

Ryuki Hyodo

兵頭龍樹

Address:

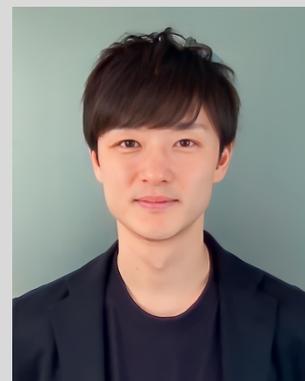
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Summary

A theoretical planetary scientist, working on planet formation and planetary explorations, such as Cassini, Hayabusa2, BepiColombo, MMX, 次世代サンプルリターン計画, OPENS (日本初の外惑星探査計画).

Job Experience

2019/10/01 – Current International Top Young Fellow (ITYF), ISAS/JAXA

2017/04/01 – 2019/09/31 JSPS Research Fellow (PD), ELSI/Tokyo-Tech

2015/04/01 – 2017/03/31 JSPS Research Fellow (DC2), Kobe University

Teaching

Rikkyo University (立教大学), 全学共通科目(全カリ)「地球の理解」 – **FY2020, FY2021, FY2022**

Education

2016 Ph.D. in Science, Graduate School of Science, Kobe University, Japan

2015 – 2017 Visiting at the Institut de physique du globe de Paris (IPGP), France

2014 M.S. in Science, Graduate School of Science, Kobe University, Japan

2012 B.Sc. in Science, Faculty of Science, Kobe University, Japan

Academic Service (Referees)

NASA Proposal
Nature Geoscience
Nature Astronomy
Astronomy & Astrophysics (A&A)
Monthly Notices of the Royal Astronomical Society (MNRAS)
Astronomical Journal (AJ)
Astrophysical Journal (ApJ)
Earth, Moon, and Planets

Awards

- **2022 最優秀研究者賞 (Outstanding Young Scientist Award)**, The Japanese Society for Planetary Sciences (JSPS)
- **2019 JAXA 理事長賞 (President Award)**, Japan Aerospace Exploration Agency (JAXA)
- **2017 学長賞 (The President's Award)**, Kobe University
- **2016 最優秀発表賞 (Best Research Presentation Award)**, The Japanese Society for Planetary Sciences (JSPS)
- **2016 学長賞 (The President's Award)**, Kobe University

Grants

1. **2022-2025 科学研究費補助金 若手研究 (代表)**
「進化する原始惑星系円盤における微惑星形成の理論研究」
3,600 千円
2. **2021-2026 科学研究費補助金 基盤 A (分担)**
「岩石・氷・ガス惑星の衛星形成の総合的モデル:太陽系、系外惑星系」
41,210 千円
3. **2021-2026 科学研究費補助金 基盤 A (分担)**
「火星衛星の形成過程を解明する」
41,730 千円
4. **2020-2025 国際共同研究加速基金 (国際共同研究強化 B) (分担)**
「火星衛星の形成過程を解明する」
18,720 千円
5. **2019-2022 JAXA 国際トップヤングフェロー (代表)**
「火星衛星 SR 計画および土星衛星輪 SR 計画の検討」
7,500 千円
6. **2018-2022 科学研究費補助金 若手研究 (代表)**
「多様な地球型惑星が持つ衛星系の起源・進化の統一的理解に向けた理論研究」
4,160 千円
7. **2018-2018 国立天文台アストロバイオロジーセンター・プロジェクト研究 (分担)**
「巨大天体衝突による連惑星形成の可能性について」
2,100 千円
8. **2017-2020 JSPS Research Fellow (PD) (代表)**
「多様なリング-衛星系の起源・進化の統一的理解に向けた理論研究」
4,810 千円
9. **2015-2017 JSPS Research Fellow (DC2) (代表)**
「惑星が持つ衛星-リング系の多様性：その起源と進化の理論的研究」
1,900 千円

Refereed Publications

42 publications (21 as first author)

