



J/ψ elliptic flow measurement in isobar collisions

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Analysis strategy

Event level:

Vpdmb-30 (600001, 600011, 600021 and 600031)

$|V_r| < 2 \text{ cm}$, $-35 < V_z < 25 \text{ cm}$, and $|V_z^{TPC} - V_z^{VPD}| < 3 \text{ cm}$

Bad run rejected, bad run index in backup slides

Electron identification:

$$nHitsFit \geq 20$$

$$nHitsFit/nHitsPoss \geq 0.52$$

$$nHitsDedx \geq 15$$

$$dca < 0.75 \text{ cm}$$

$$|\eta| < 1.0$$

$$-1.5 \leq n\sigma_e \leq 2.0$$

$$p < 1.5 \text{ GeV}/c$$

$$|1 - 1/\beta| \leq 0.025$$

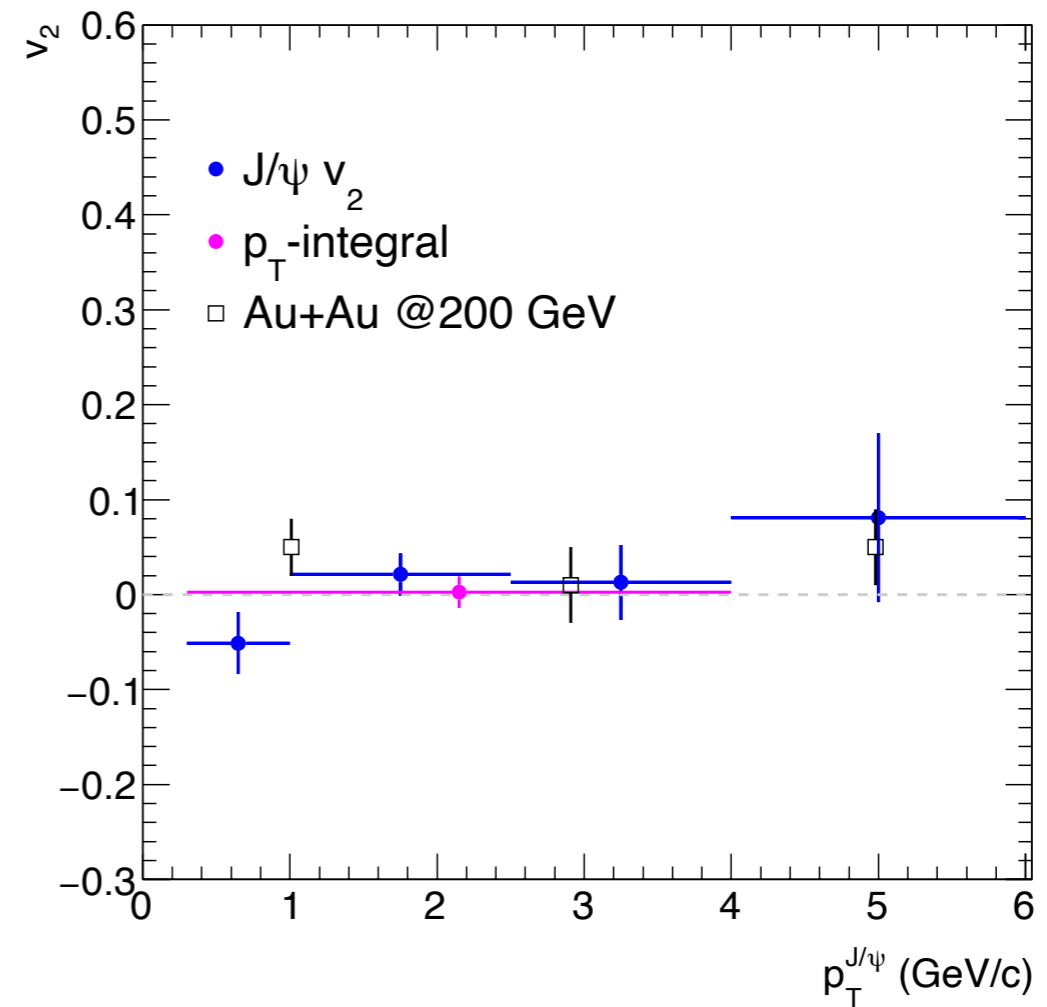
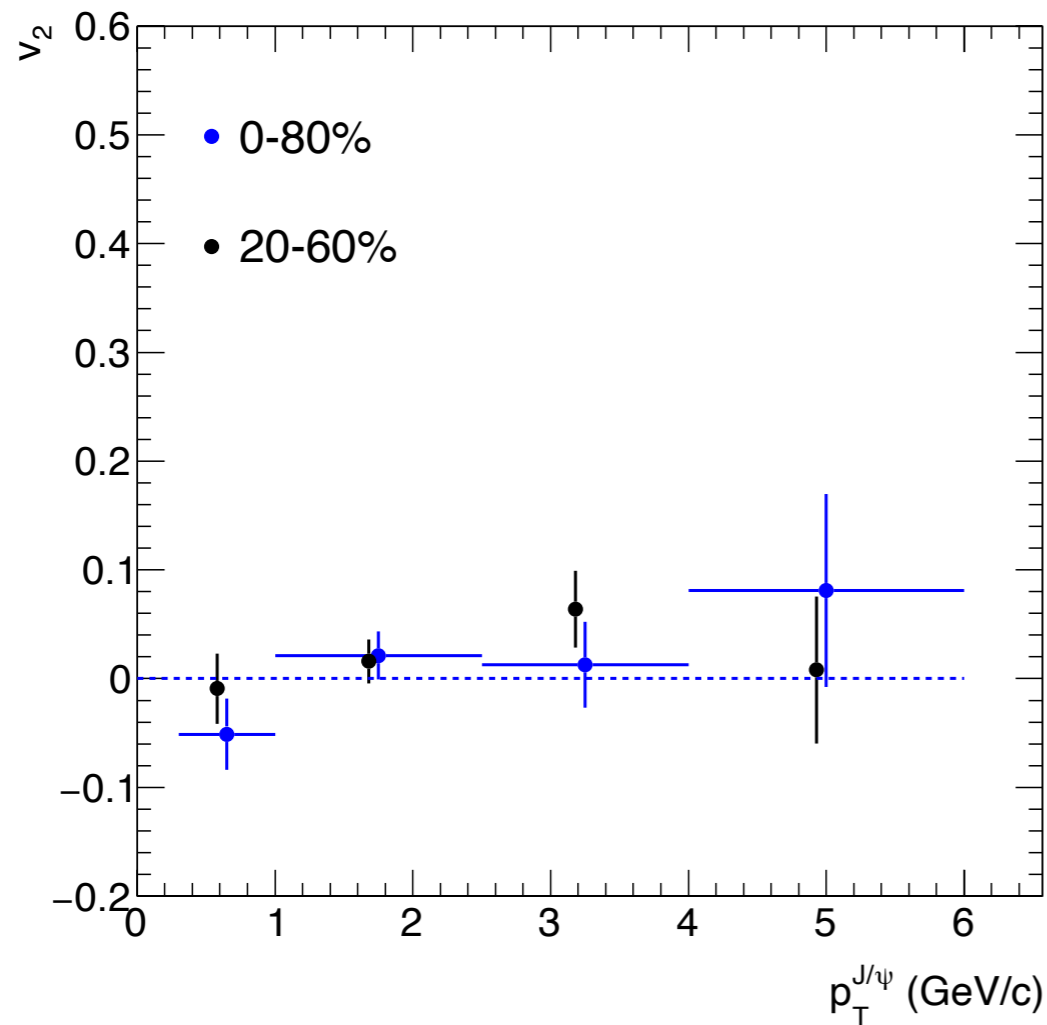
$$p \geq 1.5 \text{ GeV}/c$$

