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**Non-invasive electrical method for measurement of electron temperature in an atmospheric pressure plasma jet source** YOUNG-CHEOL KIM, YU-SIN KIM, HYO-CHANG LEE, JUN-HYEON MOON, CHIN-WOOK CHUNG\*, Hanyang University — Electrical diagnostic method of electron temperature using non-perturbed floating harmonic technique is studied in an atmospheric pressure plasma jet source. When a sinusoidal voltage is applied to the quartz tube which surrounds plasma, the received current has harmonic component. From the relation of the harmonic currents with considerations of the collisional sheath and the applied voltage to the sheath, the electron temperature can be obtained. The measured electron temperature is in the range of 2 - 3 eV in helium discharge.

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