

LUCA VOLPE

SCIENTIFIC REPORT FOR SHORT VISIT IN POLAND

During my short visit in Poland at the Institute of Plasma Physics and laser Microfusion the first day I have visited the institute and the laboratory together with Prof. J. Wolowski, which invited me, and the local staff. The other days I have participated in the experimental measurements and analysis regarding the experiment in progress.

The experiment was performed in order to estimate the influence of various experimental conditions on properties of laser generated ion streams. We observe the laser-induced modification of surface of samples and samples modified by laser-produced ions. The properties of ion characteristics were measured with the use of different ion diagnostic systems, in particular ion collectors and an electrostatic ion energy analyser. Especially interesting were results obtained in the arrangement including an original electrostatic system for post-acceleration and cumulating of laser stream prepared for ion implantation.

In particular, colleagues from IPPLM and I have analysed the result obtained for different systems of electrodes also during previous experiments in IPPLM. This analysis was compared with results of numerical simulation of the ion paths through the electric field.

During my short visit also, the prospects for further collaboration from IPPLM with University of Milan-Bicocca have been discussed.

I have learned much about laser properties, used diagnostic and experimental parameter in such a way to give an exhaustive report to my group in Milano Bicocca in order to think about the possibility for future collaborations. Unfortunately, due to the too short period I can not present any personal results about the experiment which was in progress when I left Poland.

Luca Volpe

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