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Microwave Initiated Atomic Spectra from Select Atomic Species¹ JAMES ROBERTS, University of North Texas, JAI DAHIYA², Southeast Missouri State University, AMAN ANAND, RICK CROLEY, University of North Texas — Quantum states were energized in gaseous Helium (³He and ⁴He) using a 2.45 GHz magnetron coupled to the gases. A residual gas analyzer was used to determine the mass of each species. An Ocean Optics Optical Spectrometer collected the light via an optic probe. The data show unique spectral emission line shapes. Data using both computational as well as theoretical techniques are presented. Traditional high voltage arc discharge data were taken for the gas species to compare with microwave stimulated atomic emissions.

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