$$0.3 \leq p/E \leq 1.5$$

J/psi pT	0.3 - 1 GeV/c	1 - 2.5 GeV/c	2.5-4 GeV/c	4-6 GeV/c
Minimum electron pT	0.4 GeV/c	0.6 GeV/c	0.6 GeV/c	0.8 GeV/c



J/ψ elliptic flow



- No centrality dependence is shown within statistical uncertainty
- More precise (stat. uncert.) v_2 results at low- p_T range (< 4 GeV/c) in Isobar data than Au+Au data

Systematic uncertainty source



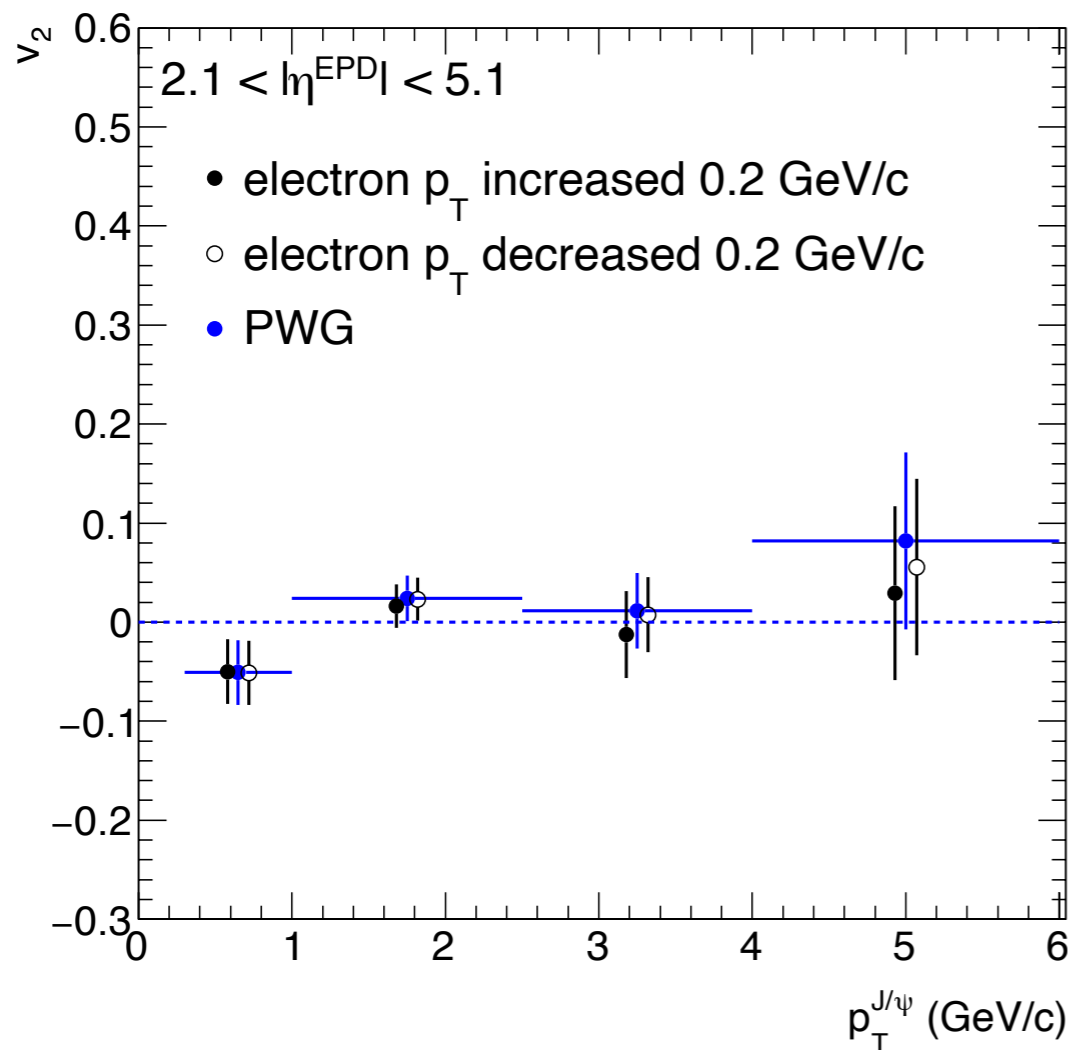
- **J/psi reconstruction**
 - **Dca**
 - **nHitsFit**
 - **Electron pT**

