

New instrumented baffles for AdV+ upgrade

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Abstract

The IFAE group is developing instrumented baffles around test masses for Virgo in time for the new upgrade of the interferometer in 2023. The construction of baffles instrumented with photon sensors allows for a better understanding of the stray light distribution in the interferometer, offering a new tool for: a much more efficient pre-alignment and fine-tune of the parameters of the interferometer after shutdowns and during operations; the detection and suppression of developing high modes in the interferometer; and the possibility of dynamically feeding back the observed light distributions in the baffles into the description of the mirrors surface. In this contribution, the overview of the project and the technological challenges are presented.

Primary author(s) : MARTÍNEZ, Mario (ICREA/IFAE)

Presenter(s) : MARTÍNEZ, Mario (ICREA/IFAE)

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