

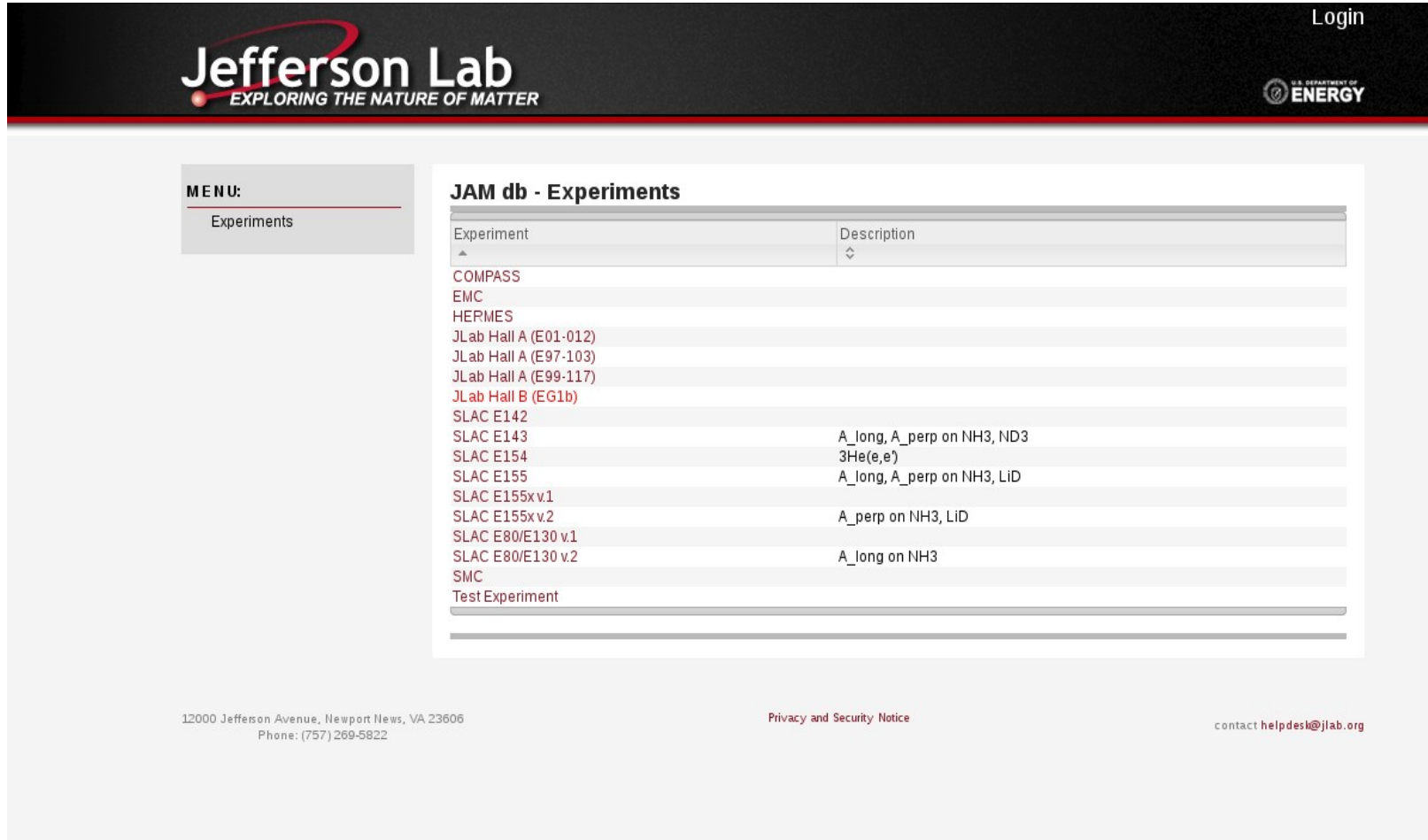
# **3rd JAM collaboration meeting**

**P. Jimenez-Delgado, A. Accardi, W. Melnitchouk**  
**Halls A, B, C**



# Data base status

Collection of DIS data completed



The screenshot shows the Jefferson Lab website interface. At the top, there is a navigation bar with the Jefferson Lab logo (tagline: EXPLORING THE NATURE OF MATTER) on the left, a 'Login' link on the right, and the U.S. Department of Energy logo in the bottom right corner. Below the navigation bar is a 'MENU:' section with a link to 'Experiments'. The main content area is titled 'JAM db - Experiments' and contains a table with two columns: 'Experiment' and 'Description'. The table lists various experiments, including COMPASS, EMC, HERMES, and several SLAC experiments. The 'Test Experiment' row is highlighted in red. At the bottom of the page, there is contact information for Jefferson Lab, a 'Privacy and Security Notice' link, and a 'contact helpdesk@jlab.org' email address.

