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Characteristics of extreme ultraviolet radiation from laser triggered vacuum spark discharge plasma[1] MASATO WATANABE, NOZOMU KISHI, EIKI HOTTA, Department of Energy Sciences, Tokyo Institute of Technology — Comparative experimental studies of the vacuum spark discharge triggered by nanosecond duration laser pulses are performed under differing electrical conditions. A maximum discharge current of about 6 kA with a pulse width of 500 ns was supplied to anode-cathode gap. In our system, after laser was irradiated on electrode surface made of Sn, the main discharge will be triggered and extreme ultraviolet (EUV) radiation will occur from the generated Sn plasma between electrodes. In present study, EUV radiation emitted from laser triggered Sn discharge produced plasma was quantitatively measured using an in-band calorimeter. Both time-integrated visible image and time-resolved in-band source image measurements were also conducted using a pinhole camera system. The details of experimental results will be discussed.

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