

Megan E Eckart

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/9045645/publications.pdf>

Version: 2024-02-01

128
papers

1,994
citations

257357

24
h-index

330025

37
g-index

128
all docs

128
docs citations

128
times ranked

1963
citing authors

#	ARTICLE	IF	CITATIONS
1	Hitomi Constraints on the 3.5 keV Line in the Perseus Galaxy Cluster. <i>Astrophysical Journal Letters</i> , 2017, 837, L15.	3.0	84
2	Position sensitive x-ray spectrophotometer using microwave kinetic inductance detectors. <i>Applied Physics Letters</i> , 2006, 89, 222507.	1.5	76
3	A Galaxy at $z = 6.545$ and Constraints on the Epoch of Reionization. <i>Astrophysical Journal</i> , 2005, 619, 12-18.	1.6	69
4	Proximity effects and nonequilibrium superconductivity in transition-edge sensors. <i>Physical Review B</i> , 2011, 84, .	1.1	64
5	Small Pitch Transition-Edge Sensors with Broadband High Spectral Resolution for Solar Physics. <i>Journal of Low Temperature Physics</i> , 2012, 167, 168-175.	0.6	62
6	Atmospheric gas dynamics in the Perseus cluster observed with Hitomi. <i>Publication of the Astronomical Society of Japan</i> , 2018, 70, .	1.0	57
7	The Serendipitous Extragalactic X-ray Source Identification (SEXSI) Program. III. Optical Spectroscopy. <i>Astrophysical Journal, Supplement Series</i> , 2006, 165, 19-56.	3.0	53
8	A COMPARISON OF X-RAY AND MID-INFRARED SELECTION OF OBSCURED ACTIVE GALACTIC NUCLEI. <i>Astrophysical Journal</i> , 2010, 708, 584-597.	1.6	53
9	The Astro-H high resolution soft x-ray spectrometer. <i>Proceedings of SPIE</i> , 2016, , .	0.8	51
10	The Serendipitous Extragalactic X-ray Source Identification Program. I. Characteristics of the Hard X-ray Sample. <i>Astrophysical Journal</i> , 2003, 596, 944-956.	1.6	49
11	Implications of weak-link behavior on the performance of Mo/Au bilayer transition-edge sensors. <i>Journal of Applied Physics</i> , 2013, 114, .	1.1	49
12	Atomic data and spectral modeling constraints from high-resolution X-ray observations of the Perseus cluster with Hitomi. <i>Publication of the Astronomical Society of Japan</i> , 2018, 70, .	1.0	46
13	Constraints on the chemical enrichment history of the Perseus Cluster of galaxies from high-resolution X-ray spectroscopy. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 483, 1701-1721.	1.6	39
14	Lynx x-ray microcalorimeter. <i>Journal of Astronomical Telescopes, Instruments, and Systems</i> , 2019, 5, 1.	1.0	39
15	Advances in Small Pixel TES-Based X-Ray Microcalorimeter Arrays for Solar Physics and Astrophysics. <i>IEEE Transactions on Applied Superconductivity</i> , 2013, 23, 2100705-2100705.	1.1	37
16	SEARCHING FOR keV STERILE NEUTRINO DARK MATTER WITH X-RAY MICROCALORIMETER SOUNDING ROCKETS. <i>Astrophysical Journal</i> , 2015, 814, 82.	1.6	35
17	Fine pitch transition-edge sensor X-ray microcalorimeters with sub-eV energy resolution at 1.5 keV. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	34
18	Performance of an X-ray Microcalorimeter with a 240 μm Absorber and a 50 μm TES Bilayer. <i>Journal of Low Temperature Physics</i> , 2018, 193, 337-343.	0.6	33

