

Scientific Report

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ERI visit from September 20th to October 7th, 2014

During my stay, I was invited by Dr Yusoke Aoki. Scientific discussions were developed with him on several aspects:

- monitoring active volcanoes with ambient seismic noise
- strategies to improve the temporal and spatial resolution of the seismic velocity variations in the edifice
- numerical simulations of wave propagation in multiple scattering media (heterogeneous media such as volcanoes)

We specifically analyzed data from the Asama 2010 eruption, using repetitive seismic doublets, to estimate the relative velocity change associated to the eruption. Further implementations are requested to obtain significant observations, and we pointed out the possibility of using continuous ambient noise instead of repetitive seismic doublets.

I also had the chance to travel to Tohoku University, Sendai, where I could meet with Dr Mare Yamamoto, in charge of several active volcanoes in the north of the Island. During this visit, I could make a one-day field trip to Azo Volcano, in order to take part in field experiments and maintaining the seismic survey there.

During my visit, I was given the opportunity to give two invited seminars: the first at ERI-Tokyo, on Friday 26th, 2014, and the other in Sendai on Tuesday 30th, 2014.

My visit ended with several perspectives, including another visit during summer 2015. During the next visit, for which we think submitting proposals (JSPS/CNRS calls in particular), we plan to push further data analysis, and also plan possible field experiment. The global framework of these future developments might crystallize within a collaboration between ISTERre, ERI and Tohoku Univ.

I sincerely wish to deeply thank the ERI, together with my host Yosuke Aoki, for this valuable, productive and friendly visit. I wish to come back to Tokyo for more scientific collaborations.