- **V2 extraction**
 - **Fitting function**
 - **TPC reference**
 - **Different EPD range (over estimated)**



J/psi reconstruction

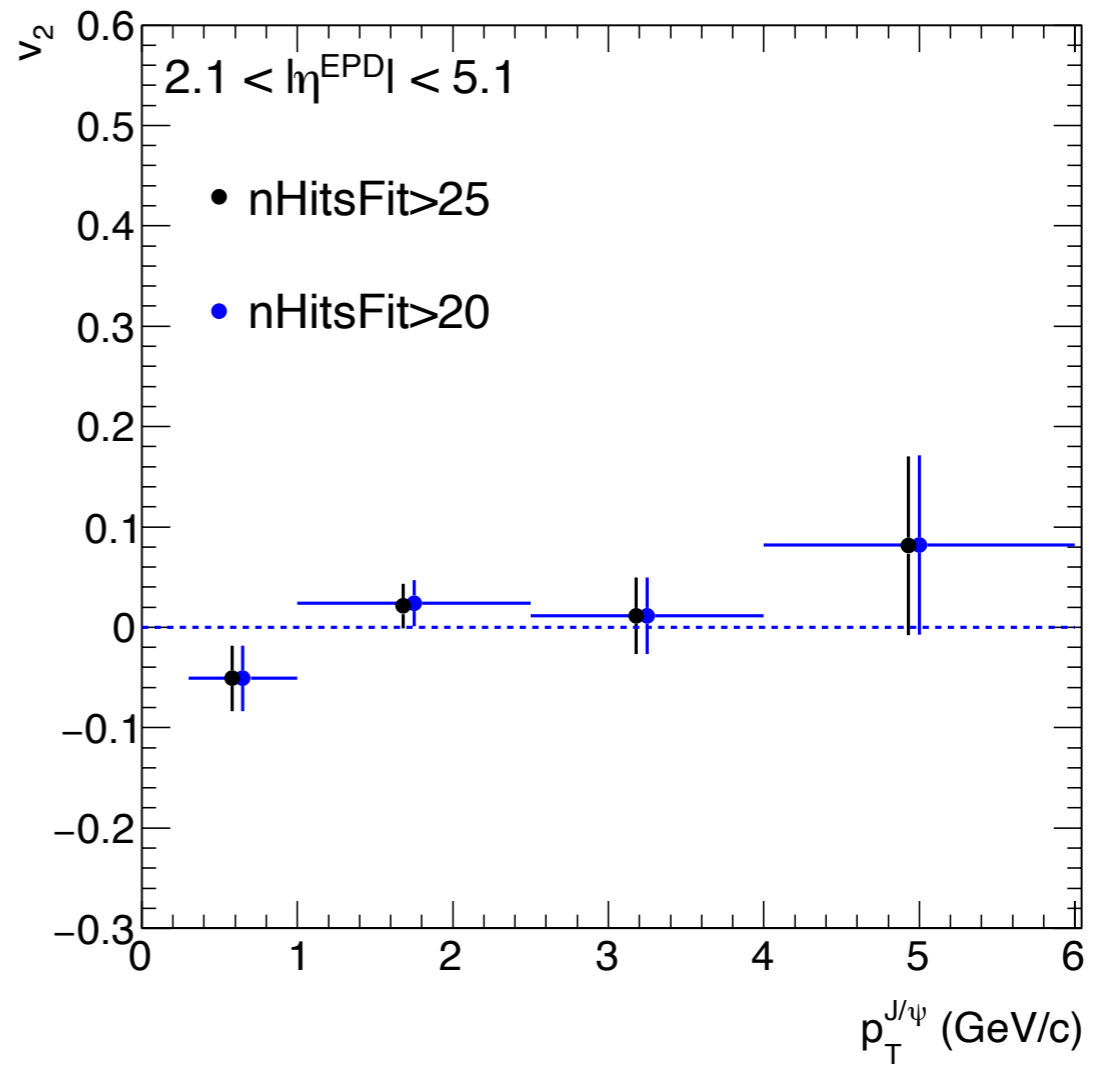
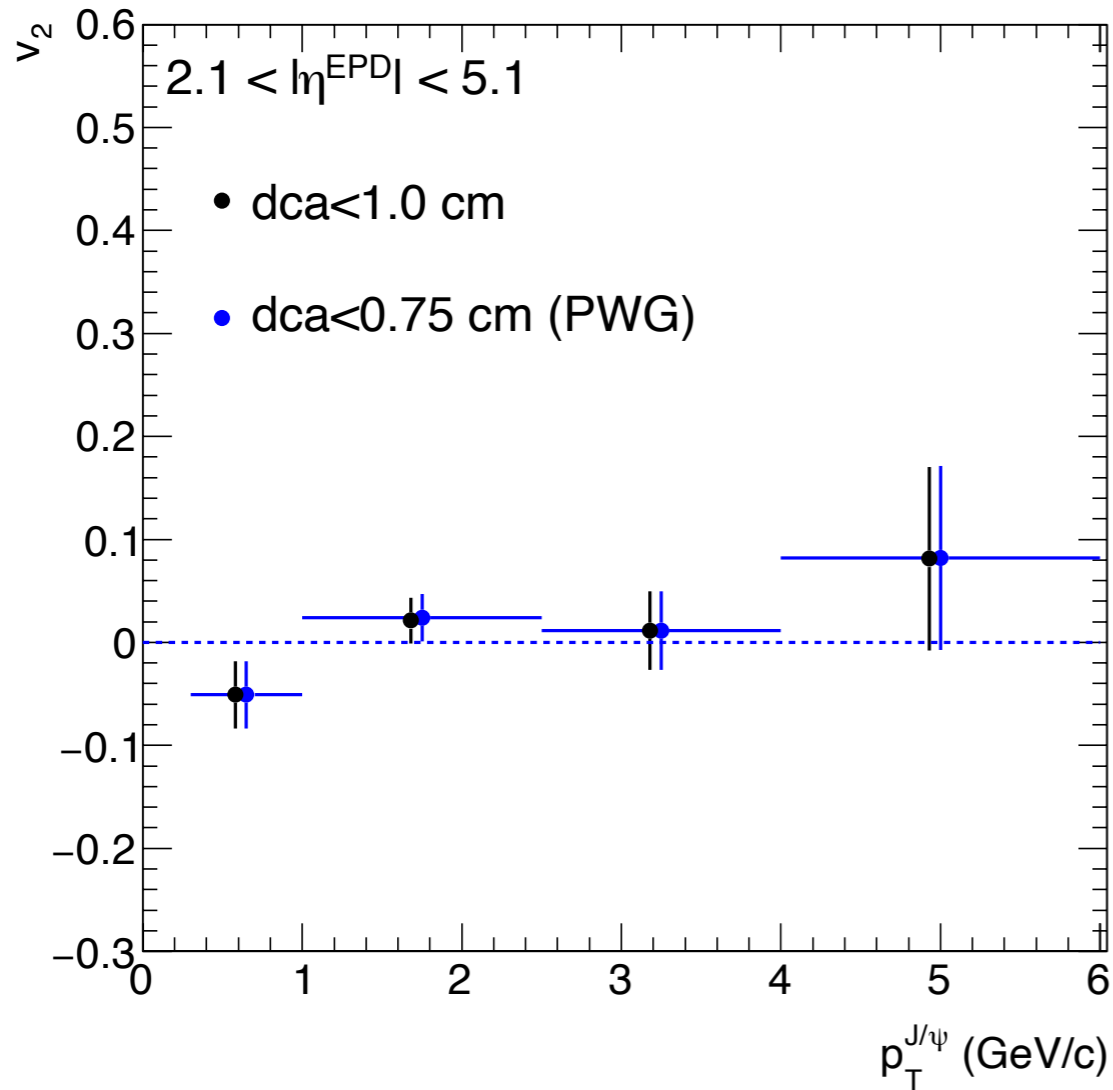
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J/psi pT	0.3 - 1	1 - 2.5	2.5-4	4-6
Max. Deviation	0.00077	0.0078	0.023	0.053



