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”Phenomenological analysis of $e^+e^- \rightarrow hX$ data and extraction of TMD Fragmentation Functions from thrust dependent observables”

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Accessing TMD Fragmentation Functions through the phenomenological analysis of SIDIS data requires a non-trivial disentangling from the TMD Parton Distribution Function, that appear as convolutions in the factorized cross section. Difficulties in this kind of analyses can partly be overcome by exploiting the thrust distribution of e^+e^- annihilation into one single hadron, for which we now have a well-established factorization theorem. In this talk, I present the first phenomenological extraction of the unpolarized pion TMD Fragmentation Function from $e^+e^- \rightarrow hX$ process. This analysis can successfully describe the p_T and z dependence of the cross section as well as its thrust dependence, providing the first phenomenological success in one of the most intriguing challenges of the past few years.

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