Experiment	Description
COMPASS	
EMC	
HERMES	
JLab Hall A (E01-012)	
JLab Hall A (E97-103)	
JLab Hall A (E99-117)	
JLab Hall B (EG1b)	
SLAC E142	
SLAC E143	A_long, A_perp on NH3, ND3
SLAC E154	$^3\text{He}(e,e')$
SLAC E155	A_long, A_perp on NH3, LiD
SLAC E155x v.1	
SLAC E155x v.2	A_perp on NH3, LiD
SLAC E80/E130 v.1	
SLAC E80/E130 v.2	A_long on NH3
SMC	
Test Experiment	

Future steps: inclusion of SIDIS (and eventually RHIC) data

# Analysis status

Infrastructure for inclusive DIS (almost) complete:  
NLO QCD + TMC + HT + nuclear smearings

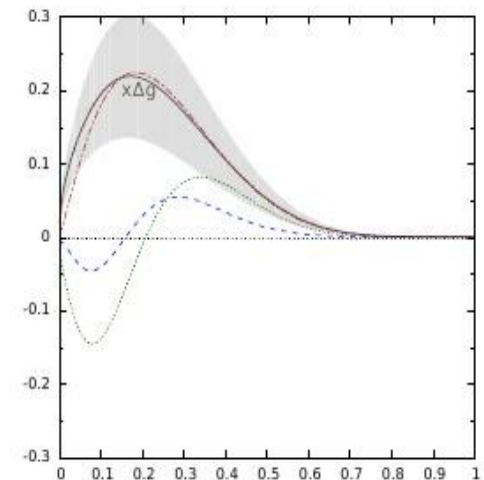
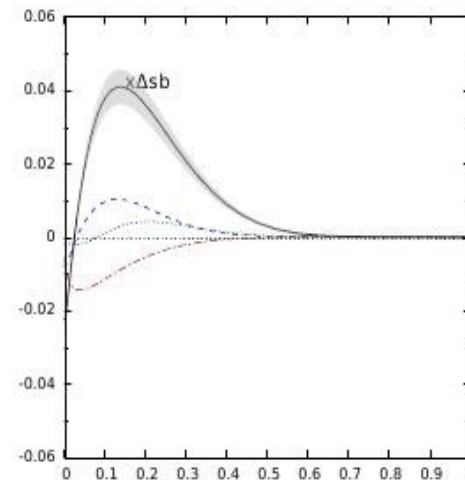
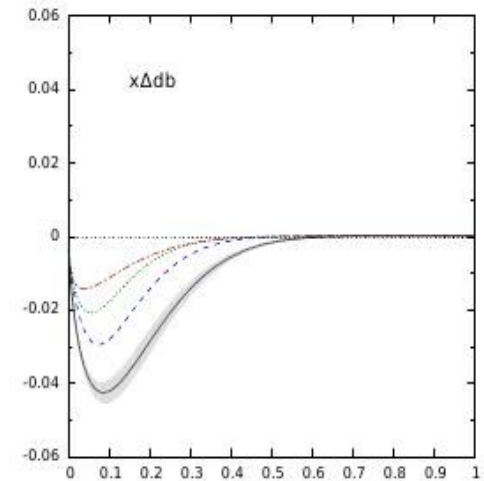
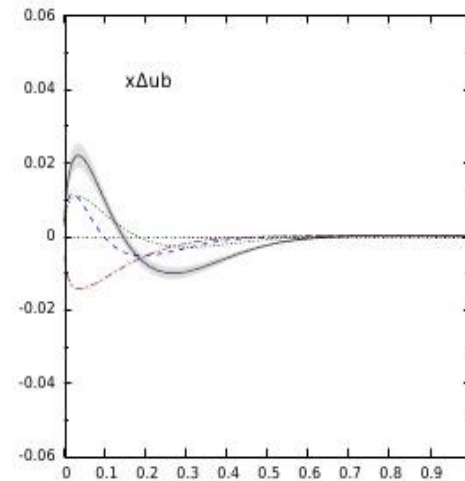
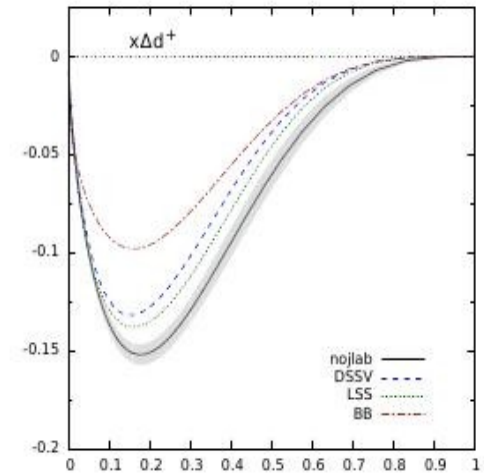
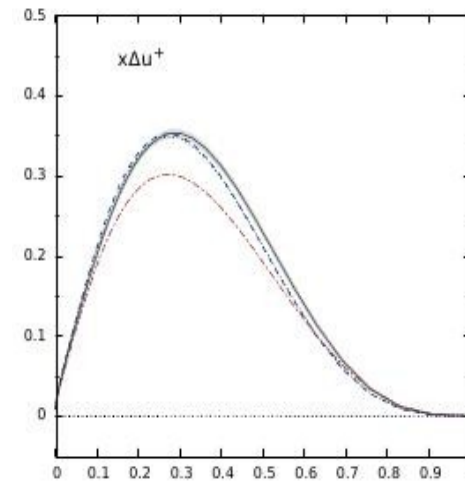
Unpolarized basis: specific NLO fit à la JR + nuclear corrections  
+ up to twist-6 contributions (to go down to 1 GeV<sup>2</sup>)

