IDENTIFICATION AND ASSIGNMENTS OF LASER OPTOGALVANIC TRANSITIONS IN ATOMIC ARGON [a]

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The optogalvanic spectra of argon have been investigated in the ultraviolet region ($290.88 - 320.75$ nm) in an argon-containing commercial Laser Galvatron using a dye laser pumped by a Nd:YAG laser. Of the 102 optogalvanic transitions observed, some 80 transitions belong to argon, while the remaining transitions are due to Fe atoms. All of the observed argon transitions have been identified using the J-L
coupling scheme. Of the 80 observed optogalvanic transitions that belonged to the argon atom, 39 have been identified and assigned for the first time. The wavelengths of the OG-spectral lines were cross-calibrated using the LIF spectrum of the OH-radical in a propane-air flame.

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