

Visit to Kagoshima Observatory

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This field trip to Kagoshima Prefecture was supported by the PBASE program. I am very grateful for the opportunity to participate in this trip and gain hands-on field experience at observation sites in southern Japan.

From March 21 to 22, I visited the Kagoshima observatory along with Shiokawa sensei, Mr. Masaki Gomi, and Mr. Yuto Hotta. We visited two observation sites of the Kagoshima Observatory, located in Tarumizu and Sata. This observatory is equipped with ELF/VLF receivers, magnetometers, and all-sky cameras to study Earth's ionospheric irregularities through nightglow observations, characterization of upper atmospheric waves, and monitor geomagnetic conditions. The main objectives of the trip were to perform routine equipment checks, carry out replacement tasks, and install calibrated observation instruments.

In Tarumizu, we began by replacing the lithium battery in the *magkag1* PC, which handles magnetometer observations, and updated its BIOS settings. We also replaced the UPS for the other *magkag2* system and arranged to send the old unit back to Nagoya. At Sata, we installed the spectral temperature photometer (ATP2), which had been sent back to Nagoya last year for repair. The photometer was calibrated at the National Institute of Polar Research. The dedicated UPS to APT2 was also installed. After reinstallation, we confirmed that the system was operating properly and later reviewed the images captured through all available filters of the photometer to ensure it was correctly installed. Additionally, we also carried out partial reburial of magnetometer sensor cables which were exposed. Since these sensors are installed underground, proper burial of the sensor cables are also important for protecting them from weather damage, animal interference, and accidental exposure.

The Kagoshima Observatory is located in southern Kyushu, near the Sakurajima volcano, in a very scenic area. I was deeply impressed by the region's natural beauty. One of the most memorable parts of the trip was the journey itself. The drive from the airport through the Osumi Peninsula to Tarumizu and Sata offered stunning views, with the road often running between the coastline and the mountains. After completing our fieldwork, we had a brief chance on the way back to catch a glimpse of Cape Sata, the southernmost point of mainland Japan, and see



ATP2 after installation

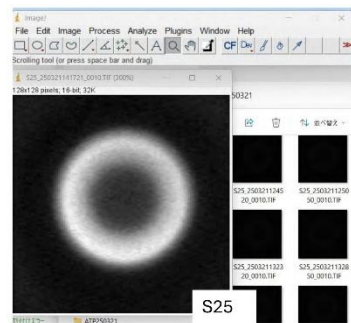


Image taken by ATP2 at 557.7 nm



Reburial of magnetometer sensor cables

Sakurajima, Kagoshima's iconic active volcano. This was my first time seeing an active volcano, and it left a strong impression on me.

Overall, this trip was an incredibly valuable experience. The work was completed smoothly thanks to the guidance of the team, and I was able to gain first-hand experience with some of the field instruments and deepen my understanding of their operation, particularly the photometer observations, which will be a valuable addition to my research on studying ionospheric variabilities. I also appreciated the opportunity to experience the natural beauty of Kagoshima, along with an authentic Japanese seafood experience and stay. I am grateful to PBASE for supporting this field trip and look forward to applying the knowledge gained to my future research.



Tarumizu Observation site



Infront of Sakurajima Volcano