Time to start physics studies: immediately after holidays

Preliminary analyses already started:  
12 parameter fits (9 for errors) with different data selections

# “nojlab”

101SLAC(E80/E130)_PRL51_Apap	23 ( 35),	13 (0.5744)
102EMC_NPB328_A1p	10 ( 10),	4 (0.4231)
103SMC_PRD58_A1p	12 ( 15),	5 (0.4414)
104SMC_PRD60_A1p	8 ( 15),	10 (1.2541)
105COMPASS_PLB690_A1p	15 ( 15),	12 (0.8288)
106SLAC(E143)_PRD58_Apap	85 ( 159),	75 (0.8857)
107SLAC(E143)_PRD58_Apеп	48 ( 50),	46 (0.9732)
109HERMES_PRD75_Apap	37 ( 45),	16 (0.4338)
111SMC_PRD58_A1d	12 ( 15),	18 (1.5381)
112SMC_PRD60_A1d	8 ( 15),	4 (0.5613)
113COMPASS_PLB647_A1d	15 ( 17),	11 (0.7434)
114SLAC(E143)_PRD58_Apad	85 ( 156),	90 (1.0592)
115SLAC(E143)_PRD58_Aped	48 ( 50),	44 (0.9219)
117HERMES_PRD75_Apad	37 ( 45),	35 (0.9466)
119SU2_Hyperon decay	1 ( 1),	0 (0.0027)
120SU3_Hyperon decay	1 ( 1),	0 (0.0105)
121SLAC(E142)_PRD54_A1He	8 ( 8),	4 (0.5827)
122SLAC(E142)_PRD54_A2He	8 ( 8),	5 (0.6929)
123SLAC(E154)_PRL79_ApaHe	18 ( 18),	9 (0.5052)
124SLAC(E154)_PRL79_ApeHe	18 ( 18),	17 (0.9996)
125HERMES_PLB404_A1n	9 ( 9),	2 (0.2388)
131SLAC(E155)_PLB493_Apap	73 ( 75),	63 (0.8643)
132SLAC(E155)_PLB463_Apad	73 ( 75),	71 (0.9837)
133SLAC(E155)_PLB458_Apеп	66 ( 71),	66 (1.0097)
134SLAC(E155)_PLB458_Aped	66 ( 71),	99 (1.5057)



# “HallA”

126JLabHallA(E99-117)_PRL92_ApaHe	3 ( 3),	0 (0.2596)
127JLabHallA(E99-117)_PRL92_ApeHe	3 ( 3),	3 (1.1005)
128JLabHallA(E97-103)_PRL95_ApaHe	2 ( 5),	omitted
129JLabHallA(E97-103)_PRL95_ApeHe	2 ( 5),	omitted
130JLabHallA(E01-012)_PRL101_ApaHe	15 ( 168),	42 (2.8246)

