

## Measurement of spatiotemporal distribution for the excited Xe atoms density in the $1s_5$ in accordance with various ITO-shapes in AC-PDP

S. H. Cho, J. H. Kim, Y. J. Hong, P. Y. Oh, B. H. Hong, G. S. Cho, and E. H. Choi

Charged particle beam and plasma laboratory / PDP Research Center, Department of Electrophysics,  
Kwangwoon Univ.

In this study, we have measured the spatiotemporal behavior of the excited Xe atoms density in the  $1s_5$  metastable states by laser absorption spectroscopy in accordance with various ITO-shapes. The maximum density of excited Xe atoms in the  $1s_5$  state in discharge cell for Fish-bone typed, T typed and Square typed ITO electrodes has been measured to be  $3.01 \times 10^{13} \text{ cm}^{-3}$ ,  $2.66 \times 10^{13} \text{ cm}^{-3}$  and  $2.06 \times 10^{13} \text{ cm}^{-3}$ , respectively. Throughout this experiment, we could understand the influence of ITO-shape in micro discharge cell on the high efficiency in AC-PDPs.