

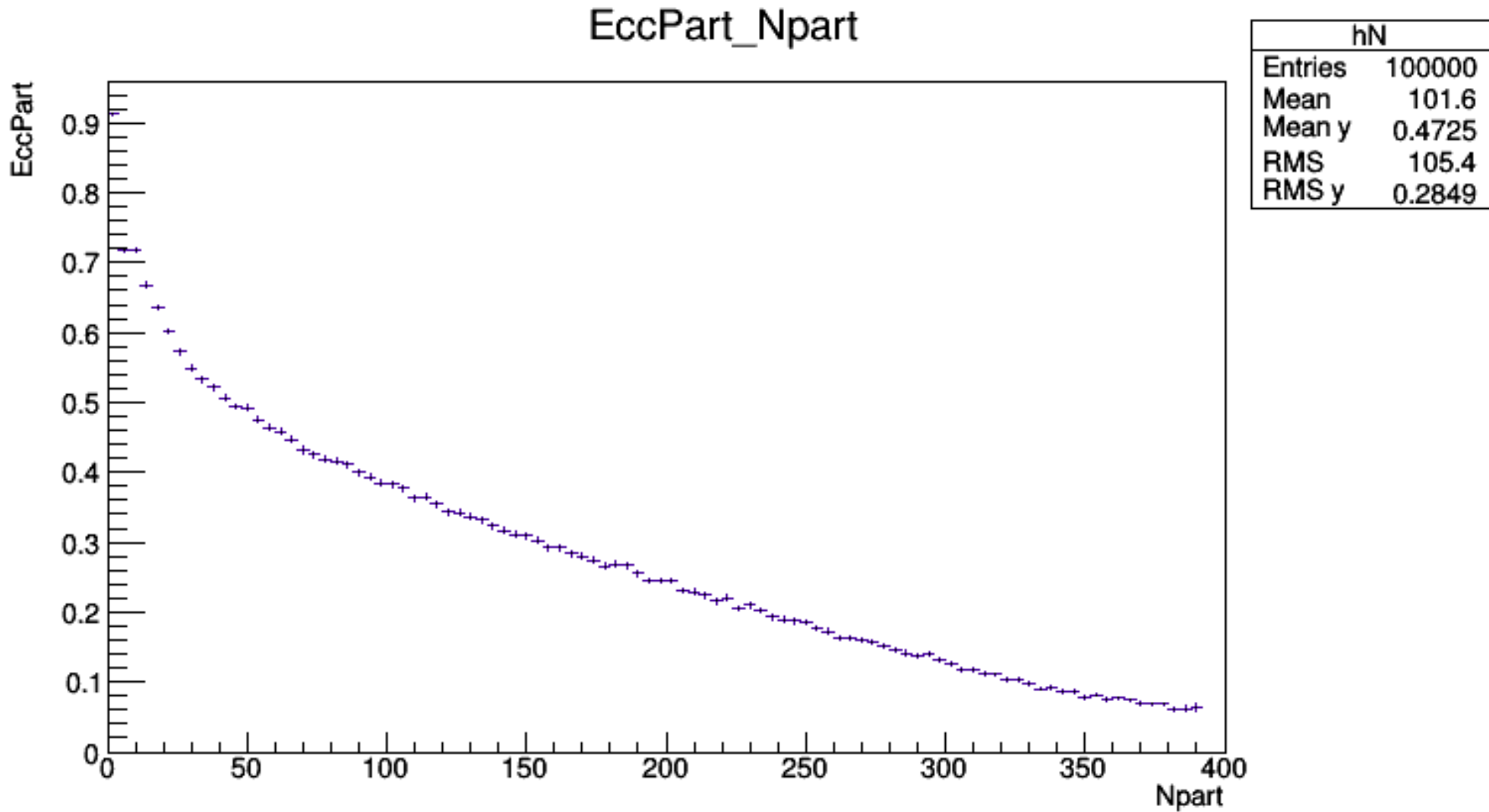
PHOBOS Glauber for Au-Au at energy 200 GeV

