

Jin Beniyama

May 18, 1996

Observatoire de la Côte d'Azur, Université Côte d'Azur

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Laboratoire J.L. Lagrange

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Education

2024 Mar. Ph.D., Department of Astronomy, The University of Tokyo, Japan
Supervisor: Dr. Shigeyuki Sako
Date of defense: January 11, 2024

2021 Mar. Master, Department of Astronomy, The University of Tokyo, Japan

2019 Mar. Bachelor, Department of Astronomy and Geophysics, Tohoku University, Japan

Academic Appointments

2025 Feb.–Present Young Researcher Excellence Fellowships, Université Côte d'Azur, France

2025 Feb.–Present Visiting Researcher, The University of Tokyo, Japan

2024 Apr.–2025 Jan. The Japan Society for the Promotion of Science (JSPS) Postdoctoral Fellow,
The University of Tokyo, Japan

2024 Apr.–2025 Jan. Visiting Researcher, Laboratoire Lagrange, Observatoire de la Côte d'Azur,
France

Publications

Refereed Articles (First author)

1. **Jin Beniyama**, Thomas Müller, Marco Delbo, Eric Pantin, et al., “Size Constraint on Hayabusa2 Extended Mission Rendezvous Target 1998 KY₂₆ via VLT/VISIR Non-detection”, *Astronomical Journal*, 169, 264, (2025), [doi: 10.3847/1538-3881/adc682](https://doi.org/10.3847/1538-3881/adc682).
2. **Jin Beniyama**, Bryce Bolin, Alexey Sergeyev, Marco Delbo, et al., “Multi-epoch spectrophotometric characterization of the mini-moon 2024 PT₅ in the visible and near-infrared”, *Astronomy & Astrophysics*, 700, A183, (2025), [doi: 10.1051/0004-6361/202555633](https://doi.org/10.1051/0004-6361/202555633).
3. **Jin Beniyama**, “Simultaneous visible spectrophotometry of interstellar object 3I/ATLAS with Seimei/TriCCS”, *Publications of the Astronomical Society of Japan*, 77, L71-L76, (2025), [doi: 10.1093/pasj/pasf097](https://doi.org/10.1093/pasj/pasf097).
4. **Jin Beniyama**, Alexey Sergeyev, David Tholen, Marco Micheli, “Rotation state, colors, and albedo of the mission-accessible tiny near-Earth asteroid 2001 QJ₁₄₂”, *Astronomy & Astrophysics*, 690, A180, (2024), [doi: 10.1051/0004-6361/202451414](https://doi.org/10.1051/0004-6361/202451414).

5. **Jin Beniyama**, Tomohiko Sekiguchi, Daisuke Kuroda, Tomoko Arai, et al., "Simultaneous multicolor photometry of the DESTINY⁺ target asteroid (3200) Phaethon", Publications of the Astronomical Society of Japan, 75, 297-310, (2023), doi: [10.1093/pasj/psac109](https://doi.org/10.1093/pasj/psac109).
6. **Jin Beniyama**, Shigeyuki Sako, Katsuhito Ohtsuka, Tomohiko Sekiguchi, et al., "Photometry and Polarimetry of 2010 XC₁₅: Observational Confirmation of E-type Near-Earth Asteroid Pair", Astrophysical Journal, 955, 143, (2023), doi: [10.3847/1538-4357/ace88f](https://doi.org/10.3847/1538-4357/ace88f).
7. **Jin Beniyama**, Ryou Ohsawa, Chrysa Avdellidou, Shigeyuki Sako, et al., "Multicolor Photometry of Tiny Near-Earth Asteroid 2015 RN₃₅ across a Wide Range of Phase Angles: Possible Mission-accessible A-type Asteroid", Astronomical Journal, 166, 229, (2023), doi: [10.3847/1538-3881/ad0151](https://doi.org/10.3847/1538-3881/ad0151).
8. **Jin Beniyama**, Shigeyuki Sako, Ryou Ohsawa, Satoshi Takita, et al., "Video observations of tiny near-Earth objects with Tomo-e Gozen", Publications of the Astronomical Society of Japan, 74, 877-903, (2022), doi: [10.1093/pasj/psac043](https://doi.org/10.1093/pasj/psac043).
9. **Jin Beniyama**, Shigeyuki Sako, Ryou Ohsawa, Satoshi Takita, et al., "Observational study of near-Earth objects with Tomo-e Gozen", Yu-Sei-Jin, 31, 272–285, (2022), doi: [10.14909/yusejin.31.4.272](https://doi.org/10.14909/yusejin.31.4.272).

