Leung, E. Mentuch Cooper, K. Gebhardt, D.J. Farrow, E. Gawiser, G. Zeimann, D.P. Schneider, L. Morabito, D. Mock, C. Liu: Identifying Active Galactic Nuclei at z 3 from the HETDEX Survey Using Machine Learning. Astron. J. 165, 4 (2023).

Temmink M., A. Booth, N. van der Marel, E. van Dishoeck: Investigating the asymmetric chemistry in the disk around the young star HD 142527. Astron. Astrophys. 675, A131 (2023).

Teng Y., K.M. Sandstrom, J. Sun, M. Gong, A.D. Bolatto, I. Chiang, A.K. Leroy, A. Usero, S.C. Glover, R.S. Klessen, D. Liu, M. Querejeta, E. Schinnerer, F. Bigiel, Y. Cao, M. Chevance, C. Eibensteiner, K. Grasha, F.P. Israel, E.J. Murphy, L. Neumann, H. Pan, F. Pinna, M.C. Sormani, J. Smith, F. Walter, T.G. Williams: The Physical Drivers and Observational Tracers of CO-to-H2 Conversion Factor Variations in Nearby Barred Galaxy Centers. Ap. J. 950, 2 (2023).

Thilker D.A., J.C. Lee, S. Deger, A.T. Barnes, F. Bigiel, M. Boquien, Y. Cao, M. Chevance, D.A. Dale, O.V. Egorov, S.C. Glover, K. Grasha, J.D. Henshaw, R.S. Klessen, E. Koch, J.D. Kruijssen, A.K. Leroy, R.A. Lessing, S.E. Meidt, F. Pinna, M. Querejeta, E.

Rosolowsky, K.M. Sandstrom, E. Schinnerer, R.J. Smith, E.J. Watkins, T.G. Williams, G.S. Anand, F. Belfiore, G.A. Blanc, R. Chandar, E. Congiu, E. Emsellem, B. Groves, K. Kreckel, K.L. Larson, D. Liu, I. Pessa, B.C. Whitmore: PHANGS-JWST First Results: The Dust Filament Network of NGC 628 and Its Relation to Star Formation Activity. Ap. J. Lett. 944, 2 (2023).

Tortosa A., C. Ricci, L.C. Ho, F. Tombesi, P. Du, K. Inayoshi, J. Wang, J. Shangguan, R. Li: Systematic broadband X-ray study of super-Eddington accretion on to supermassive black holes - I. X-ray continuum. Mon. Not. R. Astron. Soc. 519, 4 (2023).

Tubín-Arenas D., G. Lamer, M. Krumpe, T. Urrutia, A. Schwope, R. Brogan, J. Comparat, M. Salvato, E. Bulbul, C. Garrel, M. Schramm, T. Liu: Discovery of the lensed quasar eRASS1 J050129.5-073309 with SRG/eROSITA and Gaia. Astron. Astrophys. 672, L9 (2023).

Upsdell E., P. Giles, A. Romer, [. . .], J. Weller, P. Wiseman: The XMM cluster survey: exploring scaling relations and completeness of the dark energy survey year 3 redMaPPer cluster catalogue. Mon. Not. R. Astron. Soc. 522, 4 (2023).

Valdivia-Mena M., J. Pineda, D. Segura-Cox, P. Caselli, A. Schmiedeke, S. Choudhury, S. Offner, R. Neri, A. Goodman, G. Fuller: Flow of gas detected from beyond the filaments to protostellar scales in Barnard 5. Astron. Astrophys. 677, A92 (2023).

Valentini M., K. Dolag, S. Borgani, G. Murante, U. Maio, L. Tornatore, G.L. Granato, C. Ragone-Figueroa, A. Burkert, A. Ragagnin, E. Rasia: Impact of H2-driven star formation and stellar feedback from low-enrichment environments on the formation of spiral galaxies. Mon. Not. R. Astron. Soc. 518, 1 (2023).

Vayner A., N.L. Zakamska, Y. Ishikawa, S. Sankar, D. Wylezalek, D.S. Rupke, S. Veilleux, C. Bertemes, J.K. Barrera- Ballesteros, H. Chen, N. Diachenko, A.D. Goulding, J.E. Greene, K.N. Hainline, F. Hamann, T. Heckman, S.D. Johnson, H.X. Grace Lim, W. Liu, D. Lutz, N. Lützgendorf, V. Mainieri, R. McCrory, G. Murphree, N.P. Nesvadba, P. Ogle, E. Sturm, L. Whitesell: First Results from the JWST Early Release Science Program Q3D: Ionization Cone, Clumpy Star Formation, and Shocks in a z = 3 Extremely Red Quasar Host. Ap. J. 955, 2 (2023).

Veilleux S., W. Liu, A. Vayner, D. Wylezalek, D.S. Rupke, N.L. Zakamska, Y. Ishikawa, C. Bertemes, J.K. Barrera- Ballesteros, H. Chen, N. Diachenko, A.D. Goulding, J.E. Greene, K.N. Hainline, F. Hamann, T. Heckman, S.D. Johnson, H.X. Grace Lim, D. Lutz, N. Lützgendorf, V. Mainieri, R. Maiolino, R. McCrory, G. Murphree, N.P. Nesvadba, P. Ogle, S. Sankar, E. Sturm, L. Whitesell: First Results from the JWST Early Release Science Program Q3D: The Warm Ionized Gas Outflow in z 1.6 Quasar XID 2028 and Its Impact on the Host Galaxy. Ap. J. 953, 1 (2023).

Vermette B., C. Salcedo, K. Mori, J. Gerber, K.D. Yoon, G. Bridges, C.J. Hailey, F. Haberl, J. Hong, J. Grindlay, G. Ponti, G. Ramsay: Constraining the White-dwarf Mass and Magnetic Field Strength of a New Intermediate Polar through X-Ray Observations. Ap. J. 954, 2 (2023).

Vincenzi M., M. Sullivan, A. Möller, [. . .], T.N. Varga, J. Weller, DES Collaboration: The Dark Energy Survey supernova program: cosmological biases from supernova photometric classification. Mon. Not. R. Astron. Soc. 518, 1 (2023).

Vinkó J., B.P. Thomas, J.C. Wheeler, A.Y. Ho, E.M. Cooper, K. Gebhardt, R. Ciardullo, D.J. Farrow, G.J. Hill, Z. Jäger, W. Kollatschny, C. Liu, E. Regős, K. Sárneczky: Searching for Supernovae in HETDEX Data Release 3. Ap. J. 946, 1 (2023).

Wang W., M. Zhai, G. Zhao, S. Wang, J. Liu, J. Chang, X. Zhang, J. Dong, B. Xu, F. Grupp: The Tianlin Mission: A 6 m UV/Opt/IR Space Telescope to Explore Habitable Worlds and the Universe. Research in Astron. and Astrophys. 23, 9 (2023).

Watkins E.J., A.T. Barnes, K. Henny, H. Kim, K. Kreckel, S.E. Meidt, R.S. Klessen, S.C. Glover, T.G. Williams, B.W. Keller, A.K. Leroy, E. Rosolowsky, J.C. Lee, G.S. Anand,

F. Belfiore, F. Bigiel, G.A. Blanc, M. Boquien, Y. Cao, R. Chandar, N.M. Chen, M. Chevance, E. Congiu, D.A. Dale, S. Deger, O.V. Egorov, E. Emsellem, C.M. Faesi, K. Grasha, B. Groves, H. Hassani, J.D. Henshaw, C. Herrera, A. Hughes, S. Jeffreson, M.J. Jiménez-Donaire, E.W. Koch, J.D. Kruijssen, K.L. Larson, D. Liu, L.A. Lopez, I. Pessa, J. Pety, M. Querejeta, T. Saito, K. Sandstrom, F. Scheuermann, E. Schinnerer, M.C. Sormani, S.K. Stuber, D.A. Thilker, A. Usero, B.C. Whitmore: PHANGS-JWST First Results: A Statistical View on Bubble Evolution in NGC 628. Ap. J. Lett. 944, 2 (2023).

Weaver J., I. Davidzon, S. Toft, O. Ilbert, H. McCracken, K. Gould, C. Jespersen, C. Steinhardt, C. Lagos, P. Capak, C. Casey, N. Chartab, A. Faisst, C. Hayward, J. Kartaltepe, O. Kauffmann, A. Koekemoer, V. Kokorev, C. Laigle, D. Liu, A. Long, G. Magdis, C. McPartland, B. Milvang-Jensen, B. Mobasher, A. Moneti, Y. Peng, D. Sanders, M. Shuntov, A. Sneppen, F. Valentino, L. Zalesky, G. Zamorani: COSMOS2020: The galaxy stellar mass function. The assembly and star formation cessation of galaxies at $0.2< z <7.5$. Astron. Astrophys. 677, A184 (2023).

Webb N.A., F.J. Carrera, A. Schwope, C. Motch, J. Ballet, M. Watson, M. Page, M. Freyberg, I. Georgantopoulos, M. Coriat, D. Barret, Z. Massida, M. Gupta, H. Tranin, E. Quintin, M. Teresa Ceballos, S. Mateos, A. Corral, R. Dominguez, H. Stiele, I. Traulsen, A. Pires, A. Nebot, L. Michel, F. Xavier Pineau, J. Kuuttila, P. Maggi, S. Chakroborty, K. Birchall, P. Kuin, A. Akylas, A. Ruiz, E. Pouliasis, A. Georgakakis: XMM2ATHENA, the H2020 project to improve XMM-Newton analysis software and prepare for Athena. Astron. Nachr. 344, 7 (2023).

Weng S., C. Péroux, A. Karki, R. Augustin, V. Kulkarni, R. Szakacs, M. Zwaan, A. Klitsch, A. Hamanowicz, E. Sadler, A. Biggs, A. Fresco, M. Hayes, J. Howk, G. Kacprzak, H. Kuntschner, D. Nelson, M. Pettini: MUSE-ALMA Haloes - VIII. Statistical study of circumgalactic medium gas. Mon. Not. R. Astron. Soc. 519, 1 (2023).

Wevers T., E. Coughlin, D. Pasham, M. Guolo, Y. Sun, S. Wen, P. Jonker, A. Zabludoff, A. Malyali, R. Arcodia, Z. Liu, A. Merloni, A. Rau, I. Grotova, P. Short, Z. Cao: Live to Die Another Day: The Rebrightening of AT 2018fyk as a Repeating Partial Tidal Disruption Event. Ap. J. Lett. 942, 2 (2023).

Whitmore B.C., R. Chandar, M.J. Rodríguez, J.C. Lee, E. Emsellem, M. Floyd, H. Kim, J.D. Kruijssen, A. Mok, M.C. Sormani, M. Boquien, D.A. Dale, C.M. Faesi, K.F. Henny, S. Hannon, D.A. Thilker, R.L. White, A.T. Barnes, F. Bigiel, M. Chevance, J.D. Henshaw, R.S. Klessen, A.K. Leroy, D. Liu, D. Maschmann, S.E. Meidt, E. Rosolowsky, E. Schinnerer, J. Sun, E.J. Watkins, T.G. Williams: PHANGS-JWST First Results: Massive Young Star Clusters and New Insights from JWST Observations of NGC 1365. Ap. J. Lett. 944, 2 (2023).

Wolf J., K. Nandra, M. Salvato, J. Buchner, M. Onoue, T. Liu, R. Arcodia, A. Merloni, S. Ciroi, F. Di Mille, V. Burwitz, M. Brusa, R. Ishimoto, N. Kashikawa, Y. Matsuoka, T. Urrutia, S. Waddell: X-ray emission from a rapidly accreting narrow-line Seyfert 1 galaxy at $z = 6.56$. Astron. Astrophys. 669, A127 (2023).

Wölfer L., S. Facchini, N. van der Marel, E. van Dishoeck, M. Benisty, A. Bohn, L. Francis, A. Izquierdo, R. Teague: Kinematics and brightness temperatures of transition discs. A survey of gas substructures as seen with ALMA. Astron. Astrophys. 670, A154 (2023).

Yan W., W. Brandt, F. Zou, S. Zhu, C.J. Chen, R.C. Hickox, B. Luo, Q. Ni, D.M. Alexander, F.E. Bauer, C. Vignali, F. Vito: The Most Obscured AGNs in the XMM-SERVS Fields. Ap. J. 951, 1 (2023).

Yang Y., D. Baade, P. Hoeflich, L. Wang, A. Cikota, T. Chen, J. Burke, D. Hiramatsu, C. Pellegrino, D.A. Howell, C. McCully, S. Valenti, S. Schulze, A. Gal-Yam, L. Wang, A.V. Filippenko, K. Maeda, M. Bulla, Y. Yao, J.R. Maund, F. Patat, J. Spyromilio, J.C. Wheeler, A. Rau, L. Hu, W. Li, J.E. Andrews, L. Galbany, D.J. Sand, M. Shahbandeh,

E.Y. Hsiao, X. Wang: The interaction of supernova 2018evt with a substantial amount of circumstellar matter - An SN 1997cy-like event. Mon. Not. R. Astron. Soc. 519, 2 (2023).

Yeung M., M. Freyberg, G. Ponti, K. Dennerl, M. Sasaki, A. Strong: SRG/eROSITA X-ray shadowing study of giant molecular clouds. Astron. Astrophys. 676, A3 (2023).

Yoo H., C.W. Lee, E.J. Chung, S. Kim, M. Tafalla, P. Caselli, P.C. Myers, K.H. Kim, T. Liu, W. Kwon, A. Soam, J. Kim: TRAO Survey of Nearby Filamentary Molecular Clouds, the Universal Nursery of Stars (TRAO-FUNS). III. Filaments and Dense Cores in the NGC 2068 and NGC 2071 Regions of Orion B. Ap. J. 957, 2 (2023).