#	ARTICLE	IF	CITATIONS
19	Transition-edge sensor pixel parameter design of the microcalorimeter array for the x-ray integral field unit on Athena. Proceedings of SPIE, 2016, , .	0.8	32
20	Optical and Near-Infrared Spectroscopy of a High-Redshift Hard X-Ray-emitting Spiral Galaxy. Astronomical Journal, 2003, 125, 1236-1246.	1.9	31
21	Resolve Instrument on X-ray Astronomy Recovery Mission (XARM). Journal of Low Temperature Physics, 2018, 193, 991-995.	0.6	31
22	Soft x-ray spectrometer (SXS): the high-resolution cryogenic spectrometer onboard ASTRO-H. Proceedings of SPIE, 2014, , .	0.8	29
23	Measurements of resonant scattering in the Perseus Cluster core with Hitomi SXS. Publication of the Astronomical Society of Japan, 2018, 70, .	1.0	29
24	Hitomi observation of radio galaxy NGC%1275: The first X-ray microcalorimeter spectroscopy of Fe-K \pm line emission from an active galactic nucleus. Publication of the Astronomical Society of Japan, 2018, 70, .	1.0	27
25	Optical/UV and X-Ray Microwave Kinetic Inductance Strip Detectors. Journal of Low Temperature Physics, 2008, 151, 537-543.	0.6	24
26	Multiplexed readout of uniform arrays of TES x-ray microcalorimeters suitable for Constellation-X. Proceedings of SPIE, 2008, , .	0.8	23
27	Effects of Normal Metal Features on Superconducting Transition-Edge Sensors. Journal of Low Temperature Physics, 2018, 193, 231-240.	0.6	22
28	Thermal fluctuation noise in Mo/Au superconducting transition-edge sensor microcalorimeters. Journal of Applied Physics, 2019, 125, .	1.1	22
29	Detection of polarized gamma-ray emission from the Crab nebula with the Hitomi Soft Gamma-ray Detector. Publication of the Astronomical Society of Japan, 2018, 70, .	1.0	21
30	Ground calibration of the Astro-H (Hitomi) soft x-ray spectrometer. Journal of Astronomical Telescopes, Instruments, and Systems, 2018, 4, 1.	1.0	21
31	Development of Position-Sensitive Transition-Edge Sensor X-Ray Detectors. IEEE Transactions on Applied Superconductivity, 2009, 19, 451-455.	1.1	20
32	Temperature structure in the Perseus cluster core observed with Hitomi. Publication of the Astronomical Society of Japan, 2018, 70, .	1.0	20
33	Characterization and Performance of Magnetic Calorimeters for Applications in X-ray Spectroscopy. Journal of Low Temperature Physics, 2014, 176, 617-623.	0.6	19
34	Multiabsorber transition-edge sensors for x-ray astronomy. Journal of Astronomical Telescopes, Instruments, and Systems, 2019, 5, 1.	1.0	18
35	Characterization of Mo/Au Transition-Edge Sensors with Different Geometric Configurations. Journal of Low Temperature Physics, 2014, 176, 356-362.	0.6	17
36	Temporal Gain Correction for X-ray Calorimeter Spectrometers. Journal of Low Temperature Physics, 2016, 184, 498-504.	0.6	16

#	ARTICLE	IF	CITATIONS
37	Toward Large Field-of-View High-Resolution X-ray Imaging Spectrometers: Microwave Multiplexed Readout of 28 TES Microcalorimeters. <i>Journal of Low Temperature Physics</i> , 2018, 193, 258-266.	0.6	16
38	Calibration sources and filters of the soft x-ray spectrometer instrument on the Hitomi spacecraft. <i>Journal of Astronomical Telescopes, Instruments, and Systems</i> , 2017, 4, 1.	1.0	16
39	The Serendipitous Extragalactic X-ray Source Identification (SEXSI) Program. II. Optical Imaging. <i>Astrophysical Journal, Supplement Series</i> , 2005, 156, 35-45.	3.0	15
40	Development of Embedded Heatsinking Layers for Compact Arrays of X-Ray TES Microcalorimeters. <i>IEEE Transactions on Applied Superconductivity</i> , 2011, 21, 223-226.	1.1	15
41	In-orbit operation of the ASTRO-H SXS. , 2016, , .		15
42	The design, implementation, and performance of the Atro-H SXS calorimeter array and anti-coincidence detector. , 2016, , .		15
43	OBSERVED LIMITS ON CHARGE EXCHANGE CONTRIBUTIONS TO THE DIFFUSE X-RAY BACKGROUND. <i>Astrophysical Journal</i> , 2012, 758, 143.	1.6	14
44	Kilopixel X-ray Microcalorimeter Arrays for Astrophysics: Device Performance and Uniformity. <i>Journal of Low Temperature Physics</i> , 2012, 167, 732-740.	0.6	14
45	TES-Based X-ray Microcalorimeter Performances Under AC Bias and FDM for Athena. <i>Journal of Low Temperature Physics</i> , 2016, 184, 436-442.	0.6	14
46	Mapping of the resistance of a superconducting transition edge sensor as a function of temperature, current, and applied magnetic field. <i>Journal of Applied Physics</i> , 2017, 121, .	1.1	13
47	A High Spectral Resolution Study of the Soft X-Ray Background with the X-Ray Quantum Calorimeter. <i>Astrophysical Journal</i> , 2019, 884, 120.	1.6	13
48	Study of Dissipative Losses in AC-Biased Mo/Au Bilayer Transition-Edge Sensors. <i>Journal of Low Temperature Physics</i> , 2018, 193, 356-364.	0.6	12
49	First Operation of TES Microcalorimeters in Space with the Micro-X Sounding Rocket. <i>Journal of Low Temperature Physics</i> , 2020, 199, 1062-1071.	0.6	12
50	Development of arrays of position-sensitive microcalorimeters for Constellation-X. <i>Proceedings of SPIE</i> , 2008, , .	0.8	11
51	Performance of the helium dewar and cryocoolers of ASTRO-H SXS. , 2016, , .		11
52	Extended Line Spread Function of TES Microcalorimeters With Au/Bi Absorbers. <i>IEEE Transactions on Applied Superconductivity</i> , 2019, 29, 1-5.	1.1	11
53	Large-Absorber TES X-ray Microcalorimeters and the Micro-X Detector Array. , 2009, , .		10
54	The x-ray microcalorimeter spectrometer onboard of IXO. <i>Proceedings of SPIE</i> , 2010, , .	0.8	10