Refereed Articles (N-th author)

1. Bryce Bolin, Christoffer Fremling, Matthew Belyakov, **Jin Beniyama**, et al., "Keck and Gemini Characterization of Hayabusa2# Rendezvous Target 1998 KY₂₆", Astronomical Journal, 169, 303, (2025), doi: [10.3847/1538-3881/adccbe](https://doi.org/10.3847/1538-3881/adccbe).
2. Jooyeon Geem, Masateru Ishiguro, Jun Takahashi, Hiroshi Akitaya, et al., "(3200) Phaethon polarimetry in the negative branch: new evidence for the anhydrous nature of the DESTINY⁺ target asteroid", Monthly Notices of the Royal Astronomical Society, 516, L53-L57, (2022), doi: [10.1093/mnrasl/slac072](https://doi.org/10.1093/mnrasl/slac072).
3. Yohei Nishino, Mariko Kimura, Shigeyuki Sako, **Jin Beniyama**, et al., "Detection of highly correlated optical and X-ray variations in SS Cygni with Tomo-e Gozen and NICER", Publications of the Astronomical Society of Japan, 74, L17-L22, (2022), doi: [10.1093/pasj/psac027](https://doi.org/10.1093/pasj/psac027).
4. Ji-an Jiang, Keiichi Maeda, Miho Kawabata, Mamoru Doi, et al., "Discovery of the Fastest Early Optical Emission from Overluminous SN Ia 2020hvf: A Thermonuclear Explosion within a Dense Circumstellar Environment", Astrophysical Journal Letters, 923, L8, (2021), doi: [10.3847/2041-8213/ac375f](https://doi.org/10.3847/2041-8213/ac375f).

Presentations ("*": Invited talk)

1. **Jin Beniyama**, Eri Tatsumi, Keigo Enya, Sunao Hasegawa, Moe Matsuoka, Takafumi Ootsubo, Fumihiko Usui, "Near-Earth Asteroid observations with Ariel", [Ariel Consortium Meeting 2025](#), Madrid, Spain, 2025-09-30; 2025-10-03, Oral,
2. **Jin Beniyama**, Marco DELBO, Thomas Müller, Luca Conversi, Margherita Maria Revellino, Paolo Tanga, Karri Muinonen, Javier Licandro, "On the detection and characterization of potential Earth-impacting asteroids from space in the thermal infrared", [EPSC-DPS Joint Meeting 2025](#), Finlandia Hall Helsinki, Finland, 2025-09-07; 2025-09-12, Oral,
- *3. **Jin Beniyama**, "OISTER Colloquium", On-line, Online, 2025-08-22, Oral, **Invited**

- *4. **Jin Beniyama**, "Telescopic Observations of Near-Earth Asteroids During Close Approaches: Contributions to Planetary Defense", [FY2024 Planetary Defense Symposium \(16th Spaceguard Symposium\)](#), Online, 2025-02-27; 2025-02-28, Oral, **Invited**
- *5. **Jin Beniyama & Marco Delbo**, "Thermal infrared observations of near-Earth asteroids with the TAO 6.5-m telescope", EU-ESA Workshop on Size Determination of Potentially Hazardous Near-Earth Objects, Darmstadt, 2024-11-11; 2024-11-13, Oral, **Invited**
- 6. **Jin Beniyama**, "Photometric Observations of Tiny Near-Earth Asteroids during the Close Approaches", Europlanet Science Congress 2024, Berlin + Online, 2024-09-09; 2024-09-12, Oral,
- 7. **Jin Beniyama**, "Observational Study of Tiny Near-Earth Asteroids during Close Approaches", 2024 Group of Optical and Infrared Astronomers Symposium, National Astronomical Observatory + Online, 2024-09-07; 2024-09-09, Oral,
- *8. **Jin Beniyama**, "Photometric Observations of Tiny Near-Earth Asteroids during Close Approaches", [25th Symposium on Planetary Sciences \(SPS2024\)](#), Tohoku University, 2024-02-20; 2024-02-22, Oral, **Invited**
- 9. **Jin Beniyama**, "Observation proposals of the Hayabusa2# target asteroid 1998 KY26 with ground-based telescopes in 2024", 2nd Hayabusa2# Joint Science Team (H#JST) Meeting, Tokyo, Japan, 2023-11-18, Oral,
- 10. **Jin Beniyama**, Shigeyuki Sakou, Katsuhito Otsuka, ... (19 authors), "Photometric and Polarimetric Observations of 2010 XC15 — Discovery of an E-type Near-Earth Asteroid Pair", 2023 Annual Meeting of the Japanese Society for Planetary Science, Hiroshima, 2023-10-11; 2023-10-13, Oral,
- 11. **Jin Beniyama**, "Photometric and Polarimetric Observations of Tiny Asteroid 2010 XC15", 2023 Seimei Users Meeting, Kyoto University + Online, 2023-09-12; 2023-09-13, Oral,
- *12. **Jin Beniyama**, "Recent Telescopic Observations of Near-Earth Asteroids: Asteroids of Interests for Future Missions", ISAS Planetary Exploration Workshop 2023, Tokyo, Japan, 2023-08-28; 2023-08-30, Oral, **Invited**
- 13. **Jin Beniyama**, Sako Shigeyuki, Katsuhito Ohtsuka, ..., (19 co-authors), "Polarimetric Observations of Small Near-Earth Asteroid 2010 XC15 at Large Phase Angles", Asteroids, Comets, Meteors Conference 2023, USA, Arizona, 2023-06-18; 2023-06-23, Oral,
- 14. **Jin Beniyama and 13 co-authors**, "Multicolor Simultaneous Photometry of (3200) Phaethon with Seimei/TriCCS in 2021", The 3rd DESTINY+ Science Working Team (SWT) meeting, Online, 2023-03-02; 2023-03-03, Oral,
- 15. **Jin Beniyama**, "Polarimetric Observations of Tiny Asteroid 2010 XC15 by OISTER", 13th OISTER workshop, Aichi + Online, 2023-02-28; 2023-03-01, Oral, **Student Presentation Award**
- 16. **Jin Beniyama**, "Quick Follow-up Observations of Near-Earth Asteroids", The 4th Japan-Chile Academic Forum 2022, Republic of Chile, 2022-11-29; 2022-11-30, Oral,
- 17. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Rei Takita, Naoto Kobayashi, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Fumihiro Usui, Fumi Yoshida, "Near-Earth Asteroid Search and Immediate Follow-up Observations for Planetary Defense", 66th Space Sciences and Technology Conference, Kumamoto, 2022-11-01; 2022-11-04, Oral,

18. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Rei Takita, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Fumihiko Usui, Fumi Yoshida, Hiroyuki Maehara, "Immediate Monitoring Observations of Tiny Near-Earth Asteroid 2022 JL", 2022 Annual Meeting of the Japanese Society for Planetary Science, Mito + Online, 2022-09-20; 2022-09-23, Oral,
19. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Rei Takita, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Fumihiko Usui, Fumi Yoshida, "Immediate Monitoring Observations of Tiny Fast-Rotating Asteroid 2022 JL", 2022 Annual Fall Meeting of the Astronomical Society of Japan, Niigata, 2022-09-13; 2022-09-15, Oral,
- *20. **Jin Beniyama**, Shigeyuki Sako, Ryou Ohsawa, Satoshi Takita, Naoto Kobayashi, Shin-ichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Fumihiko Usui, Fumi Yoshida, "Subsecond Photometry of Tiny Near-Earth Objects with Tomo-e Gozen", IAU General Assembly, Focus Meeting 8, Planetary Astronomy via Telescopic and Microscopic Approaches, Busan, 2022-08-02; 2022-08-03, Oral, **Invited**
- *21. **Jin Beniyama**, "Observations of Near-Earth Asteroids with Seimei Telescope and TriCCS", 2022 Seimei Users Meeting, Online, 2022-07-26; 2022-07-27, Oral, **Invited**
22. **Jin Beniyama**, "Immediate Monitoring Observations of Tiny Fast-Rotating Asteroid 2022 JL with Tomo-e and TriCCS", Kiso Schmidt Symposium 2022, Nagano + Online, 2022-07-05; 2022-07-06, Oral,
23. **Jin Beniyama**, Shigeyuki Sako, Ryou Ohsawa, Satoshi Takita, Naoto Kobayashi, Shin-ichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Fumihiko Usui, Fumi Yoshida, "Subsecond Time-Resolved Photometry of Tiny Near-Earth Objects with Tomo-e Gozen", The 53rd Lunar and Planetary Science Conference (LPSC2022), The Woodlands, Texas + Online, 2022-03-07; 2022-03-11, Poster,
24. **Jin Beniyama**, Tomohiko Sekiguchi, "Multicolor Simultaneous Photometry of (3200) Phaethon with Seimei/TriCCS", The 2nd DESTINY+ Science Working Team (SWT) Meeting, Online, 2022-02-24; 2022-02-25, Oral,
25. **Jin Beniyama**, Tomohiko Sekiguchi, Daisuke Kuroda, Tomoko Arai, Ko Ishibashi, Masateru Ishiguro, Ryou Ohsawa, Takafumi Ootsubo, Shigeyuki Sako, Hiroki Senshu, Satoshi Takita, Fumi Yoshida, "Multicolor Simultaneous Photometry of (3200) Phaethon with Seimei/TriCCS", PERC Int'l Symposium on Dust & Parent Bodies 2022, Online, 2022-02-21; 2022-02-22, Oral,
- *26. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Rei Takita, Naoto Kobayashi, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Fumihiko Usui, Fumi Yoshida, "Science with Kiso Tomo-e Gozen: Near-Earth Asteroid Search and Immediate Follow-up Observations", 2021 Planetary Defense Symposium (13th Spaceguard Workshop), Online, 2022-02-14–15, Oral, **Invited**
- *27. **Jin Beniyama**, "Comparative Asteroid Science: Near-Earth Asteroids and Main Belt Asteroids", 23rd Symposium on Planetary Sciences (SPS2022), Online, 2022-02-08; 2022-02-10, Oral, **Invited**
28. **Jin Beniyama**, "Exploration of Near-Earth Asteroids Using Wide-Field CMOS Camera Tomo-e Gozen: Achievements and Challenges from Two Years of Full Operations", 10th Workshop on Visible and Infrared Observation Instrumentation 2021, National Astronomical Observatory of Japan, Mitaka, Development Experiment Building #3 + Online, 2021-12-09; 2021-12-13, Oral,
29. **Jin Beniyama**, "Immediate Multicolor Simultaneous Imaging Observations of Tiny Near-Earth Asteroids by OISTER", 12th OISTER workshop, Online, 2021-11-24; 2021-11-26, Oral,

