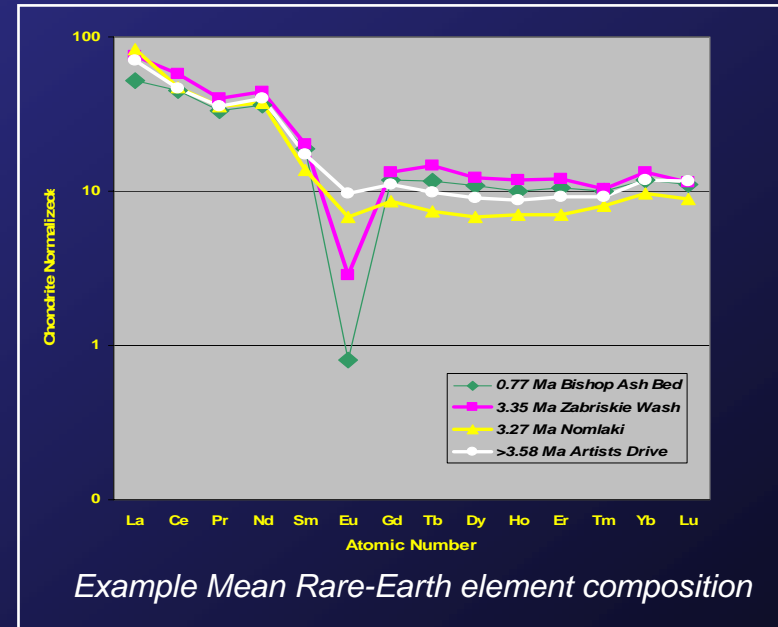
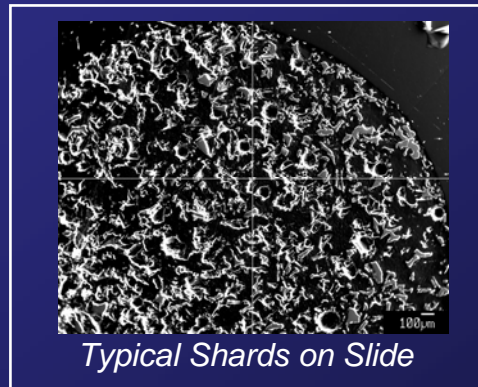
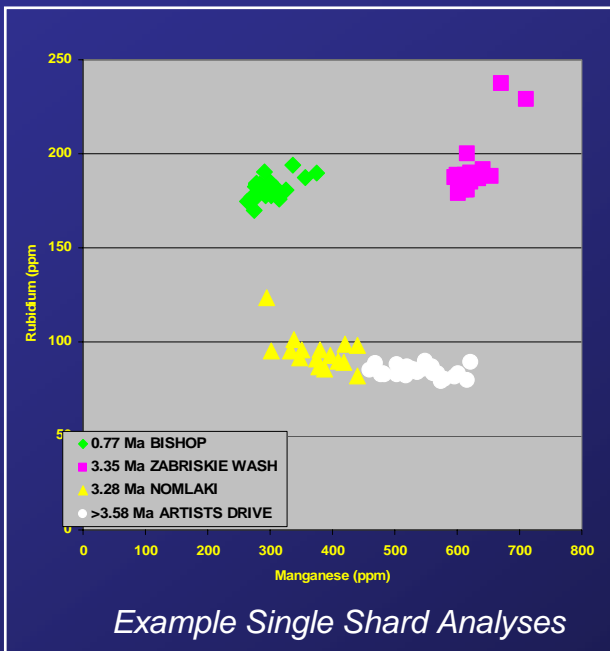


Single Shard Analysis of Volcanic Glass Shards by Time-of-Flight Laser-Ablation Inductively Coupled Plasma Mass Spectrometry (TOF-LA-ICP-MS)

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Goal: Determining minor and trace element composition of single shards from tephra layers using TOF-LA-ICP-MS for suitability in a large database.

Need: Determination of minor and trace elements is limited to bulk samples.



Results: I have analyzed glass shards known to have similar major-element compositions. Single shard analyses using TOF-LA-ICP-MS are sufficiently precise and accurate to differentiate among tephra from the both different and the same volcanic source.

The results from this project are sufficient that I am moving forward on completing analyses of the stratigraphically important and unresolved Wilson Creek ash beds of eastern California