

# Testing the performance of the PFA algorithms

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Particle Flow Calorimetry promises an excellent jet energy resolution by combining the momentum measurement, electromagnetic calorimeter and using the hadron calorimeter for neutral hadron only. This technique depends on the ability of separation of energy deposits of separate particles and thus on the spatial density of particles in the calorimeter. We investigate the variation of the particle densities for different physics processes and center-of-mass energies to evaluate validity proofs-of-concept of the PFA algorithms. Demonstration of the performance of the PFA calorimetry relies primarily on the detector simulation tools. We investigate current uncertainties of the simulation tools and try to outline possible experimental tests for simulations tools and for the PFA calorimeter.

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