

Abstract Submitted
for the DPP15 Meeting of
The American Physical Society

Inverse Bremsstrahlung in Weakly Ionized Underdense Plasmas¹

SUSUMU KATO, National Institute of Advanced Industrial Science and Technology (AIST), ATSUSHI SUNAHARA, Institute of Laser Engineering — Laser-induced air breakdown has attracted much attention in many applications such as laser ignition, laser breakdown spectroscopy. The breakdown and energy transfer are dominated by the properties of a weakly ionized plasma, which is characterized by a collision with the neutral gas. In order to predict threshold conditions of the laser breakdown precisely, it is necessary to understand the details of the laser energy absorption and ionization degree in the weakly ionized plasma. The coefficient of classical absorption were investigated for various degree of ionization.

¹This work was supported by JSPS KAKENHI (25610173).

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Date submitted: 17 Sep 2015

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