

Design Concepts for a $^{40}\text{Ar}/^{39}\text{Ar}$ Laboratory
NMGRL's Plans for a New Mass Spectrometer
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The New Mexico Geochronology Research Laboratory is planning and preparing for the purchase of a new noble gas mass spectrometer. The addition of a new mass spectrometer requires the design and construction of a new rare gas extraction line. A brief look at mass spectrometer options along with preliminary extraction line designs will be presented. Mass spectrometer options under consideration are volume and collector setup. The extraction line is required to operate at ultra-high vacuum, and is designed to minimize analytical volume. In addition, design concepts and issues for an alternative extraction device, a laser furnace, will be explored.