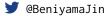
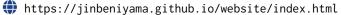
# **Iin BENIYAMA**

(Last updated on Nov. 24, 2024)

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## **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  $\sim 20$  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 Fell	owshij	ps for	Young R	esearchers		
Apr. 2024 – Jan. 2025	Observatoire d	e la Cô	te d'A	zur, Lab	oratoire Laş	grange, Visiting	Researcher
Apr. 2023 – Jan. 2025	The Japan Soci	ety for	the P	romotio	n of Science	e (JSPS) fellowsh	ip.
Oct. 2021 – Mar. 2023	Doctoral Fello	wship	of Th	e Univer	sity of Toky	<b>70.</b>	

## **Education**

Apr. 2021 – Mar. 2024	<b>Ph.D. course in Astronomy</b> , The University of Tokyo, Japan. Thesis title: Photometric Observations of Tiny Near-Earth Asteroids during the Close Approaches.
Apr. 2019 – Mar. 2021	Master in Astronomy, The University of Tokyo, Japan. Thesis title: 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.
Apr. 2015 – Mar. 2019	<b>Bachelor in Astronomy and Geophysics</b> , Tohoku University, Japan. Graduation research title:  Probing grain radii in the disk around IM Lup by near-infrared scattered light observations.

## **Publications and Selected Talks**

#### Refereed Articles (First author)

- J. Beniyama, A. V. Sergeyev, D. J. Tholen, and M. Micheli, "Rotation state, colors, and albedo of the mission-accessible tiny near-Earth asteroid 2001 QJ<sub>142</sub>," *A&A*, vol. 690, A180, A180, Oct. 2024. ODI: 10.1051/0004-6361/202451414.
- J. Beniyama, R. Ohsawa, C. Avdellidou, et al., "Multicolor Photometry of Tiny Near-Earth Asteroid 2015 RN<sub>35</sub> across a Wide Range of Phase Angles: Possible Mission-accessible A-type Asteroid," Astronomical Journal, vol. 166, no. 6, pp. 229–241, Dec. 2023. ODI: 10.3847/1538-3881/ad0151. arXiv: 2310.05740 [astro-ph.EP].

- J. Beniyama, S. Sako, K. Ohtsuka, *et al.*, "Photometry and Polarimetry of 2010 XC<sub>15</sub>: Observational Confirmation of E-type Near-Earth Asteroid Pair," *Astrophysical Journal*, vol. 955, no. 2, pp. 143–158, Oct. 2023. ODI: 10.3847/1538-4357/ace88f. arXiv: 2306.15506 [astro-ph.EP].
- J. Beniyama, T. Sekiguchi, D. Kuroda, *et al.*, "Simultaneous multicolor photometry of the DESTINY<sup>+</sup> target asteroid (3200) Phaethon," *Publication of the Astronomical Society of Japan*, vol. 75, no. 2, pp. 297–310, Apr. 2023. ODI: 10.1093/pasj/psac109. arXiv: 2212.09323 [astro-ph.EP].
- 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.
- 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)

- J. Geem, M. Ishiguro, J. Takahashi, et al., (3200) Phaethon polarimetry in the negative branch: new evidence for the anhydrous nature of the DESTINY<sup>+</sup> target asteroid, Oct. 2022. ODI: 10.1093/mnrasl/slac072. arXiv: 2208.11912 [astro-ph.EP].
- 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. O DOI: 10.1093/pasj/psac027. arXiv: 2205.08721 [astro-ph.CO].
- 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. ODOI: 10.3847/2041-8213/ac375f. arXiv: 2111.09470 [astro-ph.HE].

## **Conference Proceedings**

- 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.
- 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.
- 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**

- J. Beniyama, Photometric Observations of Tiny Near-Earth Asteroids during the Close Approaches, Symposium on Planetary Sciences 2024, Miyagi, Feb. 2024.
- 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.
- J. Beniyama, Comparative "asteroidology" –NEAs and MBAs–, Symposium on Planetary Sciences 2022, On-line, Feb. 2022.
- J. Beniyama, Observations of NEAs with Seimei telescope and TriCCS camera, Seimei 3.8-m telescope users meeting, On-line, Jul. 2022.
- 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, Land Eq. (27).

Databases sqlite, Postgresql.

Web Dev Html, css, JavaScript.

Misc. Class 1 driver's license (invalid since currently not based in Japan).

# **Miscellaneous Experience**

physics.

### **Awards**

Mar. 2024	The School of Science Encouragement Award (Doctoral program, graduate with honors), School of Science, The University of Tokyo.
Mar. 2023	<b>Oral presentation award</b> , The 13th OISTER (the Optical and Near-Infrared Astronomy Inter-University Cooperation Program) Workshop (2 people/yr).
Sep. 2022	<b>Best presentation award</b> , 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 Astro-

Achievements	
Apr. 2024 – Mar. 2025	The Japan Society for the Promotion of Science (JSPS) fellowship, \$2,400/month.
Aug. 2023	<b>Repayment Exemption for Students with Excellent Grades</b> , 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	<b>Teaching assistant</b> , 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<sup>+</sup> Science Working Team.
 2021 - Japan Geoscience Union.
 2020 - Astronomical Society of Japan.
 The Japanese Society for Planetary Sciences.