**Cosmo24- Workshop description**

Monday 20.05.24, 13:00 – 14:30, Cologne University

Room 0.03, Building 310, Zülpicher Str. 49b (will be signposted)

**Workshop on Sample Preparation Techniques in Cologne**

Obtaining dates and rates of Earth surface processes from terrestrial cosmogenic nuclides has become fairly routine within the geoscience community and beyond. This typically requires separating and purifying a specific mineral from a rock or sediment sample, followed by the extraction of the element to be measured. For those nuclides where measurement by AMS (Accelerator Mass Spectrometry) is required, samples will be prepared as AMS targets using a series of chemical procedures. However, the specific procedures used can vary between labs because of resources, or because of the preferences of the user, while different applications often require different sample preparation approaches.

In this workshop, the procedures used at the University of Cologne cosmogenic nuclide sample preparation labs to prepare AMS targets will be presented and discussed. Focus will be on the established protocols for 10Be, 26Al in quartz. 36Cl in carbonates and silicates will also be covered, as will approaches used in Cologne to determine quality and reproducibility of results. Time permitting, some of the more novel lithology-nuclide pairings that have been/are being attempted in Cologne will also be presented.

Steven Binnie