

Final COMPASS results on the spin dependent structure functions g_1^d and g_1^p

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The COMPASS experiment at the CERN SPS has taken data with a polarised muon beam scattering off a polarised NH_3 target in 2007 and 2011 and scattering off a ^6LiD target from 2002-2004 and 2006. The 2006 measurement increases the statistics from 2002-2004 by roughly a factor of two. For the measurement in 2011 the beam energy has been increased from 160 GeV to 200 GeV thus higher values of Q^2 and lower values of x are reached.

The new results from the 2011 and 2006 data taking on the longitudinal double spin asymmetry $A_1^{p,d}$ and on the spin dependent structure function $g_1^{p,d}$ will be shown and compared to the previous results. Using the combined deuteron data set the first moment of g_1^d is calculated. From the first moment the quark contribution to the nucleon spin can be calculated. This quantity is also obtained from a NLO QCD fit to the world data including our data.

The final deuteron results together with the two measurements on the proton are used to update the results on the Bjorken sum rule connecting the first moment of the non-singlet structure function to the ratio of the weak coupling constants.