

Curriculum Vita

Frederik Bernard Stefan Paerels

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Born

16 June 1956 in Bussum, The Netherlands

Citizenship

US, Dutch

Education

Ph.D., University of Utrecht, Utrecht, The Netherlands, Astronomy, 1987
M.S., University of Utrecht, Utrecht, The Netherlands, Astronomy, 1984

Professional History

2014 (July—July 2015) Vice-Chair, Department of Astronomy
2011 (July—July 2014) Chair, Department of Astronomy
2010 (July—present) Professor of Astronomy, Columbia University
2010 (April—July 2011) Department of Astronomy, Vice Chair
2010 (January—July 2015)—co-Director, Columbia Astrophysics Laboratory, Columbia University.
2001 (July—July 2010)—Associate Professor of Astronomy, Columbia University.
1999 (July—2001 July)—Adjunct Associate Professor of Astronomy, Columbia University.
1999 (July—2003 October)—Director, Columbia Astrophysics Laboratory, Columbia University.
1998 (January—1999 July)—senior scientist, Space Research Laboratory Utrecht, Space Research Organization of the Netherlands.
1995 (September—2001 July)—Research Physicist, Columbia Astrophysics Laboratory, Columbia University.
1990 (September—1995 September)—Assistant Research Physicist, Space Sciences Laboratory, University of California, Berkeley.

1988 (September–1990 August)—Postdoctoral Fellow, Space Sciences Laboratory, University of California, Berkeley.

1988 (September–1990 August)—Postdoctoral Fellow, Institute for Geophysics and Planetary Physics, Lawrence Livermore National Laboratory.

Invited Lectures

- Invited Presentation, Mini-symposium celebrating 20 Years of XMM-Newton, NASA Goddard Space Flight Center, November 2019
- Invited Presentation, Mini-symposium celebrating 20 Years of *Chandra*, SRON Space Research Organization of the Netherlands, Utrecht, the Netherlands, November 2019
- Invited Presentation, Retirement of Professor Takaya Ohashi, Tokyo Metropolitan University, June 2019
- Invited Presentation, Special Session at 17th Meeting AAS High Energy Astrophysics Division, Monterey, CA, March 17-21, 2019
- Summary Talk, ISSI Workshop on 'Cluster of Galaxies: Physics and Cosmology', ISSI, Bern, Switzerland, November 20-24, 2017
- Invited presentation at "Whereabouts and Physics of the Roaming Baryons in the Universe", INAF Workshop, Sexten, Italy, July 10-14, 2017
- Invited two-day Review, High Resolution X-ray Spectroscopic Methods in Astrophysics, SRON Space Research Organization of the Netherlands, September 24-25, 2015
- Invited Presentation 'The Universe in High Resolution Spectra', *Chandra*-sponsored workshop, *Chandra* Science Center, SAO/Harvard, Cambridge, MA, August 19-21, 2015
- Invited Lecture 'Soft X-ray Astrophysical Spectroscopy', Symposium in honor of Professor Steven M. Kahn's 60th Birthday, Stanford University, January 29-30, 2015
- Colloquium, Department of Astronomy, University of Michigan, October 30, 2014
- Colloquium, Department of Astronomy, Michigan State University, October 29, 2014
- Invited Lectures 'Collisional Plasmas' and 'X-ray Absorption Edges and Features', NASA- and JAXA sponsored Workshop and School, Tokyo Metropolitan University, Tokyo, Japan, September 6-10, 2014.
- Invited Review 'High Resolution Astrophysical Spectroscopy: Current and Future', COSPAR General Assembly, August 3-10, 2014, Moscow, Russia.
- Invited Review, 'Astrophysics with Astro-H', workshop for Dutch astronomers, Space Research Organization of the Netherlands, Utrecht, the Netherlands, May 27, 2014.
- Four Invited Lectures 'X-rays from Neutron Stars', International School on Neutron Star Matter, Yukawa Institute for Theoretical Physics, Kyoto University, Japan, March 4-7, 2014.
- Invited Review 'Small telescopes, Big Dreams', SPIE Conference, Session on Instrumentation for X-ray and UV Astronomy, Amsterdam, the Netherlands, July 2-6, 2012.
- Invited review 'X-ray Absorption from the WHIM', "Whereabouts, Physical State and Metallicity of the Missing Baryons in the Local Universe", Cervia-Milano Marittima, Italy, May 27-30, 2012.