Created by Elizaveta Zherebtsova
03/05/2016

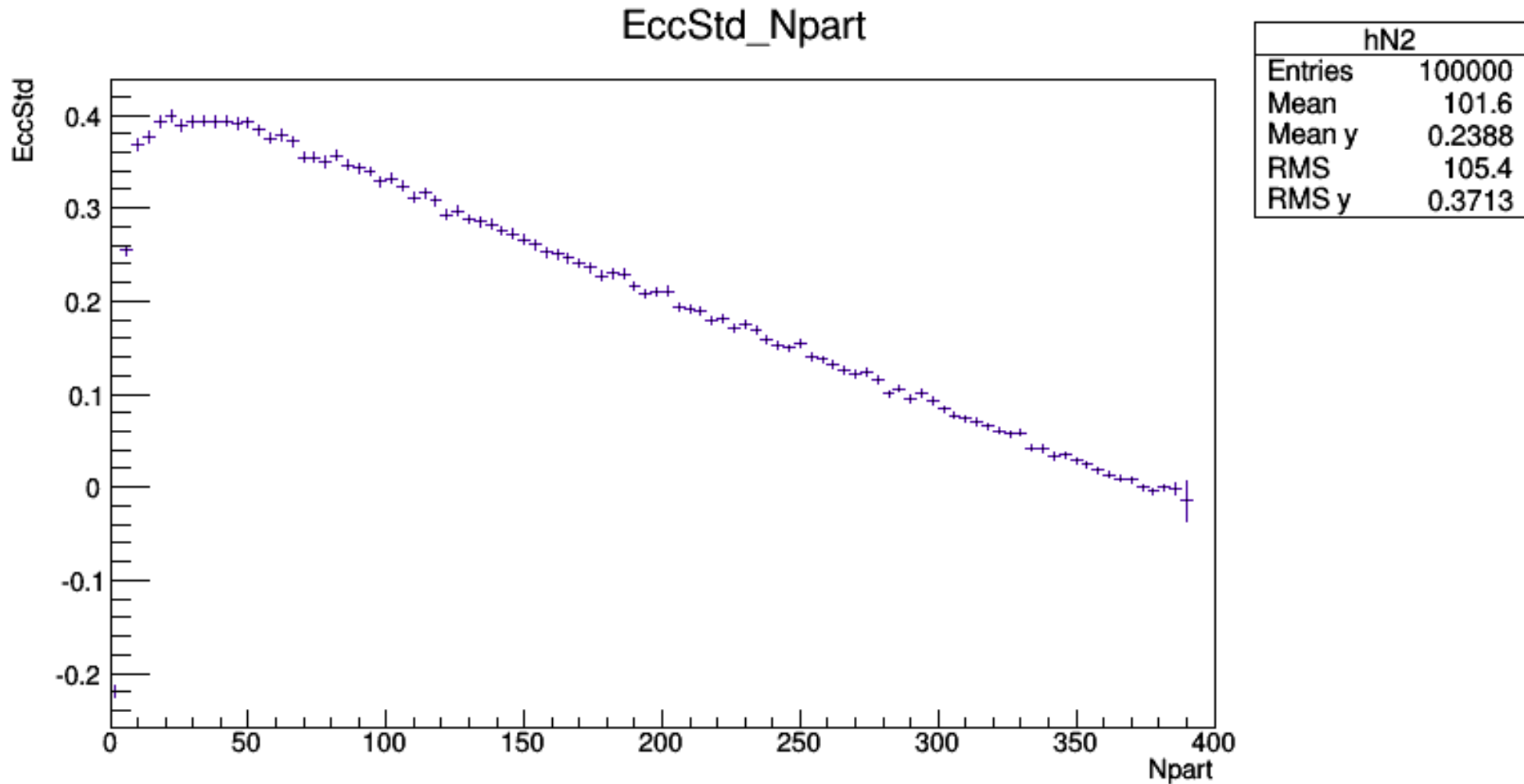
Used data:

- PHOBOS Glauber for the colliding system - Au-Au and Cu-Cu at the energy 200 GeV

