

## **Fieldwork summary**

Over a period of five weeks (31 January – 6 March), we visited and worked on three Chilean volcanoes, and met with OVDAS (the Southern Chilean Volcano Observatory) officials who provided logistical support and advice.

### **Villarrica**

Villarrica is one of Chile's most active volcanoes, as well as one of its most popular tourist destinations. We had a one week multi-instrument field campaign there. After reconnoitring to find suitable places to set up our instruments, we worked in two teams at different sites.

On two occasions we had teams working on the lower flanks and summit of the volcano simultaneously. At the base, the instruments included an ultraviolet camera and spectrometers, measuring sulphur dioxide from the volcanic plume. At the summit, we ran a filter pack inside the plume to measure acid gases, and a sun photometer to measure aerosols. The UV spectrometer at the summit had to be carried through the plume - we soon learned that it was easier to have the instrument mounted on an ice axe, rather than on your helmet!

### **Puyehue-Cordón Caulle**

The start of the Puyehue-Cordón Caulle eruption in June 2011 led to air traffic problems around the southern hemisphere. In February 2012 there was still heavy ash covering the land in the nearby village of Rininahue and the plume was visible hundreds of kilometres away. We had an eerie hike through ash-covered forest to the erupting vent. We couldn't get gas measurements, but recorded video and sampled an active lava flow.

### **Lascar**

Lascar is on the Chilean altiplano, where many of the highest volcanoes in the Andes are to be found. Our gas data was of particular interest due to a recent increase in seismic activity, of concern to OVDAS at the time. We spent five days taking gas and particle measurements from the lower flanks of the volcano.