

SCOSTEP 2024 Distinguished Young Scientist Award



Man Hua

Citation: Her work has made fundamental contributions to the understanding of the nature and interaction of various plasma waves by using complex numerical simulations of radiation belt dynamics with global diffusion codes and observations of plasma waves from spacecraft such as the Van Allen Probes.

Dr. Man Hua obtained B.Eng degree from the School of Electronic Information, Wuhan University, China, in 2016 and her PhD degree from the Department of Space Physics, Wuhan University in 2021. Since July 2021 she has been working as a postdoctoral scholar in the Department of Atmospheric and Oceanic Sciences, UCLA, Los Angeles, USA.

She received her PhD 3 years ago. Her work focuses on the Earth's Van Allen radiation belts. Her work has made fundamental contributions concerning the nature and interaction of various plasma waves by using complex numerical simulations of radiation belt dynamics with global diffusion codes and observations of plasma waves from spacecraft such as the Van Allen Probes. Her 2022 paper 'Upper Limit of Outer Radiation Belt Electron Acceleration Driven by Whistler-Mode Chorus Waves' addresses the question first posed in 1966: 'How intense could the radiation belt ever get?'. The answer was limited by observations available at the time. Dr. Hua developed a new theory testing using current and recent observations showing how and why the radiation belt fluxes achieve their uppermost values. Her exceptional research is highly productive with an excellent publication record. She has published 35 peer-reviewed research articles, with 13 as the lead author. These publications have more than 500 citations. She succeeded in winning an NSF grant, on which she is the principal investigator. She has won a number of awards including Best PhD Dissertation award (one of only five); outstanding final-year graduate student, IAGA early career award, Academic Star Award (1 of only 8, School of Electronic Information, Wuhan University), outstanding poster and student presentations Award, and UCLA Chancellor's Award for Postdoctoral Research. She is a member of the American Geophysical Union, European Geosciences Union and Chinese Geophysical Society.

For all of these accomplishments, Dr. Man Hua is most deserving of the SCOSTEP Distinguished Young Scientist Award.