National Argon Map: an AuScope initiative

**Data Acquisition Project Proposal**

*This form should be completed and returned to Geoff Fraser (*[*Geoff.Fraser@ga.gov.au*](mailto:Geoff.Fraser@ga.gov.au)*) for consideration by the National Argon Map Oversight Panel*

**Project Proponent**

Name:

Affiliation and position:

Collaborators:

Project Title:

Geographic Region:

Geological Province or Tectonic Unit:

**How will these samples benefit the National Argon Map?**

*Provide a succinct answer to this question, see the suggestions in the Guidelines and Criteria on the next page.*

**Brief Project Description:**

*Approximately 500 word maximum. Include what geological process/problem will be addressed, and how new 40Ar/39Ar data from the specific samples to be dated will contribute. Please include reference to pre-existing geochronological constraints, if any exist. Please include a simple location map which showing the spatial distribution of samples in their geological context (with scale).*

**Approximate number of samples proposed for 40Ar/39Ar analyses:**

**Lithologies and minerals proposed for 40Ar/39Ar analyses:**

**Do you have a preferred 40Ar-39Ar laboratory? (ANU, Curtin, UQ, UMelb):**

If so, why you prefer this laboratory (e.g. student affiliation, ongoing relationship, sample type etc):

**Guidelines and Criteria**

*Project Proposals for funding support as part of the AuScope National Argon Map initiative will be assessed on the following criteria.*

**Australian**: Samples must come from Australia (this may include Australian offshore regions)

**Non-confidential**: 40Ar/39Ar data must be made publicly-available (ie non-confidential)

**Impact**: to what extent new 40Ar/39Ar data from the proposed samples will contribute to geographic data coverage, or address key geological questions

**Feasibility**: whether the nature of the work is tractable via 40Ar/39Ar geochronology and the scale of the proposal is realistic within the time frame of the National Argon Map initiative (January 2020 – June 2021)?

**Appropriate sample material**: whether the proposed samples are (i) appropriate for 40Ar/39Ar analyses, and (ii) available within the time-frames of the National Argon Map initiative?

**Oversight Panel**

Dr Geoff Fraser, Geoscience Australia

Professor Zheng-Xiang Li,

Dr Anthony Reid, Geological Survey of South Australia

Peter Rea, MIM/Glencore

Dr Catherine Spaggiari, Geological Survey of Western Australia

Dr David Giles, MinEx CRC

Dr Marnie Forster (observer role as Project Coordinator)

**Expectations**

*AuScope funding will cover the costs of sample irradiation and isotopic analyses.*

*Project Proponents will be responsible for:*

* Provision of appropriate sample material. This includes mineral separation, which can be arranged at the relevant 40Ar/39Ar laboratories (in many cases this is preferred), but costs of mineral separation will be borne by the project proponent. The relevant laboratory reserves the right not to analyse material if it is deemed unsuitable for 40Ar/39Ar analysis.
* Provision of appropriate sample information. A sample submission template will be provided. Information in these sample submission sheets will form the basis of data delivery/publication, and the oversight committee or relevant laboratory reserves the right not to proceed with analyses unless and until appropriate sample details are provided. This includes description and geological context for each sample.
* Leading the preparation of reports and/or publications to deliver 40Ar/39Ar results into the public domain within the duration of the National Argon Map initiative (January 2020 – June 2021).
* Project Proponents will be expected to communicate directly with the relevant 40Ar/39Ar laboratory once a project has been accepted by the Oversight Committee, in order to clarify project expectations, arrange sample delivery, discuss results, collaborate on reporting and data delivery etc.

*Participating Ar Laboratories will be responsible for:*

* Providing advice to project proponents regarding suitable sample material and feasibility of proposed work
* Irradiation of sample material
* 40Ar/39Ar isotopic analyses
* Delivery of data tables, and analytical metadata to project proponents

Queries regarding possible projects as part of the National Argon Map initiative can be directed to Marnie Forster ([Marnie.Forster@anu.edu.au](mailto:Marnie.Forster@anu.edu.au)) or Geoff Fraser (Geoff.Fraser@ga.gov.au)