You B., Y. Dong, Z. Yan, Z. Liu, Y. Tuo, Y. Yao, X. Cao: X-Ray Spectral Correlations in a Sample of Low-mass Black Hole X-Ray Binaries in the Hard State. Ap. J. 945, 1 (2023).

Young A., S. Gillessen, T. de Zeeuw, Y. Dallilar, A. Drescher, F. Eisenhauer, R. Genzel, F. Mang, T. Ott, J. Stadler, O. Straub, S. von Fellenburg, F. Widmann: Accelerations of stars in the central 2-7 arcsec from Sgr A*. Astron. Astrophys. 670, A36 (2023).

Yuan Z., J. Han, H. Böhringer, Z. Wen, G. Chon: More relaxed intracluster gas than galaxies in clusters in quasiequilibrium. Mon. Not. R. Astron. Soc. 523, 1 (2023).

Zakardjian A., J. Pety, C.N. Herrera, A. Hughes, E. Oakes, K. Kreckel, C. Faesi, S.C. Glover, B. Groves, R.S. Klessen, S. Meidt, A. Barnes, F. Belfiore, I. Bešlić, F. Bigiel, G.A. Blanc, M. Chevance, D.A. Dale, J. den Brok, C. Eibensteiner, E. Emsellem, A. García-Rodríguez, K. Grasha, E.W. Koch, A.K. Leroy, D. Liu, R. Mc Elroy, L. Neumann, H. Pan, M. Querejeta, A. Razza, E. Rosolowsky, T. Saito, F. Santoro, E. Schinnerer, J. Sun, A. Usero, E.J. Watkins, T. Williams: The impact of H II regions on giant molecular cloud properties in nearby galaxies sampled by PHANGS ALMA and MUSE. Astron. Astrophys. 678, A171 (2023).

Zakharova D., I.S. Tikhonenko, N.Y. Sotnikova, A.A. Smirnov: B/PS bulges and barlenses from a kinematic viewpoint - I. Mon. Not. R. Astron. Soc. 525, 4 (2023).

Zannese M., B. Tabone, E. Habart, F. Le Petit, E. van Dishoeck, E. Bron: OH mid-infrared emission as a diagnostic of H2O UV photodissociation. II. Application to interstellar photodissociation regions. Astron. Astrophys. 671, A41 (2023).

Zen Vasconcellos C.A., J. Rodrigo Sacahui Reyes, P.O. Hess, G. Piccinelli, M. Vargas Magaña, R. Gonzalez Felipe, T. Boller, S. Gullberg, D. Hadjimichef: Review volume of the 10th international workshop on astronomy and relativistic astrophysics, from quarks to cosmos—IWARA 2022. Astron. Nachr. 344, 6 (2023).

Zen Vasconcellos C.A., J.R. Sacahui Reyes, P.O. Hess, G. Piccinelli, M. Vargas Magaña, R. Gonzalez Felipe, T. Boller, S. Gullberg, D. Hadjimichef: Preface: 10th International Workshop on Astronomy and Relativistic Astrophysics, from Quarks to Cosmos—IWARA 2022. Astron. Nachr. 344, 1-2 (2023).

Zeng L., Q. Zhang, F.O. Alves, T. Ching, J.M. Girart, J. Liu: Submillimeter Observations of Magnetic Fields in Massive Star-forming Region W75N. Ap. J. 954, 1 (2023).

Zhang J., S. Wuyts, S.E. Cutler, L.A. Mowla, G.B. Brammer, I.G. Momcheva, K.E. Whitaker, P. van Dokkum, N.M. Förster Schreiber, E.J. Nelson, P. Schady, C. Villforth, D. Wake, A. van der Wel: Dust attenuation, dust content, and geometry of star-forming galaxies. Mon. Not. R. Astron. Soc. 524, 4128 (2023).

Zhang X., A. Simionescu, F. Gastaldello, D. Eckert, L. Camillini, R. Natale, M. Rossetti, G. Brunetti, H. Akamatsu, A. Botteon, R. Cassano, V. Cuciti, L. Bruno, T. Shimwell, A. Jones, J. Kaastra, S. Ettori, M. Brüggen, F. de Gasperin, A. Drabent, R. van Weeren, H. Röttgering: The Planck clusters in the LOFAR sky. III. LoTSS-DR2: Dynamic states and density fluctuations of the intracluster medium. Astron. Astrophys. 672, A42 (2023).

Zhang Y., C. Ginski, J. Huang, A. Zurlo, H. Beust, J. Bae, M. Benisty, A. Garufi, M.R. Hogerheijde, R.G. van Holstein, M. Kenworthy, M. Langlois, C.F. Manara, P. Pinilla, C. Rab, Á. Ribas, G.P. Rosotti, J. Williams: Disk Evolution Study Through Imaging of Nearby Young Stars (DESTINYS): Diverse outcomes of binary-disk interactions. Astron. Astrophys. 672, A145 (2023).

Zhang Y., M. Ouchi, K. Gebhardt, C. Liu, Y. Harikane, E.M. Cooper, D. Davis, D.J. Farrow, E. Gawiser, G.J. Hill, W. Kollatschny, Y. Ono, D.P. Schneider, S.L. Finkelstein, C. Gronwall, S. Jogee, M. Krumpe: The Stellar Mass-Black Hole Mass Relation at z 2 down to MBH 107 M0 Determined by HETDEX. Ap. J. 948, 2 (2023).

Zhou C., A. Tong, M. Troxel, [. . .], T.N. Varga, J. Weller: The intrinsic alignment of red galaxies in DES Y1 redMaPPer galaxy clusters. Mon. Not. R. Astron. Soc. 526, 1 (2023).

Zou F., W. Brandt, Q. Ni, S. Zhu, D.M. Alexander, F.E. Bauer, C.J. Chen, B. Luo, M. Sun, C. Vignali, F. Vito, Y. Xue, W. Yan: Identification and Characterization of a Large Sample of Distant Active Dwarf Galaxies in XMM-SERVS. Ap. J. 950, 2 (2023).

ZuHone J., Y. Bahar, V. Biffi, K. Dolag, J. Sanders, E. Bulbul, T. Liu, T. Dauser, O. König, X. Zhang, V. Ghirardini: Effects of multiphase gas and projection on X-ray observables in simulated galaxy clusters as seen by eROSITA. Astron. Astrophys. 675, A150 (2023).

de Wet S., T. Laskar, P. Groot, F. Cavallaro, A. Nicuesa Guelbenzu, S. Chastain, L. Izzo, A. Levan, D. Malesani, I. Monageng, A. van der Horst, W. Zheng, S. Bloemen, A. Filippenko, D. Kann, S. Klose, D. Pieterse, A. Rau, P. Vreeswijk, P. Woudt, Z.-. Zhu: The triple-peaked afterglow of GRB 210731A from X-ray to radio frequencies. Astron. Astrophys. 671, A116 (2023).

van Dishoeck, E.F., S. Grant, B. Tabone, M. van Gelder, L. Francis, L. Tychoniec, G. Bettoni, A.M. Arabhavi, D. Gasman, P. Nazari, M. Vlasblom, P. Kavanagh, V. Christiaens, P. Klaassen, H. Beuther, Th. Henning, I. Kamp: The diverse chemistry of protoplanetary disks as revealed by JWST. Faraday Discussions, 245 52-79 (2023).

4.2 In nicht referierten Zeitschriften

Ahmadi A., H. Beuther, C. Gieser, F. Bosco, S. Suri, J. Mottram, T. Henning, R. Kuiper, CORE Team: Physics and Chemistry of Star Formation: The Dynamical ISM Across Time and Spatial Scales. Proceedings of the 7th ChileCologne-Bonn Symposium, held 26-30 September, 2022 in Puerto-Varas, Chile. Edited by V. Ossenkopf-Okada et al. ISBN: 978-3-00-074740-3. Published by Universitäts- und Stadtbibliothek Köln, 2023, p.191 (2023).

Anderson S., M. Eracelous, P. Green, J. Runnoe, A. Merloni, Y. Shen, J. Burchett, T. Dwelly, H. Ibarra-Medel, S. Morrison, J. Trump, J. Buchner, J. Comparat, M. Davis, S. Demasi, S. Frederick, L. Fries, C. Grier, K. Horne, K. Nandra, B. Trakhtenbrot, S. Waddell, J. Wolf, G. Zeltyn, J. Aird, W. Brandt, E. Bulbul, A. Rankine, C. Ricci, D. Schneider, Q. Yang, SDSS Collaboration: The Black Hole Mapper in SDSS-V. American Astronomical Society Meeting Abstracts 55 (2023).

Ashok, A., Aishwarya, A. Seth, Anil, P. Erwin, V.P. Debattista, A. de, Lorenzo-Cáceres, D.A. Gadotti, J. MéndezAbreu, Jairo, J.E. Beckman, R. Bender, N. Drory, D. Fisher, U. Hopp,, Ulrich, M. Kluge, T. Kolcu, W. Maciejewski, K. Mehrgan,, T. Parikh, R. Saglia, M. Seidel, J.Thomas: Composite Bulges – III. A Study of Nuclear Star Clusters in Nearby Spiral Galaxies. Astrophysical Journal 958 100120 (2023).

Bulbul E., e. Working Group: Cosmology Results from the First eROSITA All-Sky Cluster Survey. AAS/High Energy Astrophysics Division 55 (2023).

Collett T., A. Sonnenfeld, C. Frohmaier, K. Glazebrook, D. Sluse, V. Motta, A. Verma, T. Anguita, L. Koopmans, C. Tortora, F. Courbin, R. Cabanac, B. Frye, G. Smith, J. Diego, B. Alteiri, S. Lopez, C. Fassnacht, A. Cooray, A. Goobar, D. Ryczanowski, S.

Serjeant, J. Richard, T. Treu, L. Moustakas, R. Li, C. Jacobs, C. Lemon, L. Marchetti, P. Hartley, E. Jullo, C.-. Lee, S. Birrer, A. Fritz, J. Nightingale, N. Napolitano, A. Plazas, S. Kruk, C. Spiniello, C. Grillo, S. Suyu, A. Shajib, G. Vernardos, S. Dye, T. Daylan, J. Newman, S. Schuldt: The 4MOST Strong Lensing Spectroscopic Legacy Survey (4SLSLS). The Messenger 190 (2023).

Concas A., R. Davies, M. Petr-Gotzens, M. Heida, H. Kuntschner, B. Leibundgut, M. Marsset, R. De Rosa, L. TacconiGarman, Z. Wahhaj, T. Wevers, D. Parraguez, I. Blanchard: ERIS Science Verifications. The Messenger 191 (2023).

Conversi L., J. Licandro, M. Delbo, A. Fitzsimmons, K. Muinonen, T. Müller, M. Popescu, P. Tanga, L. Berthelsen, D. Föhring, M. Micheli, R. Moissl: NEOMIR: an NEO earlywarning, space-based mission. Proceedings of the 2nd NEO and Debris Detection Conference (2023).

Diehl R., J. Greiner, M.G. Krause, M.M. Pleintinger, T. Siegert: Gamma-ray spectroscopy of galactic nucleosynthesis. European Physical Journal Web of Conferences 279 (2023).

Finger, G., F. Eisenhauer, R. Genzel, C. Mandia, I. Baker, D. Alvarez, A. Amorim, W. Brandner, C. Dupuy, C. Deen, D. Ives, L. Mehrgan, M. Meyer, K. Perraut, G. Perrin, J. Stegmeier, C. Straubmeier, H.J. Weller, V. Isgar: On-sky performance verification of near-infrared eAPD technology for wavefront sensing and demonstration of eAPD pixel performance to improve the sensitivity of large science focal planes. Scientific Detector Workshop, LeibnizInstitute for Astrophysics Potsdam, Potsdam, Germany, 2022. (Eds.) M.M. Roth. Astronomische Nachrichten, 344, Issue 8-9, Wiley-VCH GmbH, Germany, (2023).

Fleischhack H., N. Omodei, N. Di Lalla, J.M. Burgess, S. Kumar: Multi-wavelength data analysis with the threeML framework. American Astronomical Society Meeting Abstracts 55 (2023).

Gezari S., T. Wevers, D.R.R. Pasham, J.L. Dai, J. Miller, R. Arcodia, A. Mummery, J. Garcia, M. Guolo, K. Madsen, D. Stern: The High Energy X-ray Probe (HEX-P): X-ray Spectro-Timing of Extragalactic Nuclear Transients. American Astronomical Society Meeting Abstracts 55 (2023).

Green P., D. Kim, J.R. Martinez-Galarza, Q. Yang, I. Evans, R. D'Abrusco, A. Rots, T. Dwelly, S. Anderson: Chandra, Meet Sloan: SDSS Spectroscopy of Chandra Source Catalog Counterparts. AAS/High Energy Astrophysics Division 55 (2023).

Gulick H., J.C. Martinez Oliveros, C. Chen, R. Senthil Kumar, A. Lowell, B. Mochizuki, T. Takahashi, K. Nakazawa, H. Yoneda, A. Joens, S. Boggs, T. Siegert, D. Hartmann, A. Zoglauer, J. Tomsick: The Background and Transient Observer: A Gamma-ray Detector System for Time-Domain Astrophysics. American Astronomical Society Meeting Abstracts 55 (2023).

Hahn C., M. Eickenberg, S. Ho, J. Hou, P. Lemos, E. Massara, C. Modi, A. Moradinezhad Dizgah, B.R. Blancard, M.M. Abidi: A forward modeling approach to analyzing galaxy clustering with SIMBIG. Proceedings of the National Academy of Science 120, 42 (2023).

