Small x References

References

[1] S. Brodsky, SLAC-PUB-5313, DESY topical meeting: Small-x behavior of deep inelastic structure functions in QCD, Hamburg, Germany, May 14-16, 1990.

[2] E.M. Levin, M.G. Ryskin, Sov. J. Nucl. Phys. 53, 653, 1991, Yad. Fiz. 53, 1052, 1991.
Deep inelastic structure function at low x.

[3] A.D. Martin, Preprint DTP/93/66, Aug. 1993.
Structure functions and small x physics.

[4] F.E. Close and R.G. Roberts, RAL-94-071, June 1994.
The spin dependence of diffractive processes and implications for the small x behavior of g_1 and the spin content of the nucleon.

[5] S.D. Bass and P.V. Landshoff, Cavendish preprint HEP 94/4, DAMTP 94/50.
The small x behaviour of g_1.

[6] A. Capella *et al.,* Phys. Lett. **B337,** 358, 1994.
Structure functions and low x physics.

[7] A.D. Martin, HEP-PH-9507272, DTP/95/60, Jul. 1995.
Description of F_2 and the gluon at small x.

[8] F.J. Yndurain, HEP-PH/9605265, April 1996.
On the theoretical analysis of the small x data in recent HERA papers.

[9] M. Gluck, E. Reya, A. Vogt, Z. Phys. **C67,** 433, 1995.
Dynamical parton distributions of the proton and small physics.

[10] J. Bartel, *et al.,* Z. Phys. **C70** , 273, 1996. HEP-PH/9507271.
Nonsinglet contributions to the structure function g_1 at small x.

[11] S. Catani , Z. Phys. **C70 ,** 263, 1996. HEP-PH/9506357.
Comments on quarks and gluons at small x and the SDIS factorization scheme.

[12] J. Bartel, B.I. Ermolaev, M.G. Ryskin, Z. Phys. **C72,** 627, 1996.
Flavor singlet contribution to the structure function g_1 at small x.

[13] B.I. Ermolaev, S.I. Mayanenkov, M.G. Ryskin, Z. Phys. **C69,** 259, 1996.
Small x behaviour of the non-singlet structure function.

[14] R.D. Ball, S. Forte and G. Ridolfi, Nucl. Phys. **B444,** 287,1995, CERN-TH/95-31, Feb. 1995.
Scale dependence and small x behaviour of polarized parton distributions.

[15] S. Forte and R. Ball, CERN-TH/95-184, HEP-PH/9507211, June 1995.
Scheme dependence at small x.

[16] R.D. Ball and S. Forte, CERN-TH/95-198, HEP-PH/9507321, July 1995.
Momentum conservation at small x.

[17] S. Forte and R. D. Ball, CERN-TH/95-323, HEP-PH/9512208, Nov. 1995.
Universality and scaling in pertubative QCD at small x.

[18] S. Catani, DFF-248-4-96, HEP-PH/9609263, April 1996.
Physical anomalous dimensions at small x.

[19] M. Khulen, HEP-PH/9606246, Jun 1996.
A new method to probe the low x parton dynamics at HERA.

[20] R. Kirschner, HEP-PH/9408258, Aug. 1994.
Low x physics and pertubative Regge asymptotics.

[21] R. Kirschner, L. Mankiewicz, A. Schafer, HEP-PH/9606267, Jun. 1996.
Small x behavior of the chirally odd parton distribution H(1)(x,Q**2).

[22] J. Kwiecinski, Acta Phys. Polon. **B27,** 893. 1995, HEP-PH/9511375.
Pertubative QCD predictions for the small x behavior of unpolarized and polarized deep inelastic structure functions.

[23] G.P. Korchemsky, Preprint LPTHE-ORSAY-95076, HEP-PH/9511370.
Theoretical progress in QCD at small x.

[24] J. Kwiecinski, J. Phys. G22, 685, 1996, HEP-PH/9602286. Sept. 1995.
Theoretical issues of small x physics.

[25] R. Peschanski, G.P. Salam, HEP-PH/9607474, May 1996.
The QCD dipole picture of small x.

[26] Hsiang-nan Li, CCUTH-96-04, HEP-PH/9607256, Jul. 1996.
Resummation at large Q and at small x.

[27] A.V. Kotikov, G. Parente, DIS96, Rome , Italy, 15-19 April 1996, HEP-PH/9608409.
The longitudinal structure function F(L) at small x.