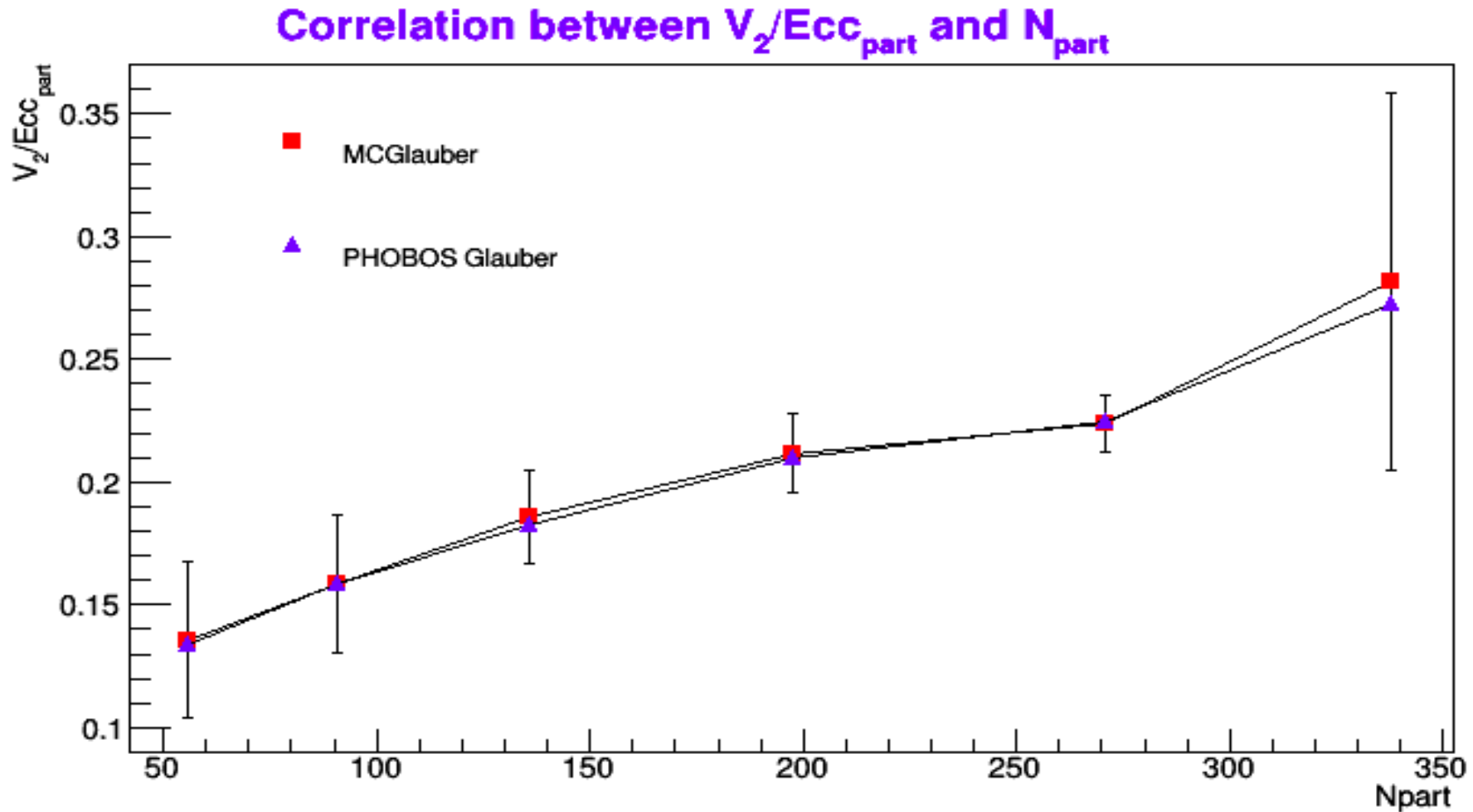
The correlation between EccPart and Npart for Au-Au



