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EFFECTIVE METHOD FOR PHOTOGRAPHIC RECORDING OF HEAT FIELDS OF OBJECTS AND LASER RADIATIONS BASED ON A GAS DISCHARGE CELL

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ABSTRACT

This paper describes the design of a semiconductor photographic ionization camera used for spatio-temporal diagnostics of thermal fields of objects in the infrared wavelength range up to 30 μm and beyond. The results of experimental studies of photo detectors made of silicon doped with platinum and sulfur in a semiconductor photographic ionization camera gas-discharge cell are presented. It is shown that high sensitivity of the photographic process is provided due to a new photographic effect, which is associated with the phenomenon of photoelectric hysteresis.

KEYWORDS: *Diagnostics, Thermal Field, Laser Radiation, Photographic Effect, Photoelectric Hysteresis.*

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