

# Analysis optimisation for more than 10 TeV gamma-ray astronomy with IACTs

There are many important topics, which require good sensitivity at energies above 10 TeV. But in the case of the current generation of Cherenkov telescopes, e.g. H.E.S.S., the best sensitivity is typically reached around 1 TeV, and for higher energies, the analysis methods should be additionally optimised. In this contribution, we present an analysis technique, which is aimed to improve the sensitivity above 10 TeV. It includes the employment of improved event direction reconstruction and gamma-hadron separation. For the standard event offset angles (below  $2.5^\circ$ ), the developer high-energy analysis reaches  $\sim 5$ -10% better angular resolution and  $\sim 10$ -20% better sensitivity than the standard analysis. And for the first time, extensive air showers with event offsets up to  $4.5^\circ$  from the camera centre are considered in the analysis, thereby increasing the effective Field-of-View of H.E.S.S. from  $5^\circ$  to  $9^\circ$  and potentially increasing source exposure and, as a result, gamma-ray statistics at high-energies.