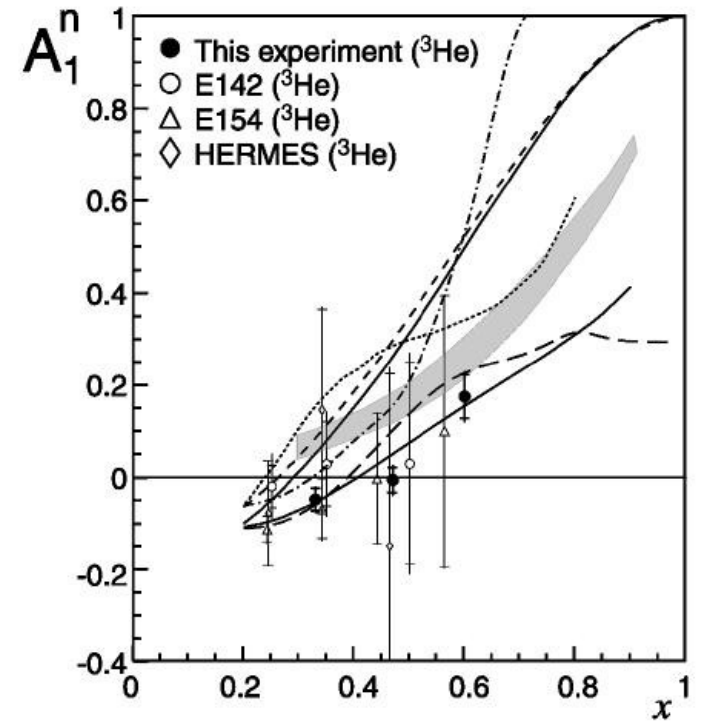
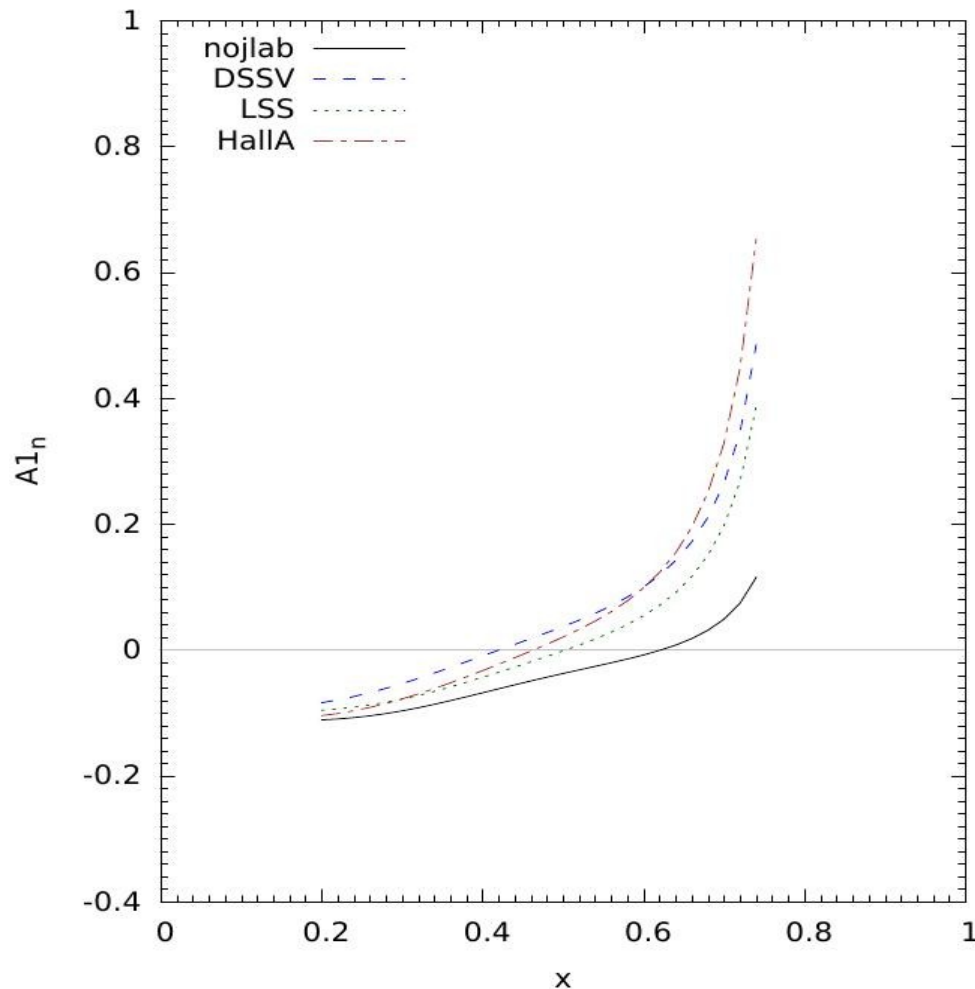
