

Pockels-based Mueller polarimetry for E field measurements

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In the interaction of non-thermal atmospheric pressure plasmas and dielectric substrates there are challenges in measuring plasma properties in-situ and time resolved. The interaction of the plasma and the substrate is described by plasma models, however the experimental data remains difficult to obtain. The measurement of electric field falls into this category. This talk presents an advanced version of the Pockels-based E field measurement technique. Using Mueller polarimetry one is capable of obtaining the full polarimetric picture of the target, opening the possibility to not only work with perfect dielectric targets, but also with targets of great complexity.