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Determination of the light exposure on the photodiodes of a new instrumented baffle for the Virgo input mode cleaner end-mirror ALBA ROMERO-RODRGUEZ, Inst High Enrgy Phy (IFAE) UAB, IFAE+EGO+CALTECH COLLABORATION — As part of the upgrade program of the Advanced Virgo interferometer, the installation of new instrumented baffles surrounding the main test masses is foreseen. As a demonstrator, and to validate the technology, the existing baffle in the area of the input mode cleaner end-mirror will be first replaced by a baffle equipped with photodiodes. This paper presents detailed simulations of the light distribution on the input mode cleaner baffle. They served to validate the proposed layout of the sensors in the baffle, and determine the light exposure of the photodiodes under different scenarios of the interferometer operations, in order to define mitigation strategies for preserving the detector integrity.

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