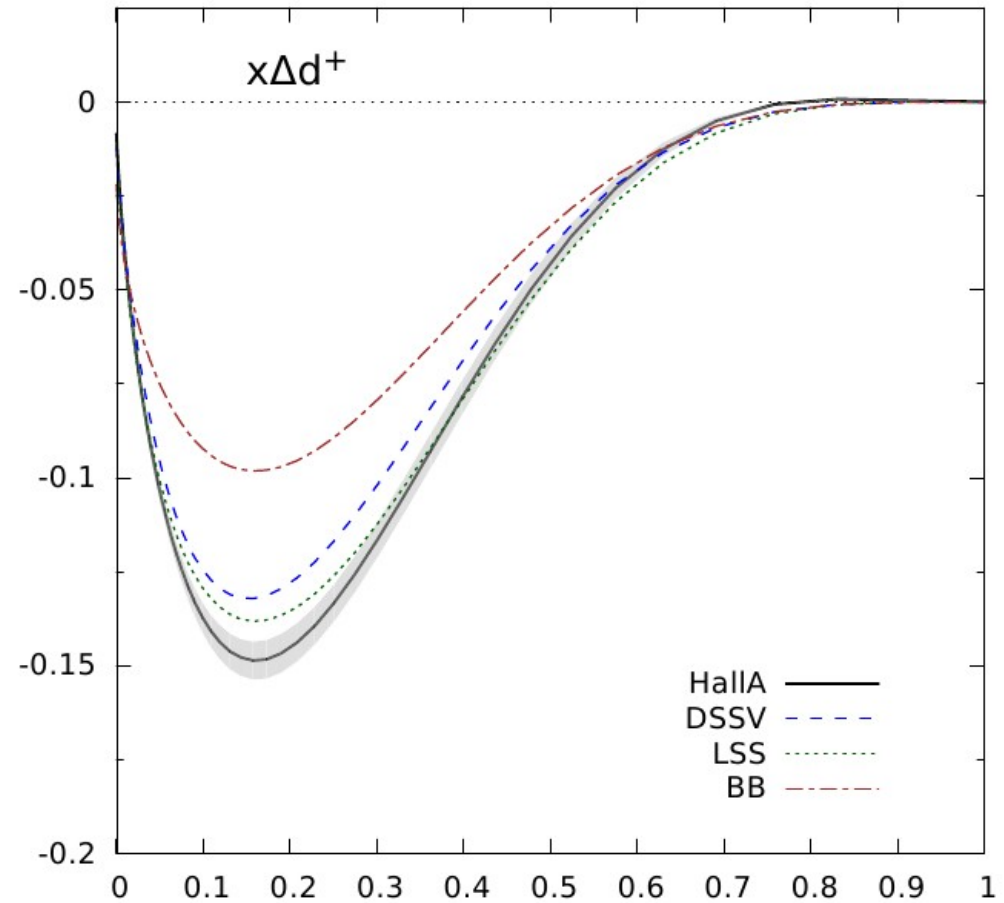
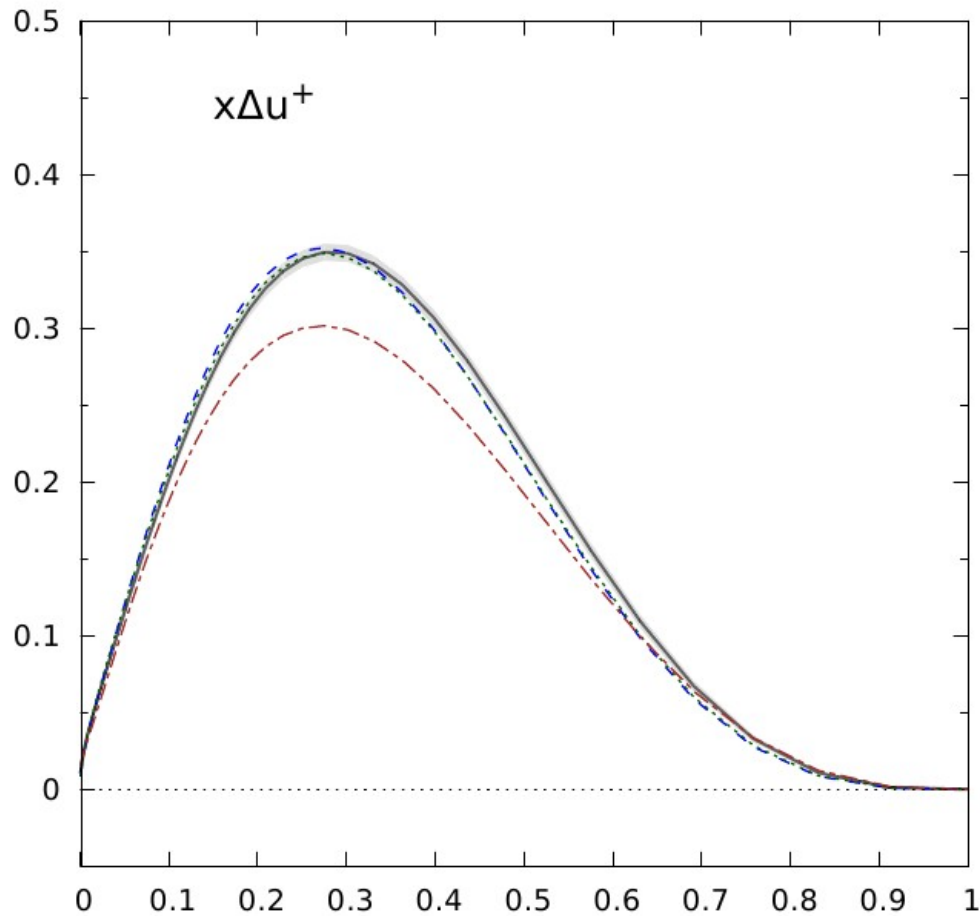


