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### **Investigating sporadic E layers from ground-based and space-based data sets as well as modelling results**

The generous support from the PBASE project enabled me to spend some time in Japan. From April 20th to May 8th 2024, I joined Prof. Huixin Liu's space weather lab at Kyushu University in Fukuoka.

During that time, we worked on the daily and interannual behaviour of sporadic E layers that appear in Earth's lower ionosphere. Especially the synopsis between Japanese ionosonde measurements, Radio Occultation soundings and modelling results reveals some unexplained features in the sporadic E layer evolution. Since these layers result from complex coupling processes between neutral atmospheric dynamics, the ionosphere and Earth magnetic field parameters, they are well-suited phenomena to investigate the coupling processes acting on the ionosphere from below and above.



The joint interest in this topic led to intense and insightful discussions. We are going to consolidate our cooperation and work together on the sporadic E layer phenomenon in the future.

During my stay, I got the opportunity to share my scientific experiences and to exchange about current research interests with the colleagues and the students in a colloquium, also in Prof. Liu's classroom and lab seminar.

Besides science, I got memorable impressions from the beautiful landscape in the surroundings. On the weekends, together with the group members, we went hiking in the mountains and visited the nearby beaches.

In summary, the trip was an inspiring and thoroughly positive experience from a scientific and also cultural perspective. I am very grateful to Prof. Huixin Liu for offering this exchange opportunity to me and hope that we can continue with joint research activities.