- Astrophysics Colloquium at the Kavli Institute for Astrophysics and Space Research at MIT, October 18, 2011.
- Invited Review 'Electromagnetic Constraints on the Neutron Star Equation of State', First Gravitational Wave Physics and Astronomy Workshop, University of Wisconsin-Milwaukee, January 26-29, 2011.
- Lecturer, First Astro-H Advanced School in Astrophysics, Minakami, Japan, August 19-21, 2010.
- Invited Lecture, High Resolution X-ray Spectroscopy, Utrecht, the Netherlands, March 15-18, 2010.
- Invited presentation, Special Session on the Physics of the Warm Intergalactic Medium, 11th biannual meeting of the High Energy Astrophysics Division of the American Astronomical Society, Kona, Hawaii, February 2010.
- Invited Lectures, 1st Mullard Space Science Laboratory School on High Resolution X-ray Spectroscopy, MSSL, Holmbury St Mary, Surrey, UK, March 13-14, 2009.
- 'Measuring the Masses and Radii of Neutron Stars', General Physics Colloquium, Utrecht University, Utrecht, May 30, 2008
- 'Photospheric Spectroscopy of Neutron Stars', colloquium at the Theoretical Astrophysics Section, Ioffe Physico-Technical Institute of the Russian Academy of Sciences, St. Petersburg, Russia, May 23, 2008
- 'Physical Properties and Observables of the Warm/Hot IGM', invited presentation at "The Warm and Hot Universe", Columbia University, New York, May 7, 2008
- Colloquium, Department of Astronomy, Leiden University, Leiden, the Netherlands, March 20, 2008
- Invited Talk, Symposium on the Occasion of the Retirement of Professor John Heise, Sterrenwacht 'Sonnenborgh', Utrecht, February 22, 2008
- Colloquium, Department of Astronomy, Utrecht University, Utrecht, the Netherlands, January 23, 2008
- Colloquium, Department of Astronomy, Groningen University, Groningen, the Netherlands, November 5, 2007
- Invited review, International Team "Non-virialized X-ray Components of Clusters of Galaxies", International Space Science Institute, Bern, Switzerland, October 30-November 3, 2006.
- Colloquium, Department of Physics, University of Miami, Miami, FL, April 21, 2006
- Colloquium, Department of Astronomy, University of Toronto, Toronto, Canada, April 7, 2006
- Invited review, Workshop on Sterile Neutrinos in Astrophysics and Cosmology, Crans-Montana, Switzerland, March 25-29, 2006.
- Invited review, 2nd Mullard Space Science Laboratory Workshop on High Resolution X-ray Spectroscopy, MSSL, Holmbury St Mary, Surrey, UK, March 27-28, 2006.
- Invited Lecture, E. L. Hulbert Center and Remote Sensing Division, Naval Research Laboratory, Washington, DC, March 2, 2006.
- Invited Review, NASA Laboratory Astrophysics Workshop, University of Las Vegas, Nevada, February 14-16, 2006

