Precision-Machine Learning for the Matrix Element Method

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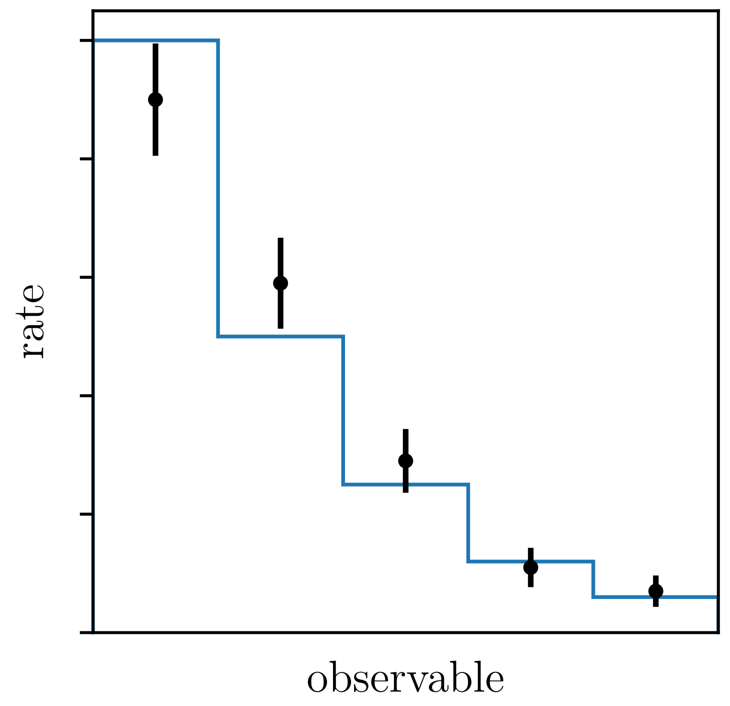
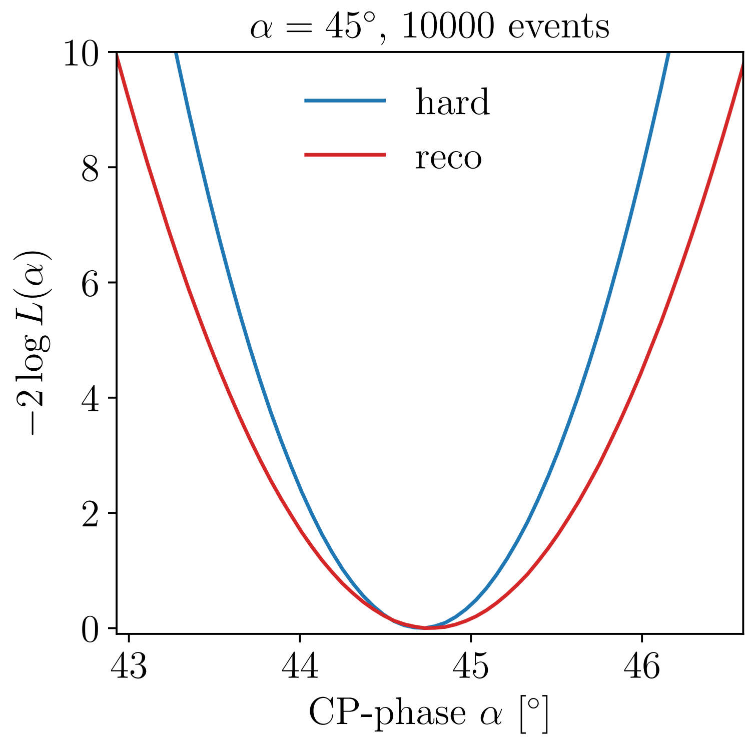
How can we extract all the available information from LHC data?



Binned, low-dimensional data

→ loss of information



Use theory knowledge to extract likelihood

→ matrix element method

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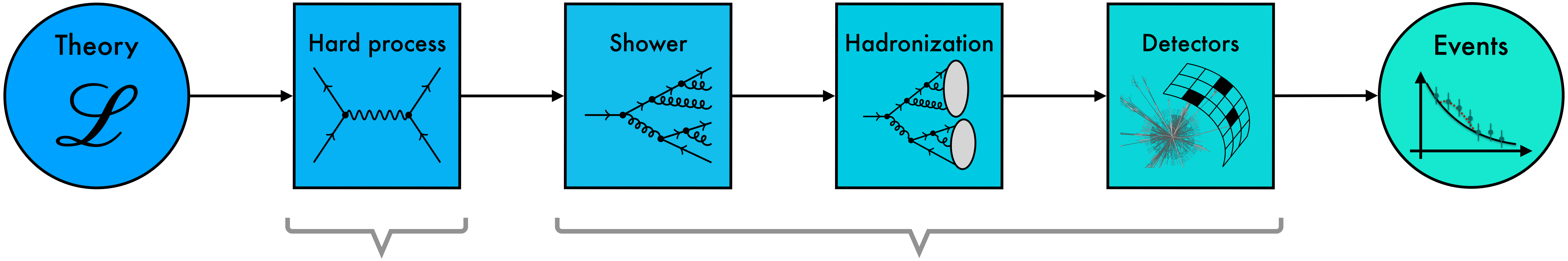
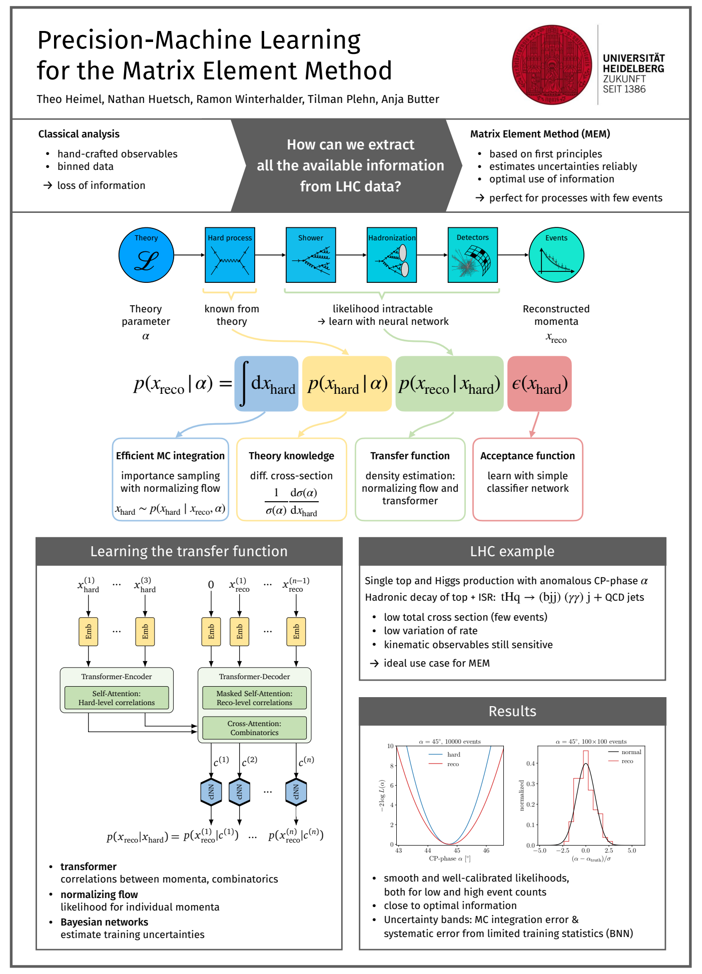


known from theory

likelihood intractable

→ **use machine learning**



Come to my poster to see how this can be done with transformers, normalizing flows, classifiers and neural importance sampling!