#	ARTICLE	IF	CITATIONS
55	High-spectral resolution high-cadence imaging x-ray microcalorimeters for solar physics. , 2010, , .		10
56	Implications of Weak Link Effects on Thermal Characteristics of Transition-Edge Sensors. Journal of Low Temperature Physics, 2012, 167, 121-128.	0.6	10
57	Uniformity of Kilo-Pixel Arrays of Transition-Edge Sensors for X-ray Astronomy. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-5.	1.1	10
58	In-flight performance of the Soft X-ray Spectrometer detector system on Astro-H. , 2016, , .		10
59	In-flight verification of the calibration and performance of the ASTRO-H (Hitomi) Soft X-Ray Spectrometer. Proceedings of SPIE, 2016, , .	0.8	10
60	Progress Towards Improved Analysis of TES X-ray Data Using Principal Component Analysis. Journal of Low Temperature Physics, 2016, 184, 382-388.	0.6	10
61	Electron-Beam Deposition of Superconducting Molybdenum Thin Films for the Development of Mo/Au TES X-ray Microcalorimeter. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-4.	1.1	10
62	In-flight calibration of Hitomi Soft X-ray Spectrometer. (1) Background. Publication of the Astronomical Society of Japan, 2018, 70, .	1.0	10
63	Design, implementation, and performance of the Astro-H SXS calorimeter array and anticoincidence detector. Journal of Astronomical Telescopes, Instruments, and Systems, 2018, 4, 1.	1.0	10
64	Energy Calibration of High-Resolution X-Ray TES Microcalorimeters With 3 eV Optical Photons. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-4.	1.1	9
65	High-resolution Laboratory Measurements of K-shell X-Ray Line Polarization and Excitation Cross Sections in Helium-like S XV Ions. Astrophysical Journal, 2021, 914, 34.	1.6	9
66	The design, implementation, and performance of the Astro-H SXS aperture assembly and blocking filters. , 2016, , .		9
67	In-flight performance of pulse processing system of the ASTRO-H soft x-ray spectrometer. , 2016, , .		9
68	Heat Sinking, Crosstalk, and Temperature Uniformity for Large Close-Packed Microcalorimeter Arrays. IEEE Transactions on Applied Superconductivity, 2009, 19, 557-560.	1.1	8
69	High Count-Rate Studies of Small-Pitch Transition-Edge Sensor X-ray Microcalorimeters. Journal of Low Temperature Physics, 2014, 176, 597-603.	0.6	8
70	Vibration isolation system for cryocoolers of Soft X-ray Spectrometer (SXS) onboard ASTRO-H (Hitomi). Proceedings of SPIE, 2016, , .	0.8	8
71	Ground calibration of the Astro-H (Hitomi) soft x-ray spectrometer. , 2016, , .		8
72	Design and Performance of Hybrid Arrays of Mo/Au Bilayer Transition-Edge Sensors. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-5.	1.1	8

