ABSTRACT

Paper to be presented at the second "Lunar Science Conference in Houston, January 11, 1971 on results with samples 12070,38 12057,61 12001,74 120033,25 and 12009,47 studied under N.A.S.A contract 33-187-001 with Alfred University

Charles H. Greene, Principal Investigator

Glass spherules with diameters between 0.1 and 0.2 mm were separated from four samples of lunar soil fines (< 1mm) Electron microprobe analyses of these samples, after preliminary density measurements, permitted the synthesis of similar reduced glasses in silica tubes. The properties of these glasses are described as well as the density changes found when the spherules from the moon were held for increasing lengths of time at a constant temperature in the glass transition range. Crystallization behaviors of synthetic and actual lunar glasses are also reported. The bearing of these experiments on the origin and history of lunar glass is discussed.