**Broader Impacts**

Development of Pychron will benefit noble gas laboratories outside of NMGRL by offering a new software option for data acquisition and processing. The flexible and extensible design of Pychron, together with detailed user and developer guides, will aid in the integration of new hardware and different experimental procedures at other laboratories. Toward the end of the funded year we plan to host a workshop for developers and potential users. This workshop is intended to jump start collaboration among software developers in the noble gas community and expose end users to the full capabilities of Pychron.

Pychron has and will continue to help improve the quality and quantity of argon geochronology at NMGRL and elsewhere. Advancement of argon geochronology directly benefits society as a whole, providing important time constraints to studies of societally relevant problems, including volcanic hazards, global climate change, and economic geology.

This proposal is the first submittal to NSF by recent Ph.D., Dr. Jake Ross. The requested one-year of Post Doctoral funding will help Dr. Ross in this critical early development period by exposing him to the noble gas community and providing opportunities to work collaboratively with a diverse group of stakeholders.

We also intend on involving graduate and undergraduate students from the computer science department. These students will gain direct experience in geoscience and scientific computing, and also provide new perspectives and different skill sets for Pychron development. Working with these students will offer opportunities for Jake to develop and enhance his managerial and advisory skills.