[28] H1 Collaboration, (C. Adloff *et al.,*) Phys. Lett. **B393.,** 452, 1997, HEP-PH/9611017.
Determination of the longitudinal proton structure function $F(L)(x, Q^2)$ at low x.

[29] J. Blumlein, S. Riemersma and A. Vogt, DIS96, Rome, April 1996,HEP-PH/9607329.
On small-x resummation for the evolution of unpolarized and polarized non-singlet structure functions.

[30] J. Blumlein, S. Riemersma, A. Vogt, Preprint DESY-96-143, Aug. 1996, HEP-PH/9608470, Nuclear Physics Proc. Suppl. **51C** 30, 1996.
The evolution of unpolarized and polarized structure functions at small x.

[31] J. Blumlein, S. Riemersma, A. Vogt, CRAD96, Crakow, Poland, 1-5 Aug. 1996. HEP-PH/9610427.
The small x evolution of unpolarized and polarized structure functions.

[32] E. Gotsman, *et al.,* Dec. 1995, Phys. Lett. **B379,** 186, 1996, HEP-PH/9512316.
A screened BFKL interpretation of F2 in the exceedingly small x.

[33] I. Bojak, M. Ernst, DO-TH-96-18, HEP-PH/9609378. Sept. 1996.
Small x resummations confronted with F2 (x,Q**2) data.

[34] A.V. Kotikov, G. Parente, US-FT-41-96, HEP-PH/9609439, Sept. 1996.
The DIS cross-section ratio R = SIGMA(L) / SIGMA(T) at small x from the HERA data.

[35] J. Blumlein, A. Vogt, SPIN96, Amsterdam, Netherland, 10-14 Sept. 1996, HEP-PH/9610203.
The effect of small x resummations on the evolution of polarized structure functions.

[36] S.M. Troshin, Oct. 1996, HEP-PH/9610249.
On the extreme behavior of $g_1(x,Q^2)$ at $x \to 0$.

[37] K. Adel, F. Barreiro, F.J. Yndurain, FTUAM-96-39, HEP-PH/9610380, Oct. 1996.
Theory of small x deep inelastic scattering: NLO evaluations.

[38] W. Buchmuller, A. Hebecker, Nucl. Phys. **B476,** 203, 1996, HEP-PH/9512329.
Semiclassical approach to structure functions at small x.

[39] V. A. Petrov, Nucl. Phys. Proc. Suppl. **54A,** 160, 1997, HEP-PH/9609234, Sept. 1996.
Unitarity at low s.

[40] H. Navelet, R. Peschanski, HEP-PH/9609293, SACLAY-SPHT-96094.
On the origin of the rise of F(2) at small x .

[41] M.G. Ryskin, *et al.,* HEP-PH/9512297, Dec. 1995.
F2/X, G(X,Q**2) ratio at small x and the role of the contribution from infrared region.

[42] J. Kwiecinski, INP-1756-PH, Acta Phys. Polon. **B27,** 3455, 1996, HEP-PH/9702223, June 1996.
Recent developments in low x physics.

[43] H. Abramowicz, *et al,* Surveys High Energ. Phys. 11, 51, 1997, HEP-PH/9503437.
Interplay of hard and soft physics in small x deep inelastic processes.

[44] Zheng Huang, *et al.,* AZPH-TH-97-07, HEP-PH/9705250, May 1997.
Partonic picture of nuclear shadowing at small x.

[45] S.I. Mayanenkov, Z. Phys. **C75 ,** 685,1997.
Analytical solution of the double integral equation with QCD running coupling.

[46] S. Catani, Z. Phys. **C75,** 665, 1997.
Physical anomalous dimension at low x.

[47] R. Deka, *et al.,* Z. Phys. **C75,** 679, 1997.
Gluon evolution at low x and the longitudinal structure function.

[48] H Abramowicz, TAUP-2396-96, ICHEP 96, Warsaw, Poland,25-31 Jul. 1996, HEP-PH/9612001, Nov 1996.
Tests of QCD at low x.

[49] G.P. Salam, IFUM-97-28, DIS 97, Chicago, IL, 14-18 April 1997, HEP-PH/9705233.
Angular ordering and small-x structure functions.

[50] J. Edelman, G. Piller, W. Weise, TUM-T39-96-30, Jan. 1997, NUCL-TH/9701026.
Polarized deuteron structure functions at small x.