J/psi reconstruction

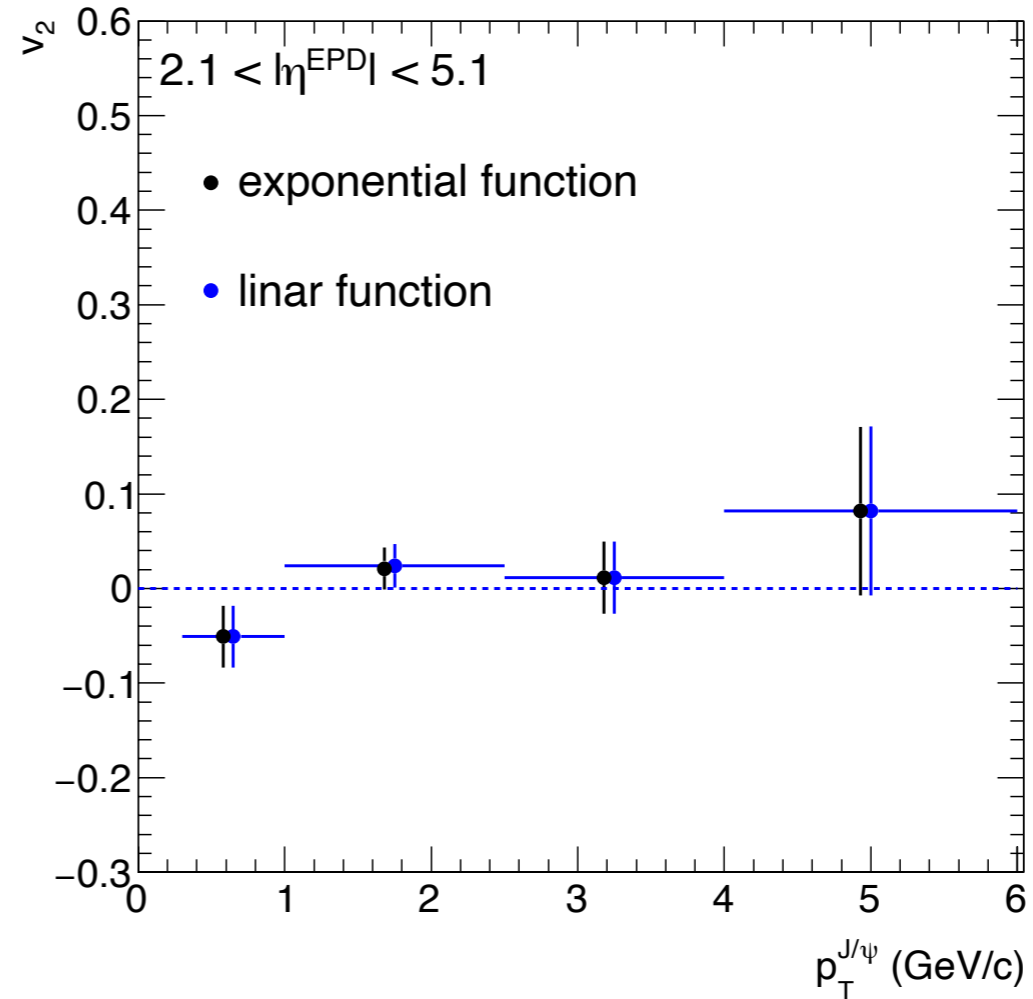
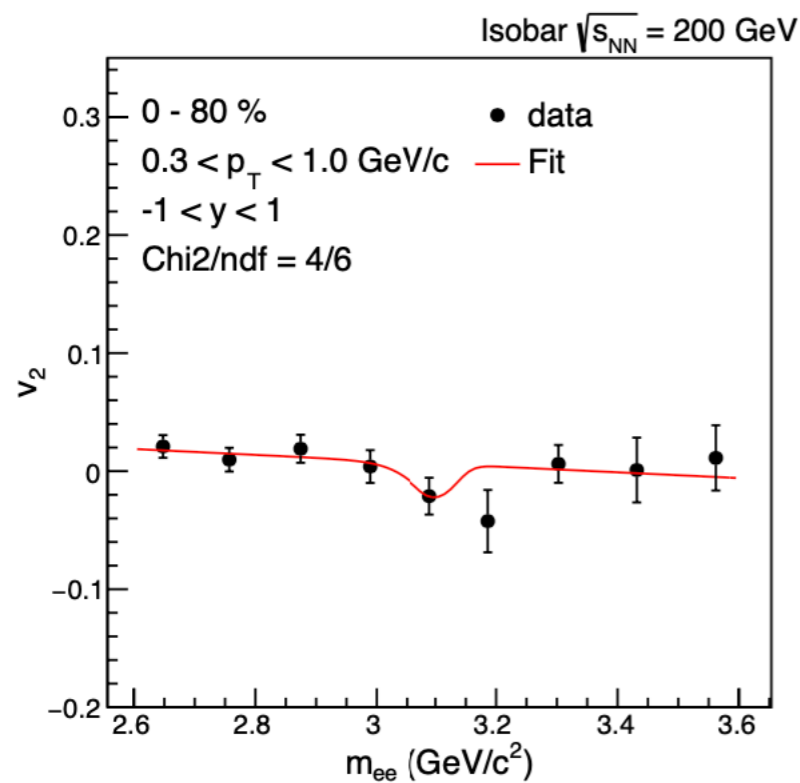


J/psi pT		0.3 - 1	1 - 2.5	2.5-4	4-6
Max. Deviation	DCA	4.84E-06	0.0029	4.0E-05	0.00065
	nHitsFit	4.12E-05	0.0028	2.14E-05	0.00069



