

Jin BENIYAMA (Last updated on Nov. 24, 2024)

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🐦 @BeniyamaJin

🔑 Bitbucket

🌐 <https://jinbeniyama.github.io/website/index.html>



Personal Statement

A dedicated postdoctoral researcher in astronomy and planetary science. The discovery of near-Earth asteroids (NEAs), the characterizations (photometry, spectroscopy, and polarimetry) of NEAs with medium telescopes such as the 1.05 m Kiso Schmidt telescope and 3.8 m Seimei telescope, and the campaign observations of a peculiar NEA (3200) Phaethon, etc. Discovered more than 50 tiny (mean diameter ~ 20 m) NEAs with Tomo-e Gozen camera. Characterized more than 100 NEAs. Familiar with Python and machine learning.

Employment

Feb. 2025 – Jan. 2027	Observatoire de la Côte d'Azur, Laboratoire Lagrange, Excellence Fellowships for Young Researchers
Apr. 2024 – Jan. 2025	Observatoire de la Côte d'Azur, Laboratoire Lagrange, Visiting Researcher
Apr. 2023 – Jan. 2025	The Japan Society for the Promotion of Science (JSPS) fellowship.
Oct. 2021 – Mar. 2023	Doctoral Fellowship of The University of Tokyo.

Education

Apr. 2021 – Mar. 2024	Ph.D. course in Astronomy , The University of Tokyo, Japan. Thesis title: <i>Photometric Observations of Tiny Near-Earth Asteroids during the Close Approaches.</i>
Apr. 2019 – Mar. 2021	Master in Astronomy , The University of Tokyo, Japan. Thesis title: <i>Development of the moving object processing system and follow-up observations of tiny near-Earth objects with the Kiso Schmidt telescope and the Tomo-e Gozen camera.</i>
Apr. 2015 – Mar. 2019	Bachelor in Astronomy and Geophysics , Tohoku University, Japan. Graduation research title: <i>Probing grain radii in the disk around IM Lup by near-infrared scattered light observations.</i>

Publications and Selected Talks

Refereed Articles (First author)

- 1 J. Beniyama, A. V. Sergeev, D. J. Tholen, and M. Micheli, “Rotation state, colors, and albedo of the mission-accessible tiny near-Earth asteroid 2001 QL₁₄₂,” *A&A*, vol. 690, A180, A180, Oct. 2024. [DOI](#): 10.1051/0004-6361/202451414.
- 2 J. Beniyama, R. Ohsawa, C. Avdellidou, *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*, vol. 166, no. 6, pp. 229–241, Dec. 2023. [DOI](#): 10.3847/1538-3881/ad0151. arXiv: 2310.05740 [astro-ph.EP].

- 3 J. Beniyama, S. Sako, K. Ohtsuka, *et al.*, “Photometry and Polarimetry of 2010 XC₁₅: Observational Confirmation of E-type Near-Earth Asteroid Pair,” *Astrophysical Journal*, vol. 955, no. 2, pp. 143–158, Oct. 2023. [DOI: 10.3847/1538-4357/ace88f](#). arXiv: 2306.15506 [astro-ph.EP].
- 4 J. Beniyama, T. Sekiguchi, D. Kuroda, *et al.*, “Simultaneous multicolor photometry of the DESTINY⁺ target asteroid (3200) Phaethon,” *Publication of the Astronomical Society of Japan*, vol. 75, no. 2, pp. 297–310, Apr. 2023. [DOI: 10.1093/pasj/psac109](#). arXiv: 2212.09323 [astro-ph.EP].
- 5 J. Beniyama, S. Sako, R. Ohsawa, *et al.*, “Observational study of near-Earth objects with Tomo-e Gozen,” *Yu-Sei-Jin*, vol. 31, no. 4, pp. 272–285, Dec. 2022.
- 6 J. Beniyama, S. Sako, R. Ohsawa, *et al.*, “Video observations of tiny near-Earth objects with Tomo-e Gozen,” *Publication of the Astronomical Society of Japan*, vol. 74, no. 4, pp. 877–903, Aug. 2022. [DOI: 10.1093/pasj/psac043](#). arXiv: 2207.07071 [astro-ph.EP].

Refereed Articles (N-th author)

- 1 J. Geem, M. Ishiguro, J. Takahashi, *et al.*, (3200) Phaethon polarimetry in the negative branch: new evidence for the anhydrous nature of the DESTINY⁺ target asteroid, Oct. 2022. [DOI: 10.1093/mnrasl/slac072](#). arXiv: 2208.11912 [astro-ph.EP].
- 2 Y. Nishino, M. Kimura, S. Sako, *et al.*, Detection of highly correlated optical and X-ray variations in SS Cygni with Tomo-e Gozen and NICER, Jun. 2022. [DOI: 10.1093/pasj/psac027](#). arXiv: 2205.08721 [astro-ph.CO].
- 3 J. Jiang, K. Maeda, M. Kawabata, *et al.*, Discovery of the Fastest Early Optical Emission from Overluminous SN Ia 2020hvf: A Thermonuclear Explosion within a Dense Circumstellar Environment, Dec. 2021. [DOI: 10.3847/2041-8213/ac375f](#). arXiv: 2111.09470 [astro-ph.HE].

