

Stanford



Daniel Richard Wilkins

Physical Science Research Scientist

Kavli Institute for Particle Astrophysics and Cosmology

Bio

BIO

I am a research scientist, astronomer and astrophysicist in the Kavli Institute for Particle Astrophysics and Cosmology at Stanford University. My research focuses on how material spiralling into a supermassive black hole in the centre of a galaxy is able to release huge amounts of energy, powering some of the brightest objects we see in the Universe.

My research bridges the divide between observational and theoretical studies of black holes, using state of the art space telescopes, developing novel data analysis techniques and designing computer simulations of how light travels around black holes. I am using the X-rays that are emitted and measurements of how they reflect off of the material in its final moments before it falls in to create a 3D map of the extreme environment just outside the event horizon. I am interested in what happens to material and light just before it is lost into the black hole, how the corona that produces the radiation we see is powered, and how black holes are able to launch jets at almost the speed of light.

I am passionate about teaching and communicating science to the general public. I regularly give public lectures to a wide variety of audiences and am the founder and host of the Discover Our Universe public lecture series from Stanford's Kavli Institute of Particle Astrophysics and Cosmology. I have made a number of appearances on TV and radio, and am actively involved in a number of initiatives to involve the public in astronomy and physics.

ACADEMIC APPOINTMENTS

- Phys Sci Res Assoc, Kavli Institute for Particle Astrophysics and Cosmology

HONORS AND AWARDS

- Einstein Fellowship, NASA (Oct 2016 - Oct 2019)
- Kavli Fellowship, Stanford University (Oct 2019 - Oct 2020)
- National Fellowship, Canadian Institute for Theoretical Astrophysics (CITA) (Sept 2013 - Sept 2015)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Fellow, Royal Astronomical Society (2011 - present)
- Full Member, American Astronomical Society (2013 - present)
- Member, NASA STROBE-X Mission Study Team (2018 - present)
- Member, NASA/US Wide Field Imager Consortium for the ESA Athena Mission (2017 - present)
- Member, JAXA Hitomi Science Working Group (2014 - 2016)

PROFESSIONAL EDUCATION

- Doctor of Philosophy, University of Cambridge , Astronomy (2013)
- Master of Arts, University of Cambridge (2012)
- Master of Natural Sciences, University of Cambridge , Physics (2009)
- Bachelor of Arts, University of Cambridge , Natural Sciences (2009)

LINKS

- Personal Web Page: <http://danwilkins.net>

Teaching

COURSES

2020-21

- Black Holes and Extreme Astrophysics: PHYSICS 17 (Aut)

Publications

PUBLICATIONS

- **Light bending and X-ray echoes from behind a supermassive black hole** *NATURE*
Wilkins, D. R., Gallo, L. C., Costantini, E., Brandt, W. N., Blandford, R. D.
2021; 595 (7869): 657-+
- **Venturing beyond the ISCO: detecting X-ray emission from the plunging regions around black holes** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Wilkins, D. R., Reynolds, C. S., Fabian, A. C.
2020; 493 (4): 5532-50
- **Returning radiation in strong gravity around black holes: reverberation from the accretion disc** *Monthly Notices of the Royal Astronomical Society*
Wilkins, D. R., García, J. A., Dauser, T., Fabian, A. C.
2020; 498 (3): 3302-3319
- **Low-frequency X-ray timing with Gaussian processes and reverberation in the radio-loud AGN 3C 120** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Wilkins, D. R.
2019; 489 (2): 1957-72
- **On the illumination of neutron star accretion discs** *Monthly Notices of the Royal Astronomical Society*
Wilkins, D. R.
2018; 475 (1): 748-756
- **Revealing structure and evolution within the corona of the Seyfert galaxy I Zw 1** *Monthly Notices of the Royal Astronomical Society*
Wilkins, D. R., Gallo, L. C., Silva, C. V., Costantini, E., Brandt, W. N., Kriss, G. A.
2017; 471 (4): 4436-4451
- **Towards modelling X-ray reverberation in AGN: piecing together the extended corona** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Wilkins, D. R., Cackett, E. M., Fabian, A. C., Reynolds, C. S.
2016; 458 (1): 200-225
- **Flaring from the supermassive black hole in Mrk 335 studied with Swift and NuSTAR** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Wilkins, D. R., Gallo, L. C., Grupe, D., Bonson, K., Komossa, S., Fabian, A. C.
2015; 454 (4): 4440-4451
- **Mitigating the effects of particle background on the Athena Wide Field Imager** *JOURNAL OF ASTRONOMICAL TELESCOPES INSTRUMENTS AND SYSTEMS*