v2 extraction

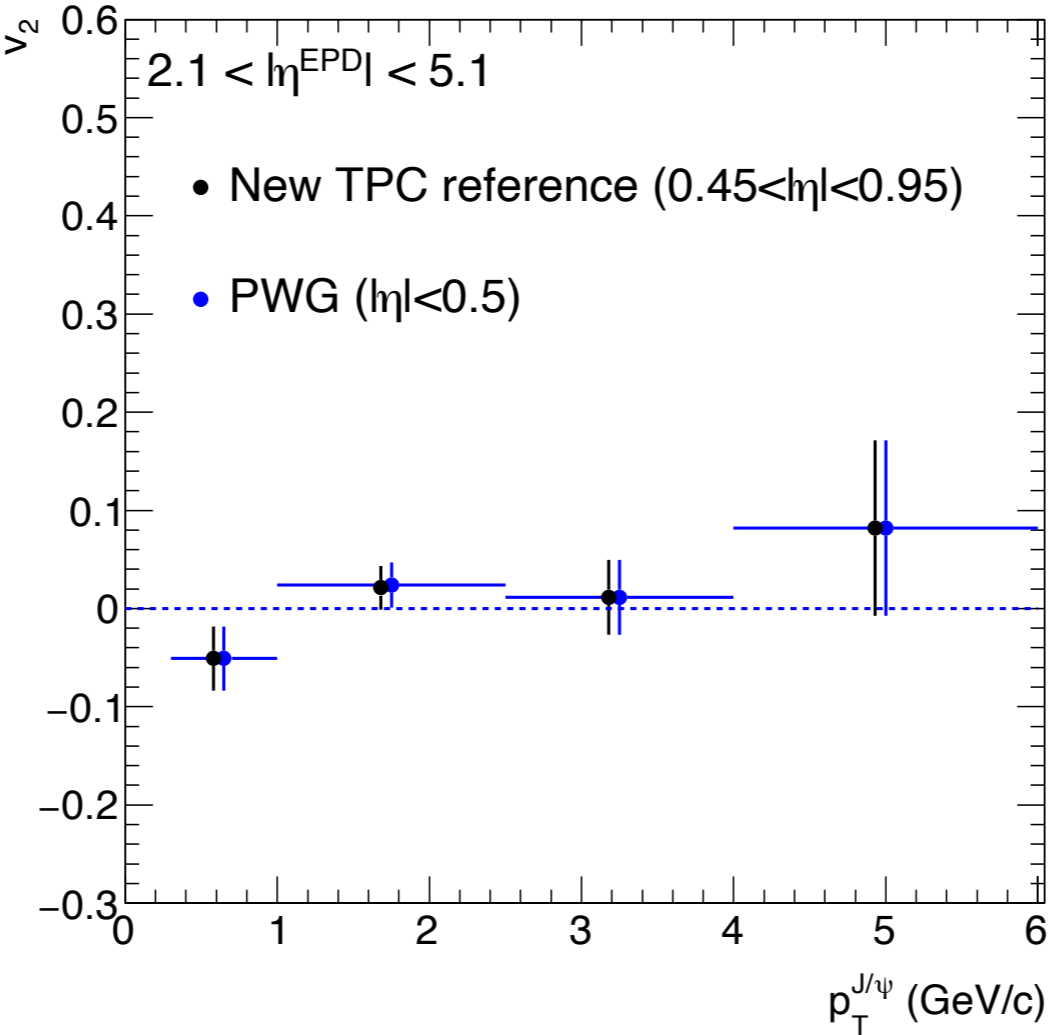
Different function to describe background v2



J/psi pT	0.3 - 1	1 - 2.5	2.5-4	4-6
