In a further attempt to form an intermetallic compound, an alloy (0.328 mol fraction rubidium) was studied at high pressures. The sample was incapsulated in polyethylene, placed in a graphite cylinder and subjected to pressures up to 60,000 atm in one of the tetrahedral presses available in the high pressure laboratory at Brigham Young University.[10,11]

Time-temperature heating and cooling curves were obtained on the sample at various pressures by using the graphite capsule as a resistance heater. Temperatures were measured with a chromel-alumel thermocouple. A halt in the cooling or warming curve due to the eutectic was easily identified. The eutectic increased from 269 K at atmospheric pressure to 397 K at 60,000 atm. No other halts were observed at any pressure. Comparable measurements in the sodium-potassium system gave both a eutectic halt and a peritectic halt over the same pressure range.[12] It is concluded that pressure does not bring about the formation of an Na_2Rb intermetallic compound.

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