

## ***<sup>3</sup>He production-rate calibration from Red Cones and Groundhog Cone, Sierra Nevada***

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Deglacial hydrologic variability in the western US is widely believed to reflect asynchrony in global climate perturbations (e.g., Broecker et al., 2010). But, the chronological control on the records of change in this interval is poor. Strong evidence for hydrologic variability is observed in Mono Basin, CA, from well-preserved lake level terraces up to 200 m above the modern Mono Lake and are likely deglacial and younger in age (Lajoie 1968, Ali et al. 2009). These terraces are erosional surfaces with exposure histories that can be potentially dated using cosmogenic nuclides. If this record can be well constrained, it may yield valuable information on the timing and rates of Mono Basin's hydrologic response to global deglacial climate forcing. The vast majority of the Mono Basin is comprised of volcanic lithologies, making cosmogenic <sup>3</sup>He the most suitable geochronologic tool. However, despite the improvement of the precision of cosmogenic dating over the last two decades, production rates remain the largest uncertainty. Therefore, our principal objective is to calibrate <sup>3</sup>He production rates using the Holocene Red Cones and Groundhog Cone located just south of Mono Lake.