6 publications in *NATURE* / *SCIENCE* publishing group (3 as first author)

1. Madeira G., Charnoz S., Zhang Y., **Hyodo R.**, Michel P., Genda H., Winter S.G. (2023). "Exploring the recycling model of Phobos formation: rubble-pile satellites". *AJ* **165**, 161 [http:// 10.3847/1538-3881/acbf53](http://dx.doi.org/10.3847/1538-3881/acbf53)
2. Madeira G., Charnoz S. & **Hyodo R.** (2023). "Dynamical origin of Dimorphos from fast spinning Didymos". *Icarus* **394**, 115428 <http://doi.org/10.1016/j.icarus.2023.115428>
3. Okuya A., Ida S., **Hyodo R.**, Okuzumi S. (2023). "Modeling of Accretion Disk Evolution with Silicate Sublimation/Condensation around White Dwarfs". *MNRAS* **519**, 1657 <http://doi.org/10.1093/mnras/stac3522>
4. Liang Y. & **Hyodo R.** (2023). "Giga-year dynamical evolution of particles around Mars". *Icarus* **391**, 115335 <https://doi.org/10.1016/j.icarus.2022.115335>
5. **Hyodo R.** and Sugiura, K. (2022). "Formation of moons and equatorial ridge around top-shaped asteroids after surface landslide". *ApJL*, **937**, L36 <https://doi.org/10.3847/2041-8213/ac922d>
6. Nakamura T., Matsumoto M., Amano K., et al. (inc. **Hyodo, R.**) (2022). "Formation and evolution of Cb-type asteroid Ryugu: Direct evidence from returned samples". *Science* **379**, eabn8671