- Miller, E. D., Grant, C. E., Bautz, M. W., Molendi, S., Kraft, R., Nulsen, P., Bulbul, E., Allen, S., Burrows, D. N., Eraerds, T., Fioretti, V., Gastaldello, F., Hall, et al
2022; 8 (1)
- **Modeling the Multiwavelength Variability of Mrk 335 Using Gaussian Processes** *ASTROPHYSICAL JOURNAL*
Griffiths, R., Jiang, J., Buisson, D. K., Wilkins, D., Gallo, L. C., Ingram, A., Lee, A. A., Grupe, D., Kara, E., Parker, M. L., Alston, W., Bourached, A., Cann, et al
2021; 914 (2)
 - **Identifying charged particle background events in X-ray imaging detectors with novel machine learning algorithms**
Wilkins, D. R., Allen, S. W., Miller, E. D., Bautz, M., Chattopadhyay, T., Fort, S., Grant, C. E., Herrmann, S., Kraft, R., Morris, R. G., Nulsen, P., DenHerder, J. W., Nikzad, et al
SPIE-INT SOC OPTICAL ENGINEERING.2021
 - **Characterizing continuum variability in the radio-loud narrow-line Seyfert 1 galaxy IRAS 17020+4544** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Gonzalez, A. G., Gallo, L. C., Kosec, P., Fabian, A. C., Alston, W. N., Berton, M., Wilkins, D. R.
2020; 496 (3): 3708–24
 - **The soft state of the black hole transient source MAXI J1820+070: emission from the edge of the plunge region?** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Fabian, A. C., Buisson, D. J., Kosec, P., Reynolds, C. S., Wilkins, D. R., Tomsick, J. A., Walton, D. J., Gandhi, P., Altamirano, D., Arzoumanian, Z., Cackett, E. M., Dyda, S., Garcia, et al
2020; 493 (4): 5389–96
 - **Blueshifted absorption lines from X-ray reflection in IRAS 13224-3809** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Fabian, A. C., Reynolds, C. S., Jiang, J., Pinto, C., Gallo, L. C., Parker, M. L., Lasenby, A. N., Alston, W. N., Buisson, D. K., Cackett, E. M., De Marco, B., Garcia, J., Kara, et al
2020; 493 (2): 2518–22
 - **Characterization of the Particle-induced Background of XMM-Newton EPIC-pn: Short- and Long-term Variability** *ASTROPHYSICAL JOURNAL*
Bulbul, E., Kraft, R., Nulsen, P., Freyberg, M., Miller, E. D., Grant, C., Bautz, M. W., Burrows, D. N., Allen, S., Eraerds, T., Fioretti, V., Gastaldello, F., Ghirardini, et al
2020; 891 (1)
 - **A dynamic black hole corona in an active galaxy through X-ray reverberation mapping** *NATURE ASTRONOMY*
Alston, W. N., Fabian, A. C., Kara, E., Parker, M. L., Dovciak, M., Pinto, C., Jiang, J., Middleton, M. J., Miniutti, G., Walton, D. J., Wilkins, D. R., Buisson, D. K., Caballero-Garcia, et al
2020
 - **Identifying charged particle background events in x-ray imaging detectors with novel machine learning algorithms** *Astronomical Telescopes and Instrumentation, Space Telescopes and Instrumentation 2020: Ultraviolet to Gamma Ray*
Wilkins, D., Allen, S., Miller, E., et al
2020
 - **Black hole magnetosphere with small-scale flux tubes - II. Stability and dynamics** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Yuan, Y., Spitkovsky, A., Blandford, R. D., Wilkins, D. R.
2019; 487 (3): 4114–27
 - **The XMM-Newton/HST View of the Obscuring Outflow in the Seyfert Galaxy Mrk 335 Observed at Extremely Low X-Ray Flux** *ASTROPHYSICAL JOURNAL*
Lia Longinotti, A., Kriss, G., Krongold, Y., Arellano-Cordova, K. Z., Komossa, S., Gallo, L., Grupe, D., Mathur, S., Parker, M. L., Pradhan, A., Wilkins, D.
2019; 875 (2)
 - **Black hole magnetosphere with small-scale flux tubes** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Yuan, Y., Blandford, R. D., Wilkins, D. R.
2019; 484 (4): 4920–32
 - **Evidence for an emerging disc wind and collimated outflow during an X-ray flare in the narrow-line Seyfert 1 galaxy Mrk 335** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Gallo, L. C., Gonzalez, A. G., Waddell, S. H., Ehler, H. S., Wilkins, D. R., Longinotti, A. L., Grupe, D., Komossa, S., Kriss, G. A., Pinto, C., Tripathi, S., Fabian, A. C., Krongold, et al

