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Measurement of Ar Excited Atoms Temperature in D.C planar Discharge by Diode laser technique MONA MEHRANFAR, Tehran North Branch, Azad University, Tehran, Iran, MAJID ESHGHABADI, KIOUMARS YASSERIAN, MAHMOOD GHORANNEVISS, Plasma Physics Research Center, Science and Research Campus, Azad University, Tehran, Iran — A diode laser has been used to measure the temperature of Ar atoms. A D.C discharge is employed to make the Ar excited atoms between two planar stainless steel electrodes in a Pyrex glass tub. The laser beam passes through the plasma. This laser is calibrated on 772.3nm corresponding to the high intensity wavelength of light which emitted by Ar atoms. The diode laser input power is modulated as saw tooth mode by a signal generator. The temperature of the Ar atoms is calculated by full-width-half-maximum (FWHM) of Doppler absorption curve. Details of results will be discussed in full paper.

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