30. **Jin Beniyama**, "Characterization of Tiny Near-Earth Asteroids via Immediate Multicolor Simultaneous Imaging", Solar System Bodies Workshop (SSBW2021), Online, 2021-11-11; 2021-11-12, Oral,
31. **Jin Beniyama**, "High Time-Resolution Imaging of Tiny NEOs with Kiso Tomo-e Gozen", Kiso Schmidt Symposium 2021, Nagano + Online, 2021-10-04; 2021-10-06, Oral,
32. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Rei Takita, Naoto Kobayashi, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Fumihiko Usui, Fumi Yoshida, "High Time-Resolution Imaging of Near-Earth Asteroids with Kiso 105 cm Schmidt Telescope Tomo-e Gozen", 2021 Annual Meeting of the Japanese Society for Planetary Science, Online, 2021-09-16; 2021-09-18, Oral + Poster, **Best Presentation Award**
33. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Rei Takita, Naoto Kobayashi, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Fumihiko Usui, Fumi Yoshida, Tomo-e Gozen Collaboration, "High Time-Resolution Imaging of Tiny Near-Earth Asteroids with Kiso Tomo-e Gozen", 2021 Annual Fall Meeting of the Astronomical Society of Japan, Online, 2021-09-13; 2021-09-15, Oral,
34. **Jin Beniyama**, "Simultaneous Fast-Color Visible Observations of Near-Earth Asteroids with Seimei Telescope TriCCS", 2021 Seimei Users Meeting, Online, 2021-08-11; 2021-08-12, Oral,
35. **Jin Beniyama**, Shigeyuki Sako, Ryou Ohsawa, Satoshi Takita, Naoto Kobayashi, Shin-ichiro Okumura, Seitaro Urakawa, Fumihiko Usui, Fumi Yoshida, Makoto Yoshikawa, "Highly Time-Resolved Photometric Observation of Tiny Near Earth Objects with the Tomo-e Gozen Camera", Japan Geoscience Union Meeting 2021, Online, 2021-05-30; 2021-06-06, Oral, **Outstanding Student Presentation Award**
36. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Tomoki Morokuma, Rei Takita, Naoto Kobayashi, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Shunji Yanagisawa, Hidetaka Sato, "Exploration of Near-Earth Asteroids Using Wide-Field CMOS Camera Tomo-e Gozen", 2020 Annual Meeting of the Japanese Society for Planetary Science, Online, 2020-11-12; 2020-11-14, Oral,
37. **Jin Beniyama**, "Immediate Video/Multicolor Photometric Observations of Tiny Near-Earth Asteroids", 11th OISTER workshop, Online, 2020-11-10; 2020-11-12, Oral,
38. **Jin Beniyama**, "Development of a Moving Object Detection System Using Random Forest on Tomo-e Gozen Survey Data", 50th Summer School for Young Astronomers and Astrophysicists 2020, Online, 2020-08-24; 2020-08-27, Oral, **Presentation Award**
39. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Naoto Kobayashi, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Shunji Yanagisawa, Hidetaka Sato, "Exploration of Near-Earth Asteroids Using Wide-Field Fast Camera Tomo-e Gozen", 2020 Annual Spring Meeting of the Astronomical Society of Japan, Online, 2020-03-16; 2020-03-19, Oral,
40. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Tomoki Morokuma, Naoto Kobayashi, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, Shunji Yanagisawa, Hidetaka Sato, "Wide-Field Survey of Near-Earth Asteroids with Tomo-e Gozen", 10th OISTER workshop, Okayama Prefecture, 2019-12-02; 2019-12-03, Oral,
41. **Jin Beniyama**, Shigeyuki Sakou, Ryo Osawa, Naoto Kobayashi, Shinichiro Okumura, Seitaro Urakawa, Makoto Yoshikawa, "Asteroid Exploration Using Tomo-e Gozen", 49th Summer School for Young Astronomers and Astrophysicists 2019, Aichi Prefecture, 2019-07-30; 2019-08-02, Poster,