<https://doi.org/10.1126/science.abn8671>

7. **Hyodo R.**, Genda H., Sekiguchi R., Madeira G., Charnoz S. (2022). "Challenges in forming Phobos and Deimos directly from a splitting of an ancestral single moon". *Planet. Sci. J.* **3**, 204 <https://doi.org/10.3847/PSJ/ac88d2>
8. Ozaki N., Yanagida K., Chikazawa T., Takeishi N. & **Hyodo R.** (2022). "Asteroid Flyby Cyclor Trajectory Design Using Deep Neural Networks". *JGCD*, **0 0:0**, 1-16 <https://doi.org/10.2514/1.G006487>
9. **Hyodo R.**, Ida S., Guillot T. (2022). "A "no-drift" runaway pile-up of pebbles in protoplanetary disks II. Characteristics of the resulting planetesimal belt". *A&A*, **660**, A117 <https://doi.org/10.1051/0004-6361/202142345>
10. Barucci M.A., Reess J.M., Bernardi P., et al. (inc. **Hyodo, R.**) (2021). "MIRS: an imaging spectrometer for the MMX mission". *Earth, Planets and Space*, **73**, 211 <https://doi.org/10.1186/s40623-021-01423-2>
11. **Hyodo R.** & Usui T. (2021). "Searching for life in Mars and its moons". *Science* **373**, 742 <https://doi.org/10.1126/science.abj1512>
12. Arakawa S., **Hyodo R.**, Shoji D. & Genda H. "Tidal evolution of the eccentric moon around dwarf planet (225088) Gonggong". *AJ*, **162**, 226 <https://doi.org/10.3847/1538-3881/ac1f91>
13. **Hyodo R.** & Genda H. (2021). "Erosion and accretion by cratering impacts on rocky and icy bodies". *Astrophys. J.*, **913**, 77 <https://doi.org/10.3847/1538-4357/abf6d8>
14. Charnoz S., Avice G., **Hyodo R.**, Pignatale F.C., & Chaussidon M. (2021). "Forming pressure-traps at the snow-line to isolate isotopic reservoirs in the absence of a planet". *A&A*, **652**, A35 <https://doi.org/10.1051/0004-6361/202038797>
15. Sugiura K., Kobayashi H., Watanabe S., Genda, H., **Hyodo R.** & Inutsuka S. (2021). "SPH simulations for shape deformation of rubble-Pile asteroids through spinup: the challenge for making top-shaped asteroids Ryugu and Benue". *Icarus*, **365**, 114505 <https://doi.org/10.1016/j.icarus.2021.114505>
16. Charnoz S., Sossi A.P., Lee YN., Siebert J., **Hyodo R.**, Allibert L., Pignatale FC., Landeau M., Oza A.V. & Moynier F. (2021). "Tidal pull of the Earth strips the proto-Moon of its volatiles". *Icarus*, **364**, 114451 <http://doi.org/10.1016/j.icarus.2021.114451>
17. **Hyodo R.**, Ida S., Guillot T. 2021. "A "no-drift" runaway pile-up of pebbles in protoplanetary disks in which midplane turbulence increases with radius" *A&A Letters*, **645**, L9 <https://doi.org/10.1051/0004-6361/202040031>
18. **Hyodo R.**, Guillot T., Ida S., Okuzumi S. and Youdin A. 2021. "Planetesimal formation around the snow line II. Dust or pebbles?". *A&A*, **646**, A14 <https://doi.org/10.1051/0004-6361/202039894>
19. Ida S., Guillot T., **Hyodo R.**, Okuzumi S. and Youdin A. 2021. "Planetesimal formation around the snow line I. Monte Carlo simulations of silicate dust pile-up in a turbulent disk". *A&A*, **646**, A13 <https://doi.org/10.1051/0004-6361/202039705>
20. **Hyodo, R.**, Genda, H. & Brasser, R. 2021. "Modification of the composition and density of Mercury from late accretion". *Icarus*, **354**, 114064 <https://doi.org/10.1016/j.icarus.2020.114064>
21. **Hyodo, R.** & Genda, H. (2020). "Escape and accretion by cratering impacts: Formulation of scaling relations for high-speed ejecta". *Astrophys. J.*, **898**, 30 <https://doi.org/10.3847/1538-4357/ab9897>
22. Rothery D., Massironi M., Alemanno G., et al. (inc.**Hyodo, R.**) 2020. "Rationale for BepiColombo Studies of Mercury's Surface and Composition". *Space Science Reviews* **216**, 66 <http://doi.org/10.1007/s11214-020-00694-7>

