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Transverse *Lambda*-hyperon polarization in e^+e^- annihilation processes within the TMD formalism.

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Data from Belle Collaboration for associated (with a light unpolarized hadron) and single-inclusive production of transversely polarized Λ -hyperons in e^+e^- annihilation processes allowed to extract, for the first time, the Λ polarizing fragmentation function, by adopting a simplified TMD approach. Recent theoretical developments on the computation of cross sections for single-inclusive hadron production in e^+e^- annihilation, within a Soft Collinear Effective Theory approach, combined with the CSS formalism for the double-hadron production case, have been used to perform a renewed analysis, adopting a proper TMD factorization scheme. A detailed comparison with the former analysis will be discussed. Preliminary estimates for the transverse Λ polarization at OPAL and at $\sqrt{s} = M_Z$ will also be presented.

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