

Experiences of a visitor during the earthquake

Timothy Ziman

Institut Laue-Langevin, France and CNRS



In the front of Newton's Apple Tree in Koishikawa Botanical Gardens, the University of Tokyo

I was on the third floor of the Advanced Science Research Center of the JAEA when the great East Japan earthquake struck on March 11. It soon became apparent this quake was exceptionally strong, and, above all, continued for what seemed a very a very long time. While the building itself did not seem in any danger of collapsing, there were many sounds of falling objects. Bookshelves emptied onto the floor and even heavy items such as computer printers fell. Leaving the building everybody was calm, though clearly some were very shaken emotionally. In front of the building we started to hear news from other parts of Japan and learnt of the greater damage in Tohoku, where many of the group had family or friends. Our building was apparently unharmed but had moved slightly relative to its foundations.

When it seemed things were stable, local people left to see their families and the visitors were advised to look for a little food and water and return to the guesthouse. At the convenience store, despite the lack of electricity and broken windows, we could buy sandwiches and bottles of water. Walking back to Masago International Guesthouse we could see the damage to the highway, and especially the Akogigaura lodge. At Masago I discovered that we were being evacuated to the community center in Muramatsu village. Taking a blanket and a few belongings I walked down the hill to this center, which I had visited for informal Japanese lessons. It was now full of evacuated families but I was given a spot in the tatami room, a mattress, water and a portion of dehydrated food. I slept rather fitfully as I was still slightly jetlagged and there were numerous aftershocks. While crowded and rather cold, it was reassuring to be with many people, especially as the older people comforted children who were frightened. In the middle of the night I walked outside where there was rather a convivial group of European graduate students drinking with volunteer rescuers.

Next morning I decided to go back to Masago where I met up again with my colleagues and the graduate students living there who work on the neutrino project T2K. Via a borrowed cellular phone I finally managed to send a message to my family in France and only then realized how worried people were in Europe - they were maybe too well informed about the terrible tsunami damage and the unfolding nuclear drama. We decided to stay in Masago as the community center was stretched to capacity. In the late morning our group secretary invited us to join a barbecue of the food that was defrosting in her parents' freezer. We bicycled there and rejoined our colleagues. It was an odd experience to peacefully enjoy the sunshine and the food in a garden in the midst of a disaster. At Tokai station we learnt that naive ideas of soon travelling by train were over optimistic. Again I was struck how calm people were: a long line waiting to use a public telephone patiently waited while we helped a student struggle to use an international phone card.

Back at Masago Lodge we discovered that the staff and guests were organizing cooking. We were lucky in that the students had good stocks of food and there were soon large pots of soup and noodles boiling up outside over a fire of dried wood. For the next couple of days there were trips to the river to fill buckets of water to use for the sanitary facilities. A visitor from Kyoto, Prof. Osamura, even made friends with some local farmers who gave us fresh daikon in return for our helping move a diesel generator for their pump. Dinners were at a table of about twenty lit by torches. Masago essentially acted as a sort of refugee center for visitors from outside Tokai. We were kept informed by radio and, on Sunday, by the surprising appearance of a newspaper painstakingly translated for the benefit of the foreigners, but where the photographs alone told of the devastation in Tohoku.

On Sunday night the neutrino group were evacuated to Tsukuba, where they were to be sent back to Europe - most were loath to leave as they would have preferred to stay to help reconstruct their experiments. On Monday we met with Prof. Maekawa and decided to move to Kashiwa the next day, by taxi to Mito and then the bus service to Tsukuba. It was impressive to see the good nature with which drivers accepted traffic jams and the

long lines for gasoline. Impressive too that there were no attempts to profit from the many travellers from Ibaraki and Fukushima attempting to leave the stricken area. At Tsukuba we discovered that the trains to Kashiwa were stopped to save electricity until the evening so we decided to share a taxi to Kashiwa. It was a relief to arrive at the ISSP where in the darkness (there was still an electricity outage) we were given keys to the guesthouse and the first hot water in five days.

From then on, life returned to normal although I admit that when I left from Narita two days later, I felt a slight relief to feel the stability of a large aeroplane after a rather shaky *terra firma*.

Dr. Ziman experienced the East Japan Great Earthquake during his stay at ASRC to organize the 2nd ASRC International Workshop which was to be held from March 14 to 17, 2011. This workshop has been rescheduled for January from 10 to 13, 2012.

My visit to Los Alamos National Laboratory this summer

Hiroyuki Chudo

Research Group for Mechanical Control of Materials and Spin Systems

For two and half months from July 2011, I had worked in the Dr. J.D. Thompson's research group in Los Alamos National Laboratory (LANL), U.S., and have performed nuclear magnetic resonance (NMR) experiments on strongly correlated electron compounds and thin films related to spintronics devices. This visit was made possible through Prof. Hiroshi Yasuoka (former director of ASRC). At that time of the Great East Japan Earthquake of 3.11, He had been working on Thompson's Gr. He was concerned of my circumstance and I could not continue to do my experiments, due to the damages of our laboratory in Japan. Fortunately, I was invited by him to Los Alamos for the collaboration this summer.

2 days before departing from Japan, an evacuation order was issued in Los Alamos, since wildfires had spread over the suburbs of Los Alamos. I was optimistic that it would rain and the wildfires would be extinguished soon after, so I left Japan on schedule. However, as a result, I had to stay a week in Albuquerque, about 100 km apart from Los Alamos because it wasn't extinguished. After the wildfires subsided around Los Alamos and the evacuation order was finally revoked in Los Alamos. Immediately, I went into the town and was going to move in an apartment, however, the owner had not returned from the evacuation and thus I wouldn't move in. I had no choice but to stay in Prof. Yasuoka's apartment for a while. Although the evacuation order was cancelled, I could see smoke on the top of a mountain near Los Alamos and the mountain glowed red with the wildfires at night.

In spite of such a circumstance, I would be able to start experiments two weeks later after my departure. Prof. Yasuoka and I had done experiments independently using the different NMR spectrometers, but we had often discussed in detail with each other, what to do in the next measurements, and what we could derive from the results. In addition, I could discuss freely and frequently with the experts in LANL on sample synthesis and/or on macroscopic characterization of physical properties. If we faced some experimental problems, the experts tried to help us fix. I was very impressed with their prompt and accurate troubleshooting methods.

The days spent there were fruitful toward my career, because I could perform NMR experiments face-to-face with Prof. Yasuoka, who is my guru in NMR study, and because I could collaborate with the famous researchers in LANL. I'm so thankful to my colleagues for their support during this trip.



At the Canyon de Shelly, Arizona