

Report on 14th International Conference for Muon Spin Rotation, Relaxation and Resonance (μ SR2017)

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This international conference is the largest conference in the field of muon-spin spectroscopy (μ SR). It takes place every three years and this time took place in Sapporo, Japan. As my PhD project is heavily based in the field of μ SR, the subject matter of this conference was extremely relevant to me and it provided an excellent opportunity to learn about research going on all around the world.

The conference consisted of invited and contributed talks as well as poster sessions. The speakers at the invited talks were often less frequent users of μ SR, but were nonetheless experts on materials suitable for study by muons or similar probes. My favourite invited talk was the talk by Denis Arcon on 'Nanometer-scale spin texturing in frustrated antiferromagnets'. In this talk he explained how geometric frustration in spin systems can lead to novel spin-stripe phases and a new kind of excitation, which he memorably coined a "wigglon". I found the contributed talk by Stephen Blundell on 'Muon-induced distortions and their effect on crystal fields in pyrochlores' particularly interesting. The effect of muon-induced distortions is a key element of my PhD project and it was illuminating to learn about cases where these distortions can have a significant effect on the local physics being probed.

There was also an ad hoc session on the application of electronic structure methods and atomistic simulation to μ SR. This session was particularly relevant to me and I was invited to give an oral presentation about the work I had carried out in my PhD so far. I was very grateful for the opportunity to present at an international conference at such an early stage of my PhD and I felt that the talk was well received. A couple of days after my talk I also gave a poster presentation based on similar work. This gave me the opportunity to interact more with other attendees and answer any outstanding questions they had about my talk. I had many useful discussions with people working on similar problems to me, which has led me to think of new directions in which to take my research.

The conference was very well run, with a relaxed and friendly atmosphere that helped foster discussion. The conference also included a trip to the Nikka Whiskey distillery in Yoichi and the Old Aoyama Villa in Otaru as well as a Hokkaido-style barbeque at the Sapporo Beer museum. This was my first time visiting Japan and I found it to be a very enjoyable experience.

In summary, I thought this was an excellent conference. It has given me a better idea about the scope of μ SR research going on around the world and has allowed me to discuss my work with other people in the field.