- invited review, 'High resolution X-ray Photospheric X-ray Spectroscopy of Neutron Stars', 'X-ray Universe 2005' meeting (five years of Science with XMM-Newton), El Escorial (Spain), September 26-30, 2005.
- invited review, 'Workshop on Measuring the Diffuse Intergalactic Medium', Shonan Village Center (Japan), October 12-16, 2005
- Meeting Summary and Review, 'X-ray Diagnostics of Astrophysical Plasmas', Cambridge, MA, November 2004.
- invited review, SPIE Glasgow (astrophysical X-ray spectroscopy), June 2004
- invited review Cospar meeting Paris, astrophysical X-ray spectroscopy, July 2004
- Colloquium, Department of Astronomy, University of Massachusetts, Amherst, March 25, 2004
- Invited Review, 'X-ray Observations of the Intergalactic Medium ', 'Four Years of *Chandra*' Symposium, Huntsville, Ala., September 2003.
- Colloquium, Laboratory for High Energy Astrophysics, NASA Goddard Space Flight Center, August 26, 2003
- Invited Review, 'Physics and Astrophysics of Neutron Stars', Santa Fe, NM, July 29, 2003
- Colloquium, Department of Physics and Astronomy, Rice University, April 2, 2003
- Invited Review, 'First *Constellation-X* Workshop on X-ray Spectroscopy', Columbia University, New York, May 2003
- Invited Review, 'New Directions in X-ray Astronomy', 201st Meeting of the American Astronomical Society, Seattle, WA, January 8, 2003
- Invited Lecture, Amateur Astronomy Association of New York, American Museum of Natural History, October 25, 2002
- Invited Lecture 'Recent Highlights of High Energy Astrophysics', 91st Spring Meeting of the American Association of Variable Star Observers, Waikoloa, HI, July 2002
- Colloquium, Department of Physics and Astronomy, Ohio University, May 2, 2002
- Invited Presentation at the 13th APS Topical Conference on Atomic Processes in Plasmas, Gatlinburg, TN, April 22-25, 2002
- Invited Presentation at the 'XEUS – Studying the Evolution of the Hot Universe' Workshop, Garching, Germany, March 11-13, 2002
- Colloquium, Department of Astronomy and Astrophysics, Penn State University, January 23, 2002
- Invited Presentation at the 2nd XMM-Newton Workshop, ESTEC, Noordwijk, the Netherlands, November 26-30, 2001
- Colloquium, Department of Physics, Columbia University, November 19, 2001
- Invited Presentation at the 13th Rencontres de Blois Meeting: 'Frontiers of the Universe', Blois, France, June 17-23, 2001
- Special Astrophysics Seminar, Department of Physics and Astronomy, Rutgers University, April 26, 2001
- Special Astrophysics Seminar, Department of Physics and Astronomy, SUNY/Stony Brook, April 18, 2001
- Special Astrophysics Seminar, Center for Space Research, MIT, February 19, 2001

- Colloquium, Department of Physics and Astronomy, University of Illinois Urbana-Champaign, February 13, 2001
- Invited. Reviewer, American Astronomical Society 2001 Winter Meeting, January 7-11, 2001 (San Diego, CA)
- Invited Lecturer, International Astronomical Union General Assembly, Manchester (UK), August 2000
- Invited Lecturer, 196th Meeting of the American Astronomical Society, Special Session A New Era in X-ray Astronomy, Rochester, NY, June 2000
- Invited Reviewer, 33d COSPAR Assembly, Special Symposium New Vistas from X-ray Observatories, Warsaw, July 2000
- Invited Reviewer, X-ray Astronomy 1999, Bologna, September 1999
- Invited Lecturer, 10th European Astrophysics Doctoral Network Summer School, University of Amsterdam, September 1997
- Invited Reviewer, 'Advanced Satellite for Cosmology and Astrophysics' workshop (Washington, DC, 1997)
- Invited Reviewer, International Astronomical Union Colloquium No. 152 'Astrophysics in the Extreme Ultraviolet' (Berkeley, 1995)