2019; 484 (3): 4287-4297

● **US Contributions to the Athena Wide Field Imager**

Burrows, D. N., Allen, S., Bautz, M., Bulbul, E., Chattopadhyay, T., Erdley, J., Falcone, A. D., Grant, C. E., Herrmann, S., Hornschemeier, A., Kelly, D., Kennea, J., Kraft, et al

SPIE-INT SOC OPTICAL ENGINEERING.2019

● **The remarkable X-ray variability of IRAS 13224-3809-I. The variability process** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*

Alston, W. N., Fabian, A. C., Buisson, D. K., Kara, E., Parker, M. L., Lohfink, A. M., Uttley, P., Wilkins, D. R., Pinto, C., De Marco, B., Cackett, E. M., Middleton, M. J., Walton, et al

2019; 482 (2): 2088-2106

● **Detection of polarized gamma-ray emission from the Crab nebula with the Hitomi Soft Gamma-ray Detector** *PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF JAPAN*

Aharonian, F., Akamatsu, H., Akimoto, F., Allen, S. W., Angelini, L., Audard, M., Awaki, H., Axelsson, M., Bamba, A., Bautz, M. W., Blandford, R., Brenneman, L. W., Brown, et al

2018; 70 (6)

● **The variability of the warm absorber in I Zwicky 1 as seen by XMM-Newton** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*

Silva, C. V., Costantini, E., Giustini, M., Kriss, G. A., Brandt, W. N., Gallo, L. C., Wilkins, D. R.

2018; 480 (2): 2334-2342

● **Eleven years of monitoring the Seyfert 1 Mrk 335 with Swift: Characterizing the X-ray and UV/optical variability** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*

Gallo, L. C., Blue, D. M., Grupe, D., Komossa, S., Wilkins, D. R.

2018; 478 (2): 2557-2568

● **The 1.5Ms observing campaign on IRAS 13224-3809-I. X-ray spectral analysis** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*

Jiang, J., Parker, M. L., Fabian, A. C., Alston, W. N., Buisson, D. K., Cackett, E. M., Chiang, C., Dauser, T., Gallo, L. C., Garcia, J. A., Harrison, F. A., Lohfink, A. M., De Marco, et al

2018; 477 (3): 3711-3726

● **Variable blurred reflection in the narrow-line Seyfert 1 galaxy Mrk 493** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*

Bonson, K., Gallo, L. C., Wilkins, D. R., Fabian, A. C.

2018; 477 (3): 3247-3256

● **Hitomi X-ray observation of the pulsar wind nebula G21.5-0.9** *PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF JAPAN*

Aharonian, F., Akamatsu, H., Akimoto, F., Allen, S. W., Angelini, L., Audard, M., Awaki, H., Axelsson, M., Bamba, A., Bautz, M. W., Blandford, R., Brenneman, L. W., Brown, et al

2018; 70 (3)

● **Hitomi X-ray studies of Giant Radio Pulses from the Crab pulsar.** *Publications of the Astronomical Society of Japan. Nihon Tenmon Gakkai*

Aharonian, F., Akamatsu, H., Akimoto, F., Allen, S. W., Angelini, L., Audard, M., Awaki, H., Axelsson, M., Bamba, A., Bautz, M. W., Blandford, R., Brenneman, L. W., Brown, et al

2018; 70 (2)

● **Hitomi (ASTRO-H) X-ray Astronomy Satellite** *JOURNAL OF ASTRONOMICAL TELESCOPES INSTRUMENTS AND SYSTEMS*

Takahashi, T., Kokubun, M., Mitsuda, K., Kelley, R. L., Ohashi, T., Aharonian, F., Akamatsu, H., Akimoto, F., Allen, S. W., Anabuki, N., Angelini, L., Arnaud, K., Asai, et al

2018; 4 (2)

● **Is there a UV/X-ray connection in IRAS 13224-3809?** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*

