

## High Energy Physics - Phenomenology

# Sivers and Boer-Mulders functions in Light-Cone Quark Models

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(Submitted on 29 Jan 2010)

Results for the naive-time-reversal-odd quark distributions in a light-cone quark model are presented. The final-state interaction effects are generated via single-gluon exchange mechanism. The formalism of light-cone wave functions is used to derive general expressions in terms of overlap of wave-function amplitudes describing the different orbital angular momentum components of the nucleon. In particular, the model predictions show a dominant contribution from S- and P-wave interference in the Sivers function and a significant contribution also from the interference of P and D waves in the Boer-Mulders function. The favourable comparison with existing phenomenological parametrizations motivates further applications to describe azimuthal asymmetries in hadronic reactions.

Comments: 25 pages, 8 figures

Subjects: **High Energy Physics - Phenomenology (hep-ph)**; High Energy Physics - Experiment (hep-ex); High Energy Physics - Theory (hep-th); Nuclear Experiment (nucl-ex)

Cite as: [arXiv:1001.5398v1](https://arxiv.org/abs/1001.5398v1) [hep-ph]

## Submission history

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[v1] Fri, 29 Jan 2010 13:06:57 GMT (1232kb)

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