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Uncertainty-aware diffusion models for LHC Event Generation

jeudi 30 novembre 2023 15:30 (25 minutes)

Given the recent success of diffusion models in image generation, we study their applicability to generating LHC phase space distributions. We find that they achieve percent level precision comparable to INNs. Training uncertainties are quantified by developing Bayesian versions to further enhance the interpretability of our results. In this talk, diffusion models are introduced and discussed followed by a presentation of our findings.

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