Committee Assignments

- Treasurer and Member, Executive Committee of the High Energy Astrophysics Division of the American Astronomical Society, March 2019-
- Member, Scientific Organizing Committee, IAU General Assembly Focus Meeting 'Warm and Hot Baryons in the Cosmos', IAU General Assembly, Vienna, 2018
- Member, NASA *Lynx* Science and Technology Definition Team, March 2016-June 2019.
- Chair, Scientific Organizing Committee, Symposium in Celebration of Professor Steven M. Kahn's 60th Birthday, Stanford University, January 29-30, 2015.
- Member, Scientific Organizing Committee, COSPAR General Assembly, "Research In Astrophysics from Space", Session E1.4 'X-ray Spectroscopy of Large-scale Plasmas', Moscow, August 2-10, 2014.
- Member, Scientific Organizing Committee, Symposium in Celebration of Professor Edward A. Spiegel's Eightieth Birthday, Columbia University, May 2011
- Member, Executive Committee of the High Energy Astrophysics Division of the American Astronomical Society, February 2010-February 2013
- Member, *Electromagnetic Observations from Space* Program Prioritization Panel of the National Research Council *Astro2010* Decadal Survey of Astronomy and Astrophysics
- Member, *Astro-H* Science Working Group, February 2009-present
- Member, *International X-ray Observatory* Science Definition Team, September 2008-May 2012
- Member, Scientific Organizing Committee, conference on 'High resolution X-ray Spectroscopy: Past, Present, and Future', Utrecht University, the Netherlands, March 2010.

- Chair, Scientific Organizing Committee, conference on ‘The Warm & Hot Universe’, Columbia University, May 2008
- *Constellation-X* observatory Facility Science Team, chair of the science panel on ‘Extreme states of matter’, January 2008-August 2008.
- Member and Panel Chair, XMM-Newton X-ray Observatory Guest Investigator Program Peer Review Committee, 2007.
- Member, Chandra X-ray Observatory Guest Investigator Program Peer Review Committee, 2006.
- Chair, NASA High Energy Astrophysics Archival Research Center Users Committee (Fall 2005-current)
- Member, Chandra X-ray Observatory Guest Investigator Program Peer Review Committee, 2005.
- Member, Astro-E2 Users Committee (Spring 2005-current)
- Member, *XMM-Newton* Observatory Time Allocation Committee, November 2004
- Member, NASA ‘Astrophysics and Physics Research and Analysis’ program peer review, August, 2004
- Member, NASA ‘Astrophysics and Physics Research and Analysis’ program peer review, June, 2003
- Member, *XMM-Newton* Observatory Time Allocation Committee, June 2003
- Member, Scientific Organizing Committee, ‘First *Constellation-X* Workshop on X-ray Spectroscopy’, Columbia University, May 2003
- Chair, Chandra Fellowship Selection Committee, 2003
- Member, Chandra Fellowship Selection Committee, 2001.
- Member, Chandra X-ray Observatory Guest Investigator Program Peer Review Committee, 2000.
- Member, Chandra X-ray Observatory Users Committee, 2000-2003
- Member, Astro-E Guest Investigator Program Peer Review Committee, 1999.
- Member, Scientific Organizing Committee, X-ray Astronomy 1999, Bologna, September 1999.
- Member, Scientific Organizing Committee, First XMM Workshop, Noordwijk (NL), 1998.
- Member, X-ray Astrophysics Working Group for the X-ray Evolving Universe (XEUS) Observatory, 1999-
- Member, Emission Line Project for the Chandra X-ray Observatory Peer Review Committee, August 1999.
- Member, Advanced Satellite for Astrophysics and Cosmology Guest Investigator Program Peer Review Committees, 1993-1997.
- Delegate to US/Japan Merger Meeting, Joint Advanced Satellite for Astrophysics and Cosmology Guest Investigator Program Peer Review Committee, November 1994.
- Member, Rontgen Satellite Guest Investigator Program Peer Review Committees, 1993-1996.
- Member, NASA High Energy Astrophysics Archival Research Center Users’ Group, 1993-1998.