Haines C., Y. Jaffé, N. Tejos, A. Monachesi, E. Pompei, A. Finoguenov, C. Sifón, S. Lopez, A. Manjunatha, L. Bilton, J. Comparat, R. Cuellar, G. D'Ago, R. Demarco, C. LimaDias, E. Lösch, P. Merluzzi, A. Smith Castelli, L. Sodre, E. Vinicius, CHANCES Team: CHANCES: A CHileAN Cluster galaxy Evolution Survey. The Messenger 190 (2023).

Heilmann R., A. Bruccoleri, V. Burwitz, E. Gullikson, R. Smith, M. Schattenburg: Soft x-ray performance of flightlike critical-angle transmission gratings for Arcus-Probe. AAS/High Energy Astrophysics Division 55 (2023).

Hicks E., I. García-Bernete, D. Rigopoulou, A. AlonsoHerrero, F. Donnan, P. Roche, M. Pereira-Santella, A. Labiano, L. Peralta de Arriba, T. Izumi, C. Ramos Almeida, T. Shimizu, S. Hönig, S. García-Burillo, D. Rosario, M. Ward, E. Bellocchi, L. Fuller, C. Packham: JWST View of PAH Emission in Seyfert Galaxies. American Astronomical Society Meeting

Abstracts 55 (2023).

Hornschemeier A., N. Vulic, A. Rau: Time Domain Studies of Neutron Star and Black Hole Populations with the Athena WFI (Wide Field Instrument): X-ray Identification of Compact Object Types. AAS/High Energy Astrophysics Division 55 (2023).

Hsieh C., H. Arce, Z. Li, M. Dunham, S. Offner, I.W. Stephens, A. Stutz, T. Megeath, S. Kong, A. Plunkett, J.J. Tobin, Y. Zhang, D. Mardones, J.E. Pineda, T. Stanke, J. Carpenter: The Evolution of Protostellar Outflow Cavities, Kinematics, and Angular Distribution of Momentum and Energy in Orion A: Evidence for Dynamical Cores. American Astronomical Society Meeting Abstracts 55 (2023).

Jiménez-Redondo M., L. Díaz-Pérez, R.J. Peláez, B. Maté, I. Tanarro, V.J. Herrero: Generation of Interstellar Carbonaceous Dust Analogs in C2H2 Plasmas: Gas-Phase Reactions and Particle Properties. European Conference on Laboratory Astrophysics ECLA2020. The Interplay of Dust, Ice, and Gas in Space. ISBN: 978-3-031-29003-9, pp. 111-117, Springer, New York (2023).

Kastner J., P. Moraga Baez, J. Bublitz, J. Alcolea, M. Santander-Garcia, P. Hily-Blant, T. Forveille, B. Balick, R. Montez, C. Gieser: ALMA Observations of Molecular Line Emission from Nearby, High-excitation Bipolar Planetary Nebulae: Mapping Irradiation Tracers. American Astronomical Society Meeting Abstracts 55 (2023).

Kohno K., S. Fujimoto, A. Tsujita, V. Kokorev, G. Brammer, G. Magdis, F. Valentino, N. Laporte, F. Sun, E. Egami, F. Bauer, A. Guerrero, N. Nagar, K. Caputi, G. Caminha, J.-. Jolly, K. Knudsen, R. Uematsu, Y. Ueda, M. Oguri, A. Zitrin, M. Ouchi, Y. Ono, J. González-López, J. Richard, I. Smail, D. Coe, M. Postman, L. Bradley, A. Koekemoer, A.M.n. Arancibia, M. Dessauges-Zavadsky, D. Espada, H. Umehata, B. Hatsukade, F. Egusa, K. Shimasaku, K. MatsuiMorokuma, W.-. Wang, T. Wang, Y. Ao, A. Baker, M.M. Lee, C.d.P. Lagos, D. Hughes, ALCS collaboration: Unbiased surveys of dust-enshrouded galaxies using ALMA. Physics and Chemistry of Star Formation: The Dynamical ISM Across Time and Spatial Scales. (eds.): V. Ossenkopf-Okada et al., Proceedings of the 7th Chile-CologneBonn Symposium, 26-30 September 2022, Puerto-Varas, Chile. ISBN: 978-3-00-074740-3., p.16, Universitäts- und Stadtbibliothek Köln (2023).

Koss M., E. Treister, D. Kakkad, J. Casey-Clyde, J. Williams, A. Foord, B. Trakhtenbrot, F. Bauer, G. Privon, C. Ricci, R. Mushotzky, L. Barcos-Munoz, L. Blecha, T. Connor, F. Harrison, T. Liu, M. Magno, C. Mingarelli, K. Oh, F. Muller-Sanchez, T. Shimizu, K. Smith, D. Stern, M. Parra Tello, C. Urry: A Confirmed Dual AGN at 230 pc Separation. American Astronomical Society Meeting Abstracts 55 (2023).

Kuhn L., J. Shangguan, R. Davies: Probing BLR dynamics with single-epoch line profiles. American Astronomical Society Meeting Abstracts 55 (2023).

Kuntz K., R. Nutter, W. Baumgartner, V. Burwitz, C. Connor, H. Connor, G. Hartner, T. Mueller, C. Paw U, F.S. Porter, S. Rukdee, D. Sibeck, T. Schmidt, N. Thomas, B. Walsh: LEXI: The Lunar Environment heliospheric X-ray Imager. AAS/High Energy Astrophysics Division 55 (2023).

Kurpas J., A. Schwope, A. Pires, F. Haberl: X-ray dim isolated neutron star candidates from the eROSITA All-Sky Survey. IAU Symposium 363, Proceedings of the International Astronomical Union 16, Symposium S363: Neutron Star Astrophysics at the Crossroads: Magnetars and the Multimessenger Revolution, pp. 345 - 346 (2023).

Mallick L., A.L. Danhaive, M. Parker, A. Srinivasan, Z. Igo, J. Garcia, F. Harrison, L. Brenneman, A. Fabian, W. Alston, A. Markowitz: Improving the detection and modeling of Ultra-Fast Outflows to constrain AGN feedback mechanisms. AAS/High Energy Astrophysics Division 55 (2023).

Mantha K.B., R. Sankar, L. Fortson, C. Scarlata, C. Lintott, D. Adams, H. Dickinson, V. Mehta, B. Simmons, R. Smethurst, M. Walmsley, S. Kruk: Spatio-Spectroscopic Anomaly Detection in MaNGA IFU-based Data using 3D Deep Learning. American Astronomical

Society Meeting Abstracts 55 (2023).

Martínez-Núñez S., F. Carrera, M. Ceballos, D. Barret, A. Rau, E. Bozzo: Six years supporting the Athena Community Office. Highlights on Spanish Astrophysics XI, Proceedings of the XV Scientific Meeting of the Spanish Astronomical Society, (eds.): M. Manteiga, L. Bellot, P. Benavidez, A. de Lorenzo-Cáceres, M. A. Fuente, M. J. Martínez, M. Vázquez Acosta, C. Dafonte, September 4-9, 2022, La Laguna, Spain (2023).

Moraga Baez P., J.H. Kastner, J. Bublitz, J. Alcolea, M. Santander-Garcia, T. Forveille, B. Balick, Montez, Rodolfo, Jr., C. Gieser: ALMA Observations of Molecular Line Emission from Nearby, High-excitation Bipolar Planetary Nebulae: Molecular Gas Structures and Kinematics. American Astronomical Society Meeting Abstracts 55 (2023).

Murillo N., T.-. Hsieh, C. Walsh: Modeling snowline locations. Physics and Chemistry of Star Formation: The Dynamical ISM Across Time and Spatial Scales. (eds.): V. Ossenkopf-Okada et al., Proceedings of the 7th ChileCologne-Bonn Symposium, 26-30 September 2022, Puerto-Varas, Chile. ISBN: 978-3-00-074740-3., p.256, Universitäts- und Stadtbibliothek Köln (2023).

Nandra K., Erosita de Team: eROSITA: Status and Recent Results. AAS/High Energy Astrophysics Division 55 (2023).

Orlando E., V. Petrosian, A. Strong: The Quiet Sun: Synchrotron from Galactic Cosmic Rays in x-rays and radio. American Astronomical Society Meeting Abstracts 55 (2023).

Pasham D.R.R., F. Tombesi, P. Sukova, M. Zajacek, V. Karas, A. Mummery, S. Rakshit, E. Coughlin, M. Guolo, B. Ripperda, B. Shappee, J. Hinkle, T. Holoien, A. Payne, R. Arcodia, M. Fausnaugh, V. Witzany, T. Dylan: A Case for a Binary Black Hole System Revealed via Quasi-Periodic Outflows. American Astronomical Society Meeting Abstracts 55 (2023).

Peroux C., A. Merloni, J. Liske, M. Salvato, R. Augustin, F. Balzer, M.-. Cioni, J. Comparat, S. Driver, A. Fresco, A. Garzilli, A. Hamanowicz, A. Klitsch, J.-. Kneib, J.-. Krogager, D. Nelson, J. Richard, P. Schady, Y. Shen, R. Szakacs, S. Weng, Q. Yang, ByCycle Team: Transform our Understanding of the Baryon Cycle with High-Resolution Quasar Spectroscopy (ByCycle). The Messenger 190 (2023).

Redaelli E., S. Bovino, P. Sanhueza, P. Caselli: The core population and kinematics of a massive clump: an ALMA view of AG14.49. Physics and Chemistry of Star Formation: The Dynamical ISM Across Time and Spatial Scales. (eds.): V. Ossenkopf-Okada et al., Proceedings of the 7th Chile-Cologne-Bonn Symposium, 26-30 September 2022, Puerto-Varas, Chile. ISBN: 978-3-00-074740-3., p.212, Universitäts- und Stadtbibliothek Köln (2023).

Sarkar A., S. Randall, Y. Su, G. Alvarez, C. Sarazin, P. Nulsen, E. Blanton, W. Forman, C. Jones, E. Bulbul, J. ZuHone, F. Andrade-Santos, R. Johnson, P. Chakraborty: Unveiling a critical epoch in the formation of massive galaxy clusters. AAS/High Energy Astrophysics Division 55 (2023).

Schoedel, R., S. Longmore, J. Henshaw, A. Ginsburg, J. Bally, A. Feldmeier, M. Hosek, F. Nogueras Lara, A. Ciurlo, M. Chevance, J. M. Diederik Kruijssen, R. Klessen, G. Ponti, P. Amaro-Seoane, K. Anastasopoulou, J. Anderson, M. Arias, A. T. Barnes, C. Battersby, G.Bono, L. Bravo Ferres, A. Bryant, M. Cano Gonzáalez, S. Cassisi, L. Chaves-Velasquez, F. Conte, R. Contreras R., A. Cotera, S. Crowe, E. di Teodoro, T. Do, F. Eisenhauer, R. Enokiya, R. Fedriani, J.K.S. Friske, D. Gadotti, C. Gallart, T. Gallego C., E. Gallego Cano, P. García Fuentes, M. García Marín, A. Gardini, A.K. Gautam, A. Ghez, S. Gillessen, N. Gouda, A. Gualandris, M. G. Guarcello, R. Gutermuth, D. Haggard, M. Hankins, Y. Hu, R. Kano, J. Kauffmann, R. Lau, A. Lazarian, M. Libralato, A. Lu, X. Lu, J.R. Lu, N. Luetzgendorf, J. Magorrian, S. Mandel, S. Markoff, Á. Martínez Arranz, A. Mastrobuono-Battisti, E. Mills, K. Mori, M. Morris, E. Murchikova, T. Nagata, F. Najarro, G. Nandakumar, D. Nataf, N. Neumayer, S. Nishiyama, M. Nobukawa, D. M Paré, M. Petkova, T.G.S. Pillai, M. Rich C. Román, M. Rugel, N. Ryde, N. Sabha, J. Sánchez Ber-

múdez, Á. SánchezMonge, M. Schultheis, L. Shao, H. Shinnaga, J.Simpson, S. Takekawa, J.C. Tan, B. Thorsbro, P. Torne, R. Goppala Tress, H. Uchiyam, E.a Valenti, R. van der Marel, S. Verberne, P. Vermot , S. von Fellenberg, D. Walker, G. Witzel, S. Xu, T. Yano, F. Yusef-Zadeh, M. Zajaček, M. Zoccali: The JWST Galactic Center Survey – A White Paper. Astrophysical Journal Letters arxiv.org, (2023).

Shah E., J. Kartaltepe, C. Magagnoli, I. Cox, C. Wetherell, B. Vanderhoof, K. Cooke, A. Calabrò, N. Chartab, C. Conselice, D. Croton, A. De La Vega, N. Hathi, O. Ilbert, H. Inami, D. Kocevski, A. Koekemoer, B. Lemaux, L. Lubin, K. Mantha, S. Marchesi, M. Martig, J. Moreno, B. Alcalde Pampliega, D. Patton, M. Salvato, E. Treister: The Effect of Galaxy Interactions on Star Formation at $0.5 < z < 3.0$. American Astronomical Society Meeting Abstracts 55 (2023).

Sheng Y., C.M. Rajagopal, A. Kaur, M. Ajello, A. Dominguez, A. Rau, S. Cenko, J. Greiner, H. Dieter, I. Cox, S. Joffre, C. Karwin, A. McDaniel, R. Silver, N. Torres-Alba: Discovering high-redshift BL Lacs. AAS/High Energy Astrophysics Division 55 (2023).

Spezzano, S., Astrochemistry of star and planet formation. Nachrichten aus der Chemie, 5 71-(2023)). Tahmasebzadeh B., L. Zhu, J. Shen, M. Valluri, O. Gerhard, G. van de Ven, D. Gadotti: Schwarzschild Modeling of Barred S0 Galaxy NGC4371 with TIMER Survey. American Astronomical Society Meeting Abstracts 55 (2023).