23. Rosenblatt P., **Hyodo R.**, Pignatale F., Charnoz S., Trinh A., Dunseath-Terao M., Dunseath K.M., Genda H. 2020. "The formation of the Martian moons", *In Oxford Research Encyclopedia of Planetary Science*. <https://doi.org/10.1093/acrefore/9780190647926.013.24>
24. **Hyodo, R.**, Kurosawa, K., Genda, H., Fujita, K., Usui, T. 2019. "Transport of impact ejecta from Mars to its moons as a means to reveal Martian history", *Scientific Reports* **9**, 19833 <http://doi.org/10.1038/s41598-019-56139-x>
25. Fujita, K., Kurosawa, K., Genda, H., **Hyodo, R.**, Matsuyama, S., Yamagishi, A., Mikouchi, T., and Niihara, T. 2019. "Assessment of the probability of microbial contamination for sample return from Martian moons I: Departure of microbes from Martian surface", *Life Sciences in Space Research* **23**, 73-84 <https://doi.org/10.1016/j.lssr.2019.07.009>
26. **Hyodo, R.**, Ida, S., Charnoz, S. 2019. "Formation of rocky and icy planetesimals inside and outside the snow line: Effects of diffusion, sublimation and back-reaction", *A&A* **A90**, 13 <https://doi.org/10.1051/0004-6361/201935935>
27. Kurosawa, K., Genda, H., **Hyodo, R.**, Yamagishi, A., Mikouchi, T., Niihara, T., Matsuyama, S. and Fujita, K. 2019. "Assessment of the probability of microbial contamination for sample return from Martian moons II: The fate of microbes on Martian moons", *Life Sciences in Space Research* **23**, 85-100 <https://doi.org/10.1016/j.lssr.2019.07.006>
28. Arakawa, S., **Hyodo, R.**, Genda, H. 2019. "Early formation of moons around large trans-Neptunian objects via giant impacts", *Nature Astronomy* **3**, 802-807 <https://doi.org/10.1038/s41550-019-0797-9>
29. Charnoz, S., Pignatale, F., **Hyodo, R.**, Mahan, B., Chaussidon, M., Siebert, J., Moynier, M. 2019. "Planetesimal formation in an evolving protoplanetary disk with a dead zone", *A&A*, **627**, A50 <https://doi.org/10.1051/0004-6361/201833216>
30. **Hyodo, R.**, Genda, H., Charnoz, S., Rosenblatt, P., Pignatale, F. 2018. "On the Impact Origin of Phobos and Deimos. IV Volatile depletion", *Astrophys. J.*, **860**, 2 <https://doi.org/10.3847/1538-4357/aac024>
31. **Hyodo, R.** & Genda, H. 2018. "Implantation of Martian materials in the inner solar system by a mega impact on Mars", *Astrophys. J. Letters*, **856**, 2 <https://doi.org/10.3847/2041-8213/aab7f0>
32. Charnoz, S., Crida, A., **Hyodo, R.** 2018. "Rings in the Solar System: a short review", *Handbook of Exoplanets*, Springer, Cham. https://doi.org/10.1007/978-3-319-30648-3_54-1
33. Pignatale, F., Charnoz, S., Rosenblatt, P., **Hyodo, R.**, Nakamura, T., Genda, H. 2018. "On the Impact Origin of Phobos and Deimos. III resulting composition from different impactors", *Astrophys. J.*, **853**, 2 <https://doi.org/10.3847/1538-4357/aaa23e>
34. **Hyodo, R.**, Rosenblatt, P., Genda, H., Charnoz, S., 2017. "On the Impact Origin of Phobos and Deimos. II True Polar Wander and Disk Evolution", *Astrophys. J.*, **851**, 122 <https://doi.org/10.3847/1538-4357/aa9984>
35. **Hyodo, R.**, Genda, H., Charnoz, S., & Rosenblatt, P. 2017, "On the Impact Origin of Phobos and Deimos. I. Thermodynamic and Physical Aspects", *Astrophys. J.*, **845**, 2 <https://doi.org/10.3847/1538-4357/aa81c4>
36. **Hyodo, R.** & Charnoz, S. 2017. "Dynamical Evolution of the Debris Disk after a Satellite Catastrophic Disruption around Saturn", *Astronomical J.*, **154**, 34 <https://doi.org/10.3847/1538-3881/aa74c9>
37. **Hyodo, R.**, Charnoz, S., Ohtsuki, K. & Genda, H. 2017. "Ring formation around giant planets by a single encounter of Kuiper belt object", *Icarus*, **282**, 195-213 <https://doi.org/10.1016/j.icarus.2016.09.012>
38. **Hyodo, R.**, Charnoz, S., Genda, H. & Ohtsuki, K. 2016. "Formation of Centaurs' Rings through Their Partial Tidal Disruption during Planetary Encounters" *Astrophys. J. Letters*, **828**, L8