Awards

- 2010 Presidential Award for Outstanding Teaching, Columbia University

Professional Affiliations and Memberships

- Member, American Astronomical Society
- Member, International Astronomical Union

Publications:**Frederik B. S. Paerels**

- 2020 Detecting and Locating Electromagnetic Counterparts to Gravitational Wave Sources Using Galactic Dust Scattering Halos, Richard Nederlander and Frits Paerels, *Astrophysical Journal*, **890**, 135.
- 2019 Photoionization Emission Models for the Cyg X-3 X-Ray Spectrum, Tim Kallman, Michael McCollough, K. Koljonen, Duane Liedahl, Jon Miller, Frits Paerels, G. Pooley, Masao Sako, Norbert Schulz, S. Trushkin, and Lia Corrales, *Astrophysical Journal*, **874**, 51.
- 2019 NuSTAR Observations of the Accreting Atolls GX 3+1, 4U 1702-429, 4U 0614+091, and 4U 1746-371, Renee Ludlam, Jon Miller, Didier Barret, Edward Cackett, B. M. Coughenour, T. Dauser, N. Degenaar, Javier Garca, Fiona Harrison, and F. Paerels, *Astrophysical Journal*, **873**, 99.
- 2019 Constraining Gas Motions in the Intra-Cluster Medium, Simionescu, Aurora, ZuHone, John, Zhuravleva, Irina, Churazov, Eugene, Gaspari, Massimo, Nagai, Daisuke, Werner, Norbert, Roediger, Elke, Canning, Rebecca, Eckert, Dominique, Gu, Liyi, Paerels, Frits, *Space Sci. Rev.*, **215**, 24.
- 2019 Shocks and Non-thermal Particles in Clusters of Galaxies, Bykov, A. M., Vazza, F., Kropotina, J. A., Levenfish, K. P., Paerels, F. B. S., *Space Sci. Rev.*, **215**, 14.
- 2018 Detection of polarized gamma-ray emission from the Crab nebula with the Hitomi Soft Gamma-ray Detector, F. Aharonian *et al.* (Hitomi Collaboration), *Publ. Astron. Soc. Japan*, **70**, 113.
- 2018 X-Ray Spectroscopy of Galaxy Clusters: Beyond the CIE Modeling, Gu, Liyi, Zhuravleva, Irina, Churazov, Eugene, Paerels, Frits, Kaastra, Jelle, Yamaguchi, Hiroya, *Space Sci. Rev.*, **214**, 108.
- 2018 Detection of the Missing Baryons in a Warm-Hot Intergalactic Medium, Fabrizio Nicastro, J. Kaastra, Y. Krongold, S. Borgani, E. Branchini, R. Cen, M. Dadina, C.W. Danforth, M. Elvis, F. Fiore, A. Gupta, S. Mathur, D. Mayya, F. Paerels, L. Piro, D. Rosa-Gonzalez, J. Schaye, J.M. Shull, J. Torres-Zafra, N. Wijers, and L. Zappacosta, *Nature*, **558**, 406.
- 2018 Hitomi X-ray observation of the pulsar wind nebula G21.5-0.9, F. Aharonian *et al.* (Hitomi Collaboration), *Publ. Astron. Soc. Japan*, **70**, 38.
- 2018 Search for gravitational redshifted absorption lines in LMXB Serpens X-1, Hiroki Yoneda, Chris Done, Frits Paerels, Tadayuki Takahashi, and Shin Watanabe, *Mon. Not. Royal Astron. Soc.*, **475**, 2194.
- 2018 The very faint X-ray binary IGR J17062-6143: a truncated disc, no pulsations, and a possible outflow, J. van den Eijnden *et al.*, *Mon. Not. Royal Astron. Soc.*, **475**, 2027.
- 2018 Glimpse of the highly obscured HMXB IGR J16318-4848 with Hitomi, F. Aharonian *et al.* (Hitomi Collaboration), *Publ. Astron. Soc. Japan*, **70**, 17.
- 2018 Hitomi observations of the LMC SNR N 132 D: Highly redshifted X-ray emission from iron ejecta, F. Aharonian *et al.* (Hitomi Collaboration), *Publ. Astron. Soc. Japan*, **70**, 16.
- 2018 Hitomi X-ray studies of giant radio pulses from the Crab pulsar, F. Aharonian *et al.* (Hitomi Collaboration), *Publ. Astron. Soc. Japan*, **70**, 15.
- 2018 Search for thermal X-ray features from the Crab nebula with the Hitomi soft X-ray spectrometer, F. Aharonian *et al.* (Hitomi Collaboration), *Publ. Astron. Soc. Japan*, **70**, 14.
- 2018 Hitomi observation of radio galaxy NGC 1275: The first X-ray microcalorimeter spectroscopy of Fe-K line emission from an active galactic nucleus, F. Aharonian *et al.* (Hitomi Collaboration), *Publ. Astron. Soc. Japan*, **70**, 13.