Teng Y., K. Sandstrom, J. Sun, A. Leroy, L. Johnson, A. Bolatto, D. Kruijssen, A. Schruba, A. Usero, A. Barnes, F. Bigiel, G. Blanc, B. Groves, F. Israel, D. Liu, E. Rosolowsky, E. Schinnerer, J. Smith, F. Walter, Phangs Team: Connecting CO-to-H2 Conversion Factors to Molecular Gas Properties in Nearby Barred Galaxy Centers. American Astronomical Society Meeting Abstracts 55 (2023).

Wilms J., T. Dauser, L. Dauner, C. Kirsch, O. Koenig, M. Lorenz, P. Peille, E. Cucchetti, B. Cobo, M. Ceballos, A. Rau, A. Ptak, K. Pottschmidt, P. Tzanavaris: SIXTE - a generic X-ray mission simulator. AAS/High Energy Astrophysics Division 55 (2023).

Wolk S., W. Dunn, C. Lisse, D. Koutroumpa, J. Carter, R. Gladstone, J. Ness, K. Dennerl, G. Branduardi-Raymont, C. Jackman, S. McEntee, R. Kraft: Solar System Studies with LEM. AAS/High Energy Astrophysics Division 55 (2023).

4.3 Telegramme / Circulars

Kozyrev, A. S., Golovin, D. V., Litvak, M. L., Mitrofanov, I. G., Sanin, A. B., Mgns/Bepicolombo Team, Hend/Mars Odyssey Team, Benkhoff, J., Bepicolombo Team, Hurley, K., IPN, Svinkin, D., Golenetskii, S., Frederiks, D., Ridnaia, A., Lysenko, A., Cline, T., Konus-Wind Team, von Kienlin, A., Zhang, X., Rau, A., Savchenko, V., Bozzo, E., Ferrigno, C., INTEGRAL SPI-ACS GRB Team, Barthelmy, S., Cummings, J., Krimm, H., Palmer, D., Tohuvavohu, A., Swift-Bat Team, Boynton, W., Fellows, C., Harshman, K., Enos, H., Starr, R., Gardner, A. S., GRS-Odyssey GRB Team: IPN triangulation of GRB 230209B, GCN Circ. 33323 (2023).

Kozyrev, A. S., Golovin, D. V., Litvak, M. L., Mitrofanov, I. G., Sanin, A. B., Mgns/Bepicolombo Team, Hend/Mars Odyssey Team, Benkhoff, J., Bepicolombo Team, Hurley, K., IPN, Svinkin, D., Golenetskii, S., Frederiks, D., Ridnaia, A., Lysenko, A., Cline, T., Konus-Wind Team, von Kienlin, A., Zhang, X., Rau, A., Savchenko, V., Bozzo, E., Ferrigno, C., INTEGRAL SPI-ACS GRB Team, Barthelmy, S., Cummings, J., Krimm, H., Palmer, D., Tohuvavohu, A., Swift-Bat Team, Boynton, W., Fellows, C., Harshman, K., Enos, H., Starr, R., Gardner, A. S., GRS-Odyssey GRB Team: IPN triangulation of GRB 230116B (short), GCN Circ. 33200 (2023).

Mailyan, B., von Kienlin, A., Meegan, C., and Fermi Gamma-ray Burst Monitor Team: GRB 230815A: Fermi GBM detection, GCN Circ. 34440 (2023).

von Kienlin, A., Meegan, C., and Fermi Gamma-ray Burst Monitor Team: GRB 230524A: Fermi GBM Observation, GCN Circ. 33874 (2023).

von Kienlin, A. and Fermi GBM Team: Fermi Gamma-ray Burst Monitor trigger 706536788/ 230523509 is not a GRB, GCN Circ. 33857 (2023).

4.4 Instrumentelle Publikationen

Basso S., M. Civitani, G. Pareschi, V. Cotroneo, V. Burwitz, T. Schmidt, T. Müller, G. Hartner, S. Rukdee, A. Langmeier: Development of thin glass mirrors via cold shaping replication for future x-ray telescopes. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 12679 (2023).

Basso S., B. Salmaso, D. Spiga, M. Ghigo, G. Vecchi, G. Sironi, V. Cotroneo, P. Conconi, E. Redaelli, A. Bianco, G. Pareschi, G. Tagliaferri, D. Sisana, C. Pelliciari, M. Fiorini, S. Incorvaia, M. Uslenghi, L. Paoletti, C. Ferrari, R. Lolli, A. Zappettini, M. Sanchez del Rio, G. Parodi, V. Burwitz, S. Rukdee, G. Hartner, T. MuÌller, T. Schmidt, A. Langmeier, D. Della Monica Ferreira, S. Massahi, N. Gellert, F. Christensen, M. Bavdaz, I. Ferreira, M. Collon, G. Vacanti, N. Barrière: BEaTriX, the new facility to measure the modular x-ray optics of the ATHENA telescope with an expanded and parallel x-ray beam. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 12777 (2023).

Bavdaz M., E. Wille, M. Ayre, I. Ferreira, B. Shortt, S. Fransen, M.J. Collon, G. Vacanti, N.M. Barrière, B. Landgraf, D. Girou, M. Olde Riekering, J. Haneveld, R. Start, B. Schurink, C. van Baren, D.D. Monica Ferreira, S. Massahi, S. Svendsen, F. Christensen, M. Krumrey, D. Skroblin, V. Burwitz, G. Pareschi, B. Salmaso, A. Moretti, D. Spiga, S. Basso, G. Valsecchi, D. Vernani, P. Lupton, W. Mundon, E. Dunnell, M. Riede, T. Korhonen, M. Pasanen, A. Sanchez, D. Heinis, C. Colldelram, M. Tordi, N. Niewrzella, R. Willingale: NewATHENA optics technology. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 12679 (2023).

Burwitz V., G. Hartner, T. Müller, S. Rukdee, T. Schmidt, A. Langmeier, M. Bavdaz, I. Ferreira, M.J. Collon, G. Vacanti, N.M. Barrière, B. Salmaso, A. Moretti, D. Spiga, G. Sironi: Characterising x-ray optics at PANTER for the NewATHENA mission and x-ray optic test facilities. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 12679 (2023).

Burwitz V., K. Mercier, F. Gonzalez, J. Le Duigou, D. Götz, A. Meuris, C. Feldman, J. Pearson, R. Willingale, P. O'Brien, G. Hartner, A. Langmeier, T. Müller, S. Rukdee, T. Schmidt: SVOM-MXT optic and telescope testing at PANTER. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 12777 (2023).

Burwitz V., G. Vacanti, M. Collon, N. Barrière, M. Bavdaz, I. Ferreira, M. Ayre, E. Tipper, J. Eder, E. Breunig, G. Hartner, A. Langmeier, T. Müller, S. Rukdee, T. Schmidt: Update on the ongoing ATHENA optic testing at PANTER. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 12777 (2023).

Collon M., L. Abalo, N. Barrière, A. Bayerle, L. Castiglione, N. Eenkhoorn, D. Girou, R. Günther, E. Hauser, R. van der Hoeven, J. den Hollander, Y. Jenkins, L. Keek, B. Landgraf, A. Lassise, B. Okma, P. da Silva Ribeiro, C. Rizos, A. Thete, G. Vacanti, S. Verhoeckx, M. Vervest, R. Visser, L. Voruz, M. Bavdaz, E. Wille, I. Ferreira, M. Olde Riekerink, J. Haneveld, A. Koelewijn, M. Wijnperle, J. Lankwarden, B. Schurink, R. Start, C. van Baren, J. den Herder, M. Krumrey, D. Skroblin, V. Burwitz, S. Massahi, D. della Monica Ferreira, S. Svendsen, F. Christensen, W. Mundon, G. Phillips: The development of the mirror for the Athena X-ray mission. Society of PhotoOptical Instrumentation Engineers (SPIE) Conference Series 12777 (2023).

Cui W., H. Wang, X. Zhao, J. Zhang, N. Meidinger, Y. Yang, I. Keil, Z. Zhang, J. Huo, J. Wang, Z. Song, F. Lu, J. Ma, Y. Wang, J. Xu, Y. Zhu, T. Li, W. Li, L. Luo, D. Han, Z. Zhao, D. Hou, X. Yang, H. Geng, S. Li, H. Chen, Q. Tang, Y. Chen, Y. Chen: Design and performance of the focal plane camera for FXT onboard the Einstein Probe satellite. Experimental Astronomy 55, 3 (2023).

Döhring T., V. Stieglitz, P. Friedrich, V. Burwitz, M. Jelinek, R. Hudec: Testing of lobster-

eye type telescopes with X-rays and visible light. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 12576 (2023).

Erhardt J., F. Grupp, H. Kellermann, F. Lang, C. Gössl, F. Kummer, F. Langaßner, U. Hopp, R. Bender: The telescope simulator for the Fraunhofer telescope Wendelstein. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 12680 (2023).

Ferreira I., M. Bavdaz, M. Ayre, E. Wille, B. Shortt, S. Fransen, M. Collon, G. Vacanti, N. Barrière, B. Landgraf, M. Olde Riekerink, J. Haneveld, R. Start, C. van Baren, D. Della Monica Ferreira, S. Massahi, S. Svendsen, F. Christensen, M. Krumrey, D. Skroblin, V. Burwitz, G. Pareschi, G. Tagliaferri, B. Salmaso, S. Basso, A. Moretti, D. Spiga, G. Valsecchi, D. Vernani, P. Lupton, W. Mundon, G. Phillips, J. Schneider, T. Korhonen, A. Sanchez, D. Heinis, C. Colldelram, M. Tordi, R. Willingale: Status of the demonstration of the critical technologies of the ATHENA telescope. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 12777 (2023).

Finger, G., F. Eisenhauer, R. Genzel, C. Mandia, I. Baker, D. Alvarez, A. Amorim, W. Brandner, C. Dupuy, C. Deen, D. Ives, L. Mehrgan, M. Meyer, K. Perraut, G. Perrin, J. Stegmeier, C. Straubmeier, H.J. Weller, V. Isgar: On-sky performance verification of near-infrared eAPD technology for wavefront sensing and demonstration of eAPD pixel performance to improve the sensitivity of large science focal planes. Scientific Detector Workshop, LeibnizInstitute for Astrophysics Potsdam, Potsdam, Germany, 2022. (Eds.) M.M. Roth. Astronomische Nachrichten, 344, Issue 8-9, Wiley-VCH GmbH, Germany, (2023).

Götz D., M. Boutelier, V. Burwitz, R. Chipaux, B. Cordier, C. Feldman, P. Ferrando, A. Fort, F. Gonzalez, A. Gros, S. Hussein, J.-. Le Duigou, N. Meidinger, K. Mercier, A. Meuris, J. Pearson, N. Renault-Tinacci, F. Robinet, B. Schneider, R. Willingale: The scientific performance of the microchannel X-ray telescope on board the SVOM mission. Experimental Astronomy 55, 2, 487 - 519 (2023).

Hartner G.D., V. Burwitz, T. Müller, S. Rukdee, T. Schmidt, A. Langmeier, K. Dennerl, N. Meidinger: Characterization of the x-ray beam at PANTER. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 12679 (2023).

Kuntz K., V. Burwitz, R. Nutter, C. Connor, G. Hartner, T. Müller, C. Paw U., F.S. Porter, S. Rukdee, T. Schmidt, B. Walsh: LEXI segmented slumped micropore optic calibration at PANTER. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 12777 (2023).

Landgraf B., L. Abalo, N.M. Barrière, A. Bayerle, D. de Borst, L. Castiglione, M.J. Collon, L. Crama, A. Chatbi, N. Eenkhoorn, D. Girou, R. Günther, E. Hauser, R. van der Hoeven, J. den Hollander, Y. Jenkins, A. Lassise, L. Keek, C. Körnig, S. Obwaller, B. Okma, P. da Silva Ribeiro, C. Rizos, A. Thete, G. Vacanti, S. Verhoeckx, M. Vervest, R. Visser, L. Voruz, M. Bavdaz, E. Wille, I. Ferreira, M. Bosman, J. Haneveld, A. Koelewijn, J. Lankwarden, M. Olde Riekerink, B. Schurink, R. Start, M. Wijnperle, C. van Baren, L. Cibik, M. Krumrey, D. Skroblin, V. Burwitz, F.E. Christensen, D.D.M. Ferreira, S. Massahi, D.P. Sanz, S. Svendsen, E. Dunnell, P. Lupton, W. Mundon, A. Rees, D. Watley: High-resolution and light-weight silicon pore x-ray optics. Society of PhotoOptical Instrumentation Engineers (SPIE) Conference Series 12679 (2023).

Moretti A., D. Spiga, S. Basso, G. Sironi, G. Pareschi, V. Cotroneo, M. Civitani, M. Ghigo, N. La Palombara, M. Uslenghi, G. Valsecchi, F. Marioni, D. Vernani, F. Zocchi, G. Parodi, M. Ottolini, M. Tordi, S. de Lorenzi, F. Amisano, V. Burwitz, D.D.M. Ferreira, P. Corradi, M. Bavdaz, I. Ferreira: The VERT-X calibration facility: development of the most critical parts. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 12679 (2023).

Morrissey P., K. Madsen, R. Amini, D. Dawson, B. Grefenstette, A. Abramovici, S. Bandyopadhyay, G. Casadesus Vila, S. Franklin, W. Johnson, S. Kedar, M. Lane, K. Lee, M. Smith, D. Stern, S. Zusack, J. Arenberg, M. McEachen, L. McCreary, J. Rodgers, D.

Coutinho, J. Mueller-Seidlitz, K. Nandra, P. Predehl, R. Strecker, L. Dauner, S. Kenyon, P. Markie, W.W. Zhang, S. Basso, A. Moretti, G. Pareschi, D. Spiga, G. Valsecchi, D. Vernani: The high-energy x-ray probe (HEX-P). Society of PhotoOptical Instrumentation Engineers (SPIE) Conference Series 12678 (2023).

