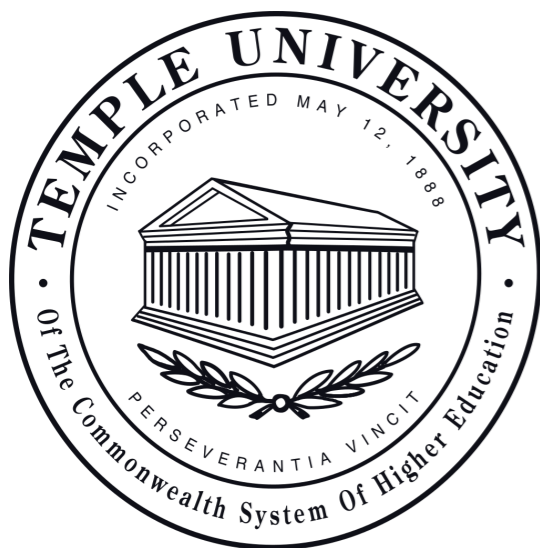


STAR 2013 W AL: Final Results and Paper Plans

Devika Gunarathne & Jinlong Zhang



STAR 2013 W AL Final Results

- Analysis are ongoing, to obtain STAR 2013 W AL Final Results including 4 mid rapidity bins (Devika & Jinlong) and 2 forward rapidly Endcap bins (Amani & Jinlong).
 - Preliminary forward rapidity analysis will be present to PWG soon and to APS 2017.
- The official data, P16ig [using SL16g library] production will be used.
 - As of now S&C has removed data from NFS, We will request for restoring data to distributed disks.
- Recently updated Run13 BEMC and EEMC calibration gains will be used.
- Preparation are ongoing to produce new embedding sample using SL16g library (Thanks Jason!).

STAR 2013 W AL Paper Plans - I

- The summary paper of STAR W A_L measurements.
- Documentation and presentation of Run 13 W AL analysis (Background and A_L).
- Combination of A_L for **Run 11 - 13** in comparison to theory evaluation including uncertainties of at least DSSV and NNPDF.
 - Obtain A_L values for 4 mid rapidity bins and 2 forward rapidity Endcap bins for $W^+(W^-)$, by **combining** Run 13 Final W A_L values with Run 11+12 published W A_L values.
- Total integrated luminosity of the data sets will be $9+77+256 = 342 \text{ Pb}^{-1}$.
- The systematic uncertainties will added accordingly. [This will be discuss later!].
- Analysis note will include all the details.

STAR Run 13 W AL - paper plans - II

Title	Measurement of longitudinal spin asymmetries for W boson production in polarized proton-proton collisions at RHIC
PAs	Gunarathne D., Kraishan A., Surrow B., Xu Q.H., Zhang J.
Proposed Target Journal	Phys. Rev. Letter
Proposed Figures	<ul style="list-style-type: none">• Figure 1 : BG Estimation [combined run 11+12+13 (We will simply add histograms)] (Both mid rapidity and forward rapidity in the same canvas but two pads)• Figure 2 : Charge sign distributions [combined run 11+12+13] (Both mid rapidity and forward rapidity in the same canvas but two pads)• Figure 3 : W A_L (combined run 11+12+13, 6 bins with latest NNPDF and DSSV curves and uncertainty bands)• Figure 4 : W A_{LL} (combined run 11+12+13)
Proposed Tables	<ul style="list-style-type: none">• Table 1 : W A_L numerical results• Table 2 : W A_{LL} numerical results

Completion Plan

Task	Time Line
Embedding Production	Now - Dec 2016
Forward - rapidity Endcap bins Preliminary analysis	Now - Dec 2016
W Tree production and analysis , Final results (Mid -rapidity)	Dec 2016 - Jan 2017
Forward - rapidity Endcap bins Final result analysis	Jan 2017
PWG presentation I [progress]	Last week of Dec 2016
PWG presentation II [Final results]	Last week of Jan 2017
PWG presentation III [Paper draft I]	Feb 2017
PWG presentation IV [Paper draft II]	Feb 2017