**HENG QUAN (权衡)**

Princeton University, Atmospheric and Oceanic Sciences Program, US

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Personal website: <https://heng-quan.github.io>

**EDUCATION & WORK EXPERIENCE**

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**Princeton University** Sep. 2022 – Jul. 2026 (expected)

*PhD in Atmospheric and Oceanic Sciences Program (Advisor: Stephan Fueglistaler)*

**Woods Hole Oceanographic Institution** June. 2025 – Aug. 2025

*Geophysical Fluid Dynamics Fellow*

**Peking University** Sep. 2018 - Jul. 2022

*Bachelor of Atmospheric Sciences (School of Physics)*

* Overall GPA: **3.85/4.00** or **91/100**
* Ranking: **9/176, top 5%** (physics school) or **1/14** (atmospheric sciences department)

**PUBLICATIONS**

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**Quan, H.**, Zhang, Y., Dagan, G., & Fueglistaler, S. Transition to periodic precipitation in a warmer climate due to stronger convectively-coupled waves. (submitted)

**Quan, H.**, Yang, D., Ge, H., Zeng, Y., & KleinStern, C. Vapor buoyancy slows the African easterly jet. (manuscript in preparation)

**Quan, H.**, Zhang, Y., & Fueglistaler, S. (2025). Weakening of tropical free tropospheric temperature gradients with global warming. *Journal of the Atmospheric Sciences,* 82(1): 31-43.

**Quan, H.**, Fueglistaler, S., Zhang, B., & Wang, C. (2025). The Sea Surface Temperature Pattern Effect on Outgoing Longwave Radiation: The Role of Large-scale Convective Aggregation. *Geophysical Research Letters*, 52(11).

**Quan, H.**, Koll, D., Lutsko, N., & Yuval, J. Optimal Solar Geoengineering Strategies Based on Reinforcement Learning. (under revision in *Journal of Geophysical Research: Atmospheres*).

**Quan, H.**, Fueglistaler, S., Zhang, B., & Wang, C. (2024). Non-linear radiative response to patterned global warming due to convection aggregation and non-linear tropical dynamics. *Journal of Climate,* 37(21): 5675-5686.

**Quan, H.**, Zhang, B., Bourguet, S., Linz, M., & Chen, G. (2023). How Do Different Processes Shape Temperature Probability Distributions? A Percentile-averaged Temperature Tendency Decomposition. *Journal of Climate*, 36(15): 5179-5196.

**Quan, H.**, Chai, W., & Fu, Z. (2022). Asymmetry of daily mean temperature series over China and its frontal mechanism. *International Journal of Climatology*, 42(3), 1828-1840.

Chai, W., Huang, Y., Yang, L., **Quan, H.**, & Fu, Z. (2021). Evaluation of re-analyses over China based on the temporal asymmetry of daily temperature variability. *Theoretical and Applied Climatology*, 1-13.

**TALKS**

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**AGU 2024, Washington D.C.**

Weakening of tropical free tropospheric temperature gradients with global warming

**ICDM Workshop 2024, Nanjing**

Weaker temperature gradient in a warmer climate

**AOFD 2024, Burlington**

Weaker temperature gradient in a warmer climate

**CFMIP 2024, Boston**

SST pattern effect on OLR: The role of convection aggregation

**AGU 2023, San Francisco**

Non-linear radiative response to patterned global warming due to convection aggregation

**POSTERS**

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**AGU 2024, Washington D.C.**

Weakening of tropical free tropospheric temperature gradients with global warming

**Gordon Research Conference on Radiation and Climate 2023, Maine**

Non-linear radiative response to patterned global warming due to convection aggregation

**CFMIP-GASS 2023, Paris**

Non-linear radiative response to patterned global warming due to convection aggregation

**AWARDS & HONORS**

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**PhD (2022-now):**

Geophysical Fluid Dynamics Fellow, Woods Hole Oceanographic Institution, 2025

Best Student Oral Presentation Award in the 2024 ICDM workshop

Accepted by the 2024 Rossbypalooza summer school at University of Chicago

**Undergraduate (2018-2022):**

National Scholarship (**top 1%** among 176 students, 2021)

Merit Student Pacesetter (2021)

POSCO Asia Scholarship (**top 3%** among ~180 students, **awarded three times** in 2019,2020 and 2021)

Outstanding bachelor student in Beijing (**10** among 176 students, 2022)

Weiming bachelor student (**7** among 176 students, 2022)

**SERVICE**

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Organizer of the 2025-2026 “climate chedann” weekly climate dynamics seminar among ~500 Chinese scholars

**EXTRACURRICULAR ACTIVITIES**

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Was the **leader of Peking University GO Chess Team** for 2 years, and won **2 champions** in Beijing GO Chess University League, 2019-2021

Was the **president of Peking University GO Chess Club** for 2 years, and organized weekly club activities and the annual PKU GO Chess Cup, 2019-2021