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A constrained fit of the valence transversity distributions from dihadron production

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We present a constrained analysis of the valence transversity Parton Distribution Function, one of the three distributions of quarks and gluons inside the proton at different energy values. The data is extracted from dihadron production in semi-inclusive DIS, an electron-proton interaction. The present analysis implements further constraints through the method of Lagrange multipliers instead of relying on the explicit fulfillment of theoretical limits —the Soffer bound—, as it is usual to do in these extractions. The results are quantitatively comparable to previous analyses; qualitatively, it is an increased flexibility in the functional form of the transversity distribution.

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