

Title: *Dust - UV interaction*

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Abstract: *Micrometer objects (dust grains) are an integral part of the universe. As other objects in the plasma, these dust grains charge to potential close to the potential of the plasmas (in this case, interplanetary plasma). In the universe, the photoelectric charging dust grain dominates all other charging processes. In general, the resulting charge of dust grain is given by a balance of all processes, which haven't been mostly yet theoretically described. In our laboratory, we are simulating space conditions and measure resulting charge and its changes on a single separated dust grain. This work is partly focused to UV source application and to finishing its electronics, and partly on test measurements and model calculations, connected with newly built experiment (e.g., to estimate effects of background currents, surfaces, and the geometry of the dust trap electrodes). The work is finished by the first measurements of glass grain charge under electron bombardment with provisional detection optics. Obtained results are compared with previous measurements on the same type of dust grains.*

Key words: *dust, dusty plasma, dust charging, photoemission*