Polak S., J. Musiał, R. Pietrzak, A. Sikorski, M. Dumin, A. Dacko, M. Rataj, T. Barciński, T. Kamisiński, A. Pilch, W. Binek, G. Woźniak, M. Zuchniak, A. RóŻańska, N. Meidinger, M. Plattner, J. Frank, R. Strecker, A. von Kienlin, M. Barbera, F. D'Anca, D. Gulli, U. Lo Cicero, N. Montinaro, G. Parodi, E. Bozzo, S. Paltani: Design and acoustic tests of the ATHENA WFI filter wheel assembly development model towards TRL5. Journal of Astronomical Telescopes, Instruments, and Systems 9 (2023).

Rabien, S.: Adaptive parabolic membrane mirrors for large deployable space telescopes. Applied Optics 62, 9 (2023).

Rukdee S., V. Burwitz, G. Hartner, T. MuÌller, T. Schmidt, A. Langmeier, P. Friedrich, C. Feldman, P. O'Brien, R. Willingale, C. Zhang, Z. Ling, W. Yuan: The X-ray testing of Einstein Probe Wide-field X-ray Telescope Qualification Model at PANTER. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 12777 (2023).

Rukdee S., V. Burwitz, G. Hartner, T. Schmidt, A. Langmeier, T. Müller, P. Friedrich, C. Feldman, P. O'Brien, G. Butcher, R. Willingale, C. Zhang, Z. Ling, Y. Dai, W. Yuan: Einstein probe wide field telescope flight mirror module characterization at PANTER test facility. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 12679 (2023).

Rukdee S., P. Friedrich, V. Burwitz, G. Hartner, T. Muller, T. Schmidt, A. Langmeier, K. Dennerl: Calibration of Einstein Probe FXT-QM and FM at the PANTER X-ray test facility. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 12777 (2023).

Salmaso B., D. Spiga, S. Basso, D. Sisana, M. Ghigo, G. Vecchi, G. Sironi, V. Cotroneo, G. Pareschi, G. Tagliaferri, C. Ferrari, G. Parodi, V. Burwitz, D. Ferreira, M. Bavdaz, I. Ferreira, M. Collon, G. Vacanti, S. Verhoeckx: The BEaTriX x-ray facility at work: activities and future development. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 12679 (2023).

Schneider B., N. Renault-Tinacci, D. Götz, A. Meuris, P. Ferrando, V. Burwitz, E. Doumayrou, T. Lavanant, N. Meidinger, K. Mercier: Spectral performance of the Microchannel X-ray Telescope on board the SVOM mission. Experimental Astronomy 56, 1 (2023).

Spiga D., B. Salmaso, S. Basso, C. Pelliciari, C. Ferrari, R. Lolli, M. Ghigo, G. Sironi, G. Vecchi, V. Cotroneo, G. Pareschi, G. Tagliaferri, D. Sisana, V. Burwitz, S. Rukdee, G. Hartner, T. Müller, T. Schmidt, A. Langmeier, D. Della Monica Ferreira, N. Gellert, S. Massahi, M. Bavdaz, I. Ferreira: Optical design and performance simulations for the 1.49 keV beamline of the BEaTriX X-ray facility. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 12777 (2023).

Wang J., J. Eder, J. Ma, Y. Yang, W. Cui, X. Yang, X. Duan, J. Feng, X. Zhang, B. Lu, H. Lv, W. Sun, F. Lu, D. Han, Y. Wang, T. Chen, Q. Zhang, X. Bi, D. Li, J. Zhang, P. Friedrich, K. Hartmann, A. Keereman, A. Santovincenzo, D. Vernani, G. Bianucci, G. Valsecchi, Q. Tang, H. Chen, Y. Chen: The structural design and thermomechanical performance of the FXT for the EP mission. Experimental Astronomy 55, 3 (2023).

Yang Y., Y. Wang, D. Han, J. Wang, W. Cui, Y. Zhu, M. Cong, J. Ma, Z. Zhao, D. Hou, X. Yang, C. Chen, B. Lu, H. Lv, W. Sun, J. Zhang, K. Yu, S. Wang, D. Liu, Q. Zhang, X. Bi, F. Lu, P. Friedrich, J. Eder, K. Hartmann, V. Burwitz, A. Keereman, A. Santovincenzo, D. Vernani, G. Bianucci, G. Valsecch, L. Sheng, Y. Yan, P. Qiang, B. Wang, L. Wang, D. Wang, F. Ding, L. Wang, J. Cheng, Y. Chen: Design and testing of the Optics for FXT onboard EP satellite. Experimental Astronomy 55, 3 (2023).

4.5 Bücher / Beiträge in Büchern

Bovino, S., T. Grassi, J. Holdship, I. Kamp, A. Lupi, C. Rab, D. Schleicher, and S. Viti: In Book: Astrochemical Modeling - Practical Aspects of Microphysics in Numerical Simulations. (Eds.) S. Bovino, T. Grassi, Elsevier, Radarweg 29, PO Box 211, 1000 AE Amsterdam, Netherlands, p.365-398 (2023).

Herder, J.W.d., M. Feroci, N. Meidinger: Handbook of Xray and Gamma-ray Astrophysics. (Eds.) C. Bambi, A. Santangelo,, Springer Nature, Singapore, Singapore, p.148 (2023).

Ivlev, A.V., V. Akimkin, K. Silsbee, D. Wiebe: Astrochemical Modeling – Practical Aspects of Microphysics in Numerical Simulations. (Eds.) S. Bovino, T. Grassi, Elsevier, Radarweg 29, PO Box 211, 1000 AE Amsterdam, Netherlands, p.235-282 (2023).

Kamp, I., Galli, D., Rab, Ch.: In Book: Astrochemical Modeling – Practical Aspects of Microphysics in Numerical Simulations. (Eds.) Bovino, S., Grassi, T., Elsevier, Radarweg 29, PO Box 211, 1000 AE Amsterdam, Netherlands, p.283-306 (2023).

Ryan, J. M., W. Collmar: In Book: Handbook of X-ray and Gamma-ray Astrophysics. (Eds.) Cosimo Bambi, Andrea Santangelo, Springer Living Reference Work, Online, p.(2023).

Sanders, J., In Book: High-Resolution X-ray Spectroscopy. (Eds.) C. Bambi, J. Jiang, Springer, Singapore, p.173-207 (2023).

Sipilä, O., M. Ruaud: In Book: Astrochemical Modeling – Practical Aspects of Microphysics in Numerical Simulations. (Eds.) Stefano Bovino, Tommaso Grassi, Elsevier, Radarweg 29, PO Box 211, 1000 AE Amsterdam, Netherlands, p.13-31 (2023).

5 Projekt-Gruppen

5.1 Infrarot- und Submillimeter-Astronomie

Leitung Wissenschaft und Personal: Tacconi

Leitung Finanzen: Lutz.

ERIS: R. Davies, Dengler, M. Deysenroth, Eisenhauer, Feuchtgruber, Hartl, Hartwig, D. Huber, Kleiser, Kravchenko, Pflüger, C. Rau, Sturm, Wiezorrek.

GRAVITY, GRAVITY+: Bourdarot, Dengler, Drescher, Eisenhauer, Feuchtgruber, Genzel, Gillessen, Gopinath, Graf, Hans, Hartl, Haußmann, Lutz, Mang, More, T. Ott, Pflüger, C. Rau, Ribeiro, Sadun Bordoni, Santos, Shangguan, Shimizu, Sturm, Tacconi, Uysal, Widmann, Wieprecht, Wiezorrek, Yazici, ZankerSmith.

MICADO: Barl, Biondi, Cao, R. Davies, Dengler, M. Deysenroth, J. Eder, Eisenhauer, A. Emslander, Förster Schreiber, Geis, Genzel, Gillessen, Graf, Hartl, Haußmann, H. Huber, Jilg, Kleiser, Kravchenko, Lang, Neumeier, Pflüger, Rabien, Sönmez, Spallek, Sturm, Ziegleder.

Galactic Center: Bourdarot, Drescher, Eisenhauer, Genzel, Gillessen, Mang, T. Ott, Ribeiro, Sadun Bordoni, Widmann.

Galactic Nuclei: Cao, R. Davies, Genzel, Lutz, Shangguan, Santos, Shimizu, Sturm, Tacconi.

Galaxies at High Redshift: Barféty, Cao, Chen, Espejo, Förster Schreiber, Genzel, Jolly, L. Lee, D. Liu, Lutz, Pastras, Pulsoni, Sturm, Tacconi.

Star Formation: Grant, Kurtovic, van Dishoeck.

5.2 Hochenergie-Astrophysik

ATHENA/Mirror: Budau, Burwitz, Hartner, Langmeier, Müller, Passlack, Rukdee, Schmidt.

ATHENA/WFI: Albrecht, Andritschke, Antonelli, Bechteler, Behrens, Bonholzer, Borne-

mann, Eder, Emberger, Freyberg, Haberl, Hälker, Hartmann, Hauser, v. Kienlin, Lederhuber, Mayr, Mican, Möller, Müller, Müller-Seidlitz, Nandra, Pietschner, A. Rau, Reiffers, Saraf, Schnetler, Schweingruber, Sönmez, Strecker, Pflüger, Veredas.

Chandra: Burwitz, Predehl.

Einstein Probe/Detector: Keil, Meidinger, Nandra.

Einstein Probe/Mirror: Budau, Burwitz, Eder, Friedrich, Gaida, Hartmann, Hartner, Langmeier, Z. Liu, Müller, Passlack, Pfeffermann, Rohe, Rukdee, Schmidt, Schuppe, Stieglitz.

eROSITA: Andritschke, Becker, Boller, Bornemann, Brunner, Budau, Burghardt, Bulbul, Burwitz, Coutinho, Dennerl, Dittrich, Eder, Eibl, Emberger, Freyberg, P. Friedrich, S. Friedrich, Gaida, Goldbrunner, Gueguen, Haberl, Hartner, F. Huber, Kink, Maitra, Meidinger, Merloni, Mican, S. Müller, Nandra, Ni, F. Oberauer, Pfeffermann, Pietschner, Predehl, RamosCeja, Rau, Rohé, Salvato, Schuppe, Soller, Stewart, Trümper, v. Kienlin.

ROSAT: Boller, Freyberg, Haberl, Trümper.

Swift: Greiner.

XMM-Newton: Boller, Dennerl, Freyberg, Haberl, Meidinger, Trümper.

Fermi: Collmar, Diehl, Greiner, v. Kienlin.

GROND: A. Rau, Bornemann.

INTEGRAL: Diehl, Greiner, v. Kienlin.

MXT-SVOM: Budau, Burwitz, Hartner, Langmaier, Müller, Passlack, Meidinger, Nandra, Rukdee, Schmidt, A. Rau.

eXTP: Altmann, Bechteler, Meidinger, Nandra.

4MOST: Comparat, Laas, Merloni, Salvato, Thi.

Active Galaxies: Boller, Buchner, Collmar, Comparat, T. Liu, Merloni, Nandra, Ni, Salvato.

Clusters of Galaxies: Artis, Buchner, Bulbul, Comparat, Garrell, Gatuzz, Ghiradini, Kluge, A. Liu, Locatelli, Ramos-Ceja, Sanders.

eBOSS/SPIDERS: Comparat, Merloni, Nandra, Salvato.

5.3 Optische und Interpretative Astronomie

Large Scale Structure, eBoss, HETDEX: Bender, Contarini, Correa, Fabricius, Hopp, Pezzotta, Sanchez.

EUCLID: Bender, Bodendorf, Fabricius, Garcia Carpio, Grupp, Haase, Hartung, Masoumzadeh, Raison, Saglia, Sanchez, Saulder, Steinwagner, Wetzstein.

Galaxy Dynamics: Bender, de Nicola, Gerhard, Neureiter, Parikh, Saglia, Thomas.

INODE: Bender, Fabricius, Subramanian.

GRAVITY+: Bender, Fabricius, Graf, Jilg. MICADO: Bender, Fabricius, Grupp, Saglia, Thomas.

Prime Focus Spectropraph: Bender, Fabricius, Garcia Carpio, Sanchez.

Stellar Populations and Galaxy Formation: Bender, Hopp, Parikh, Saglia.

5.4 Zentrum für astrochemische Studien

Observations: De Oliveira Alves, Hsieh, Jensen, Lin, Maureira Pinochet, Pineda Fornerod, Redaelli, Schmiedeke, Segura-Cox, Spezzano.

Theory: Gong, Grassi, Ivlev, Küffmeier, Nolan, Rab, Silsbee, Sipilä.

Laboratory: Dickfeld, Endres, Giuliano, Hans, Jiménez Redondo, Jusko, Kshirsagar, Lattanzi, Öncü, Spezzano.

6 Projekte und Kooperationen

6.1 Wissenschaftliche Kooperationen

Australien

CSIRO Astronomy and Space Science, Epping: CAS-Observations, CAS-Theory.

Belgien

Katholieke Universiteit Leuven, Leuven: GRAVITY+.

Department of Physics and Astronomy, Ghent University: EUCLID.

Brasilien

Instituto Federal de Educação, Ciência e Tecnologia do Rio de Janeiro, Nilópolis, Brazil: CAS-Laboratory.

IAG/Universidade de Sao Paulo: PFS. Laboratório Nacional de Astrofísica: PFS.

Universidade Federal de Minas Gerais, Belo Horizonte: CAS-Observations.

Chile

ESO, Joint ALMA Observatory, Santiago de Chile: CAS-Observations; SBNAF.