<https://doi.org/10.3847/2041-8205/828/1/L8>

39. Rosenblatt, P., Charnoz, S., Dunseath, K.M., Terao-Dunseath, M., Trinh, A., **Hyodo, R.**, Genda, H., & Toupi, S., 2016. "Accretion of Phobos and Deimos in an extended debris disc stirred by transient moons" *Nature Geoscience* **9**, 581 <https://doi.org/10.1038/ngeo2742>
40. **Hyodo, R.** & Ohtsuki, K., 2015. "Saturn's F ring and shepherd satellites a natural outcome of satellite system formation", *Nature Geoscience*, **8**, 686-689 <https://doi.org/10.1038/ngeo2508>
41. **Hyodo, R.**, Ohtsuki, K., Takeda, T., 2015. "Formation of multiple-satellite systems from low-mass circumplanetary particle disks". *Astrophys. J.*, **799**, 40 <https://doi.org/10.1088/0004-637X/799/1/40>
42. **Hyodo, R.** & Ohtsuki, K., 2014. "Collisional Disruption of Gravitational Aggregates in the Tidal Environment". *Astrophys. J.*, **787**, 56 <https://doi.org/10.1088/0004-637X/787/1/56>

International conferences

2022

1. **Hyodo, R.** "Late Accretion onto Mercury", Mercury 2022, June 7-10, 2022. Orléans, France
2. **Hyodo, R.** "「Outer Solar System Exploration」 × 「Multiple Asteroid Flyby Exploration」", ISAS Planetary Exploration Workshop 2022, Sep.28-30, 2022. **(Invited)**
3. **Hyodo, R.** "Formation of Moons and Equatorial Ridge around Top-shaped Asteroids after Surface Landslide: Applications to asteroids Ryugu, Bennu, Didymos, and more", Hayabusa 2022 Symposium, Nov. 14-16, 2022.

2021

4. **Hyodo, R.**, Ida, S., Guillot, T. "Planetesimal formation by the "no-drift" mechanism", Europlanet Science Congress (EPSC), Sep.13-Sep.24, 2021. Virtual Meeting
5. **Hyodo, R.** "A case study of JAXA's science-driven planetary exploration of the outer solar system", ISAS Planetary Exploration Workshop 2021, Sep.21-24, 2021. Virtual Meeting **(Invited)**

2020

6. **Hyodo, R.**, Genda, H., Brasser, R. "Late accretion to Mercury: Global cratering, crust erosion, and accretion of exogenic materials", Europlanet Science Congress (EPSC) Sep.21-Oct.9, 2020. Virtual Meeting
7. **Hyodo, R.**, Ida, S. Charnoz, S. "Formation of rocky and icy planetesimals inside and outside the snow line", 51th Lunar and Planetary Science Conference (LPSC), Mar. 2020, The Woodlands, Texas, U.S.A.
8. **Hyodo, R.** Kurosawa, K., Genda, H., Usui, T, Fujita, K. "Scientific Values of Martian Impact Ejecta on its Moons", 51th Lunar and Planetary Science Conference (LPSC), Mar. 2020, The Woodlands, Texas, U.S.A.

2019

9. **Hyodo, R.** "On the formation of Mercury: A quick summary" SWT #19, 13-18 October 2019, ESTEC - ESA, Noordwijk, Netherlands
10. **Hyodo, R.**, H. Genda "The fate of the impact-debris produced by a Borealis-forming impact", EPSC-DPS Joint Meeting 2019, 15–20 Sep. 2019, Geneva, Switzerland
11. **Hyodo, R.**, H. Genda, "Distribution of Martian Materials in the Inner Solar System by a Mega Impact on Mars", 50th Lunar and Planetary Science Conference (LPSC), Mar. 2019, The Woodlands, Texas,

U.S.A.

12. **Hyodo, R.** "Mercury formation", BepiColombo SWT #18, 11-14 March, Tokyo Skytree town, Campus of CIT, Chiba, Japan **(Invited)**
13. **Hyodo, R.** "On the origin of ring-satellite systems around giant planets", The 1st International Workshop for Aquaplanetology, March. 4-6 2019, Earth-Life Science Institute, Japan **(Invited)**
14. **Hyodo, R., H. Genda** "Implantation of Martian Materials in the Inner Solar System by a Mega Impact on Mars", Symposium on Planetary Science 2019, Feb. 18-21 2019, Tohoku University, Japan