[51] J. Kwiecinski, S. C. Lang, A.D. Martin, Eur. Phys. **C6** 671, 1999, HEP-PH/9707240.
Single particle spectra in deep inelatic scattering as a probe of small x dynamics.

[52] J. Edelman, G. Piller, W. Weise,Phys. Rev. **C57,** 3392, 1998, NUCL-TH/9709455.
Deuteron spin structure functions at small Bjorken x.

[53] L. Mankiewicz, *et al.,* Phys. Lett. **B393,** 175, 1997, HEP-PH/9612297, Dec. 1996.
On the analytical approximation to the GLAP evolution at small x and moderate Q^2.

[54] J. Rathman, Phys. Lett. **B393,** 181, 1997, HEP-PH/9610535.
Differences between Monte-Carlo models for DIS at small x and the relation to BKFKL dynamics.

[55] S.M. Troshin, N.E. Tyurin, HEP-PH/9705378, May 1997. Phys. Rev. **D57,** 5473, 1998.
Different behavior of the spin structure functions G1(x) and H1(x).

[56] L. McLerran, TPI-MINN-97-12, HEP-PH/9705426, May 1997.
Small x physics and why it's interesting.

[57] A. V. Stepanova, F.D. Tkachov, HEP-PH/9710242, Sept. 1997.
Algebraic algorithm for next-to-leading order calculations in the large s/ small x regime.

[58] A.V. Kotikov, G. Parente, Madrid workshop on low x Physics, Madrid, Spain, 12-18 Jun 1997, HEP-PH/9710252, Jun. 1997.
QCD relations between structure functions at small x.

[59] A.H. Mueller, CU-TP-863, HEP-PH/9710531, Sept. 1997, Eur. J. Phys. A1, 19, 1998.
General issues in small x and diffractive physics.

[60] Y. Kiyo, J. Kodaira, H. Tochimura, SPIN 97, Zeuthen, Germany.1-5 Sept. 1997, HEP-PH/9711260.
QCD higher order corrections to G1(x) at small x.

[61] N. Armesto, M.A. Braun, HEP-PH/9703360 , Z. Phys. **C76,** 335, 1997. HEP-PH/9603360.
The EMC effect at low x in pertubative QCD.

[62] J. Blumlein, A. Vogt, DESY-96-096, HEP-PH/9712546, Dec. 1997.
The evolution of unpolarized singlet structure function at small x.

[63] J. Blumlein, A. Vogt, Phys. Rev. **D57,** 1. 1998 HEP-PH/9707488.
The resummed gluon anomalous dimension and structure functions at small x.

[64] Z. Huang, H. Jung Lu, Nucl. Phys. **A637,** 79, 1998, HEP-PH/9705250.
Partonic picture of nuclear shadowing at small x.

[65] M. Ciafaloni, DFF-298-1-98, HEP-PH/9801322.
Energy scale and coherence effects in small x equations.

[66] J. Kwiecinski, A.D. Martin, A.M. Stasto, Phys. Rev. **D56,** 3991, 1997.
Unified BFKL and Gribov-Lipatov-Altarelli-Parisi description of F_2 data.

[67] Hsiang-nan Li, HEP-PH/9806211, Jun. 1998.
Small x evolution with Q dependence and unitarity.

[68] G. Bottazzi, *et al.,* HEP-PH/9702418, Nucl. Phys. **B505,** 366, 1997.
Structure functions and angular ordering at small x.

[69] F. Antonuccio *et al.,* Phys. Lett. **B412,** 104, 1997, HEP-PH/9705413 .
Light cone wave function at small x.

[70] V. Barone, M. Genovese, Phys. Lett. **B412,** 143, 1997, HEP-PH/9707320.
On the low behavior of nuclear shadowing.

[71] K. Golec-Biernat, *et al.,* HEP-PH/9712345.
QCD coherence at small x.

[72] Ina Sarcevic, NUCL-TH/9802056, Dec. 1997.
Partonic picture of nuclear shadowing at small x.

[73] B.Badelek, J. Kwiecinski, Phys. Lett. **B418,** 229, 1998.
Unified description of the non-singlet spin dependent structure function g_1 incorporating Altarelli-Parisi evolution and the double logarithmic $ln^2(1/x)$ effects at low Q^2.

[74] J. Kwiecinski, Crakow Epiphany Conf. on spin effects in particle physics, 9-11 jan. 1998, Crakow, Poland. Acta Polon. **B29,** 1201, 1998.
Spin dependent structure function g_1 at low x.