NAQAF, Nucleo de astroquimica y astrofisica, Universidad Autónoma de Chile: CAS-Laboratory.

Universidad de Chile, Santiago de Chile: CAS-Observations.

Universidad de Concepcion: Max-Planck-Partnergruppe Baryonischer Zyklus in Galaxien; Röntgen-Doppelsternsysteme; CAS-Observations; Galaxienentwicklung.

Universidad Catolica Santiago, Santiago de Chile: Röntgen-Doppelsternsysteme.

Universidad Diego Portales, Santiago de Chile: CAS-Observations.

China

Donghua University, Shanghai: CAS-Theory.

Institute for High-Energy Physics (IHEP), Peking: Gammaquellen mit COMPTEL und INTEGRAL; Einstein Probe; eXTP.

Nanjing University, Nanjing: CAS-Observations.

National Astronomical Observatories of China, Peking: PFS; CAS-Observations, CAS-Theory.

Kavli Institute for Astronomy and Astrophysics at Peking University, Peking: PFS.

Shanghai Jiao Tong University, Shanghai: PFS.

The University of Science and Technology of China, PFS.

Tsinghua University, Peking: PFS.

University of Hongkong, Hongkong: Strahlungsmechanismen von Pulsaren im Röntgen- und Gammabereich.

University of Science and Technology of China, Hefei: PFS.

Xiamen University, Xiamen: PFS.

Xinjiang Astronomical Observatory, Ürümqi: CAS-Theory.

Dänemark

Dänemarks Technische Universität, Lyngby: ATHENA.

Niels Bohr Institute, University of Copenhagen: CAS-Theory.

DTU Space, National Space Institute, Technical University of Denmark: EUCLID, ATHE-

NA.

Deutschland

Astrophysikalisches Institut Potsdam, Potsdam: eROSITA; XMMNewton; OPTIMA; HETDEX; 4MOST.

Deutsches Elektronen-Synchrotron, Hamburg: CAS-Laboratory.

European Southern Observatory (ESO), Garching: GRAVITY; GRAVITY+; Galaxienentstehung; Nukleare Astrophysik; MICADO; ERIS; Infrared Dark Clouds; CAS-Observations; CAS-Theory.

Fraunhofer Institut für Integrierte Schaltungen, Erlangen: Mikroelektronikentwicklungen; ATHENA.

Fraunhofer Institut for Computer Graphics Research IGD, Darmstadt: INODE.

Heinrich-Heine-Universität, Düsseldorf: Soft Matter Physics.

Institut für Astronomie und Astrophysik Tübingen (IAAT), Tübingen: XMM-Newton; eROSITA; ATHENA WFI; SBODS.

Institut für Astrophysik Göttingen, Göttingen: MICADO.

Institut für Festkörperphysik und Werkstoff-Forschung, Dresden: Entwicklung weichmagnetischer Werkstoffe.

Institut für Materialphysik im Weltraum, Köln: Glasübergänge.

Landessternwarte Heidelberg-Königstuhl, Heidelberg: Galaxienentstehung.

Ludwig-Maximilians-Universität, München: MICADO; HETDEX; eROSITA; CAS-Theory.

Max-Planck-Institut für Astronomie, Heidelberg: GRAVITY; GRAVITY+; SDSS; MICADO; EUCLID; CAS-Theory.

Max-Planck-Institut für Astrophysik, Garching: SDSS; OPTIMA; eROSITA; PFS.

Max-Planck-Institut für Physik, Werner Heisenberg Institut, München: MPG Halbleiterlabor; ATHENA.

MaxPlanck-Institut für Radioastronomie, Bonn: CAS-Observations; CAS-Theory.

Physikalisch-Technische Bundesanstalt Berlin, Berlin: eROSITA.

Technische Universität Berlin, Berlin: Interstellares Medium.

Technische Universität Darmstadt, Darmstadt: CAST.

Technische Universität München, München: Nukleare Astrophysik; ESBO-DS.

Thüringer Landessternwarte Tautenburg, Tautenburg: GROND; Gamma-Ray Bursts.

Universität Bonn, Bonn: ATHENA; eROSITA; EUCLID; CAS-Observations.

Universität der Bundeswehr, München: SBNAF.

Universität Düsseldorf, Düsseldorf: ERC Advanced Grant; CAS-Theory.

Universität Erlangen (ECAP), Erlangen: eROSITA; ATHENA.

Universität Hamburg, Hamburg: eROSITA; OPTIMA (Flarestars).

Universität Heidelberg, Heidelberg: ATHENA; XFEL; CAS-Theory.

Universität Jena, Jena: Isolierte Neutronensterne; Nukleare Astrophysik.

Universität Kassel, Kassel: CAS-Observations, CAS-Laboratory.

Universität Köln, Köln: Galaktisches Zentrum; GRAVITY; GRAVITY+; CAS-Observations; CAS-Theory; CAS-Laboratory.

Universität Mannheim, Mannheim: ATHENA; XFEL.

Universität Stuttgart, Stuttgart: ESBO-DS.

Universität Würzburg, Würzburg: AGADE.

EU

ESA.

Finnland

University of Helsinki, Helsinki: CAS-Theory; CAS-Observations.

University of Turku - Finnish Centre for Astronomy with ESO (FINCA), Turku: MICADO.

University of Helsinki, Department of Physics: EUCLID.

Frankreich Aix-Marseille University, Marseille: CAS-Theory.

CEA, Saclay: INTEGRAL-Spektrometer SPI; EUCLID; SVOM; ATHENA.

Centre d'Etude Spatiale des Rayonnements (UPS), Toulouse: INTEGRAL-Spektrometer SPI; CAS-Observations.

Centre National de la Recherche Scientifique, Paris: INODE. IAP, Paris: Nukleare Astrophysik.

Institut d'Astrophysique de Paris: EUCLID.

IPAG, Grenoble: GRAVITY; GRAVITY+; MICADO; CAS-Observations; CAS-Theory.

IRAM, Saint-Martin-d'Héres: CAS-Observations; Galaxienentstehung.

Laboratoire d'Astrophysique de Marseille (LAM), Marseille: EUCLID; Gamma-Ray Bursts; PFS; CAS-Observations.

Laboratoire Univers et Particules de Montpellier, Montpellier: Cosmic-ray propagation in molecular clouds.

Observatoire astronomique de Strasbourg, Strasbourg, ATHENA.

Observatoire de la Côte d'Azur Nice (OCA), Nizza: GRAVITY+.

Observatoire de Paris (GEPI), Paris: MICADO; GRAVITY.

Observatoire de Paris (LERMA), Paris: CAS-Theory.

Observatoire de Paris (LESIA), Paris: MICADO; GRAVITY.

Observatoire de Paris-Meudon, Paris: GRAVITY; GRAVITY+; MICADO; Galaktisches Zentrum.

SOLEIL Synchrotron (AILES beamline), Saint-Aubin: CAS-Laboratory.

Université de Bordeaux, Bordeaux: CAS-Theory.

Université de Cergy-Pontoise, Cergy Pontoise Cedex: CAS-Observations.

Université de Franche-Comté (UTINAM), Besançon: MICADO.

Université de Lyon (CRAL), Lyon: GRAVITY+; CAS-Observations.

Université de Rennes, Rennes: CAS-Laboratory; CAS-Observations.

Université de Toulouse, Toulouse: CAS-Observations; CAS-Laboratory. Universite Paris Diderot, Paris: CAS-Observations.

Université Paris-Saclay, Saclay: CAS-Laboratory; CAS-Observations.

Griechenland

ATHENA RC, Research and Innovation Centre in Information, Communication and Knowledge Technologies, Athen: INODE.

Infili Technologies, Athen: INODE.

University of Crete and Foundation for Research and Technology Hellas (FORTH), Hera-

klion: Röntgendoppelsternsysteme; OPTIMA Photometer; Röntgen-AGN.

National Observatory of Athens, Athen: ATHENA; eROSITA.

Großbritannien

Astrophysics Research Group University of Surrey: EUCLID.

John Moores University, Liverpool: Himmelsdurchmusterung

Galaxienhaufen; Infrared Dark Clouds; CAS-Observations.

Open University, Milton Keynes: Kataklysmische Variablen; Novae; ATHENA.

Queen Mary University of London, London, UK: CAS-Observations; CAS-Theory.

Rutherford Appleton Laboratory, Council for the Central Laboratory of the Research Councils, Swindon: SISJunctions.

SKA Organisation, Jodrell Bank Observatory, Macclesfield: CAS-Observations.

United Kingdom

Astronomy Technology Centre (UKATC), Edinburgh: EUCLID; ERIS.

University of Cambridge, Cambridge: DES; CAS-Theory. University College London, London: High Energy Pulsars; EUCLID; DES; CAS-Observations.

University of Edinburgh, Edinburgh: DES.

University of Leeds, Leeds: CAS-Theory.

University of Leicester, Leicester: XMM-Newton; ATHENA; Swift; EUCLID.

University of Nottingham, Nottingham: DES.

University of Portsmouth, Portsmouth: DES.

University of Sussex, Brighton: DES.

University of Southampton, Southampton: GRAVITY+; Magellanic Clouds.

Indien

Tata Institute of Fundamental Research, Mumbai: CAS-Observations.

Irak University of AL-Muthanna, AL-Muthanna: CAS-Observations.

Irland

National University of Ireland, Galway: High Time Resolution Astronomy; CAS-Theory.

University College Dublin: Fermi/GBM.

Israel

School of Physics and Astronomy, Wise Observatory, Tel Aviv: Aktive Galaxien; Interstellares Medium; Galaxienentwicklung.

Italien

Free University of Bozen-Bolzano, Bozen: INODE.

IFCAI-CNR Palermo, Palermo: XMM-Newton Beobachtungen von Neutronensternen und Pulsaren.

INAF (Instituto Nationale di Astrofisica), Rom: ATHENA; EUCLID.

INAF Arcetri, Florenz: LBT; ERIS; CAS-Observations; CAS-Theory.

INAF Padua, Padua: LBT; MICADO; ERIS.

INAF Roma, Rom: LBT; Nukleare Astrophysik; EUCLID.

INAF Teramo, Teramo: ERIS.

INAF Trieste, Triest: Gamma-Ray Bursts; Fermi/LAT.

INFN Frascati, Frascati: SIDDHARTA.
Osservatorio Astronomico di Brera, Brera: Himmelsdurchmusterung, Galaxienhaufen.
Osservatorio Astrofisico di Catania, Catania: CAS-Theory; CAS-Laboratory.
Scuola Normale Superiore, Pisa: CAS-Observations.
Università degli Studi di Firenze, Florenz: CAS-Observations; CAS-Theory.
Università degli Studi di Milano, Mailand: CAS-Observations.
Università degli Studi di Torino, Turin: CAS-Observations.
Università di Bologna, Bologna: EUCLID; CAS-Theory;
CAS-Laboratory; CAS-Observations.
Japan
Academia Sinica, Nangang: PFS.
Chiba University: EUCLID.
Department of Chemistry, Tokyo University of Science, Japan: CAS-Observations.
Department of Physics, Nihon University, Japan: CAS-Observations.
Department of Materials and Life Sciences, Sophia University, Japan: CAS-Observations.
Kavli Institute for the Physics and Mathematics of the Universe, Kashiwa: PFS.
Kobe University, Kobe: CAS-Theory.
National Astronomical Observatory of Japan,
Mitaka/ Tokio: CAS-Theory; CAS-Observations; Galaxienentwicklung; PFS.
Institute of Physical and Chemical Research, Saitama: CAS-Observations.
Japan Aerospace Exploration Agency, Sagamihara, Kanagawa: SBNAF.
The Institute of Physical and Chemical Research (RIKEN), Japan: CAS-Observations.
Tokio Institute of Technology (TITECH), Ookayama: ASCA/XMM-Newton, Beobachtungen von AGN.
University of Osaka, Osaka: Astro-H.
University of Tokyo, Institutes for Advanced Study (UTIAS), Tokyo: PFS.
University of Tokyo, Tokyo: PFS; CAS-Observations.
Tohoku University, Sendai: Galaxienentwicklung.
Kanada
University of Toronto, Toronto: CAS-Theory.
Department of Physics and Astronomy, University of Waterloo: EUCLID.
Lettland
Ventspils University College, Ventspils: CAS-Theory.
Mexiko
Universidad Nacional Autonoma de México, Ensenada: CAS-Observations.
Niederlande
ESTEC, Noordwijk: XMM-Newton; INTEGRAL; EUCLID; ATHENA; eROSITA.
JIVE Dwingeloo, Dwingeloo: Black Hole Cam.
NOVA (Leiden, Groningen, ASTRON/Dwingeloo, Amsterdam): MICADO; ERIS.
Leiden University, Leiden: CAS-Observations; CAS-Theory;

IR/Submm Spectroscopy; EUCLID.

Radboud University, Nijmegen: Black Hole Cam; CAS Laboratory.

SRON, Utrecht: Chandra-LETG.

University of Groningen, Kapteyn Institute, Groningen: Rekonstruktion der Dichteverteilung im Universum;

EUCLID; Dynamical-Chemical Models; CAS-Theory; CAS-Observations.

Norwegen

Institute of Theoretical Astrophysics, University of Oslo: EUCLID.

Università di Perugia, Perugia: CAS-Observations.

Österreich

Institut für Ionenphysik und Angewandte Physik - Molekulare Systeme; Universität Innsbruck: CAS-Laboratory.

Institut für Weltraumforschung, Graz: ATHENA.

Universität und TU Wien: MICADO; ATHENA.

Universität Innsbruck: MICADO.

Universität Linz: MICADO.

RICAM Linz: MICADO.

Institute für Astronomy, Universität Wien: EUCLID.

Polen

Nicolaus Copernicus University, Torun: Pulsars Astronomical Centers; ATHENA.

