

Cosmogenic isotopic dating

Cosmogenic in-situ produced terrestrial radionuclides ^{10}Be , ^{26}Al and ^{36}Cl are now used extensively for determining the exposure history of bedrock surfaces, glacially transported boulders, sedimentary deposits, fans, buried cave sands, dune and river sands and fault scarps to determine glacial chronologies, basin wide erosion rates, burial ages, fault and slip rates, landscape change in paleo-geomorphology and climate change.

Cosmogenic isotope dating and tracing can be performed on quartz bearing rocks, granites, carbonates, sediments and ice. The correct capability to utilise depends on the sample type and the isotope(s) of interest.

Capability Selections

- Be-10 AMS measurement from pre-prepared Be oxide or Be hydroxide
- Be-10 target preparation – rock or sediment (in situ)
- Be-10 target preparation - unprocessed quartz (in situ)
- Be-10 target preparation - pure quartz (in situ)
- Be-10 target preparation - sediment (meteoric)
- Be-10 target preparation - ice, snow, water, filters
- Al-26 AMS measurement from pre-prepared Al oxide or Al hydroxide
- Al-26 target preparation - rock or sediment (in situ)
- Al-26 target preparation - unprocessed quartz (in situ)
- Al-26 target preparation - pure quartz (in situ)
- Be-10 + Al-26 target preparation - rock (in situ)
- Be-10 + Al-26 target preparation - sediment (in situ)
- Be-10 + Al-26 target preparation - unprocessed quartz (in situ)
- Be-10 + Al-26 target preparation - pure quartz (in situ)
- Cl-36 AMS measurement from pre-prepared AgCl
- Cl-36 target preparation from raw rock - calcareous (in-situ)
- Cl-36 target preparation from raw rock - basalt (in-situ)
- Cl-36 target preparation from raw rock - other rock (in-situ)
- Cl-36 target preparation - ice, snow, water, filters



Cosmogenic isotope dating has been used on samples from all over the world including Mongolia

Please discuss your proposal with the appropriate ANSTO contact scientist before submitting your proposal as they will assist you in making the correct capability selection.

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