#	ARTICLE	IF	CITATIONS
73	Search for thermal X-ray features from the Crab nebula with the Hitomi soft X-ray spectrometer. Publication of the Astronomical Society of Japan, 2018, 70, .	1.0	8
74	Mapping TES Temperature Sensitivity and Current Sensitivity as a Function of Temperature, Current, and Magnetic Field with IV Curve and Complex Admittance Measurements. Journal of Low Temperature Physics, 2018, 193, 321-327.	0.6	8
75	Hitomi X-ray observation of the pulsar wind nebula G21.5 $\hat{\sim}$ 0.9. Publication of the Astronomical Society of Japan, 2018, 70, .	1.0	8
76	Highly charged ions in a new era of high resolution X-ray astrophysics. X-Ray Spectrometry, 2020, 49, 218-233.	0.9	8
77	Simple, compact, high-resolution monochromatic x-ray source for characterization of x-ray calorimeter arrays. Review of Scientific Instruments, 2020, 91, 083110.	0.6	8
78	Quantum Efficiency Study and Reflectivity Enhancement of Au/Bi Absorbers. Journal of Low Temperature Physics, 2020, 199, 393-400.	0.6	8
79	Real-Time Data Processing for X-Ray Spectroscopy. AIP Conference Proceedings, 2009, , .	0.3	7
80	Fabrication of Microstripline Wiring for Large Format Transition Edge Sensor Arrays. Journal of Low Temperature Physics, 2012, 167, 547-553.	0.6	7
81	Magnetically Tuned Superconducting Transition-Edge Sensors. IEEE Transactions on Applied Superconductivity, 2013, 23, 2101405-2101405.	1.1	7
82	Fabrication of X-Ray Microcalorimeter Focal Planes Composed of Two Distinct Pixel Types. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-5.	1.1	7
83	In-flight calibration of Hitomi Soft X-ray Spectrometer. (3) Effective area. Publication of the Astronomical Society of Japan, 2018, 70, .	1.0	7
84	Demonstration of Fine-Pitch High-Resolution X-ray Transition-Edge Sensor Microcalorimeters Optimized for Energies below 1ÅkeV. Journal of Low Temperature Physics, 2020, 199, 949-954.	0.6	7
85	In-flight verification of the calibration and performance of the ASTRO-H (Hitomi) Soft X-ray Spectrometer. Journal of Astronomical Telescopes, Instruments, and Systems, 2018, 4, 1.	1.0	7
86	Experimental Results and Modeling of Low-Heat-Capacity TES Microcalorimeters for Soft-X-ray Spectroscopy. AIP Conference Proceedings, 2009, , .	0.3	6
87	Progress on the Micro-X sounding rocket x-ray telescope: completion of flight hardware. Proceedings of SPIE, 2010, , .	0.8	6
88	Development of a TES-Based Anti-coincidence Detector for Future x-Ray Observatories. Journal of Low Temperature Physics, 2012, 167, 236-241.	0.6	6
89	Time Domain Multiplexed Readout of Magnetically Coupled Calorimeters. IEEE Transactions on Applied Superconductivity, 2013, 23, 2500905-2500905.	1.1	6
90	Cryogen-free operation of the Soft X-ray Spectrometer instrument. , 2016, , .		6

#	ARTICLE	IF	CITATIONS
91	Design, implementation, and performance of the Astro-H soft x-ray spectrometer aperture assembly and blocking filters. <i>Journal of Astronomical Telescopes, Instruments, and Systems</i> , 2018, 4, 1.	1.0	6
92	Development of x-ray microcalorimeter imaging spectrometers for the X-ray Surveyor mission concept. <i>Proceedings of SPIE</i> , 2016, , .	0.8	5
93	Reduced-Scale Transition-Edge Sensor Detectors for Solar and X-Ray Astrophysics. <i>IEEE Transactions on Applied Superconductivity</i> , 2017, 27, 1-5.	1.1	5
94	Hitomi observations of the LMC SNR Nâ€™132â€™D: Highly redshifted X-ray emission from iron ejecta. <i>Publication of the Astronomical Society of Japan</i> , 2018, 70, .	1.0	5
95	Multi-parameter Nonlinear Gain Correction of X-ray Transition Edge Sensors for the X-ray Integral Field Unit. <i>Journal of Low Temperature Physics</i> , 2018, 193, 931-939.	0.6	5
96	High-Frequency Noise Peaks in Mo/Au Superconducting Transition-Edge Sensor Microcalorimeters. <i>Journal of Low Temperature Physics</i> , 2020, 200, 192-199.	0.6	5
97	Energy scale calibration and drift correction of the X-IFU. , 2018, , .		5
98	Update on the Micro-X Sounding Rocket payload. , 2012, , .		4
99	Development of TES Microcalorimeter Arrays for the Micro-X Sounding Rocket Experiment. <i>IEEE Transactions on Applied Superconductivity</i> , 2013, 23, 2101705-2101705.	1.1	4
100	Large Area Transition Edge Sensor X-ray Microcalorimeters for Diffuse X-ray Background Studies. <i>Journal of Low Temperature Physics</i> , 2014, 176, 331-336.	0.6	4
101	Detector Calibration for the Micro-X Sounding Rocket X-ray Telescope. <i>Journal of Low Temperature Physics</i> , 2018, 193, 984-990.	0.6	4
102	Fabrication of Flexible Superconducting Wiring with High Current-Carrying Capacity Indium Interconnects. <i>Journal of Low Temperature Physics</i> , 2018, 193, 687-694.	0.6	4
103	Glimpse of the highly obscured HMXB IGRâ€™16318â€™4848 with Hitomi. <i>Publication of the Astronomical Society of Japan</i> , 2018, 70, .	1.0	4
104	Poisson vs. Gaussian statistics for sparse X-ray data: Application to the soft X-ray spectrometer. <i>Publication of the Astronomical Society of Japan</i> , 2019, 71, .	1.0	4
105	Micro-X Sounding Rocket: Transitioning from First Flight to a Dark Matter Configuration. <i>Journal of Low Temperature Physics</i> , 2020, 199, 1072-1081.	0.6	4
106	In-flight performance of the soft x-ray spectrometer detector system on Astro-H. <i>Journal of Astronomical Telescopes, Instruments, and Systems</i> , 2018, 4, 1.	1.0	4
107	The Detector and Readout Systems of the Micro-X High Resolution Microcalorimeter X-Ray Imaging Rocket. , 2009, , .		3
108	Optimizing Transition-Edge Sensor Design for High Count-Rate Applications. , 2009, , .		3