Space Research Center (CBK), Warschau: ATHENA.

Astronomical Observatory Institute, Poznań: SBNAF.

University Zielona Gora: OPTIMA.

Portugal

CENTRA Lissabon und Porto, Lissabon: GRAVITY; GRAVITY+.

Departamento de Física da Faculdade de Ciências da Universidade de Lisboa: EUCLID.

Observatorio Astronomico de Lisboa, Lissabon: ATHENA.

Universidade de Coimbra, Coimbra: Departamento

de Engenharia Química: CAS-Laboratory.

Rumänien

Institute for Space Science: EUCLID.

Russland

Institute of Astronomy, Moskau: CAS-Theory.

Lebedev Institute of Physics, Moskau: CAS-Theory.

Prokhorov General Physics Institute, Moskau: CAS-Laboratory.

Space Research Institute (IKI) of the Russian

Academy of Science, Moskau: eROSITA/Spektrum Röntgen-Gamma.

Skobeltsyn Institute of Nuclear Physics, Moskau:

Nukleare Astrophysik; Gamma-Ray Bursts; AGADE.

Ural Federal University, Jekaterinburg: CAS-Theory.

Schweden

Chalmers University of Technology, Onsala Space Observatory, Onsala: CAS-Observations.

University Lund/Observatory, Lund: OPTIMA.

Schweiz

CERN, Geneva: CAST.

ETH Zürich, Zürich: ERIS.

Observatoire de Genève Sauverny, Genf: ISDC/INTEGRAL;

Nukleare Astrophysik; EUCLID.

Swiss Institute of Bioinformatics, Lausanne: INODE.

Universität Basel, Basel: Nukleare Astrophysik.

University of Geneva, Genf: ATHENA.

University of Zurich, Zürich: Infrared Dark Clouds.

Zürcher Hochschule für Angewandte Wissenschaften, Zürich: INODE.

Spanien

Centro de Investigaciones Energeticas, Medioambientales y Tecnologicas, Madrid: DES.

Centro de Astrobiología (CSIC/INTA), Madrid: CAS-Laboratory.

ESAC, Madrid: XMM-Newton Science Operations Center; INTEGRAL Science Operations Center; Herschel; EUCLID; SBNAF.

Instituto de Astrofísica de Andalucía (IAA), Granada: SBNAF; ESBO-DS.

Instituto d'Estudis Espacials de Catalunya: EUCLID.

Instituto de Astrofísica de Canarias, La Laguna: SBNAF; EUCLID.

Instituto de Ciencias del Espacio, Bellaterra: DES.

Instituto de Ciències de l'Espai, Cerdanyola del Vallès: CAS-Observations.

Institut de Fisica d'Altes Energies, Barcelona: DES; EUCLID.

Javalambre Physics of the Accelerating Universe Astrophysical Survey (J-PAS), Javalambre: eROSITA follow up.

SIRIS Academic SL, Barcelona: INODE.

Universitat Autònoma de Barcelona, Bellaterra: CAS-Observations.

Universidad de Valencia, Department de Astronomia, Valencia: INTEGRAL-Spektrometer SPI.

Universidad de Zaragoza, Zaragoza: CAST.

Observatorio Astronómico de Mallorca, Costitx: Novae; Kometen.

Observatorio Astronómico Nacional, Madrid: CAS-Observations.

South Korea

Seoul National University, Seoul: Hayabusa-2.

Taiwan

Academia Sinica Institute of Astronomy and Astrophysics (ASIAA), Taipei: CAS-Theory; CAS-Observations; PFS.

Tschechien

Astronomical Institute of the Czech Academy of Sciences, Prague: ATHENA.

Charles University, Prague: SBNAF; Hayabusa-2.

Dept. of Surface and Plasma Science, Faculty of Mathematics and Physics, Charles University, Prague: CAS-Laboratory.

Ungarn

Konkoly Observatory of the Hungarian Academy of Sciences, Budapest: SBNAF; CAS-Observations; CAS-Theory.

Institute for Nuclear Research (ATOMKI), Debrecen: CAS-Laboratory.

USA

Argonne National Laboratory, Lemont: DES.

Brookhaven National Laboratory, Upton: strahlenharte JFETElektronik; strahlenharte Detektoren.

Benedictine College, Atchison: CAS-Theory.

California Inst. of Technology, Pasadena: X-ray Survey; PFS.

CfA, Cambridge: ATHENA/WFI; XMM-Newton/Chandra Kalibration.

Clemson University, Clemson: Gamma-Ray Bursts; Nukleare Astrophysik.

Columbia University: PFS.

Department of Astronomy, The University of Texas at Austin, Austin: CAS-Observations.

Department of Astronomy, University of Michigan: CAS-Observations.

Fermilab, Batavia: DES.

Green Bank Observatory, Green Bank: CAS-Observations.

Harvard-Smithsonian Center for Astrophysics, Cambridge: CAS-Observations; CAS-Lab; CAS-Theory.

Johns Hopkins University, Baltimore: PFS.

Marshall Space Flight Center, Huntsville: Fermi GammaRay Burst Monitor; XMM-Newton und Chandra, Beobachtungen von Neutronensternen, Pulsaren und SupernovaÜberresten.

MIT, Cambridge: ATHENA WFI.

NASA/Ames Research Center, Mofett Field (CA): MHD Shocks; SBNAF.

NASA/Goddard Space Flight Center, Greenbelt (MD): INTEGRAL-Spektrometer SPI; Swift.

NASA/Jet Propulsion Laboratory, Pasadena: EUCLID; PFS; CAS-Observations.

National Radio Astronomy Observatory, Charlottesville: CAS-Theory; CAS-Observations.

National Radio Astronomy Observatory, Socorro, New Mexico: CAS-Observations.

National Science Foundation, Arlington: CAS-Observations.

NOAO, Tucson: DES.

Ohio State University, Columbus: DES; LBT.

Pacific Northwest National Laboratory (PNNL), Richland: CAST.

Pennsylvania State University, State College: HETDEX; Swift; ATHENA, PFS.

Princeton University, Princeton: PFS; CAS-Theory.

Research Corporation, Tucson: LBT.

San Jose State University, San Jose: MHD shocks.

SLAC, Stanford: CAMP; DES; ATHENA.

Smithsonian Astrophysical Observatory, Cambridge: Chandra-LETGS; Röntgendoppel-

sterne in M31; ATHENA.

Space Telescope Science Institute, Baltimore: Galaxienentstehung; Turbulence; SBNAF. Stanford University, Stanford: DES; Fermi/LAT; Fermi/ GBM.

Texas A M University, College Station: DES; SBNAF.

Texas State University, San Marcos: HETDEX.

University of Arizona, Tucson: Kosmische Strahlung; Planetenentstehung; LBT; CAS-Observations; CAS-Theory.

University of California, Berkely: MPG/UCB-Kollaboration;

FAST; INTEGRAL-Spektrometer SPI; Supperbubbles.

University of California, Santa Cruz: DES.

University of Chicago, Chicago: CAS-Observations; DES.

University of Colorado, Boulder (Co): Superbubbles; CAS-Observations; Galaxienkerne.

University of Connecticut: PFS.

University of Florida, Gainesville: Infrared Dark Clouds.

University of Hawaii, Honolulu, Hawaii: CAS-Theory.

University of Illinois, Urbana-Champaign: DES; PFS.

University of Massachusetts, Amherst: CAS-Observations; PFS.

University of Michigan, Ann Arbor: DES.

University of Mississippi: CAS-Laboratory.

University of Nevada, Las Vegas: CAS-Observations.

University of Pennsylvania, State College: DES.

University of Pittsburgh, Pittsburgh: Galaxienentstehung; PFS.

University of Texas, Austin: Galaxienentstehung; CAS-Theory.

University of Texas Austin, McDonald Observatory: Hobby-Eberly-Telescope, HETDEX.

University of Texas at El Paso, CAS-Observations: CAS-Theory.

University of Texas, San Antonio: SBNAF.

University of Toledo, Toledo: Galaxienentstehung; CAS-Observations.

University of Virginia, Charlottesville: CAS-Theory; CAS-Observations.

University of Wisconsin-Madison, Madison: CAS-Theory.

Yale University, New Haven: CAS-Observations.

6.2 Multinationale Kollaborationen

The International Wave Consortium: CNR-IFSI Frascati, Italy; LPCE/CNRS Orleans, France; Dept. of Automatic Control and Systems University of Sheffield, UK. ATHENA - Advanced Telescope for High Energy Astrophysics: Dänemarks Technische Universität, Dänemark; Nikolaus Kopernikus Astronomical Center, Polen; Universität Wien, Österreich; IWF, Graz; INAF Italy, Italy; CEA Frankreich, Frankreich; University of Leicester, Open University, UK; Institut für Astronomie und Astrophysik Tübingen, Erlangen Centre for Astroparticle Physics (ECAP), Germany; ESA; NOA, Greece; Universität Geneva, Schweiz; Institute for Astrophysics, Portugal; Stanford University, USA.

BOSS - Baryon Oscillation Spectroscopic Survey: SDSSIV Collaboration.

Chandra: Marshall Space Flight Center Huntsville, Massachusetts Institute of Technology Cambridge, Smithsonian Astrophysical Observatory Cambridge, USA; Space Research

Institute Utrecht, The Netherlands; Universität Hamburg, Germany.

COSMOS - Cosmological Evolution Survey: INAF-Osservatorio Astronomico di Bologna, INAF-Osservatorio Astronomico di Roma, INAF-Osservatorio Astrofisico di Arcetri, INAF/IASF-CNR, Sezione di Milano, IRA-INAF, Bologna, Dipartimento di Astronomia, Universita Padova, Dipartimento di Fisica, Universita degli Studi Roma Tre, Italy; Harvard-Smithsonian Centre for Astrophysics, Cambridge, Dept. of Physics, Carnegie Mellon University, Pittsburg, Institute for Astronomy, University of Hawaii, California Institute of Technology, Pasadena, Dept. of Astronomy, Yale University, USA; INTEGRAL Science Data Centre, Versoix, Switzerland; Laboratoire d'Astrophysique de Marseille, France.

DES - Dark Energy Survey: LMU München, Excellence Cluster Universe, Germany; The Fermi National Accelerator Laboratory (Fermilab), University of Chicago, NOAO, University of Michigan, University of Pennsylvania, University of Illinois at Urbana-Champaign, Ohio State University, Texas AM University, University of California Santa Cruz, Stanford University, SLAC National Accelerator Laboratory, The Lawrence Berkeley National Laboratory, Argonne National Laboratory, USA; University College London, University of Cambridge, University of Edinburgh, University of Portsmouth, University of Sussex, University of Nottingham, UK; Observatorio Nacional, Centro Brasileiro des Pesquisas Fisicas, Universidade Federal do Rio, Brasilien; Instituto de Ciencias dei Espacio, Institut de Fisica d'Altes Energies, Centro de Investigaciones Energeticas Medioambientales y Tecnologicas, Spain.

eBOSS - SDSS-IV Extended Baryon Oscillation Spectroscopic Survey: Carnegie Mellon University (CMU), University of Colorado Boulder, Harvard-Smithsonian Center for Astrophysics Participation Group, Johns Hopkins University, Kavli Institute for the Physics and Mathematics of the Universe, New Mexico State University, New York University, The Ohio State University, Penn State University, University of Utah, University of Wisconsin, Yale University, USA; Max-Planck-Institut fuer Astrophysik (MPA Garching), Max-Planck-Institut für extraterrestrische Physik (MPE), Max-Planck-Institut für Astronomie (MPIA Heidelberg), Germany; National Astronomical Observatories of China, Shanghai Astronomical Observatory, China; United Kingdom Participation Group, University of Portsmouth, UK. ERIS - Enhanced Resolution Imager and Spectrograph for the VLT: ESO, Germany; ETH Zürich, Switzerland; INAF Arcetri (with OAA, OATe and OAPd), Italy; UKATC Edinburgh, Scotland; NOVA Leiden, The Netherlands.

EinsteinProbe – Chinese Acadamy of Science, Institute of High Energy Physics, National Astronomical Observatories, China, ESA. eROSITA - extended Roentgen Survey with an Imaging Telescope Array: AIP Potsdam, Universität Tübingen, Universität Bonn, Universität Erlangen, Universität Hamburg, Remeis-Sternwarte Bamberg, MPA Garching, LMU (USM) München, Germany; IKI Moskau, Russia.

ESBO-DS - European Stratospheric Balloon Observatory – Design Study, EU H2020 project; University of Stuttgart, University of Tübingen, Germany; Swedish Space Corporation, Sweden; Instituto de Astrofísica de Andalucía, Spain. EUCLID - ESA Mission to map the Dark Energy: ESA; Institut d'Astrophysique de Paris, France; Institute fur Astronomy, Universitat Wien, Austria; Department of Physics and Astronomy, Ghent University, Belgium; Department of Physics and Astronomy, University of Waterloo, Canada; DTU Space, National Space Institute, Technical University of Denmark, Denmark; University of Helsinki, Department of Physics, Finland; Laboratoire d'Astrophysique de Marseille, Technopole de Marseille-Etoile, France; CEA/ DSM/Irfu/Service d'Astrophysique, CE Saclay, France; Max-Planck-Institute for Extraterrestrial Physics, Germany; Max Planck Institute for Astronomy, Germany; Dipartimento di Fisica e Astronomia, Universita di Bologna, Italy; INAF-Osservatorio di Roma, Italy; Chiba University, Japan; Leiden Observatory, Universiteit Leiden, Netherlands; Institute of Theoretical Astrophysics, University of Oslo, Norway; Departamento de Física da Faculdade de Ciências da Universidade de Lisboa, Portugal; Institut d'Estudis Espacials de Catalunya, Spain; Instituto de Astrofisica de Ca-

narias, Spain; Institute for Space Science, Romania; Physique Théorique, Université de Genève, Switzerland; Physics Department, Lancaster University, UK; Astrophysics Research Group, University of Surrey, UK; NASA Jet Propulsion Laboratory, USA.