2018

15. **Hyodo, R.** "On the Origin of Rings around Giant Planets and Small Bodies", AOGS2018, June 3-8 2018, Honolulu, U.S.A. **(Invited)**
16. **Hyodo, R.** "On the Origin of Rings around Saturn", JpGU2018, Makuhari, JAPAN, May, 20-24 2018 **(Invited)**
17. **Hyodo, R.** "MMX Mission and On the Impact Origin of Phobos and Deimos", International Workshop "Circumplanetary Disks and Satellite Formation, Nagoya, JAPAN., Mar. 26-30 2018
18. **Hyodo, R., Genda, H., Charnoz, S., Pignatale, F., & Rosenblatt, P.** "PHYSICAL AND CHEMICAL PROPERTIES OF PHOBOS AND DEIMOS IN A GIANT IMPACT HYPOTHESIS", 49th Lunar and Planetary Science Conference (LPSC), The Woodlands, Texas, U.S.A., Mar. 2018

2017

19. **Hyodo R., Genda H., Kuramoto K., Watanabe S., Kamata S., Mikouchi T., Tachibana S., Iizuka T. & Fujimoto M.** "Mission to an E-class asteroid", Arizona-JAXA Workshop 2017, Tucson, Arizona, U.S., Nov. 12-13.
20. **Hyodo R., Charnoz, S., Genda, H. & Ohtsuki, K.,** "On the Formation of Rings around Giant Planets", American Astronomical Society, DPS meeting #49, Provo, UT, U.S.A., Oct. 2017
21. **Hyodo R., Genda, H., Charnoz, S. & Rosenblatt, P.** "On the Origin of Phobos and Deimos in an Impact-Generated Disk", *Goldschmidt Conference 2017*, Le Palais des Congrès de Paris, Paris, France, August, 2017
22. **Hyodo, R.,** "On the giant impact origin of Phobos and Deimos: Bridging the modeling and MMX", *Multi-scale Planetary Science WS*, Paris Observatory, Paris, France, June, 2017
23. **Hyodo R., Genda, H., Charnoz, S. & Rosenblatt, P.,** "Examining accretion process of Phobos and Deimos in giant impact-induced disk", JpGU-AGU Joint Meeting 2017, Makuhari Messe, Chiba, Japan, May, 2017 **(invited)**

2016

24. **Hyodo R., Charnoz, S., Genda, H. & Ohtsuki, K.,** "Ring formation by tidal disruption of a passing body", American Astronomical Society, DPS meeting #48, Pasadena, CA, U.S.A., Oct. 2016
25. **Hyodo, R.,** "A recipe for rings and moons", Japan & France joint workshop, May 21, 2016, Institut Pasteur, Paris, France
26. **Hyodo, R.,** "Formation of a narrow ring and shepherd satellites around giant planets", StarPlan Seminar, Feb. 9, 2016, Centre for Star and Planet Formation, Copenhagen, Denmark

2015

27. **Hyodo, R.,** "Dynamics of Planetary Rings and Formation of Satellites", IPGP/AIM Lab seminar, Nov. 5, 2015, University of Paris Diderot, Paris, France

28. **Hyodo R.**, Charnoz, S., Ohtsuki, K. & Genda, H., “Physics of Tidal Disruption of Big Objects at the Close Encounter to Saturn”, American Astronomical Society, DPS meeting #47, Washington, DC, U.S.A., Nov. 2015
29. **Hyodo R.**, “On the diversity of satellite systems formed from Roche-interior particle disks”, East Asian Young Astronomers Meeting, Taipei, Taiwan, Feb. 2015

