New Angles on Energy Correlators

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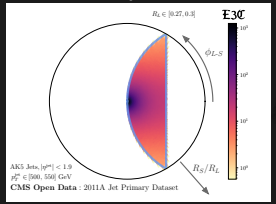
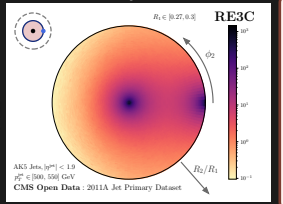
arxiv.org/abs/2410.xxxx
github.com/samcaf/ResolvedEnergyCorrelators

CMS Open Data



Traditional correlators

CMS Open Data



New correlators

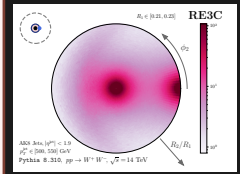
Efficient Computation

N-particle correlations

$\mathcal{O}(M^2 \ln M)$ new scaling

$\ll$

$\mathcal{O}(M^N)$ old scaling



W-jet Simulation

Energy Correlators

Separate scales, sift soft QCD

α_s, m_t, ℓ_{QGP}

New Energy Correlators

Improved scaling, Visually intuitive

Enables previously unimaginable computations!