[75] J. Kwiecinski, B. Ziaja, HEP-PH/9802386, Feb. 1998,
QCD prediction for g_1^p at small x incorporating double $ln^2(1/x)$ resummation.

[76] R.D. Ball, S. Forte, DIS98, Brussels, Belgium, 4-8 April, 1998, HEP-PH/9805315.
Corrections at small x.

[77] B. Ermolaev, *et al.,* HEP-PH/9806439, Jun. 1998. Eur. Phys. J. C7: 49, 1999.
Small x behavior of the polarized photon structure function $F_3^\gamma(x, Q^2)$.

[78] G. Bottazzi, *et al.,* HEP-PH/9708474, Nucl. Phys. Proc. Suppl. 65, 34, 1998.
Angular ordering and structure functions and at small x.

[79] Hsiang-nan Li, HEP-PH/9806211, Jun. 1998.
Small x evolution with Q dependence and unitarity.

[80] G.P. Salam, *et al.,* HEP-PH/9806482, Jun. 1998.
A resummation of large subleading corrections at small x.

[81] R. Basu, HEP-PH/9805369, May 1998, WHEPP 5.
Low x physics and structure functions.

[82] D. Schildknecht , HEP-PH/9806353, May 1998.
Generalized vector dominance and low x proton structure.

[83] A.V. Kotikov, G. Parente, HEP-PH/9807249, Jul. 1998.
Small x behaviour of parton distributions with soft initial conditions.

[84] A. Hebecker, H. Weigert, Phys. Lett. **B432,** 215, 1998.
Small x parton distributions of large hadronic targets.

[85] J. Blumlein, A. Vogt, Phys. Rev. **D58,** 0144020, 1998, HEP-PH/9712546.
The evolution of unpolarized singlet functions at small x.

[86] L. McLerran, R. Venugopalan, HEP-PH/9809427, Sept. 1998.
Fock space distributions, structure distributions, higher twist and small x.

[87] S.M. Troshin, N.E. Tyurin, SPIN98, HEP-PH/9809561, Sept. 1998.
Low x behavior of spin structure functions: unitarity and nonpertubative hadron function.

[88] A. Donnachie, P. V. Landshoff, Phys. Lett. **B535,** 408, 1998, HEP-PH/9806344.
Small x : two pomerons.

[89] K. Kwiecinski, B. Ziaja, HEP-PH/9902440, Feb. 1999.
QCD expectations for the spin structure function g_1 in the low x region.

[90] I.P. Ivanov, N.N. Nikolaev, A.V. Pronyaev, W. Schafer, HEP-PH/9903228, Mar. 1999.
Diffraction driven steep rise of spin structure function G(LT)=G(1)+G(2) at small x and DIS sum rule.

[91] Larry McLerran, HEP-PH/9903536, HEP-PH/9903536, Mar. 1999.
Three lectures on the physics of small x and high gluon density.

[92] K. Kwiecinski, B. Ziaja, HEP-PH/9906499, Jun. 1999.
Polarized deep inelastic scattering accompanied by a forward jet as a probe of $Ln^2(1/x)$ resummation.

[93] M. Ciafaloni, D. Colferai, HEP-PH/9907409, Jul. 1999.
A collinear model for small x.

[94] L. Frankfurt, DIS 99, Zeuthen, Germany, 19-23 Apr. 1999, HEP-PH/9907221.
Future small x physics with e P and e A colliders.

[95] J. Bartels, M.G. Ryskin, DESY-99-139,Sept. 1999 HEP-PH/9909344.
The small-x behavior of the nonsinglet polarized structure function g_2 in the double logarithmic approximation.

[96] j. Blumlein , HEP-PH/9909449, Sept. 1999.
QCD evolution of structure functions at small x.

[97] H.G. Dosh, *et al.,* HEP-PH/9909529, Sep. 1999.
The semi-classical gluon distribution at next to leading order.

[98] M. Goshtabpour, P.G. Ratcliffe, HEPPH/9912334, Dec. 1999.
Phenomenology of $g_1(x)$ in the observed small-x.region.

[99] R.D. Ball, P.V. Landshoff, HEP-PH/9912445, Dec. 1999.
The challenge of small x.

[100] G. Altarelli,*et al.,* HEP-PH/00117, Jan. 2000,
Singlet parton evolution at small x: a theoretical update.