Buisson, D. K., Lohfink, A. M., Alston, W. N., Cackett, E. M., Chiang, C., Dauser, T., De Marco, B., Fabian, A. C., Gallo, L. C., Garcia, J. A., Jiang, J., Kara, E., Middleton, et al

2018; 475 (2): 2306-13

● **Hitomi observations of the LMC SNR N 132 D: Highly redshifted X-ray emission from iron ejecta** *PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF JAPAN*

Aharonian, F., Akamatsu, H., Akimoto, F., Allen, S. W., Angelini, L., Audard, M., Awaki, H., Axelsson, M., Bamba, A., Bautz, M. W., Blandford, R., Brenneman, L. W., Brown, et al

2018; 70 (2)

- **Temperature structure in the Perseus cluster core observed with Hitomi** *PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF JAPAN*
Aharonian, F., Akamatsu, H., Akimoto, F., Allen, S. W., Angelini, L., Audard, M., Awaki, H., Axelsson, M., Bamba, A., Bautz, M. W., Blandford, R., Brenneman, L. W., Brown, et al
2018; 70 (2)
- **Hitomi observation of radio galaxy NGC 1275: The first X-ray microcalorimeter spectroscopy of Fe-K alpha line emission from an active galactic nucleus** *PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF JAPAN*
Aharonian, F., Akamatsu, H., Akimoto, F., Allen, S. W., Angelini, L., Audard, M., Awaki, H., Axelsson, M., Bamba, A., Bautz, M. W., Blandford, R., Brenneman, L. W., Brown, et al
2018; 70 (2)
- **Measurements of resonant scattering in the Perseus Cluster core with Hitomi SXS** *PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF JAPAN*
Aharonian, F., Akamatsu, H., Akimoto, F., Allen, S. W., Angelini, L., Audard, M., Awaki, H., Axelsson, M., Bamba, A., Bautz, M. W., Blandford, R., Brenneman, L. W., Brown, et al
2018; 70 (2)
- **Search for thermal X-ray features from the Crab nebula with the Hitomi soft X-ray spectrometer** *PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF JAPAN*
Aharonian, F., Akamatsu, H., Akimoto, F., Allen, S. W., Angelini, L., Audard, M., Awaki, H., Axelsson, M., Bamba, A., Bautz, M. W., Blandford, R., Brenneman, L. W., Brown, et al
2018; 70 (2)
- **Atomic data and spectral modeling constraints from high-resolution X-ray observations of the Perseus cluster with Hitomi** *PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF JAPAN*
Aharonian, F., Akamatsu, H., Akimoto, F., Allen, S. W., Angelini, L., Audard, M., Awaki, H., Axelsson, M., Bamba, A., Bautz, M. W., Blandford, R., Brenneman, L. W., Brown, et al
2018; 70 (2)
- **Glimpse of the highly obscured HMXB IGR J16318-4848 with Hitomi** *PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF JAPAN*
Aharonian, F., Akamatsu, H., Akimoto, F., Allen, S. W., Angelini, L., Audard, M., Awaki, H., Axelsson, M., Bamba, A., Bautz, M. W., Blandford, R., Brenneman, L. W., Brown, et al
2018; 70 (2)
- **Atmospheric gas dynamics in the Perseus cluster observed with Hitomi** *PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF JAPAN*
Aharonian, F., Akamatsu, H., Akimoto, F., Allen, S. W., Angelini, L., Audard, M., Awaki, H., Axelsson, M., Bamba, A., Bautz, M. W., Blandford, R., Brenneman, L. W., Brown, et al
2018; 70 (2)
- **Hitomi X-ray studies of giant radio pulses from the Crab pulsar** *PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF JAPAN*
Aharonian, F., Akamatsu, H., Akimoto, F., Allen, S. W., Angelini, L., Audard, M., Awaki, H., Axelsson, M., Bamba, A., Bautz, M. W., Blandford, R., Brenneman, L. W., Brown, et al
2018; 70 (2)
- **The Athena WFI Science Products Module**
Burrows, D. N., Allen, S., Bautz, M., Bulbul, E., Erdley, J., Falcone, A. D., Fort, S., Grant, C. E., Herrmann, S., Kennea, J., Klar, R., Kraft, R., Mantz, et al
SPIE-INT SOC OPTICAL ENGINEERING.2018
- **Solar abundance ratios of the iron-peak elements in the Perseus cluster** *NATURE*
Aharonian, F., Akamatsu, H., Akimoto, F., Allen, S. W., Angelini, L., Audard, M., Awaki, H., Axelsson, M., Bamba, A., Bautz, M. W., Blandford, R., Brenneman, L. W., Brown, et al
2017; 551 (7681): 478+
- **The high-Eddington NLS1 Ark 564 has the coolest corona** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Kara, E., Garcia, J. A., Lohfink, A., Fabian, A. C., Reynolds, C. S., Tombesi, F., Wilkins, D. R.
2017; 468 (3): 3489-3498
- **The response of relativistic outflowing gas to the inner accretion disk of a black hole** *NATURE*
Parker, M. L., Pinto, C., Fabian, A. C., Lohfink, A., Buisson, D. J., Alston, W. N., Kara, E., Cackett, E. M., Chiang, C., Dauser, T., De Marco, B., Gallo, L. C., Garcia, et al
2017; 543 (7643): 83-?