Max. Deviation	4.59E-05	0.0029	1.96E-05	8.75E-05



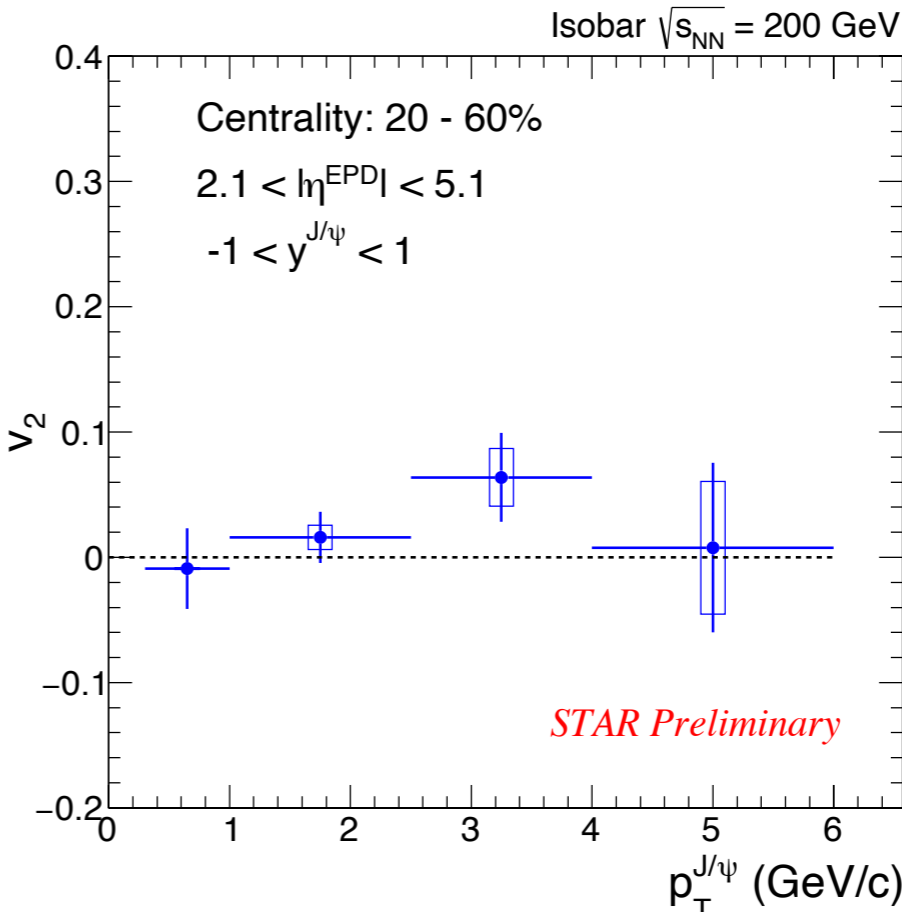
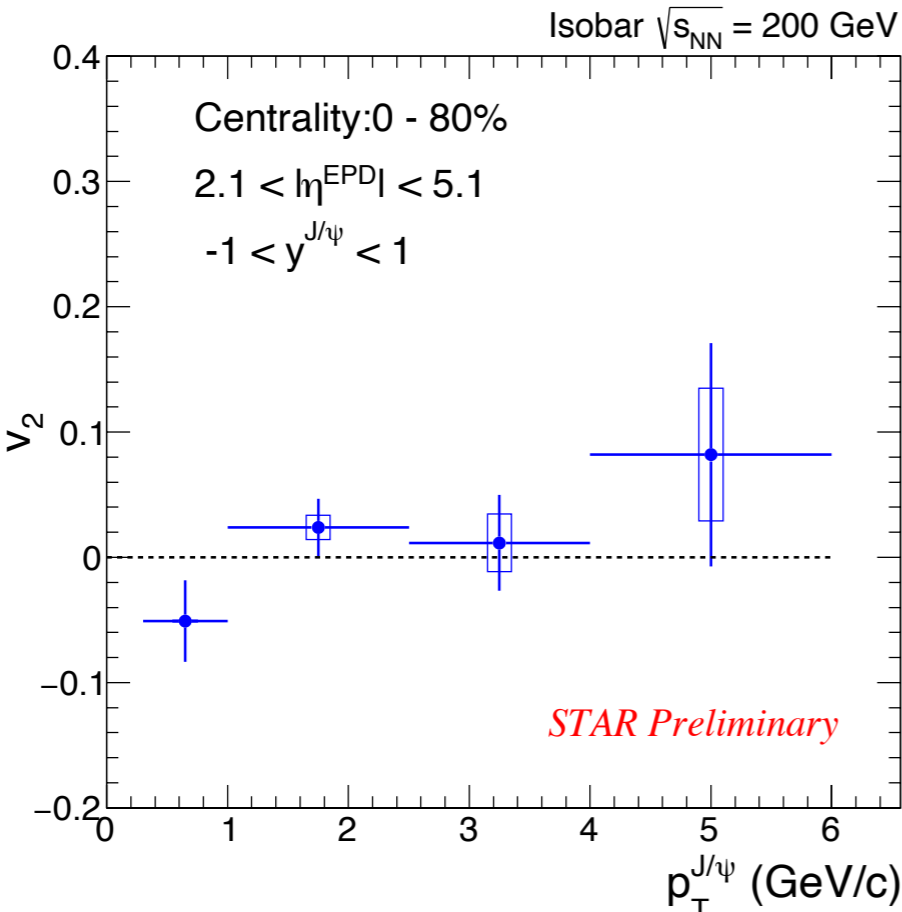
v2 extraction