2014

30. **Hyodo R.** & Ohtsuki, K., “Formation of Saturn's F ring by collision between rubble-pile satellites”, American Astronomical Society, DPS meeting #46, Tucson, Arizona, U.S.A., Nov., 2014
31. **Hyodo R.**, Ohtsuki, K. & Takeda, T., “Satellite formation from circumplanetary particle disks”, Planetary Rings Workshop, LASP, Boulder, U.S.A., Aug. 2014
32. **Hyodo R.** & Ohtsuki, K., “Collisions between gravitational aggregates in the tidal field”, Planetary Rings Workshop, LASP, Boulder, U.S.A., Aug. 2014

2013

33. **Hyodo R.**, “Direct N-body Simulations of Aggregate Collisions in the Tidal Environment”, Taiwan-Japan Symposium on Celestial Mechanics and N-Body Dynamics, National Tsing Hua University, Taiwan, Dec. 2013
34. **Hyodo R.**, Ohtsuki, K. & Takeda, T., “Formation of multiple-satellite systems from circumplanetary particle disks”, American Astronomical Society, DPS meeting #45, Denver, Colorado, U.S.A., Oct. 2013
35. **Hyodo R.** & Ohtsuki, K., “Disruption of Gravitational Aggregates in the Tidal Environment”, International Ring Seminar, Laboratory for Atmospheric and Space Physics (LASP), Boulder, Colorado, U.S.A., Oct. 2013
36. **Hyodo R.**, Ohtsuki, K. & Takeda, T., “Formation of multiple satellites from circumplanetary particle disks”, 3rd Workshop on Binaries, Hawaii, HI, U.S.A., Jul. 2013
37. **Hyodo R.** & Ohtsuki, K., “Aggregate collision in the tidal environment”, 8th Workshop on Catastrophic Disruption in the Solar System (CD8), Hawaii, HI, U.S.A, Jun. 2013
38. **Hyodo R.**, Ohtsuki, K. & Takeda, T., “Evolution of circumplanetary particle disks and formation of multiple-satellite systems”, 44th Lunar and Planetary Science Conference (LPSC), The Woodlands, Texas, U.S.A., Mar. 2013

Domestic conferences

1. **兵頭龍樹**, “惑星形成理論と惑星探査に関するある取り組み” [日本惑星科学会・最優秀研究者賞・受賞講演], 2022年日本惑星科学会, 2022年9月,
2. **兵頭龍樹**, 井田茂, “No-driftメカニズムによる微惑星形成” [口頭], 日本地球惑星科学連合2022年大会 (JpGU Meeting 2022), 2022年5月,
3. **兵頭龍樹**, 井田茂, Tristan Guillot, “No-driftメカニズムによる微惑星形成”, 2021年日本惑星科学会, オンライン, 2021年9月, オンライン
4. **兵頭龍樹**, 井田茂, “微惑星形成について — Snow line と “No-drift” mechanism”, 日本地球惑星科学連合2021年大会 (JpGU Meeting 2021), 2021年6月, オンライン
5. **兵頭龍樹**, “微惑星形成について Snow line と “No-drift” mechanism”, 惑星系形成若手研究会, 2021年2月, オンライン
6. **兵頭龍樹**, “惑星形成論の現状と太陽系内の物質輸送”, 第22回惑星圏研究会 (SPS2021), 2021年2月, オンライン[招待講演]

7. 兵頭龍樹, 玄田英典, Ramon Brasser [口頭], “日欧共同 BepiColombo 水星探査計画に向けた取り組み: 後期集積が水星に与える影響”, 2020 年日本惑星科学会, オンライン, 2020 年 11 月
8. 兵頭龍樹, “地球潮汐によってアシストされる月揮発性元素の枯渇”, 第 7 回衛星系研究会, 東北大学, 2020 年 2 月
9. 兵頭龍樹, 井田茂, [ポスター], “スノーライン付近での微惑星形成”, 2019 年日本惑星科学会, 京都産業大学, 2019 年 10 月
10. 兵頭龍樹, 玄田英典, “Implantation of Martian Materials in the Inner Solar System by a Mega Impact on Mars”, 日本地球惑星科学連合大会, 幕張メッセ 2019 年 5 月
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