

Visit to University of Michigan

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I visited the University of Michigan, Ann Arbor, USA, from 14 June to 27 June 2026 to continue my collaboration with Professor Daniel Welling in the Department of Climate and Space Sciences and Engineering. The primary objective of this visit was to advance the development of the coupled Space Weather Modeling Framework (SWMF) and Ring Current Atmosphere Interaction Model with Self-consistent Magnetic Field (RAM-SCB), with particular emphasis on implementing and validating the magnetic field coupling between the two models.

During the two-week visit, I worked closely with Prof. Welling to debug and validate the magnetic field coupling between SWMF and RAM-SCB. We carried out extensive testing and long-duration simulations to assess the stability and performance of the coupled model. Through this collaborative effort, we successfully validated the SWMF-RAM-SCB plasma coupling. We also discussed plans for a joint publication based on these developments.

During my visit, I also attended the LANL SPARC Space Weather Meeting, held at the University of Michigan from 15 to 17 June 2026. The meeting provided an excellent opportunity to learn about the latest developments in space weather research and to interact with researchers from Los Alamos National Laboratory, the University of Michigan, and other participating institutions. The scientific discussions offered valuable insights that will benefit our ongoing modeling efforts.

Beyond the research activities, I had the opportunity to explore downtown Ann Arbor with colleagues and enjoy dinner together. These informal interactions further strengthened professional relationships and provided a welcoming environment for scientific exchange.

The visit significantly advanced our collaborative effort to develop a fully coupled SWMF-RAM-SCB model. Successfully validating the plasma coupling marks an important step toward future scientific applications and provides a strong foundation for our planned joint publication. I sincerely appreciate the continued support of the PBASE program and am grateful to Prof. Daniel Welling and his research group for their hospitality, collaboration, and stimulating scientific discussions throughout the visit.



A group photo with Prof. Daniel Welling and the research group