J/psi pT	0.3 - 1	1 - 2.5	2.5-4	4-6
Max. Deviation	2.74E-05	0.0028	3.52E-08	3.35E-06

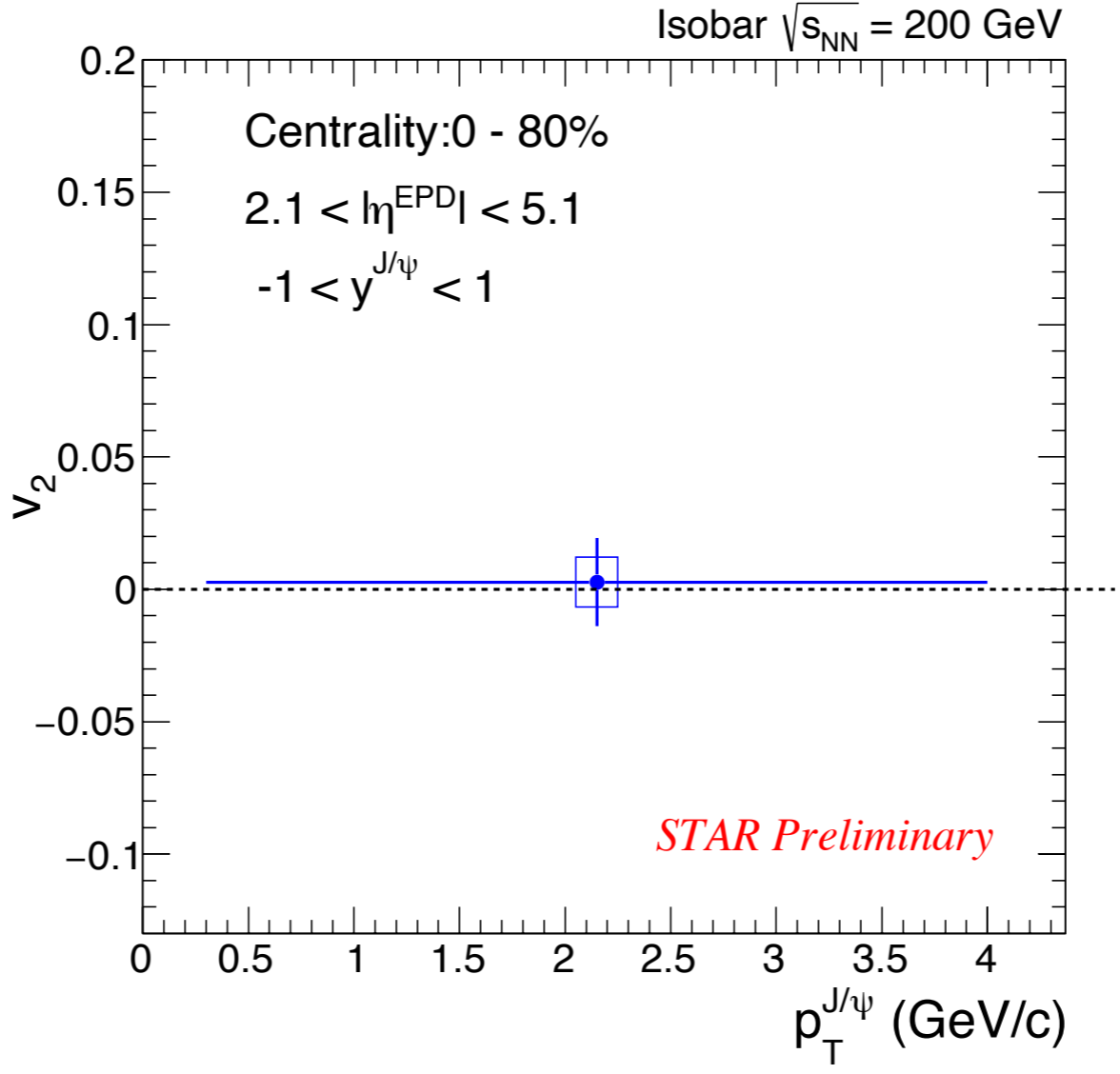


J/ψ v_2 in Isobar





J/ψ v_2 in Isobar





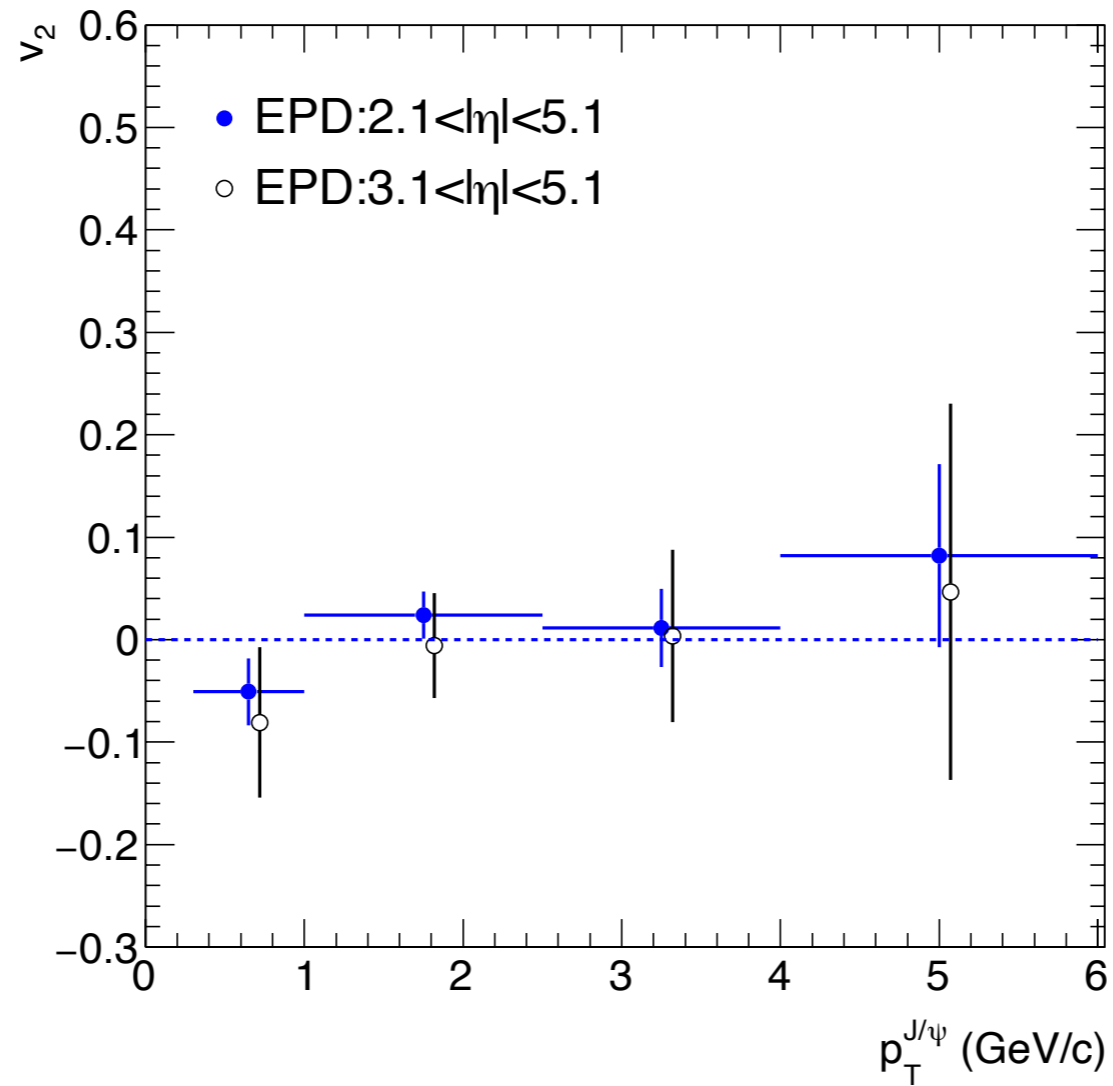
Summary

- The J/ψ v_2 in isobar collisions system has been obtained
- Systematic uncertainty (electron p_T cut, v_2 extraction) has been estimated

Thanks



EPD range



Overestimated

J/psi pT	0.3 - 1	1 - 2.5	2.5-4	4-6
Max. Deviation	0.030	0.030	0.0078	0.036



J/ψ v_2 in Isobar