- **Future of X-ray reverberation from AGN** *ASTRONOMISCHE NACHRICHTEN*
Fabian, A. C., Alston, W. N., Cackett, E. M., Kara, E., Uttley, P., WILKINS, D. R.
2017; 338 (2-3): 269-273
- **Hitomi Constraints on the 3.5 keV Line in the Perseus Galaxy Cluster** *ASTROPHYSICAL JOURNAL LETTERS*
Aharonian, F. A., Akamatsu, H., Akimoto, F., Allen, S. W., Angelini, L., Arnaud, K. A., Audard, M., Awaki, H., Axelsson, M., Bamba, A., Bautz, M. W., Blandford, R. D., Bulbul, et al
2017; 837 (1)
- **Probing the geometry and motion of AGN coronae through accretion disc emissivity profiles** *Monthly Notices of the Royal Astronomical Society*
Gonzalez, A. G., Wilkins, D. R., Gallo, L. C.
2017; 472 (2): 1932-1945
- **The Extremes of AGN Variability**
Komossa, S., Grupe, D., Schartel, N., Gallo, L., Gomez, J. L., Kollatschny, W., Kriss, G., Leighly, K., Longinotti, A. L., Parker, M., Santos-Lleo, M., Wilkins, D., Zetzl, et al
CAMBRIDGE UNIV PRESS.2017: 168-171
- **The quiescent intracluster medium in the core of the Perseus cluster** *NATURE*
Aharonian, F., Akamatsu, H., Akimoto, F., Allen, S. W., Anabuki, N., Angelini, L., Arnaud, K., Audard, M., Awaki, H., Axelsson, M., Bamba, A., Bautz, M., Blandford, et al
2016; 535 (7610): 117-?
- **Driving extreme variability: Measuring the evolving coronae and evidence for jet launching in AGN** *ASTRONOMISCHE NACHRICHTEN*
Wilkins, D. R.
2016; 337 (4-5): 557-562
- **The ASTRO-H (Hitomi) X-ray Astronomy Satellite**
Takahashi, T., Kokubun, M., Mitsuda, K., Kelley, R., Ohashi, T., Aharonian, F., Akamatsu, H., Akimoto, F., Allen, S., Anabuki, N., Angelini, L., Arnaud, K., Asai, et al
SPIE-INT SOC OPTICAL ENGINEERING.2016
- **Driving extreme variability: the evolving corona and evidence for jet launching in Markarian 335** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Wilkins, D. R., Gallo, L. C.
2015; 449 (1): 129-146
- **The Comptonization of accretion disc X-ray emission: consequences for X-ray reflection and the geometry of AGN coronae** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Wilkins, D. R., Gallo, L. C.
2015; 448 (1): 703-712
- **NEW CONSTRAINTS ON THE BLACK HOLE LOW/HARD STATE INNER ACCRETION FLOW WITH NuSTAR** *ASTROPHYSICAL JOURNAL LETTERS*
Miller, J. M., Tomsick, J. A., Bachetti, M., Wilkins, D., Boggs, S. E., Christensen, F. E., Craig, W. W., Fabian, A. C., Grefenstette, B. W., Hailey, C. J., Harrison, F. A., Kara, E., King, et al
2015; 799 (1)
- **Suzaku observations of Mrk 335: confronting partial covering and relativistic reflection** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Gallo, L. C., WILKINS, D. R., Bonson, K., Chiang, C., Grupe, D., Parker, M. L., Zoghbi, A., Fabian, A. C., Komossa, S., Longinotti, A. L.
2015; 446 (1): 633-650
- **Modelling the extreme X-ray spectrum of IRAS 13224-3809** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Chiang, C., Walton, D. J., Fabian, A. C., WILKINS, D. R., Gallo, L. C.
2015; 446 (1): 759-769
- **Caught in the act: measuring the changes in the corona that cause the extreme variability of 1H 0707-495** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Wilkins, D. R., Kara, E., Fabian, A. C., Gallo, L. C.
2014; 443 (3): 2746-2756