FIG. 1. Our  $A_1^n$  results compared with theoretical predictions and existing data obtained from a polarized  $^3\text{He}$  target [37–39]. Curves: predictions of  $A_1^n$  from SU(6) symmetry (zero) [3], constituent quark model (shaded band) [6], and statistical model (long-dashed) [23]; predictions of  $g_1^n/F_1^n$  from PQCD HHC based BBS parametrization (higher solid) [10] and LSS(BBS) parametrization (dashed) [11], bag model with the effect of hyperfine interaction but without meson cloud (dash-dotted) [20], LSS 2001 NLO polarized parton densities (lower solid) [21], and chiral soliton model (dotted) [22].

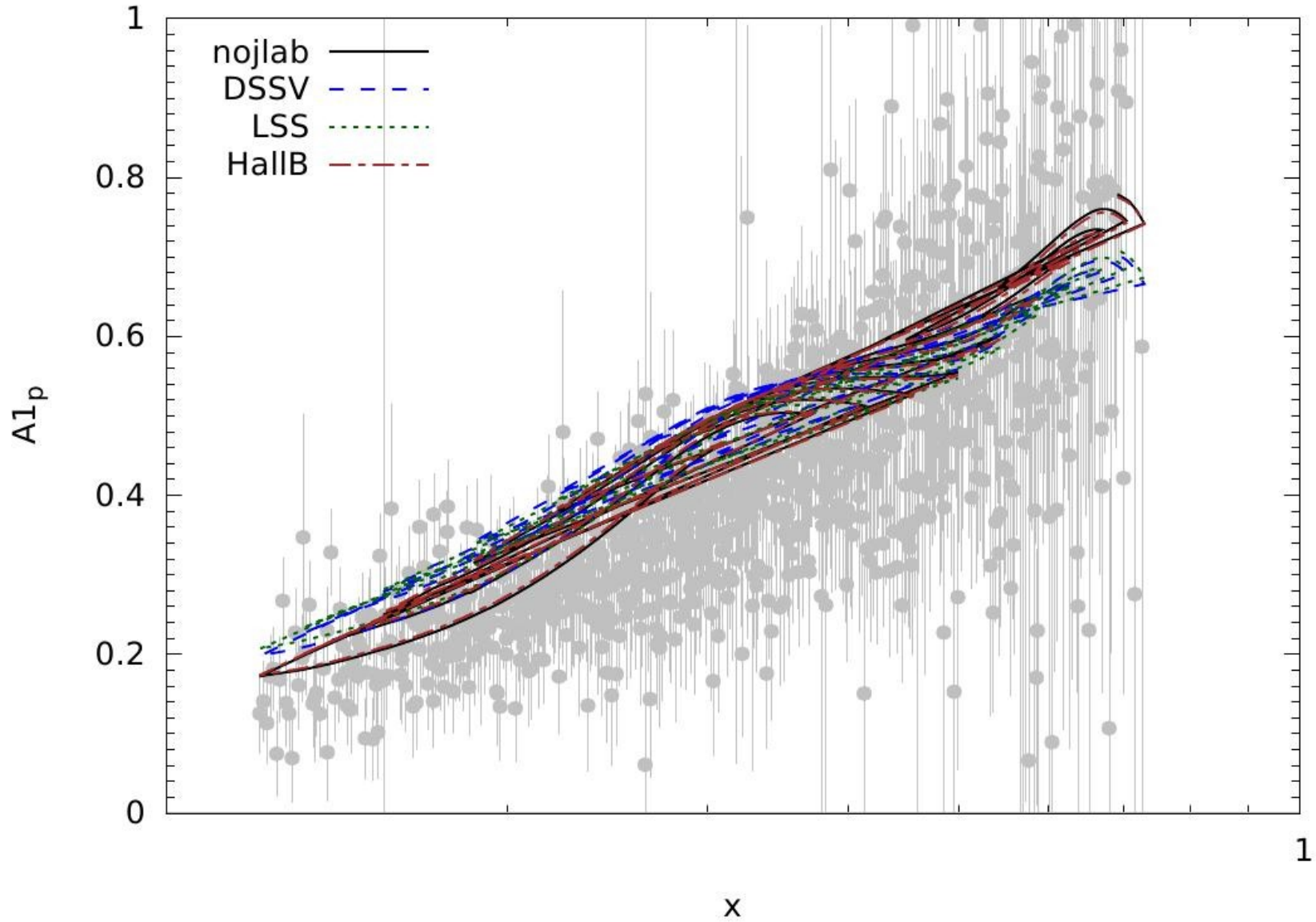
# “HallA”