- 2018 Atomic data and spectral modeling constraints from high-resolution X-ray observations of the Perseus cluster with Hitomi, F. Aharonian *et al.* (Hitomi Collaboration), *Publ. Astron. Soc. Japan*, **70**, 12.
- 2018 Temperature structure in the Perseus cluster core observed with Hitomi, F. Aharonian *et al.* (Hitomi Collaboration), *Publ. Astron. Soc. Japan*, **70**, 11.
- 2018 Measurements of resonant scattering in the Perseus Cluster core with Hitomi SXS, F. Aharonian *et al.* (Hitomi Collaboration), *Publ. Astron. Soc. Japan*, **70**, 10.
- 2018 Atmospheric gas dynamics in the Perseus cluster observed with Hitomi, F. Aharonian *et al.* (Hitomi Collaboration), *Publ. Astron. Soc. Japan*, **70**, 9.
- 2017 A Hard Look at the Neutron Stars and Accretion Disks in 4U 1636-53, GX 17+2, and 4U 1705-44 with NuStar, R. M. Ludlam, J. M. Miller, M. Bacchetti, D. Barret, A. C. Bostrom, E. M. Cackett, N. Degenaar, T. Di Salvo, L. Natalucci, J. Tomsick, F. Paerels, M. L. Parker, *Astrophys. J.*, **836**, 140.
- 2017 Solar abundance ratios of the iron-peak elements in the Perseus cluster, F. Aharonian *et al.* (Hitomi Collaboration), *Nature*, **551**, 478.
- 2017 Discovery of Galactic O iv and O v X-ray absorption due to transition temperature gas in the PKS 2155-304 spectrum, J. Nevalainen, B. Wakker, J. Kaastra, M. Bonamente, S. Snowden, F. Paerels, and C. de Vries, *Astron. Astrophys.*, **605**, 47.
- 2017 An in-depth study of a neutron star accreting at low Eddington rate: on the possibility of a truncated disc and an outflow, N. Degenaar, C. Pinto, J. M. Miller, R. Wijnands, D. Altamirano, F. Paerels, A. C. Fabian, D. Chakrabarty, *Mon. Not. Royal Astr. Soc.*, **464**, 398.
- 2017 Hitomi constraints on the 3.5 keV line in the Perseus galaxy cluster, Hitomi Collaboration (F. Aharonian, H. Akamatsu, F. Akimoto *et al.*), *Astrophys. J. (Letters)*, **837**, L15.
- 2016 The quiescent intracluster medium in the core of the Perseus cluster, Hitomi Collaboration (F. Aharonian, H. Akamatsu, F. Akimoto *et al.*), *Nature*, **535**, 117.
- 2015 Flows of X-ray gas reveal the disruption of a star by a massive black hole, Jon M. Miller *et al.*, *Nature*, **526**, 542.
- 2015 The dust scattering halo of Cygnus X-3, Lia Corrales and Frits Paerels, *Mon. Not. Royal Astron. Soc.*, **453**, 1121.
- 2015 Calibration and In-orbit Performance of the Reflection Grating Spectrometer on board *XMM-Newton*, C. P. de Vries, J. W. den Herder, C. Gabriel, R. Gonzalez-Riestra, A. Ibarra, J. S. Kaastra, A. M. T. Pollock, A. J. J. Raassen, F. B. S. Paerels, *Astron. Astrophys.*, **573**, 128.
- 2014 ASTRO-H White Paper - Chemical Evolution in the High-z Universe, M. S. Tashiro *et al.*, arXiv 1412.1179
- 2014 ASTRO-H White Paper -High Resolution Spectroscopy of Interstellar and Circumgalactic Gas in the Milky Way and Other Galaxies, F. Paerels *et al.*, arXiv 1412.1174
- 2014 ASTRO-H White Paper - Low Mass X-ray Binaries, C. Done *et al.*, arXiv 1412.1164
- 2013 Constraints on the Neutron Star and Inner Accretion Flow in Serpens X-1 Using NuSTAR, J. Miller *et al.*, *Ap.J.*, **779**, L2.
- 2013 the Chandra View of the Warm-hot Intergalactic Medium toward 1ES 1553+113: I: Absorption-line Detections and Identifications, F. Nicastro *et al.*, *Ap. J.*, **769**, 90.

