

Analytical and numerical simulations of a two-stage controlled AO system

mercredi 24 octobre 2018 10:40 (20 minutes)

Summary

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We present here a new system architecture, where an already existing low order system is followed by a high order, fast system. The benefits of such a design is to reduce temporal error by using small and fast deformable mirror, minimizing the interventions in the hardware and software of the existing system, while increasing the number of degrees of freedom and speed of the combined system. The system is described and the methodology is presented, where an analytical model was used to roughly determine system parameters, and then, a numerical simulation were performed using Octopus for verification.

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Classification de Session: Tip-Tilt & Vibration Control