Fermi/GBM - Fermi Gamma-Ray Burst Monitor: Marshall Space Flight Center Huntsville, University of Huntsville, USA.

Fermi/LAT - Fermi Gamma-Ray Large Area Space Telescope: Stanford University Palo Alto, Naval Research Laboratory Washington DC, Sonoma State University Rohnert Park, Lockheed Martin Corporation Palo Alto, University of California Santa Cruz, University of Chicago, University of Maryland Greenbelt, NASA Ames Research Center Moffett Field, NASA Goddard Space Flight Center for High Energy Astrophysics Greenbelt, Boston University, University of Utah Salt Lake City, University of Washington Seattle, SLAC Particle Astrophysics Group Palo Alto, USA; ICTP and INFN Trieste, Instituto Nacionale di Fisica Nucleare Trieste, Italy; University of Tokyo, Japan; CEA Saclay, France.

GRAVITY - Instrument for VLT Interferometry: MPIA Heidelberg, Universität Köln, ESO Garching, Germany; CENTRA Lisbon and Porto, Portugal; IPAG Grenoble, Observatoire de Paris / Meudon (LESIA), France.

GRAVITY+ - VLT Interferometry upgrade project: MPIA Heidelberg, Universität Köln, ESO Garching, Germany; CENTRA Lisbon and Porto, Portugal; IPAG Grenoble, Observatoire de Paris / Meudon (LESIA), OCA Nice, CRAL Lyon, France; University of Southampton, UK; KU Leuven, Belgium.

HETDEX - Hobby-Eberly Telescope Dark Energy Experiment: University of Texas, Austin, Pennsylvania State University, Texas AM University, USA; AIP Potsdam, LMU, USM, Germany.

INODE - Intelligent Open Data Exploration: Zürcher Hochschule für Angewandte Wissenschaften, ATHENA RC, Research and Innovation Center in Information, Communication and Knowledge Technologies, Fraunhofer Institute for Computer Graphics Research IGD, Infili Technologies Private Company, Center National de la Recherche Scientifique, SIRIS Academic SL, Swiss Institute of Bioinformatics, Free University of Bozen-Bolzano.

INTAS - Cooperation of Western and Eastern European Scientists: France, Germany, Norway, Russia.

ISDC - INTEGRAL Science Data Centre: Observatoire de Geneva Sauverny, Switzerland; Service d'Astrophysique Centre d'Etudes de Saclay, France; Rutherford Appleton Laboratory Oxon Dept. of Physics University Southampton, UK; Institut für Astronomie und Astrophysik Tübingen Germany; Danish Space Research Institute Lyngby, Denmark; University College Dublin, Ireland; Istituto di Fisica Milano, Instituto die Astrofisica Spatiale Frascati, Italy; N. Copernikus Astronomical Center Warsaw, Poland; Space Research Institute of the Russian Academy of Sciences Moscow, Russia; Laboratory for High Energy Astrophysics GSFC Greenbelt, USA.

INTEGRAL-Spectrometer SPI: Centre d'Etude Spatiale des Rayonnements (CESR) Toulouse, CEA Saclay Gif-surYvette, France; University de Valencia Burjassot, Spain.

LBT - Large Binocular Telescope Project: MPIA Heidelberg, MPIfR Bonn, Landessternwarte Heidelberg Königstuhl, AIP, Germany; University of Arizona, Tucson, Ohio State University, Columbus, Research Corporation, USA; INAF, Italy.

MICADO - Multi-Adaptive Optics Imaging Camera for Deep Observations: ESO, LMU (USM), MPIA Heidelberg, IAG Göttingen, Germany; INAF-OAPD Padova, INAF-OAR Roma, Italy; A* (an Austrian partnership comprising the University of Vienna, the University of Innsbruck, the University of Graz, and the University of Linz [with RICAM Linz]; specific contributions to MICADO come from Vienna/Innsbruck/Linz), Austria; NOVA (a federation several astronomical institutes; specific contributions to MICADO come from the University of Groningen, the University of Leiden, and the NOVA optical/infrared instrumentation group based at ASTRON in Dwingeloo), The Netherlands; CNRS/INSU

(representing LESIA and GEPI, Paris, IPAG, Grenoble and UTINAM, Besançon), France; FINCA (University of Turku) Turku, Finland.

MXT - Microchannel X-Ray Telescope for Gamma-Ray Bursts: CEA, Saclay, France; University of Leicester, UK.

OPTIMA: AIP, MPI für Astrophysik, Universität Hamburg, Germany; University of Crete, Greece; University Zielona Gora, Poland; University Lund/Observatory, Schweden.

PFS - The Subaru Prime Focus Spectrograph Collaboration: Kavli Institute for the Physics and Mathematics of the Universe, Japan; The University of Tokyo Institutes for Advanced Study (UTIAS), University of Tokyo, Japan; National Astronomical Observatory of Japan; Academia Sinica, Institute of Astronomy and Astrophysics, Taiwan; California Institute of Technology, USA; NASA Jet Propulsion Laboratory, USA; Laboratoire d'Astrophysique de Marseille, France; Princeton University, USA; Johns Hopkins University, USA; IAG/Universidade de Sao Paulo, Brazil; Laboratório Nacional de Astrofísica, Brazil; Max-Planck-Institut für Astrophysik, Garching; Shanghai Jiao Tong University, China; National Astronomical Observatories of China; Tsinghua University, China; The University of Science and Technology of China; Xiamen University, China; Peking University , China; Columbia University, USA; Tufts University, USA; University of Connecticut, USA; University of Illinois at Urbana-Champaign, USA; University of Pittsburgh, USA; University of Massachusetts Amherst, USA; Pennsylvania State University, USA.

SBNAF - Small Bodies Near and Far, EU H2020 project; Poznań, Poland; Instituto de Astrofísica de Andalucía, Granada, Instituto de Astrofísica de Canarias (IAC), Spain; Konkoly Observatory, Budapest, Hungary; Institute of Space and Astronautical Science (ISAS, JAXA), Kanagawa, Japan.

SDSS - Sloan Digital Sky Survey: MPA Garching, MPIA Heidelberg, Germany; Univ. of Washington, Seattle, Fermi National Accelerator Laboratory, Batavia, University of Michigan, Ann Arbor, Carnegie Mellon University, Pittsburgh, Penn State University, University Park, Princeton University Observatory, Princeton, Institute of Advanced Study Princeton, Space Telescope Science Institute, Baltimore, Johns Hopkins Univ. Baltimore, USA.

Swift - Gamma-Ray Burst Mission: NASA/GSFC Greenbelt, Penn State University, USA; University of Leicester, Mullard Space Science Laboratory London, UK; Osservatorio Astronomico Brera, Italy.

XMM-Newton/SSC (Survey Science Center): AIP, Germany; SAP Saclay, CDS Strasbourg, CESR Toulouse, France; University of Leicester, Institute of Astronomy Cambridge, MSSL London, UK. XMM-Newton/EPIC (European Photo Imaging Camera): SAP Saclay, IAS Orsay, CESR Toulouse, France; University of Leicester, University Birmingham, UK; CNR MailandPalermo-Bologna-Frascati, Osservatorio Astronomico Mailand, Italy; Institut für Astronomie und Astrophysik Tübingen, Germany.

6.3 Industrielle Kollaborationen

3d shape GmbH, Erlangen: Metrology for slumped glass mirror study.

ABN GmbH, Neuried: Ongoing servicing of the MPE test facility PANTER.

ACM GmbH, Naumburg - Acktar Ltd., Kiryat-Gat, Israel: Schwärzen für EUCLID.

af inventions, Braunschweig: FPGA Programmierung für eROSITA.

AHC Oberflächentechnik GmbH / Aalberts Surface Technologies GmbH: coating for MICADO ALPAO, Montbonnot-Saint-Martin, France: GRAVITY+ deformable mirrors.

Alwin Müller GmbH Co. KG, Nürnberg: Oberflächenbeschichtung vieler Projekte.

Ariane Group GmbH, Munich: EUCLID design study, eROSITA, ATHENA, Oberflächenbeschichtung und cleanliness control EinsteinProbe.

Array Electronics, Egmating: DAQ development OPTIMA.

BASF Coatings AG, Münster: Investigations on the scattering properties of micro particles.

Bräuninger und Konstruktionen, Neuried: Construction and manufacturing of laboratory equipment.

Buchberger GmbH, Tuchenbach: Manufacturing of parts for PANTER manipulators.

Carl Zeiss QEC GmbH, Garching b. München, Deutschland: Messdienstleistungen, EinsteinProbe.

Christian Rehm - ISKON, Isen: Design and mechanical engineering for MICADO, GRAVITY+.

CryoVac GmbH, Troisdorf: MICADO Cryostat.

DHL Special services, Flughafen München, EinsteinProbe.

Dico-Solutions, München: eROSITA Betrieb.

DoKaSch TEMPERATURE SOLUTIONS GmbH, Kelsterbach, Deutschland: klimatisierte Frachtcontainer, EinsteinProbe.

ECM Engineered Ceramic Materials GmbH, Moosinning: Hersteller von CESIC.

EATON Powering Business Worldwide, Camarillo, CA, USA: Actuators separation-nuts for eROSITA.

First Light Imaging, Meyreuil, France: GRAVITY+ wavefront sensor cameras.

Fraunhofer IOF, Jena: Mirror development for MICADO.

Freyer GmbH, Tuningen: PANTER.

Frühschütz Lohngalvanik GmbH, Penzberg: Oberflächenbeschichtung vieler Projekte.

Gräfe Spezialoptik GmbH, Camburg: Zerodur-Materialbearbeitung und -Lieferant.

Hans Englert GmbH, Berlin: Manufacturing of front panels and metering devices. HERMLE AG, Gosheim, Milling Machines, MPE Workshop.

HOC Optik Dr. Christoph Horneber, Lauf: GRAVITY+ Hochschule München, Laserlabor, Prof. Heinz Huber, München: Materialbearbeitung mit Ultrakurzpulsarlaser.

Industrieanlagen – Betriebsgesellschaft mbH (IABG), Ottobrunn: Testanlagen, Luftfahrtsicherheit, EinsteinProbe.

Industrieberatung Reinhard Katterloher, München: Specifications for MICADO Test Cryostat.

Ingenieurbüro Josef Eder, Hilgertshausen: System engineering for eROSITA, ATHENA, Einstein Probe.

Ingenieurbüro Weisz, München: Design and mechanical engineering for MICADO and GRAVITY+.

Ingenieurbüro Michael Kautz, Regensburg, Design and mechanical engineering for CAS.

Kampf Telescope Optics (KTO), München: Design and System Engineering for MICADO.

LaserJob GmbH, Fürstenfeldbruck, Deutschland: Präzisions-Laserzuschnitt und Schweißen EinsteinProbe.

LEX GmbH, Miesbach, Deutschland: Mechanische Fertigung, ATHENA, EinsteinProbe.

LT Ultra, Herdwangen-Schönach: Spiegelhersteller.

Feinmechanische Werkstätte Thomas Markl GmbH, Deisenhofen; eROSITA.

GEWO Feinmechanik GmbH, Hörlkofen: EinsteinProbe, MICADO.

Media Lario Srl, Bosisio Parini, Italien: eROSITA, EinsteinProbe.

OHB System AG, München: EUCLID design study.

Peter Blank GmbH, Aschaffenburg: Mechanische Fertigung MICADO, GRAVITY+.

Peter Feckl Maschinenbau GmbH, Forstern: Spiegelmodule EinsteinProbe.

Physik Instrumente (PI), Karlsruhe: Präzisions-Positionier-Systeme.

Plappert Industrieanlagen GmbH, Schorndorf: Design and mechanical engineering for MICADO Handling Tools.

Qioptic GmbH, Feldkirchen: Oberflächenbeschichtung vieler Projekte.

Steinmeyer Mechatronik, Dresden: GRAVITY+ translational stages.

Tafelmaier Dünnschicht-Technik, Rosenheim: Optical Coatings, GRAVITY+.

Unholtz-Dickie Corp., Wallingford, USA: Shaker System, MPE Test Facility.

7 Öffentlichkeitsarbeit

Das MPE engagierte sich 2023 durch folgende Aktivitäten in der Öffentlichkeitsarbeit: 19, zum Teil online gehaltene populär-wissenschaftliche Vorträge durch Wissenschaftler, sowie 24 Pressemitteilungen über wissenschaftliche Ergebnisse und allgemeine Nachrichten (wissenschaftliche Preise, Auszeichnungen). Insgesamt wurden 2023 am MPE 16 Besuchsgruppen empfangen. Der GirlsDay 2023 wurde mit 48 Schülerinnen am Institut abgehalten und bestand aus mehreren Vorträgen, einer Podiumsdiskussion zu Karrierewegen am MPE bzw. in der Astrophysik allgemein, mehreren interaktiven Sessions aus den verschiedenen wissenschaftlichen Abteilungen sowie einem Astroquiz. Zudem verbrachten vier Schülerinnen den Tag in der Lehrwerkstatt. Auch in 2023 wurden die Aktivitäten auf Social Media fortgeführt bzw. intensiviert. Das MPE ist nun vertreten auf X, früher bekannt als Twitter (@MPE-Garching), LinkedIn (MPE-Garching), Mastodon (mpe-garching) sowie Instagram (@mpe-garching. Weitere Informationen zur Öffentlichkeitsarbeit sind unter: http://www.mpe.mpg.de zu finden.

Kirpal Nandra