



Miki KURIHARA

NATIONALITY JAPAN
EMAIL kurihara@ac.jaxa.jp
WEB (MINE) https://www.isas.jaxa.jp/home/ebisawalab/kurihara/new_page/miki_EN.html
WEB (LAB) [Ebisawa Lab at ISAS/JAXA](https://www.isas.jaxa.jp/home/ebisawalab/en/members/index.html)
<https://www.isas.jaxa.jp/home/ebisawalab/en/members/index.html>

EDUCATION

-
- Apr 2023-present* | **Graduate School of Science, Astronomy, UTokyo, JAPAN**
- Supervisors: Prof. Ken Ebisawa, Masahiro Tsujimoto (ISAS/JAXA)
- Apr 2021-Mar 2023* | **M.Sc., Astronomy, the University of Tokyo, JAPAN**
- Supervisors: Prof. Ken Ebisawa, Masahiro Tsujimoto (ISAS/JAXA)
- Apr 2017-Mar 2021* | **B.S., Physics, Chiba University, JAPAN**
- graduated at the top of the Department of Physics in 2021
Frontier Science Program
- special courses for a few students who skipped their final year of high school

RESEARCH HISTORY

-
- Jun 2024-present* | *1D HD simulation for a flare loop plasma with HYDRAD*
- Research at ISAS (Institute of Space and Astronautical Science), JAPAN
- Supervisor: Dr. Jeffrey Reep
- Mar 2024-present* | *Investigation of non-Maxwellian plasma using XRISM Resolve*
- Research at ISAS (Institute of Space and Astronautical Science), JAPAN
- Supervisor: Prof. Masahiro Tsujimoto
- May 2023-present* | *Simulating X-ray spectra from κ distribution plasma with the EBIT and the microcalorimeter at LLNL*
- Research at LLNL (Lawrence Livermore National Laboratory), US
- Supervisor: Dr. Natalie Hell
- Dec 2022-Mar 2024* | *Investigation of non-Equilibrium ionization process during a giant flare in the RS CVn star UX Ari observed with NICER [3]*
- Research at ISAS (Institute of Space and Astronautical Science), JAPAN
- Supervisor: Prof. Masahiro Tsujimoto
- Jun 2021-Dec 2023* | *Evaluation of the EMI Effect on Cryogenic Calorimeters [1, 2]*
- Research at ISAS (Institute of Space and Astronautical Science), JAPAN
- Supervisor: Prof. Masahiro Tsujimoto
- Apr 2021-Oct 2023* | *Time Variability Analysis of Black Hole X-ray Binaries*
- Research at ISAS (Institute of Space and Astronautical Science), JAPAN
- Supervisor: Prof. Ken Ebisawa
- Sep 2020-Mar 2021* | *The Effect of Magnetic Field on Ram-pressure Stripping*

	- Bachelor thesis at Chiba University, JAPAN - Supervisor: Prof. Ryoji Matsumoto
Nov 2019-Aug 2020	<i>MCMC Fitting of X-ray Light Curve</i> - Undergrad research at University of Wisconsin Milwaukee (study abroad in the US) - Supervisors: Prof. Sarah J. Vigeland, Dr. Tingting Liu

TALKS, POSTERS, AND SEMINARS

Oct 11, 2024 (UC Berkeley)	<i>Special SSL seminar</i> (1-hour seminar) “High-resolution X-ray spectral observations and modeling of non-thermal plasma in stars”
Oct 7, 2024 (Uni. of Hawaii)	<i>Special IfA seminar</i> (1-hour seminar) “High-resolution X-ray spectral observations and modeling of non-thermal plasma in stars”
Sep 27, 2024 (TMU)	<i>XRISM c2c workshop for young researchers</i> (poster) “Investigating stellar flares with XRISM <i>Resolve</i> : GT Mus and EBIT initial results”
Sep 24-26, 2024 (TMU)	<i>XRISM SM6</i> (poster) “ <i>Resolve</i> observation of the RS CVn star GT Mus”
Sep 11-13, 2024 (KGU)	<i>ASJ 2024 autumn annual meeting</i> (poster) “Investigating Stellar Superflares with XRISM <i>Resolve</i> : AO1 proposal & HR1099 initial results”
Feb 28-29, 2024 (Kyoto U)	<i>Stellar Magnetic Activity Workshop</i> (INVITED, 20-min talk) “Introduction of XRISM mission”
Feb 16-18, 2024 (ISAS/JAXA)	<i>Binary and variable stars workshop</i> (LOC, 25-min talk) “Investigation of non-thermal ionization process with NICER during a flare in UX Ari”
Sep 25-29, 2023 (Niigata, Japan)	<i>Hinode-16 / IRIS-13 meeting</i> (poster) “X-ray Investigation of non-thermal plasma in “X10,000,000-class” flare of the RS CVn binary star”
Sep 20-22, 2023 (Nagoya U)	<i>ASJ 2023 autumn annual meeting</i> (12-min talk) “Investigation of non-thermal ionization process with NICER during a flare in UX Ari”
Sep 16-19, 2023 (Tohoku U)	<i>JPS 2023 autumn annual meeting</i> (INVITED 30-min talk) “Investigation of the electromagnetic interference for the cryogenic detector onboard XRISM”
Sep 13-15, 2022 (Niigata U)	<i>ASJ 2022 autumn annual meeting</i> (12-min talk) “Investigation of the electromagnetic interference for the cryogenic detector onboard XRISM”
Jul 17-23, 2022 (Montreal, Canada)	<i>SPIE Astronomical Telescopes + Instrumentation 2022</i> (poster) “Ground test results of the electromagnetic interference for the x-ray microcalorimeter onboard XRISM”

