

Dr. Hidetaka Kuniyoshi

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Current Position

1. JSPS Overseas Research Fellow (from April 2025)
Solar and Space Physics Group, Northumbria University, UK

Education

1. **PhD**, Dpt. of Earth and Planetary Science, The University of Tokyo (Apr. 2022–Mar. 2025)
Thesis: The role of swirls in solar coronal heating
2. **MSc**, Dpt. of Earth and Planetary Science, The University of Tokyo (Apr. 2020–Mar. 2022)
3. **BSc**, Dpt. of Earth and Planetary Physics, The University of Tokyo (Apr. 2016–Mar. 2020)

Awards & Grants

1. Japan Society for the Promotion of Science (JSPS) Overseas Postdoctoral Research Fellowships, April 2025–March 2027
2. The University of Tokyo School of Science Research Award (Doctor), March 2025
3. The University of Tokyo School of Science Research Award (Master), March 2025
4. International Travel Support for Students, Institute for Space-Earth Environmental Research (ISEE), Nagoya University, June 2023
5. Bronze Medal, Japan Physics Olympiad, August 2014

Research Highlights & Publications

First-author Papers:

1. *A unified picture of swirl-driven coronal heating: magnetic energy supply and dissipation* (ApJL accepted; [arXiv](#))
2. *Comprehensive Synthesis of Magnetic Tornado: Cospatial Incidence of Chromospheric Swirls and Extreme-ultraviolet Brightening*, ApJL, 969, L34 (2024) , [NASA/ADS](#)
3. *Can the Solar p-modes Contribute to the High-frequency Transverse Oscillations of Spicules?*, ApJ, 960, 118 (2024) , [NASA/ADS](#)
4. *Magnetic Tornado Properties: A Substantial Contribution to the Solar Coronal Heating via Efficient Energy Transfer*, ApJ, 949, 8 (2023) , [NASA/ADS](#)
5. *Magnetic Reconnection in a Sheared Magnetic Flux Tube: Slippage Versus Tearing*, JGR: Space Physics, 126, e29236 (2021) , [NASA/ADS](#)

Co-author Paper:

6. Baker, D., et al. (incl. Kuniyoshi, H.), *Searching for Evidence of Subchromospheric Magnetic Reconnection on the Sun*, ApJ, 970, 39 (2024) , [NASA/ADS](#)

Talks & Posters

Invited Talks

2025

1. Plasma Dynamics Group (PDG) seminar, Sheffield University, UK, 09 Oct. 2025
2. Hinode18–IRIS16 Meeting, UCL, UK, 23–27 Jun. 2025
3. SPINS Meeting, Sheffield U, UK, 2–4 Jun. 2025
4. Yamada Lab Seminar, Waseda U, Japan, 9 May 2025
5. Solar Orbiter Atmospheric Heating WG Seminar (online), 5 May 2025
6. Japan Solar Physics Community Symposium, ISAS, Japan, 17–19 Feb. 2025

2024

7. RIMS Symposium “Non-equilibrium Turbulence”, Kyoto U, Japan, 22–24 Jul. 2024
8. Seminar, Nagoya U (invited), Aichi, Japan, Jul. 2024
9. Seminar, Tsukuba Space Forum, U. Tsukuba (invited), Ibaraki, Japan, Apr. 2024
10. Chromospheric Magnetic Field Workshop, NAOJ, Japan, 14–16 Feb. 2024

2023

11. Seminar, Dept. of Earth Science & Astronomy, U. Tokyo (invited), Tokyo, Japan, Oct. 2023
12. Seminar, Mullard Space Science Laboratory, UCL (invited, online), Aug. 2023
13. Seminar, Plasma Dynamics Group, U. Sheffield (invited, online), May 2023

Contributed Talks

2025

1. Waves and Instability in the Solar Atmosphere (WISA), INAF, Italy, 25 Sep. 2025
2. Solar & Space Physics Group Seminar, Northumbria U, UK, 2 Jul. 2025
3. ASJ Spring Meeting, Ibaraki U, Japan, 17–20 Mar. 2025
4. Research Institute for Sustainable Humanosphere Seminar (online), 14 Mar. 2025
5. Cool Stars Workshop in Japan, UTokyo, Japan, 12–14 Feb. 2025

2024

6. Rironkon Symposium, NAOJ, Japan, 24–26 Dec. 2024
7. ASJ Fall Meeting, Kansei U, Japan, 11–13 Sep. 2024
8. Hinode-17 IRIS-15 SPHERE-3 Meeting, Montana U, USA, 23–27 Jul. 2024
9. ASJ Spring Meeting, UTokyo, Japan, 11–15 Mar. 2024
10. Solar-C SWG Meeting, Nagoya U, Japan, 5–6 Mar. 2024
11. JSPC Symposium, NAOJ, Japan, 20–22 Feb. 2024
12. CfCA Users Meeting, NAOJ, Japan, 29–30 Jan. 2024

13. Seminar, ISAS, JAXA, Kanagawa, Japan, Mar. 2024

2023

14. Hinode-16 / IRIS-13 Meeting, Niigata, Japan, Sep. 2023
15. ASJ Fall Meeting, Nagoya, Japan, Sep. 2023
16. Waves and Instability in the Solar Atmosphere (WISA), Newcastle, UK, Jun. 2023
17. ASJ Spring Meeting, UTokyo, Japan, Mar. 2023
18. JSPC Symposium, Nagoya, Japan, Feb. 2023

2022

19. ASJ Fall Meeting, Niigata, Japan, Sep. 2022
20. JSFM Annual Meeting, Kyoto, Japan, Sep. 2022
21. SOLAR MHD Conference, Eastbourne, UK (hybrid), Aug. 2022
22. JpGU Meeting, Chiba, Japan (hybrid), May 2022
23. Seminar, NAOJ, Tokyo, Japan, Oct. 2022
24. Seminar, Solar & Magnetospheric Theory Group, U. St. Andrews, UK, Aug. 2022
25. JSPC Symposium, Online, Feb. 2022

2021

26. AGU Fall Meeting, New Orleans, USA (hybrid), Dec. 2021
27. Seminar, ISAS, JAXA (online), Oct. 2021
28. JpGU Meeting, Online, May 2021
29. ASJ Spring Meeting, Online, Mar. 2021

Contributed Posters

2025

1. IAU Symposium 400, EAFIT U, Colombia, 21–25 Jul. 2025
2. National Astronomical Meeting, Durham U, UK, 7–11 Jul. 2025

2024

3. CfCA Users Meeting, NAOJ, Japan, 25–26 Nov. 2024

2023

4. Rironkon Symposium “High Redshift as the Frontier”, Aomori, Japan, Dec. 2023
5. AGU Fall Meeting, San Francisco, USA, Dec. 2023
6. JpGU Meeting, Chiba, Japan, May 2023

2022

7. IAUGA, Busan, ROK (hybrid), Aug. 2022

2020

8. AGU Fall Meeting, Online, Dec. 2020

9. JSPC Symposium, Online, Dec. 2020