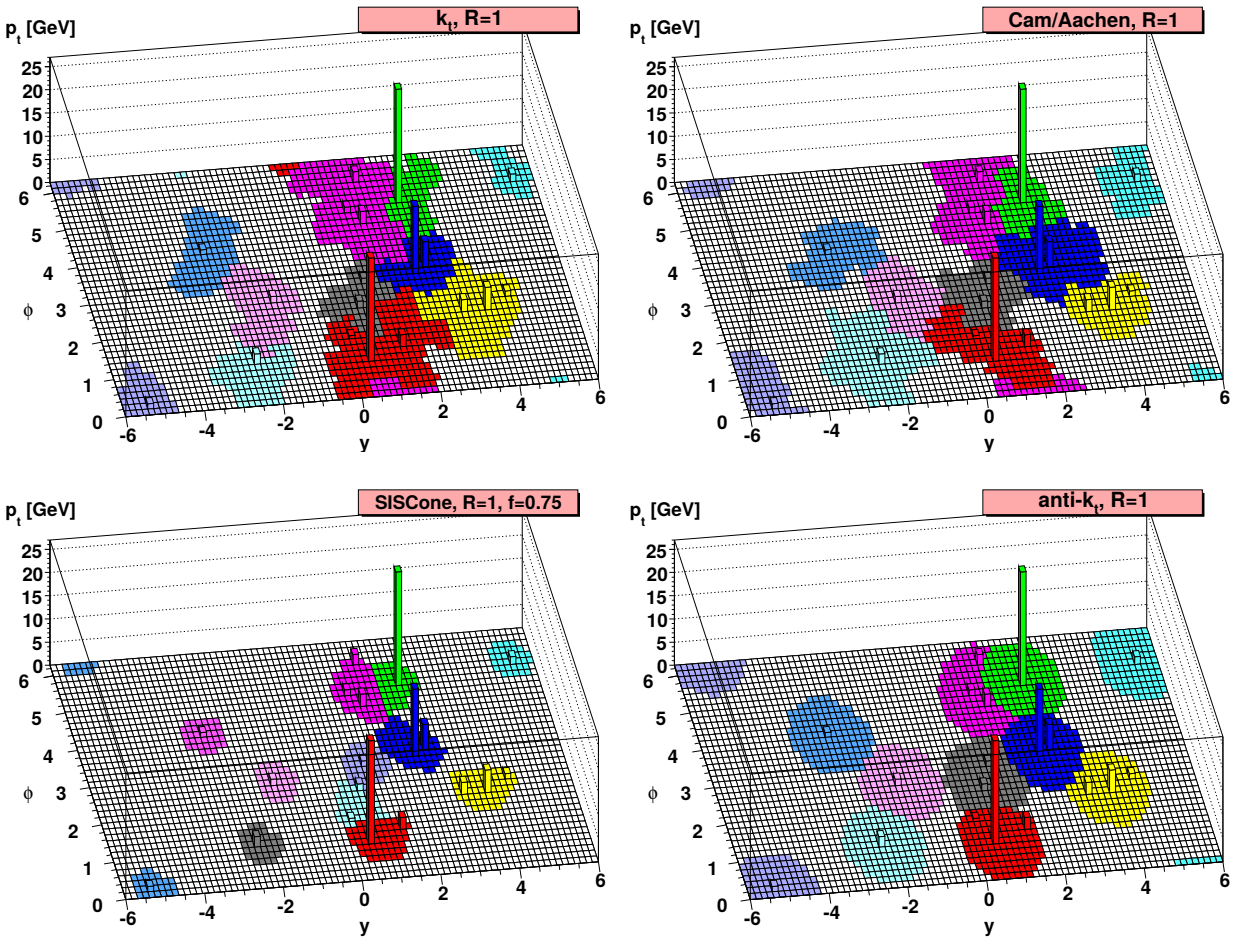

Figure 7: A sample parton-level event (generated with Herwig [101]), together with many random soft "ghosts", clustered with four different jet algorithms, illustrating the "active" catchment areas of the resulting hard jets (cf. section 4.4). For k_t and Cam/Aachen the detailed shapes are in part determined by the specific set of ghosts used, and change when the ghosts are modified.

degree of regularity (or not) of the boundaries of the resulting jets and their extents in the rapidity-azimuth place.

3 Computational geometry and jet finding

It takes the human eye and brain a fraction of a second to identify the main regions of energy flow in a calorimetric event such as fig. 7. A good few seconds might be needed to quantify that energy flow, and to come to a conclusion as to how many jets it contains. Those are timescales that usefully serve as a reference when considering the speed of jet finders — if a jet finder takes a few seconds to classify an event it will seem somewhat tedious, whereas a few milliseconds will seem fast. One can reach similar conclusions by comparing to the time for a Monte Carlo event generator to produce an event (from tens