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Recent studies of jet-medium interactions with ALICE

Diverse studies of jets in heavy-ion collisions promise a consistent picture of QCD medium interactions and a path towards further differentiating energy loss mechanisms. Some results, however, remain disjoint: the jet mass and jet angularities, including girth and thrust, are strongly-correlated observables which have given seemingly conflicted answers on the angular quenching of jets traversing the QGP. New systematic measurements of the perturbatively-calculable angularities, using consistent definitions for the first time, resolve the long-standing girth-mass problem and reveal quenching effects at broad angles. Concurrently, applying soft drop grooming isolates the narrowing in the core of quenched jets. New comparisons of the jet axis differences between groomed and ungroomed jets using various recombination schemes highlights the quenching contributions from soft radiation. Pushing to lower transverse momentum allows these studies to illuminate enhanced quenching effects at small Q^2 . Similarly, tagging jets with an external probe provides information about jet energy and momentum modifications with respect to an initial hard-scattered parton, improving access at low momentum. A novel mixed-event approach has also pushed jet-medium studies down to zero transverse momentum, providing a potential opportunity to reduce bias on future jet measurements. We compare recent results to assorted jet quenching models, providing information on medium interactions as a function of angle and momentum.

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