Conference Proceedings

- 1 J. Beniyama, S. Sako, K. Ohtsuka, *et al.*, “Polarimetric Observations of Small Near-Earth Asteroid 2010 XC₁₅ at Large Phase Angles,” in *LPI Contributions*, ser. LPI Contributions, vol. 2851, Aug. 2023, 2104, p. 2104.
- 2 J. Beniyama, S. Sako, R. Ohsawa, *et al.*, “Subsecond Time-Resolved Photometry of Tiny Near-Earth Objects with Tomo-e Gozen,” in *53rd Lunar and Planetary Science Conference*, ser. LPI Contributions, vol. 2678, Mar. 2022, 1853, p. 1853.
- 3 S. Marshall, M. Devogele, P. Taylor, *et al.*, “The changing rotation period of 3200 Phaethon,” in *AAS/Division for Planetary Sciences Meeting Abstracts*, ser. AAS/Division for Planetary Sciences Meeting Abstracts, vol. 54, Dec. 2022, 514.07, p. 514.07.

Invited Talks

- 1 J. Beniyama, Photometric Observations of Tiny Near-Earth Asteroids during the Close Approaches, Symposium on Planetary Sciences 2024, Miyagi, Feb. 2024.
- 2 J. Beniyama, Recent Observations of Near-Earth Asteroids with Ground-based Telescopes: Asteroids of Interests for Future Missions, ISAS Planetary Exploration Workshop 2023, Tokyo, Aug. 2023.
- 3 J. Beniyama, Comparative “asteroidology” –NEAs and MBAs–, Symposium on Planetary Sciences 2022, On-line, Feb. 2022.
- 4 J. Beniyama, Observations of NEAs with Seimei telescope and TriCCS camera, Seimei 3.8-m telescope users meeting, On-line, Jul. 2022.
- 5 J. Beniyama, S. Sako, R. Ohsawa, *et al.*, Subsecond Photometry of Tiny Near-Earth Objects with Tomo-e Gozen, IAUGA, Focus Meeting 8, Planetary Astronomy via Telescopic and Microscopic Approaches, Busan, Aug. 2022.

Skills

Languages	Japanese – native, English – proficient, Spanish – beginner, French – beginner.
Coding	Python, SQL, L ^A T _E X.
Databases	SQLite, PostgreSQL.
Web Dev	HTML, CSS, JavaScript.
Misc.	Class 1 driver's license (invalid since currently not based in Japan) .

Miscellaneous Experience

Awards

Mar. 2024	The School of Science Encouragement Award (Doctoral program, graduate with honors) , School of Science, The University of Tokyo.
Mar. 2023	Oral presentation award , The 13th OISTER (the Optical and Near-Infrared Astronomy Inter-University Cooperation Program) Workshop (2 people/yr).
Sep. 2022	Best presentation award , The Japanese Society for Planetary Sciences (1 person/yr).
May 2022	Outstanding Student Presentation Award , Japan Geoscience Union (10% of candidates).
Aug. 2020	Best oral presentation award , 50th Summer School on Astronomy and Astrophysics.

Achievements

Apr. 2024 – Mar. 2025	The Japan Society for the Promotion of Science (JSPS) fellowship , \$2,400/month.
Aug. 2023	Repayment Exemption for Students with Excellent Grades , Japan Student Services Organization (JASSO) Type I (interest-free) scholarship, \$20,000.
Jun. 2023	Travel Stipend for the Asteroids, Comets, Meteors Conference 2023 , Hayakawa fund of The Astronomical Society of Japan, \$2,700.
Apr. 2023 – Mar. 2024	The Japan Society for the Promotion of Science (JSPS) fellowship , \$1,300/month. Mitsubishi Corporation Scholarship , \$800/month. Iue Memorial Foundation scholarship , \$400/month.
Aug. 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, \$2,500.
Mar. 2022	Travel Stipend for the 53rd Lunar Planetary and Space Science , Hayakawa fund of The Astronomical Society of Japan, \$4,700.
Oct. 2021 – Mar. 2023	Doctoral Fellowship of The University of Tokyo , \$1,200/month.
Apr. 2021 – Mar. 2023	Public Trust Iwai Hisao Memorial Tokyo Scholarship Fund , \$800/month.
Apr. 2019 – Mar. 2020	Iwadare Scholarship Foundation , \$300/month.

Teaching

Apr. 2020 – Mar. 2023	Teaching assistant , The University of Tokyo.
Apr. 2021 – Sep. 2021	Research assistant , The University of Tokyo.

Miscellaneous Experience (continued)

Referee

2024 Icarus

Memberships

2024 – Europlanet society.
Hayabusa2# Interdisciplinary Science (IDS) subteam.
2022 – DESTINY⁺ Science Working Team.
2021 – Japan Geoscience Union.
2020 – Astronomical Society of Japan.
The Japanese Society for Planetary Sciences.