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AO on ELTs using NGSs on a wide field of view

Enlarging the Field of view of an MCAO system is an advantage, in terms of sky coverage, up to a given angle depending upon the telescope diameter. This limit for an ELT is getting so close to the actual Field of View of the E-ELT that makes an interesting bench for this kind of approach.

Actually there is no need to perform MCAO on such a large area but one can extract information along different line of sights or around a limited Field of View still retaining the advantages of the sky coverages. This requires the introduction of the live-virtual DM and the need for extremely linear Wavefront Sensing. Both are doable with today technology.