

**The Jefferson Lab Angular Momentum
Collaboration**

JAM

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Halls A, B and C



Objectives and motivation

- ▶ The (very general) aim is the study of the angular-momentum-dependent structure of hadrons
- ▶ A first (immediate) objective is the production of spin-dependent parton distributions and a parametrization of structure functions (g_1 , g_2) with emphasis on JLab data
- ▶ We intend to bring together theorists and experimentalists from the Jefferson Lab community; representatives of Halls A, B and C needed
- ▶ Eventually we would consider extensions and/or related studies (NNLO, unpolarized PDFs, TMDs ... ideas are welcome!)

Advantages and specialties

- ▶ Emphasis on JLab physics: large Bjorken- x at low and intermediate values of W and Q^2 , and the impact of JLab data on polarized PDFs
- ▶ Theoretical + Experimental collaboration profiting from the best of both; e.g. suggestions for future experiments could come out
- ▶ Experimental knowledge needed for data treatment; we would like to be as independent of assumptions and theoretical bias as possible (e.g. use asymmetries A_{\parallel} , A_{\perp} instead of structure functions)
- ▶ Theory center expertise in QCD, nuclear corrections, higher-twist etc. crucial to carry out the analysis
- ▶ Parallel determination of polarized and unpolarized distributions (and corrections) would increase consistency

Procedure and time schedule

- ▶ Create a database with all relevant (DIS, SIDIS, hadron colliders) data and proceed to the QCD analysis
- ▶ An immediate need is to complete the data collection (starting from Osipenko's database); especially all data from JLab experiments
- ▶ Code development is on the way and should be finished in (few) weeks
- ▶ We aim for preliminary results by late spring or summer
- ▶ Anyone wishing to be actively involved in the project is welcome

Please follow us up at

<http://www.jlab.org/jam>