

## **SALSA On Ice Report December 23 2017 – January 5 2018:**

**SALSA Sampling Instrument Testing Team on Ice:** Wei Li and Peter Kibler

**Happy New Year!**

### **In-situ water filtration system:**

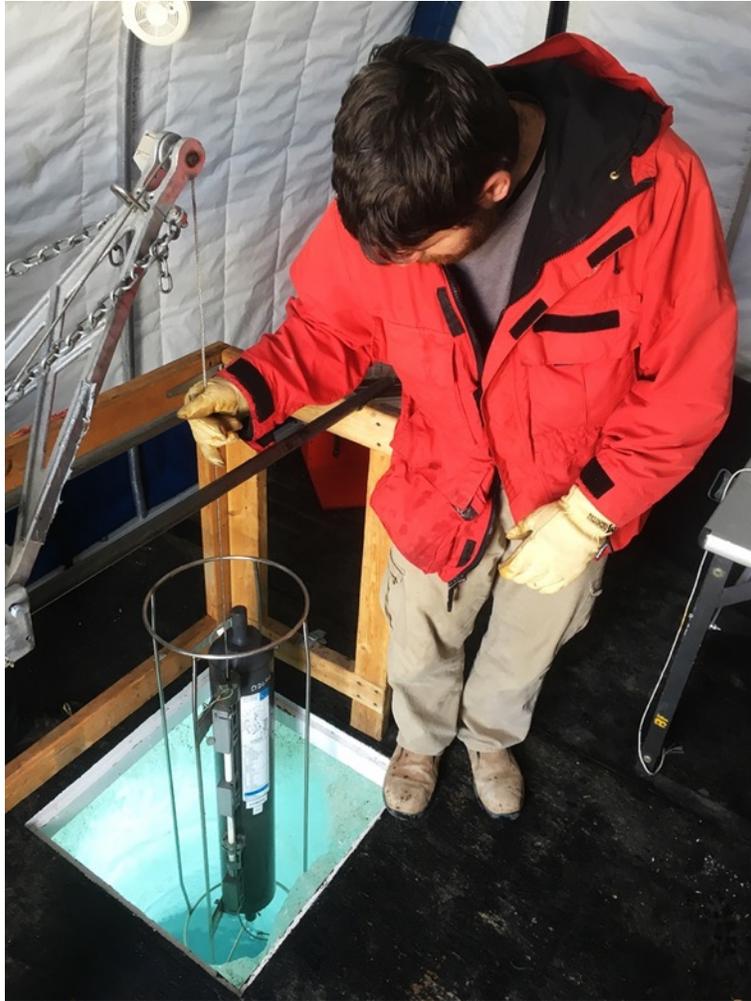
We deployed the in-situ large volume water filtration system (WTS-LV) in both east and west Lake Bonney located in McMurdo Dry Valleys (~60 miles east from McMurdo Station). The system was deployed 12 times across a salinity gradient, filtering approximately 11 to 60 liters per cast. The samples collected will be used for nucleic acid extraction to analyze community structure and functional gene composition within the lake water at specific depths. The use of the WTS-LV in the Dry Valleys will allow for more accurate calculations of water filtration volumes under varied water conditions potentially present in Subglacial Lake Mercer.

### **Niskin cage:**

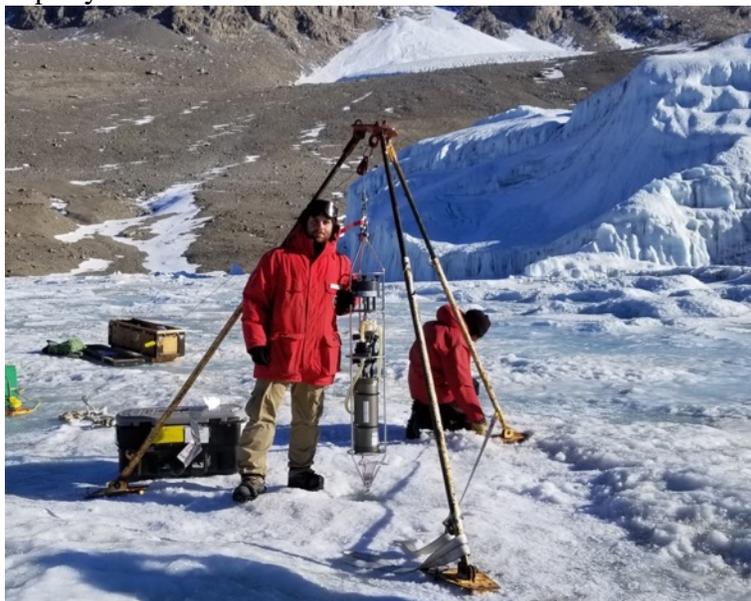
We tested the Niskin cage with a 10-liter Niskin bottle on Lake Bonney. The same sampler will be used for sampling the Subglacial Lake Mercer water column next year for the SALSA project. The Niskin cage is designed to prevent the Niskin bottle from triggering accidentally when going through the bore hole to reach the lake water column. Lake Bonney has a ~13-foot ice cap on top of the liquid lake water. The sampler was deployed via an ice hole drilled and melted in the ice cap and triggered properly to collect lake water. We noticed that the weight hanging on the cage could well balance the sampler. We also gained more experience in assembly/disassembly of the sampler.

**Report by Wei Li and Peter Kibler.**

**Pictures**



Peter successfully retrieved the sampler from the bore hole on Lake Bonney (east lobe). The Niskin bottle was properly closed.



Preparing to deploy the WTS-LV into WLB at the base of Taylor Glacier.



WTS-LV disassembly for cleaning and battery replacement at Bonney camp.