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E. Stoffels
Physics Department, Eindhoven University of Technology,
P. van de Weijer,
Philips Research Laboratories, Eindhoven.

The laser produced plasma from a metalic uranium target has been studied by means of Optical Emission Spectrometry. At moderate pressures (0.01 – 2 Torr) the plasma shows a complex temporal behavior due to interaction of ablated particles with the buffer gas. The ignition of plasma above the target surface is performed by high energetic particles ejected from the target ($v \sim 10^6$–10^7 cm/s). It is clearly separated in time from the arrival of the bulk of (radiating) particles, for plasma acts as a barrier against them and causes them to slow down. The influence of pressure on the delay of arrival of the bulk of material has been compared for two gases: argon and air. Furthermore the plasma afterglow has been studied. It has another time constant. The formation of uranium oxides can be observed in the afterglow of air plasma.