126JLabHallA(E99-117)_PRL92_ApaHe	3 ( 3),	0 (0.2596)
127JLabHallA(E99-117)_PRL92_ApeHe	3 ( 3),	3 (1.1005)
128JLabHallA(E97-103)_PRL95_ApaHe	2 ( 5),	omitted
129JLabHallA(E97-103)_PRL95_ApeHe	2 ( 5),	omitted
130JLabHallA(E01-012)_PRL101_ApaHe	15 ( 168),	42 (2.8246)



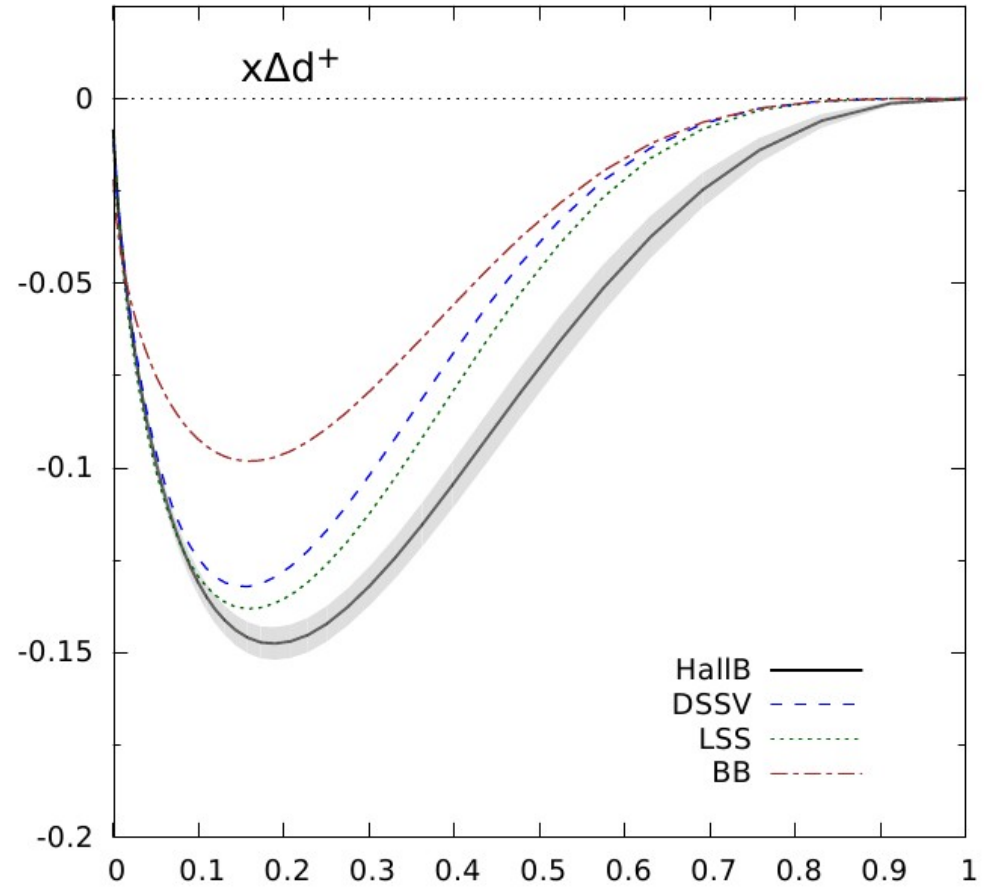
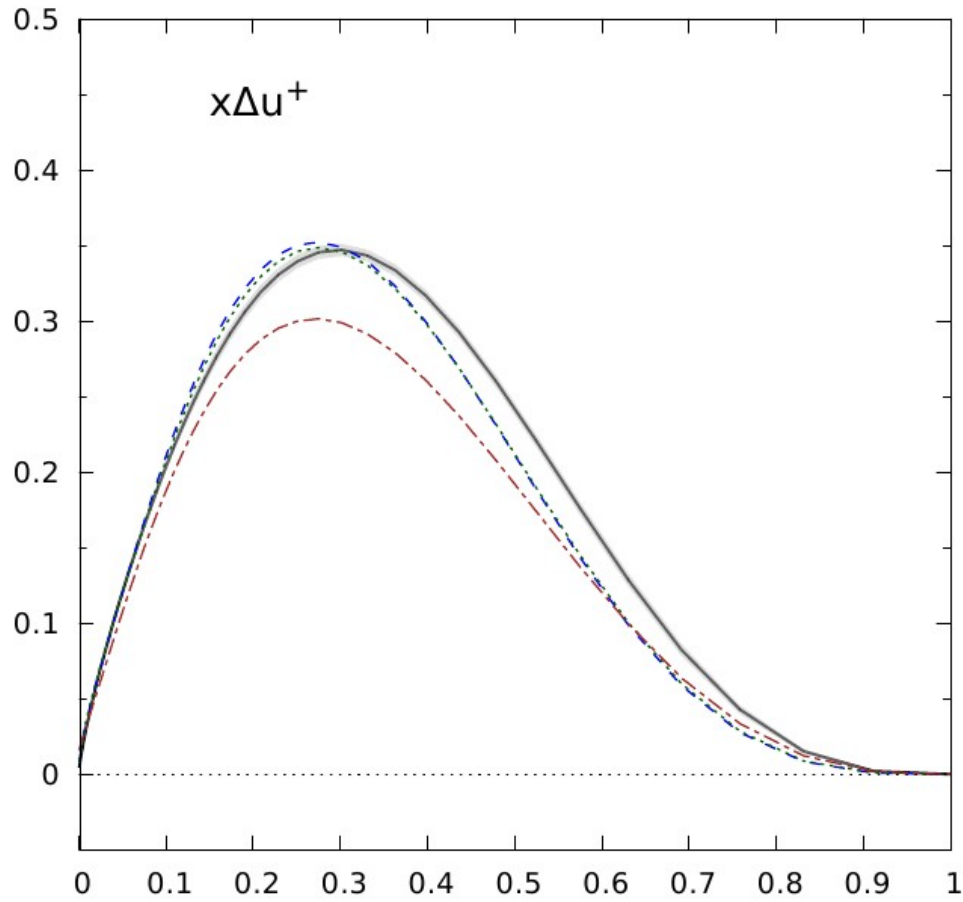
# “HallB”

110JLabHallB(EG1b)\_PLB641\_A1 796 (6993), 649 (0.8165)  
118JLabHallB(EG1b)\_PLB641\_A1 796 (7038), 596 (0.7489)



# “HallB”

110JLabHallB(EG1b)\_PLB641\_A1 796 (6993), 649 (0.8165)  
118JLabHallB(EG1b)\_PLB641\_A1 796 (7038), 596 (0.7489)





# Summary and outlook

Data base and analysis framework practically ready

Some preliminary results seem reasonable

Time to start physics studies

Goal: first final results during first months of next year

Please let us know your ideas/interests!