List of Publications

Hirokazu Odaka

Refereed Publications:

1. Mizumoto, M., Done, C., Hagino, K., Ebisawa, K., Tsujimoto, M., **Odaka, H.**, "X-ray short-time lags in the Fe-K energy band produced by scattering clouds in active galactic nuclei", *Monthly Notices of the Royal Astronomical Society*, in press
2. **Odaka, H.** and 49 co-authors, "Modeling of proton-induced radioactivation background in hard X-ray telescopes: Geant4-based simulation and its demonstration by Hitomi's measurement in a low Earth orbit", *Nuclear Instruments and Methods in Physics Research A*, 891, 92-105, 2018
3. Tomaru, R., Done, C., **Odaka, H.**, and 2 co-authors, "Monte Carlo simulations of the detailed iron absorption line profiles from thermal winds in X-ray binaries", *Monthly Notices of the Royal Astronomical Society*, 476, 1776-1784, 2018
4. Hitomi Collaboration including **Odaka, H. as one of the corresponding authors**, "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*, in press
5. Hitomi Collaboration including **Odaka, H.**, "Hitomi Observation of Radio Galaxy NGC 1275: The First X-ray Microcalorimeter Spectroscopy of Fe-Kα Line Emission from an Active Galactic Nucleus", *Publications of the Astronomical Society of Japan*, in press
6. Hitomi Collaboration including **Odaka, H.**, "Solar abundance ratios of the iron-peak elements in the Perseus cluster", *Nature*, 551, 478, 2017
7. Hagino, K., Done, C., **Odaka, H.**, Watanabe, S., Takahashi, T., "Revisiting the extremely fast disc wind in a gravitationally lensed quasar APM 08279+5255", *Monthly Notices of the Royal Astronomical Society*, 468, 1442-1452, 2017
8. Hitomi Collaboration including **Odaka, H.**, "Hitomi Constraints on the 3.5 keV Line in the Perseus Galaxy Cluster", *The Astrophysical Journal Letters*, 837, L15, 2017
9. Katsuta, J., Edahiro, I., Watanabe, S., **Odaka, H.**, and 16 co-authors, "Study of the polarimetric performance of a Si/CdTe semiconductor Compton camera for the Hitomi satellite", *Nuclear Instruments and Methods in Physics Research A*, 840, 51-58, 2016
10. **Odaka, H.**, Yoneda, H., Takahashi, T., Fabian, A., "Sensitivity of the Fe Kα Compton shoulder to the geometry and variability of the X-ray illumination of cosmic objects", *Monthly Notices of the Royal Astronomical Society*, 462, 2366-2381, 2016
11. Hagino, K., **Odaka, H.**, Done, C., Tomaru, R., Watanabe, S., Takahashi, T., "A disk wind interpretation of the strong Fe Kα features in 1H 0707-495", *Monthly Notices of the Royal Astronomical Society*, 461, 3954-3963, 2016
12. Ohno, M. and 47 co-authors including **Odaka, H.**, "Development and verification of signal processing system of avalanche photo diode for the active shields onboard ASTRO-H", *Nuclear Instruments and Methods in Physics Research A*, 831, 410-414, 2016
13. Sato, G. and 29 co-authors including **Odaka, H.**, "The Si/CdTe semiconductor camera of the ASTRO-H Hard X-ray Imager (HXI)" *Nuclear Instruments and Methods in Physics Research A*, 831, 235-241, 2016
14. Hitomi Collaboration including **Odaka, H.**, "The quiescent intracluster medium in the core of the Perseus cluster", *Nature*, 535, 117-121, 2016
15. Furui, S., Fukazawa, Y., **Odaka, H.**, Kawaguchi, T., Ohno, M., Hayashi, K., "X-Ray Spectral Model of Reprocess by Smooth and Clumpy Molecular Tori in Active Galactic Nuclei with the Framework MONACO", *The Astrophysical Journal*, 818, 164, 2016
16. Ichinohe, Y. and 16 co-authors including **Odaka, H.**, "The first demonstration of the concept of 'narrow-FOV Si/CdTe semiconductor Compton camera'", *Nuclear Instruments and Methods in Physics Research A*, 806, 5-13, 2016
17. Inoue, Y., Tanaka, Y., **Odaka, H.**, Takada, A., Ichinohe, Y., Saito, S., Takeda, S., Takahashi, T., "Prospect for future MeV gamma-ray active galactic nuclei population studies", *Publications of the Astronomical Society of Japan*, 67, 7610, 2015