The correlation between EccStd and Npart for Au-Au

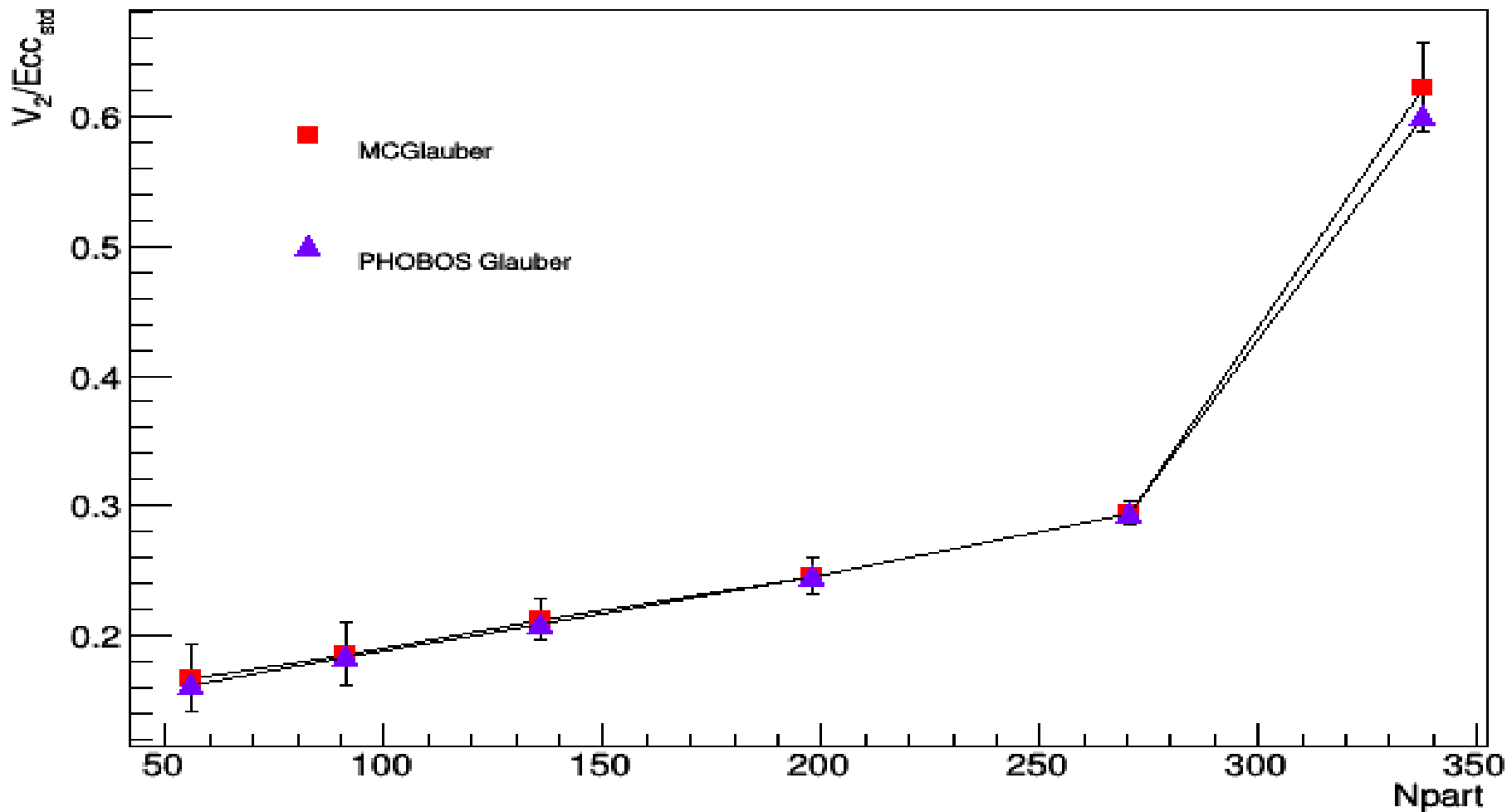


The correlation between V_2/Ecc_{part} and N_{part} for Au-Au

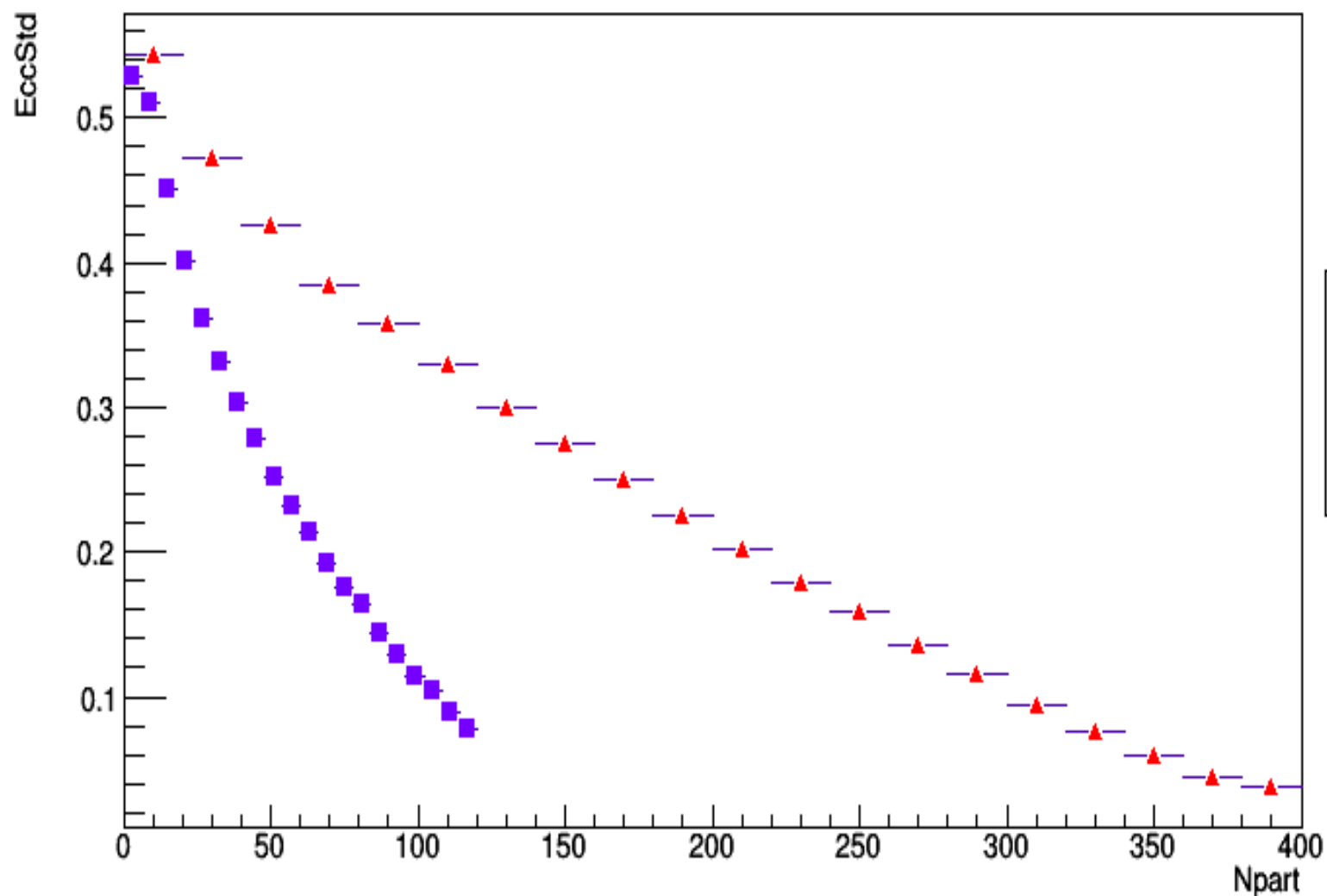