42. **Jin Beniyama**, "Minimoon Exploration Using Tomo-e Gozen", Kiso Schmidt Symposium 2019, Nagano Prefecture, 2019-07-09; 2019-07-10, Oral,

Research Funding

- 2025 Co-Investigator, Grants-in-Aid for Scientific Research (KAKENHI) Category A, Japan Society for the Promotion of Science (JSPS), Japan, *JPY 2,800,000*
- 2025 Research funding for Young Researcher Excellence Fellowships, France, *JPY 900,000*
- 2024 Research funding for JSPS Postdoctoral fellowship, Japan, *JPY 1,000,000*
- 2023 Research funding for JSPS Doctoral Course fellowship, Japan, *JPY 1,000,000*
- 2023 Travel Stipend for the Asteroids, Comets, Meteors Conference 2023, Hayakawa fund of The Astronomical Society of Japan, Japan, *JPY 300,000*
- 2022 Travel Stipend for the XXXIst International Astronomical Union General Assembly, Focus Meeting 8, Planetary Astronomy via Telescopic and Microscopic, Hayakawa fund of The Astronomical Society of Japan, Japan, *JPY 250,000*
- 2022 Travel Stipend for the 53rd Lunar Planetary and Space Science, Hayakawa fund of The Astronomical Society of Japan, Japan, *JPY 500,000*

Significant honors

Awards

- 2025 Inoue Research Award for Young Scientists, Inoue Foundation for Science, Japan
- 2025 Young Researcher Excellence Fellowships, Université Côte d'Azur, France
- 2024 The School of Science Encouragement Award (graduate with honors), The University of Tokyo, Japan
- 2023 Oral presentation award, The 13th OISTER (the Optical and Near-Infrared Astronomy Inter-University Cooperation Program) Workshop, Japan
- 2023 Repayment Exemption for Students with Excellent Grades, Japan Student Services Organization (JASSO) Type I (interest-free) scholarship, Japan
- 2022 Best presentation award, The Japanese Society for Planetary Sciences, Japan
- 2022 Outstanding Student Presentation Award, Japan Geoscience Union, Japan
- 2020 Best oral presentation award, 50th Summer School on Astronomy and Astrophysics, Japan

Scholarships

- 2023–2024 Mitsubishi Corporation Scholarship, Japan
- 2023–2024 Iue Memorial Foundation scholarship, Japan
- 2021–2023 Doctral Fellowship of The University of Tokyo, Japan
- 2021–2023 Public Trust Iwai Hisao Memorial Tokyo Scholarship Fund, Japan
- 2019–2020 Iwadare Scholarship Foundation, Japan

Teaching Activities

- 2022–2023 Co-advisor of 1 master student, Department of Astronomy, The University of Tokyo
- 2020–2023 Teaching assistant (Observation Experiment), The University of Tokyo
- 2021 Research assistant – Development of moving object detection pipeline, Department of Astronomy, The University of Tokyo, Japan

Organization of Meetings

- 2020–2023 Facilitator of [Asteroid Seminar](#) (Online seminar)
- 2021 Facilitator of [Solar System Bodies Workshop for Youngers](#) (Online workshop)

Memberships

- 2024– Europlanet Society
- 2021– Japan Geoscience Union
- 2020– Astronomical Society of Japan
- 2020– Japanese Society for Planetary Sciences

Major Collaborations

- 2024– ESA [Ariel mission](#) science team
- 2024– ESA [Hera mission](#) science team
- 2024– JAXA [Hayabusa2 Extended Mission](#)
- 2023– [NGSR Mission](#) science team
- 2021– JAXA [DESTINY+ mission](#) science team