#	ARTICLE	IF	CITATIONS
109	Characterization of a Prototype TES-Based Anti-coincidence Detector for Use with Future X-ray Calorimeter Arrays. Journal of Low Temperature Physics, 2016, 184, 23-29.	0.6	3
110	Design of optical/IR blocking filters for the Lynx X-ray Microcalorimeter. Journal of Astronomical Telescopes, Instruments, and Systems, 2019, 5, 1.	1.0	3
111	Planning in-flight calibration for XRISM. , 2020, , .		3
112	Optimal filtering of overlapped pulses in microcalorimeter data. Journal of Applied Physics, 2020, 128, 174503.	1.1	3
113	THE ADIABATIC DEMAGNETIZATION REFRIGERATOR FOR THE MICRO-X SOUNDING ROCKET TELESCOPE. AIP Conference Proceedings, 2010, , .	0.3	2
114	The Magnetically-Tuned Transition-Edge Sensor. Journal of Low Temperature Physics, 2014, 176, 392-399.	0.6	2
115	Status of the micro-X sounding rocket x-ray spectrometer. , 2016, , .		2
116	In-Orbit Performance of the Digital Electronics for the X-Ray Microcalorimeter Onboard the Hitomi Satellite. Journal of Low Temperature Physics, 2018, 193, 505-511.	0.6	2
117	Design of Magnetic Shielding and Field Coils for a TES X-ray Microcalorimeter Test Platform. Journal of Low Temperature Physics, 2019, 194, 433-442.	0.6	2
118	Microcalorimeter measurement of x-ray spectra from a high-temperature magnetically confined plasma. Review of Scientific Instruments, 2021, 92, 063520.	0.6	2
119	Testing the X-IFU calibration requirements: an example for quantum efficiency and energy resolution. , 2018, , .		2
120	Super DIOS: future x-ray spectroscopic mission to search for dark baryons. , 2018, , .		2
121	Correcting Energy Estimation Errors Due to Finite Sampling of Transition-Edge Sensor Data. Journal of Low Temperature Physics, 0, , 1.	0.6	2
122	New Science Case for the Micro-X High Energy Resolution Microcalorimeter X-ray Imaging Rocket. , 2009, , .		1
123	Extended focal-plane array development for the International X-ray Observatory. , 2009, , .		1
124	Parametric Characterization of TES Detectors Under DC Bias. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-5.	1.1	1
125	The Warm Electron Beam Ion Trap (WEBIT): An instrument for ground calibration of space-borne x-ray spectrometers. Review of Scientific Instruments, 2018, 89, 10F124.	0.6	1
126	Calibration of the microcalorimeter spectrometer on-board the Hitomi (Astro-H) observatory (invited). Review of Scientific Instruments, 2016, 87, 11D503.	0.6	0

#	ARTICLE	IF	CITATIONS
127	High count-rate study of two TES x-ray microcalorimeters with different transition temperatures. Superconductor Science and Technology, 2017, 30, 104005.	1.8	0
128	The evaluation of the Hitomi (Astro-H)/SXS spare beryllium window in 3.8-30 keV. , 2017, , .		0