The correlation between $V_2/EccStd$ and N_{part} for Au-Au

Correlation between V_2/Ecc_{std} and N_{part}



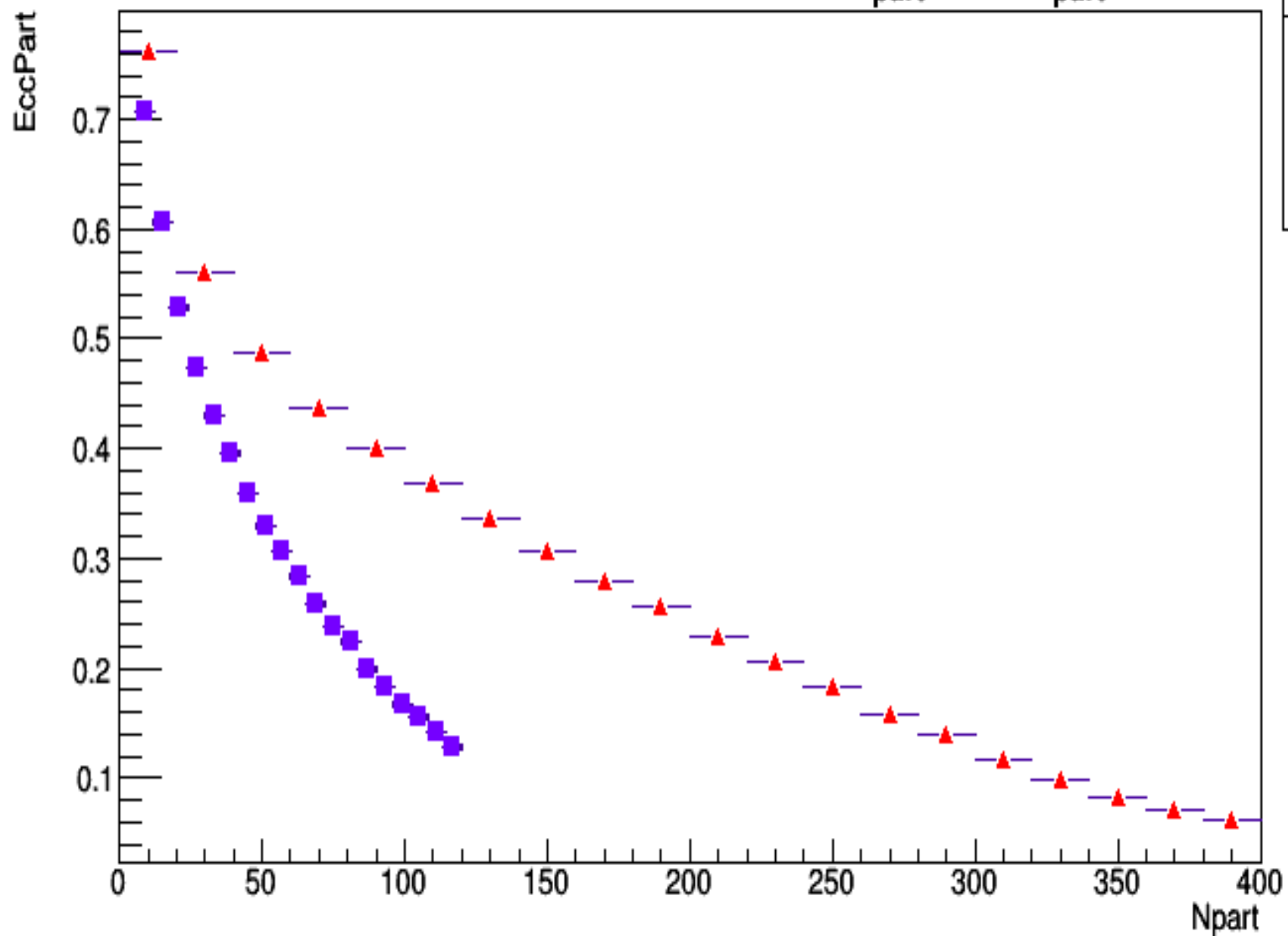
The correlation between Ecc_{std} and N_{part}



