Mars Neutron/Gamma-ray Data Clustering CARL CAMPBELL, Rowan University, ROWAN MARS RESEARCH TEAM — Neutron detectors on spacecraft at Mars and the Moon were designed to look for signs of water; at Mars a gamma-ray spectrometer was used to measure elemental abundances but no such instrument was added to the current lunar probe. The goal of this research is to determine if there are correlations between neutron and gamma-ray data at Mars so as to be able to measure elemental abundances at the Moon. To achieve this goal I am using a clustering algorithm to group similar data between neutron and gamma-ray sets. So far for N clusters, usually chosen here to be between five and eight, the results have excellent repeatability between runs and shapes recognizable with the mars albedo map.

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