- **The NuSTAR spectrum of Mrk 335: extreme relativistic effects within two gravitational radii of the event horizon?** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Parker, M. L., WILKINS, D. R., Fabian, A. C., Grupe, D., Dauser, T., Matt, G., Harrison, F. A., Brenneman, L., Boggs, S. E., Christensen, F. E., Craig, W. W., Gallo, L. C., Hailey, et al
2014; 443 (2): 1723-1732
- **X-ray reverberation around accreting black holes** *ASTRONOMY AND ASTROPHYSICS REVIEW*
Uttley, P., Cackett, E. M., Fabian, A. C., Kara, E., Wilkins, D. R.
2014; 22
- **On the determination of the spin and disc truncation of accreting black holes using X-ray reflection** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Fabian, A. C., Parker, M. L., WILKINS, D. R., MILLER, J. M., Kara, E., Reynolds, C. S., Dauser, T.
2014; 439 (3): 2307-2313
- **Modelling the broad Fe K alpha reverberation in the AGN NGC 4151** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Cackett, E. M., Zoghbi, A., Reynolds, C., Fabian, A. C., Kara, E., Uttley, P., WILKINS, D. R.
2014; 438 (4): 2980-2994
- **The ASTRO-H X-ray Astronomy Satellite**
Takahashi, T., Mitsuda, K., Kelley, R., Aharonian, F., Akamatsu, H., Akimoto, F., Allen, S., Anabuki, N., Angelini, L., Arnaud, K., Asai, M., Audard, M., Awaki, et al
SPIE-INT SOC OPTICAL ENGINEERING.2014
- **Discovery of high-frequency iron K lags in Ark 564 and Mrk 335** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Kara, E., Fabian, A. C., Cackett, E. M., Uttley, P., WILKINS, D. R., Zoghbi, A.
2013; 434 (2): 1129-1137
- **The origin of the lag spectra observed in AGN: Reverberation and the propagation of X-ray source fluctuations** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Wilkins, D. R., Fabian, A. C.
2013; 430 (1): 247-258
- **Long XMM observation of the narrow-line Seyfert 1 galaxy IRAS 13224-3809: rapid variability, high spin and a soft lag** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Fabian, A. C., Kara, E., Walton, D. J., WILKINS, D. R., Ross, R. R., Lozanov, K., Uttley, P., Gallo, L. C., Zoghbi, A., Miniutti, G., Boller, T., Brandt, W. N., Cackett, et al
2013; 429 (4): 2917-2923
- **The closest look at 1H0707-495: X-ray reverberation lags with 1.3 Ms of data** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Kara, E., Fabian, A. C., Cackett, E. M., Steiner, J. F., Uttley, P., WILKINS, D. R., Zoghbi, A.
2013; 428 (4): 2795-2804
- **Understanding X-ray reflection emissivity profiles in AGN: locating the X-ray source** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Wilkins, D. R., Fabian, A. C.
2012; 424 (2): 1284-1296
- **On the determination of the spin of the black hole in Cyg X-1 from X-ray reflection spectra** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Fabian, A. C., WILKINS, D. R., MILLER, J. M., REIS, R. C., Reynolds, C. S., Cackett, E. M., Nowak, M. A., Pooley, G. G., Pottschmidt, K., Sanders, J. S., Ross, R. R., Wilms, J.
2012; 424 (1): 217-223
- **Testing the accuracy of radiative cooling approximations in smoothed particle hydrodynamical simulations** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Wilkins, D. R., Clarke, C. J.
2012; 419 (4): 3368-3377
- **1H 0707-495 in 2011: an X-ray source within a gravitational radius of the event horizon** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Fabian, A. C., Zoghbi, A., Wilkins, D., Dwelly, T., Uttley, P., Schartel, N., Miniutti, G., Gallo, L., Grupe, D., Komossa, S., Santos-Lleo, M.
2012; 419 (1): 116-123

- **Determination of the X-ray reflection emissivity profile of 1H 0707-495** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*
Wilkins, D. R., Fabian, A. C.
2011; 414 (2): 1269-1277