- 2012 A bright thermonuclear X-ray burst simultaneously observed with Chandra and RXTE, J. in 't Zand, D. Galloway, H. Marshall, D. Ballantyne, P. Jonker, F. Paerels, D. Palmer, A. Patruno, N. Weinberg, *Astron. Astrophys.*, **553**, 83.
- 2012 ORIGIN: metal creation and evolution from cosmic dawn, J. den Herder *et al.*, *Exp. Astronomy*, **34**, 519.
- 2012 Cosmological X-ray scattering from intergalactic dust, L. Corrales & F. Paerels, *Ap. J.*, **751**, 93.
- 2011 The metal content of two groups of galaxies, Y. Grange, J. de Plaa, J. Kaastra, N. Werner, F. Verbunt, F. Paerels, C. de Vries, *Astron. Astrophys.*, **531**, 15.
- 2011 Studying the Warm-hot Intergalactic Medium in Emission, Y. Takei *et al.*, *Ap.J.*, **734**, 91.
- 2010 X-ray Diffraction Gratings for Astrophysics, Frits Paerels, *Space Science Reviews*, **157**, 15.
- 2010 The Astro-H Mission, T. Takahashi *et many al.*, *Proc. SPIE*, **7732**, 77320Z.
- 2009 HDE 245059: A Weak-Lined T Tauri Binary Revealed by Chandra and Keck, C. Baldovin-Saavedra, M. Audard, G. Duchne, M. Gdel, S.L. Skinner, F. B. S. Paerels, A. Ghez and C. McCabe, *Ap.J.*, **697**, 493.
- 2009 Studying the Warm-Hot Intergalactic Medium with Gamma-Ray Bursts, E. Branchini, E. Ursino, A. Corsi, D. Martizzi, L. Amati, J. W. den Herder, M. Galeazzi, B. Gendre, J. Kaastra, L. Moscardini, F. Nicastro, T. Ohashi, F. Paerels, L. Piro, M. Roncarelli, Y. Takei and M. Viel, *Ap.J.*, **697**, 328.
- 2009 Properties of the Ionised Plasma in the Vicinity of the Neutron Star X-ray Binary EXO0748-676, J. C. A. van Peet, E. Costantini, M. Méndez, F. B. S. Paerels, J. Cottam, *Astron. Astrophys.*, **497**, 805.
- 2009 Effective area calibration of the reflection grating spectrometers of XMM-Newton. II. X-ray spectroscopy of DA white dwarfs, J. S. Kaastra, T. Lanz, I. Hubeny, F. B. S. Paerels, *Astron. Astrophys.*, **497**, 311.
- 2009 EDGE: Explorer of diffuse emission and gamma-ray burst explosion, L. Piro, J. W. den Herder, T. Ohashi, L. Amati, J. L. Atteia, S. Barthelmy, M. Barbera, D. Barret, *and 109 co-authors*, *Experimental Astronomy*, **23**, 67.
- 2009 X-ray Spectroscopy of the Warm-Hot Intergalactic Medium, Frits Paerels, J.-W. den Herder, T. Ohashi, M. Bautz, G. Bryan, D. Buote, A. Bykov, C. Canizares, T. Fang, M. Galeazzi, J. Kaastra, F. Nicastro, M. Putman, A. Rasmussen, M. Schattensburg, J. Schaye, D. Schiminovich, Y. Takei, N. Werner, *Astro2010: The Astronomy and Astrophysics Decadal Survey*, Science White Papers, no. 231
- 2009 The Behavior of Matter Under Extreme Conditions, F. Paerels, M. Méndez, M. Agueros, M. Baring, D. Barret, S. Bhattacharyya, E. Cackett, J. Cottam, M. Díaz Trigo, D. Fox, M. Garcia, E. Gotthelf, W. Hermsen, W. Ho, K. Hurley, P. Jonker, F. Özel, G. Pavlov, R. Rutledge, R. Smith, L. Stella, T. Strohmayer, H. Tananbaum, P. Uttley, M. van Kerkwijk, M. Weisskopf, S. Zane, *Astro2010: The Astronomy and Astrophysics Decadal Survey*, Science White Papers, no. 230
- 2009 Solid State Astrophysics: Probing Interstellar Dust and Gas Properties with X-rays, Julia C. Lee, Randall K. Smith, C. R. Canizares, E. Costantini, C. de Vries, J. Drake, E. Dwek, R. Edgar, A. M. Juett, A. Li, C. Lisse, F. Paerels, D. Patnaude, B. Ravel, N. S. Schulz, T. P. Snow, L. A. Valencic,

