Realising the scientific potential of VLTI in the coming decade: a call for an ambitious data analysis open ecosystem

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Abstract

The past decade has seen impressive progresses in the capabilities and performances of VLTI, in terms of sensitivity and operational efficiency. This opens new scientific avenues beyond the historical science cases of optical interferometry, and beyond its historical users base. Realising the scientific potential can only be done by widening the community. Not only astrophysicists need to be aware of the capabilities of optical interferometry, they also need a strong ecosystem to simulate, prepare and analyse their observations. At the moment, this ecosystem is far from ideal, and the entrance step is too high. My experience developing PMOIRED in the past few years, an analysis software used in a growing 10+ publications per year, shows that unpublished results are not a fatality, and newcomers can publish results in a fraction of the time thought possible... I propose here a panorama of the current situation, with some possible avenues to improve the situation, which involve all partners: ESO, expertise centres, organisations such as the EII, and the experts community. This should be one the pilar for the upcoming VLTI roadmap, and a necessary step towards an ambitious next generation facility.

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