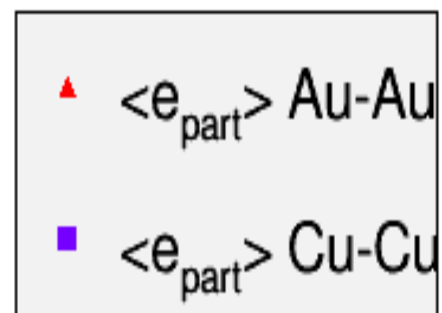
hN2	
Entries	83262
Mean	107.8
Mean y	0.361
RMS	100.6
RMS y	0.2346

▲	$\langle e_{std} \rangle$ Au-Au
■	$\langle e_{std} \rangle$ Cu-Cu

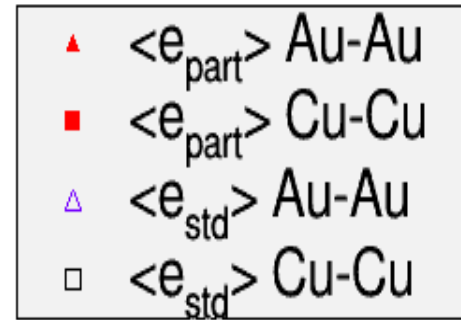
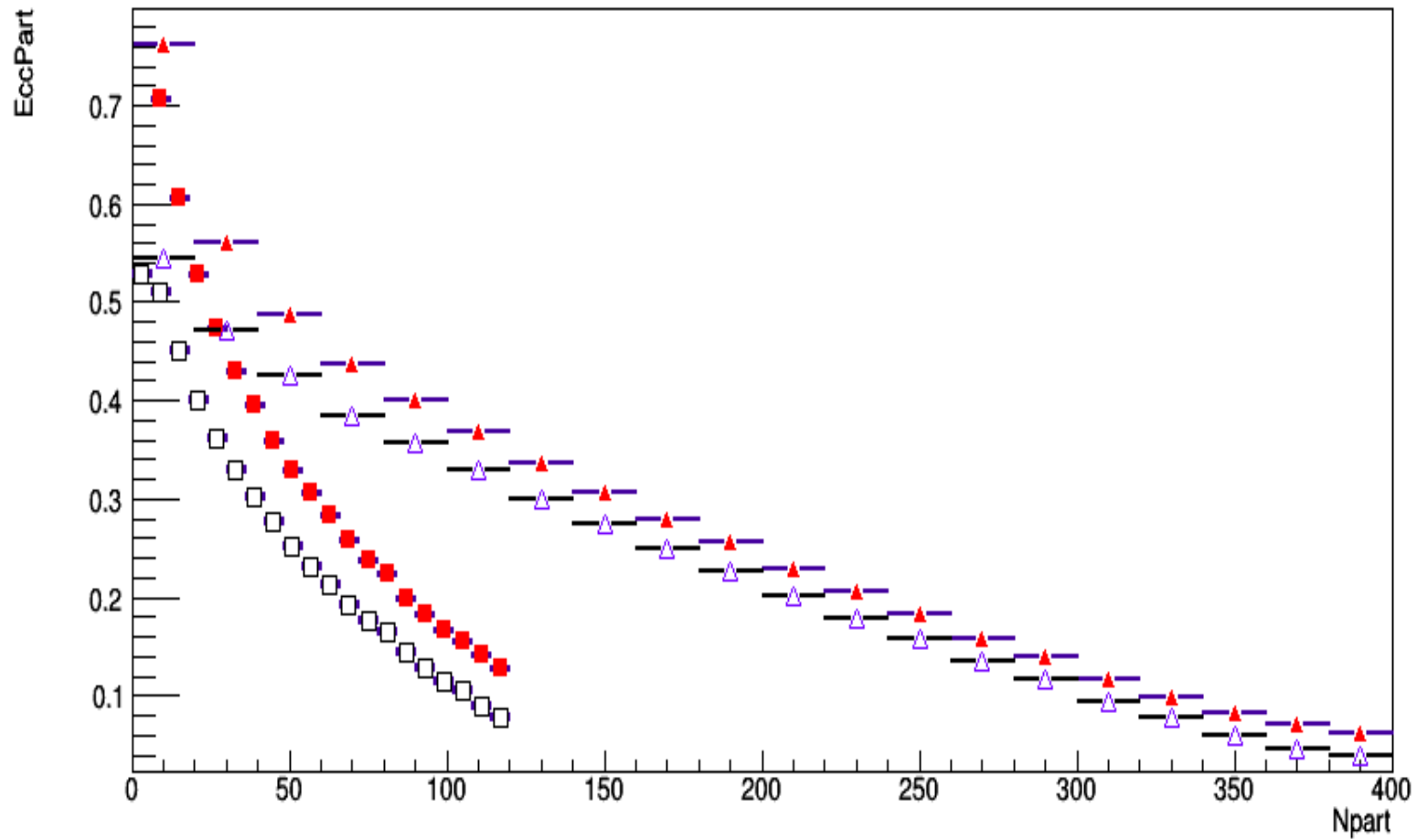
The correlation between Ecc_{part} and N_{part}