- J. Wilms, J. Xiang, Astro2010: The Astronomy and Astrophysics Decadal Survey, Science White Papers, no. 178
- 2009 Fundamental Accretion and Ejection Astrophysics, J. Miller, M. Nowak, P. Nandra, N. Brandt, G. Matt, M. Cappi, G. Risaliti, S. Kitamoto, F. Paerels, M. Watson, R. Smith, M. Weisskopf, Y. Terashima, Y. Ueda, Astro2010: The Astronomy and Astrophysics Decadal Survey, Science White Papers, no. 208
- 2009 Stellar-Mass Black Holes and Their Progenitors, J. Miller, P. Uttley, K. Nandra, D. Barret, G. Matt, F. Paerels, M. Méndez, M. Díaz Trigo, M. Cappi, S. Kitamoto, M. Nowak, J. Wilms, R. Rothschild, R. Smith, M. Weisskopf, Y. Terashima, Y. Ueda, Astro2010: The Astronomy and Astrophysics Decadal Survey, Science White Papers, no. 207
- 2009 Spin and Relativistic Phenomena Around Black Holes, L. Brenneman, J. Miller, P. Nandra, M. Volonteri, M. Cappi, G. Matt, S. Kitamoto, F. Paerels, M. Mendez, R. Smith, M. Nowak, M. Garcia, M. Watson, M. Weisskopf, Y. Terashima, Y. Ueda, Astro2010: The Astronomy and Astrophysics Decadal Survey, Science White Papers, no. 26
- 2008 Clusters of Galaxies: Beyond the Thermal View, J. Kaastra, A. M. Bykov, S. Schindler, J. Bleeker, S. Borgani, A. Diaferio, K. Dolag, F. Durret, J. Nevalainen, T. Ohashi, F. Paerels, V. Petrosian, R. Rephaeli, P. Richter, J. Schaye, N. Werner, N., *Space Sci. Rev.*, 2-13-2008.
- 2008 FUV and X-Ray Absorption in the Warm-Hot Intergalactic Medium, P. Richter, F. Paerels, J. Kaastra, *Space Sci. Rev.*, 2-13-2008.
- 2008 Future Instrumentation for the Study of the Warm-Hot Intergalactic Medium, F. Paerels, J. Kaastra, T. Ohashi, P. Richter, A. M. Bykov, J. Nevalainen, *Space Sci. Rev.*, 2-13-2008.
- 2008 Thermal Radiation Processes, J. Kaastra, F. Paerels, F. Durret, S. Schindler, P. Richter, *Space Sci. Rev.*, 2-13-2008.
- 2008 Equilibration Processes in the Warm-Hot Intergalactic Medium, A. M. Bykov, F. Paerels, V. Petrosian, *Space Sci. Rev.*, 2-13-2008.
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