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Spatial Point Pattern Analysis of LHC Data KONSTANTIN MATCHEV, ALEXANDER ROMAN, University of Florida, PRASANTH SHYAM-SUNDAR, Fermilab — We treat an LHC event sample as a spatial point pattern in the relevant phase space of the final state signature. We then demonstrate how methods from spatial statistics and computational geometry can be applied to address classical problems like statistical inference, density estimation and manifold learning in an unsupervised fashion.

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