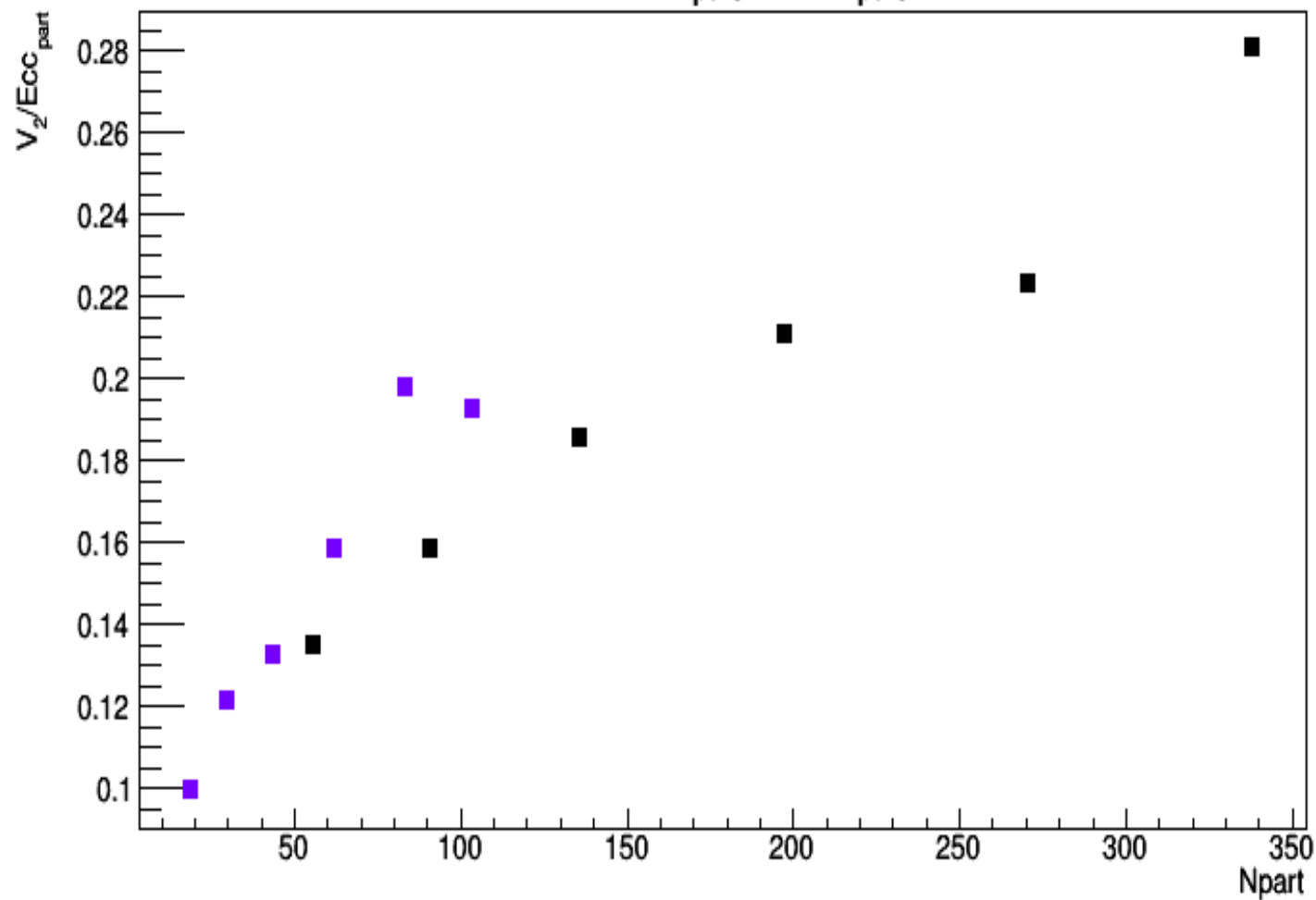
hN	
Entries	100000
Mean	101.6
Mean y	0.4725
RMS	105.4
RMS y	0.2849