Sep 13-15, 2021 (online) | ASJ 2021 autumn annual meeting (12-min talk)
“MAXI/GSC, Swift/BAT light curve similarity analysis for black hole X-ray binary outbursts”

PUBLICATIONS

- [1] M. Kurihara, M. Tsujimoto, M. Eckart, et al. “Ground test results of the electromagnetic interference in the x-ray microcalorimeter onboard XRISM”. In: *Space Telescopes and Instrumentation 2022: Ultraviolet to Gamma Ray*. Vol. 12181. SPIE. 2022, pp. 1445–1458.
- [2] M. Kurihara, M. Tsujimoto, M. E. Eckart, et al. “Ground test results of the electromagnetic interference for the x-ray microcalorimeter onboard XRISM”. In: *Journal of Astronomical Telescopes, Instruments, and Systems* 9.1 (2023), p. 018004.
- [3] M. Kurihara, W. B. Iwakiri, M. Tsujimoto, et al. “Investigation of Nonequilibrium Ionization Plasma during a Giant Flare of UX Arietis Triggered with MAXI and Observed with NICER”. In: *The Astrophysical Journal* 965.2 (2024), p. 135.

THESIS

Master, 2023 | “Investigation of the electromagnetic interference for the cryogenic detector onboard XRISM”
- https://www.isas.jaxa.jp/home/ebisawalab/ja/publications/theses/Mthesis_2023_Kurihara0404.pdf (Japanese only)

AWARDS

Jul, 2023 | Outstanding Contribution Award for XRISM ground testing
- by XRISM project *Resolve* instrument team

Apr, 2023 | Outstanding Master's Thesis Award in Instrumentation Technology Development
- <https://itdc.kek.jp/awards/index.html> (Japanese only)
- by KEK Institute of Particle and Nuclear Studies, Instrumentation Technology Development Center

Oct, 2022 | Outstanding Contribution Award for *Resolve* instrument level testing
- by XRISM project *Resolve* instrument team

PRESS RELEASE & INTERVIEW

May, 2024 | ISAS GATE article “A Giant Stellar Flare Captured by Two X-ray Instruments onboard the ISS: Investigation of the Non-Equilibrium Ionization Process”
- English: <https://www.isas.jaxa.jp/home/research-portal/en/gateway/2024/0523/>
- Japanese: <https://www.isas.jaxa.jp/home/research-portal/gateway/2024/0523/>

Mar 21, 2024 | NICER / ISS Science Nugget “Capturing the Rising Phase of a Giant Stellar Flare”
- https://heasarc.gsfc.nasa.gov/docs/nicer/science_nuggets/20240321.html

Jun, 2023 | ISAS GATE interview “Outstanding Master's Thesis Award in Instrumentation Technology Development”
- <https://www.isas.jaxa.jp/home/research-portal/people/2023/0626/>

| - Japanese only

Jul 21, 2022 | From Fujitsu Limited: “Fujitsu conducts successful large-scale electromagnetic wave simulations for space industry, urban transport use cases with solution for HPC cloud”
- <https://onl.bz/sxq546w>

WORK & OUTREACH

Nov 2024-Jan 2025	Professional internship at Fujitsu (2 days/week for 2 months) <ul style="list-style-type: none">- “Enhancing Space Weather Prediction Models Using Fujitsu AI Technology”- Supervisor: Yuta Kato
Oct 2021-present	Research Assistant of IGPEES <ul style="list-style-type: none">- “International Graduate Program for Excellence in Earth-Space Science”- Secondary Supervisor: Prof. Kazuyoshi Endo
Nov 3, 4 2023	ISAS Open House FY2023 <ul style="list-style-type: none">- create interview video of the day- YouTube link (Japanese only) -> https://www.youtube.com/watch?v=Ur02tsnGHvw&list=PL-XJoa_8IG1LwLxIuR7SvoiAu0PDakep4&index=27&pp=iAQB
Apr 2021-Mar 2023	Student staff of Kimission <ul style="list-style-type: none">- Kimission is a one-week hands-on program for high school students- plan and organize the event
Apr 2021-Mar 2023	Summer internship at MEXT (2 weeks) <ul style="list-style-type: none">- International Affairs Division, Science and Technology Policy Bureau, Ministry of Education, Culture, Sports, Science and Technology-Japan- Supervisor: Ms. Honoka Sugimura
Mar 25, 26 2022	ISAS Open House FY2021 <ul style="list-style-type: none">- online for FY2021- create 15 min program for teenagers with friends- YouTube link (Japanese only) -> https://www.youtube.com/watch?v=orBqSCRWXIk
Oct 2021-Mar 2022	Teaching Assistant at UTokyo <ul style="list-style-type: none">- physics for junior students in astronomy department
Apr 2021-Mar 2022	Research Assistant of JAXA Hayabusa2 Project <ul style="list-style-type: none">- support spacecraft operation of Hayabusa2
Apr 2018-Aug 2019	Curator at the Science Gallery of Chiba University <ul style="list-style-type: none">- guide visitors and explain the exhibitions- plan and organize some public events

NATURAL LANGUAGES

JAPANESE	Mother tongue
ENGLISH	Fluent
CHINESE	Still a beginner, but very motivated to keep learning

ARTIFICIAL LANGUAGES

Python	3 year-ish experience for my research (data analysis).
Fortran	For my bachelor thesis.
C	In-class experience.
html/CSS	In-class experience.
WordPress	In-class experience.
Shell	bash, zsh.