18. Takeda, S., Harayama, A., Ichinohe, Y., **Odaka, H.**, and 8 co-authors, "A portable Si/CdTe Compton camera and its applications to the visualization of radioactive substances", *Nuclear Instruments and Methods in Physics Research A*, 787, 207–211, 2015
19. Hagino, K., **Odaka, H**., Done, C., Gandhi, P., Watanabe, S., Sako, M., Takahashi, T., "The origin of ultrafast outflows in AGN: Monte Carlo simulations of the wind in PDS 456", *Monthly Notices of the Royal Astronomical Society*, 446, 663-676, 2015
20. Sato, T., Koyama, K., Takahashi, T., Odaka, H., Nakashima, S., "Discovery of recombining plasma in the supernova remnant 3C 391", Publications of the Astronomical Society of Japan, 66, 1249-1257, 2014
21. Watanabe, S, and 25 co-authors including **Odaka, H.**, "The Si/CdTe semiconductor Compton camera of the ASTRO-H Soft Gamma-ray Detector (SGD)", *Nuclear Instruments and Methods in Physics Research A*, 765, 192-201, 2014
22. Ikeda, S., **Odaka, H**., Uemura, M., Takahashi, T, Watanabe, S, Takeda, S., "Bin mode estimation methods for Compton camera imaging", *Nuclear Instruments and Methods in Physics Research A*, 760, 46-56, 2014
23. **Odaka, H.**, Khangulyan, D., Tanaka, Y., Watanabe, S., Takahashi, T., Makishima, K, "Short-term Variability of X-rays from Accreting Neutron Star Vela X-1. II. Monte Carlo Modeling", *The Astrophysical Journal*, 780, 38-49, 2014
24. Suzuki, Y., Yamaguchi, M., **Odaka, H.**, and 13 co-authors, "Three-Dimensional and Multi-Energy gamma-ray Simultaneous Imaging Using a Si/CdTe Compton Camera", *Radiology*, 267.3, 941-947, 2013
25. **Odaka, H.**, Khangulyan, D., Tanaka, Y., Watanabe, S., Takahashi, T, Makishima, K., "Short-term Variability of X-rays from Accreting Neutron Star Vela X-1. I. Suzaku Observations", *The Astrophysical Journal*, 767, 70-86, 2013
26. Katsuta. J, Tanaka, Y. T., Stawarz, Ł. , O'Sullivan, S. P., Cheung, C. C. , Kataoka, J., Funk, S., Yuasa, T., **Odaka, H.**, Takahashi, T., Svoboda, J., "Fermi-LAT and Suzaku observations of the radio galaxy Centaurus B", *Astronomy & Astrophysics*, 550, A66, 2013
27. **Odaka, H.,** and 15 co-authors, "High-resolution Compton cameras based on Si/CdTe double-sided strip detectors", *Nuclear Instruments and Methods in Physics Research A*, 695, 179-183, 2012
28. Takeda, S., **Odaka, H.**, Ishikawa, S., Watanabe, S., Aono, H., Takahashi, T., Kanayama, Y., Hiromura, M., Enomoto, S., "Demonstration of in-vivo Multi-Probe Tracker Based on a Si/CdTe Semiconductor Compton Camera", *IEEE transaction on nuclear science*, 59, 70-76, 2012
29. Takeda, S., and 18 co-authors including **Odaka, H**., "Applications and Imaging Techniques of a Si/CdTe Compton Gamma-Ray Camera", *Physics Procedia*, 37, 859-866, 2012
30. **Odaka, H**., Aharonian, F., Watanabe, S., Tanaka, Y., Khangulyan, D., Takahashi, T., "X-Ray Diagnostics of Giant Molecular Clouds in the Galactic Center Region and Past Activity of Sgr A*", *The Astrophysical Journal*, 740, 103-114, 2011
31. Yamaguchi, M. and 15 co-authors including **Odaka, H.**, "Development of head module for multi-head Si/CdTe Compton camera for medical applications", *Nuclear Instruments and Methods in Physics Research A*, 648, S2-S7, 2011
32. Ishikawa, and 13 co-authors including **Odaka, H.**, "Fine-Pitch Semiconductor Detector for the FOXSI Mission", *IEEE Transactions on Nuclear Science*, 58, 2039-2046, 2011
33. **Odaka, H.**, and 15 co-authors, "Development of an integrated response generator for Si/CdTe semiconductor Compton cameras", *Nuclear Instruments and Methods in Physics Research A*, 624, 303-309, 2010
34. Takeda, S., **Odaka, H.**, Katsuta, J., and 11 co-authors, "Polarimetric performance of Si/CdTe semiconductor Compton camera", *Nuclear Instruments and Methods in Physics Research A*, 622, 619-627, 2010
35. Takeda S., Aono, H., Okuyama, S., Ishikawa, S., **Odaka, H.**, Watanabe, S., Kokubun, M., Takahashi, T., Nakazawa, K., Tajima, H., Kawachi, N., "Experimental results of the gamma-ray imaging capability with a Si/CdTe semiconductor Compton camera", *IEEE Transactions on Nuclear Science,* 56, 783-790, 2009
36. Watanabe, S., Ishikawa, S., Aono, H., Takeda, S., **Odaka, H**., Kokubun, M., Takahashi, T., Nakazawa, K., Tajima, H., Onishi, M., Kuroda, Y., "High Energy Resolution Hard X-Ray and Gamma-Ray Imagers Using CdTe Diode Devices", *IEEE Transactions on Nuclear Science*, 56, 777-782, 2009
37. Watanabe, S., Ishikawa, S., Takeda, S., **Odaka, H.**, Tanaka, T., Takahashi, T., Nakazawa, K., Yamazato, M., Higa, A., Kaneku, S., "New CdTe Pixel Gamma-Ray Detector with Pixelated Al Schottky Anodes", *Japanese Journal of Applied Physics*, 46, 6043-6045, 2007

38. **Odaka, H.**, Takeda, S., Watanabe, S., Ishikawa, S., Ushio, M., Tanaka, T., Nakazawa, K., Takahashi, T., Tajima, H., Fukazawa, Y., "Performance Study of Si/CdTe Semiconductor Compton Telescopes with Monte Carlo Simulation", *Nuclear Instruments and Methods in Physics Research Section A*, 579, 878-885, 2007
39. Watanabe, S. and 11 co-authors including **Odaka, H.**, "Development of Si and CdTe Semiconductor Imaging Detectors for a Compton Camera", *Nuclear Instruments and Methods in Physics Research Section A*, 579, 871-877, 2007
40. Kokubun, M. and 57 co-authors including **Odaka, H.**, "In-Orbit Performance of the Hard X-Ray Detector on Board Suzaku", *Publications of the Astronomical Society of Japan*, 59, 53-76, 2007

Other Selected Publications (Not Refereed):

41. Tibaldo, L., Aharonian, F., Bordas, P., Caroff, S., Hinton, J. A., Khangulyan, D., **Odaka, H.**, Tuffs, R., for the H.E.S.S. Collaboration, "The Vela X pulsar wind nebula through the eyes of H.E.S.S. and Suzaku", Proceedings of 35th ICRC, Busan (Korea) 2017; PoS(ICRC2017) 719, arXiv:1708.00388
42. **Odaka, H. &** Hitomi Collaboration, "Hitomi X-ray Astronomy Satellite: Power of High-Resolution Spectroscopy", Proceedings of the International Astronomical Union, Vol. 11, Issue S322, 197-203, 2016
43. "X-Ray Radiation from Accreting Neutron Stars~~-~~A Radiation Model Based on Monte Carlo Calculations", written in Japanese, **Odaka, H.**, *Tenmon Geppo October 2014*, Astronomical Society of Japan, 2016 (written in Japanese)

Invited Talks (International Conferences):

44. "Polarimetry with the Soft Gamma Ray Detector onboard *Hitomi*", 2nd CORE-U Conference: Cosmic Polarimetry from Micro to Macro Scales, February 17-18, 2017, Hiroshima University
45. "Hitomi—Power of High-Resolution X-ray Spectroscopy", IAU Symposium 322, The Multi-Messenger Astrophysics of the Galactic Centre, July 18-22, 2016, Palm Cove, Queensland, Australia
46. "AGN Observations with the ASTRO-H X-ray Observatory", The X-ray View of Black Hole Activity in the Local Universe, February 17-19, 2016, EHT Zurich, Switzerland
47. "Monte Carlo Approach to Radiation Modeling of AGN", Prospects, challenges and evolution of AGN modeling in the Astro-H Era, Rikkyo University, Tokyo, October 21-22, 2015
48. "X-ray Spectroscopy and Polarimetry of Accreting Compact Objects", Workshop on Galactic Variable Gamma-ray Sources, Heidelberg, May 4-6, 2015
49. "MONACO: Calculation Framework of X-ray Radiation in Astrophysical Objects based on Monte Carlo Simulations", HXI/SGD Science Workshop, 2014, Hiroshima University, Higashi-Hiroshima, Japan
50. "X-ray Observations of Accreting Neutron Stars", The 12th international symposium on Origin of Matter and Evolution of Galaxies, 2013, Tsukuba, Japan
51. "X-ray observations of X-ray/gamma-ray binaries", Variable gamma-ray sources, 2013, Barcelona, Spain
52. "X-ray Reflection from the Galactic Center and Prospects for ASTRO-H", The Emerging, Multi-Wavelength View of the Galactic Center Environment, 2011, Heidelberg, Germany