The correlation between $\langle \text{Ecc} \rangle$ and N_{part} for Au-Au and Cu-Cu at energy 200 GeV



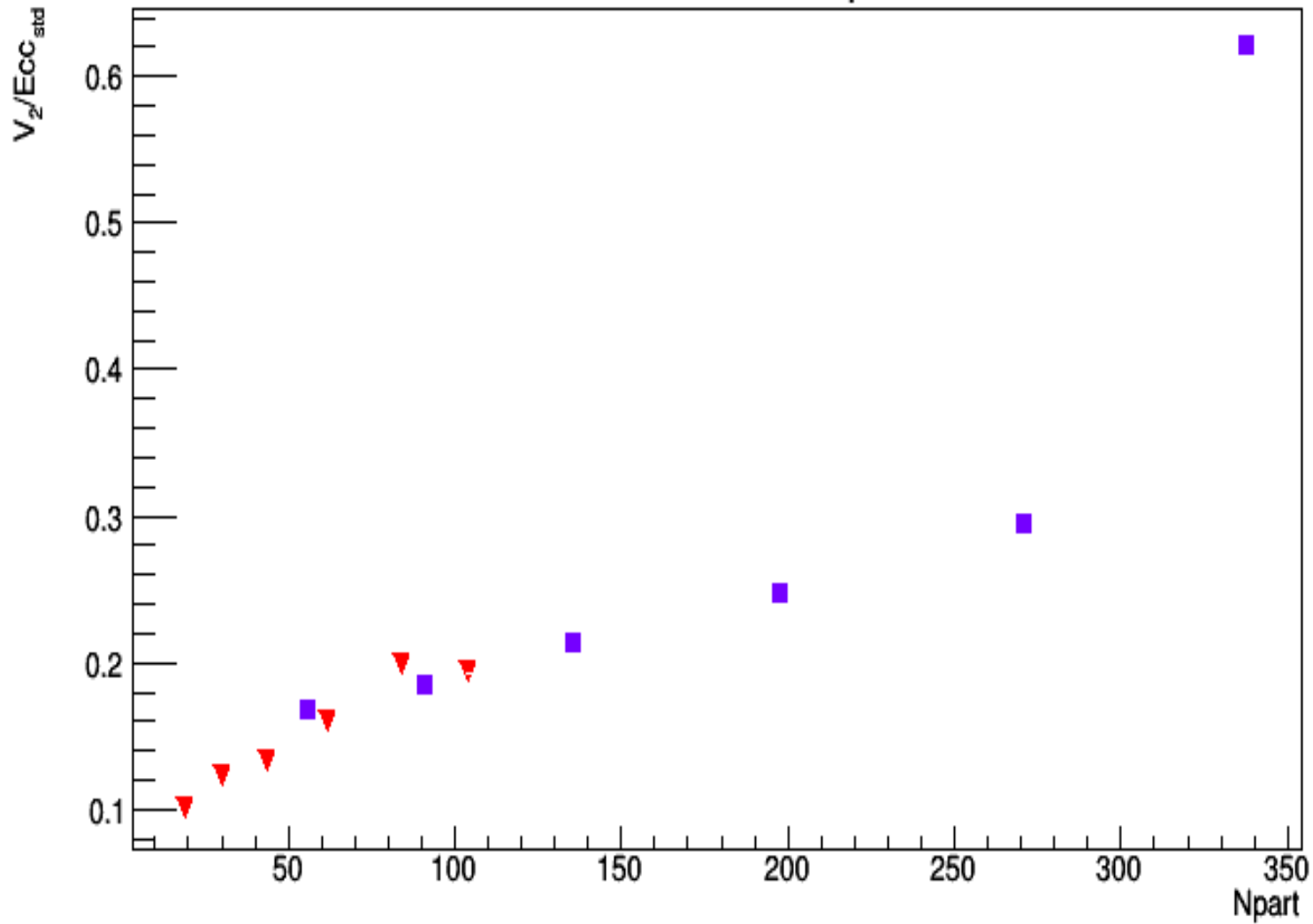
Correlation between V_2/Ecc_{part} and N_{part} at energy 200 GeV



■ V_2/Ecc_{part} Cu-Cu

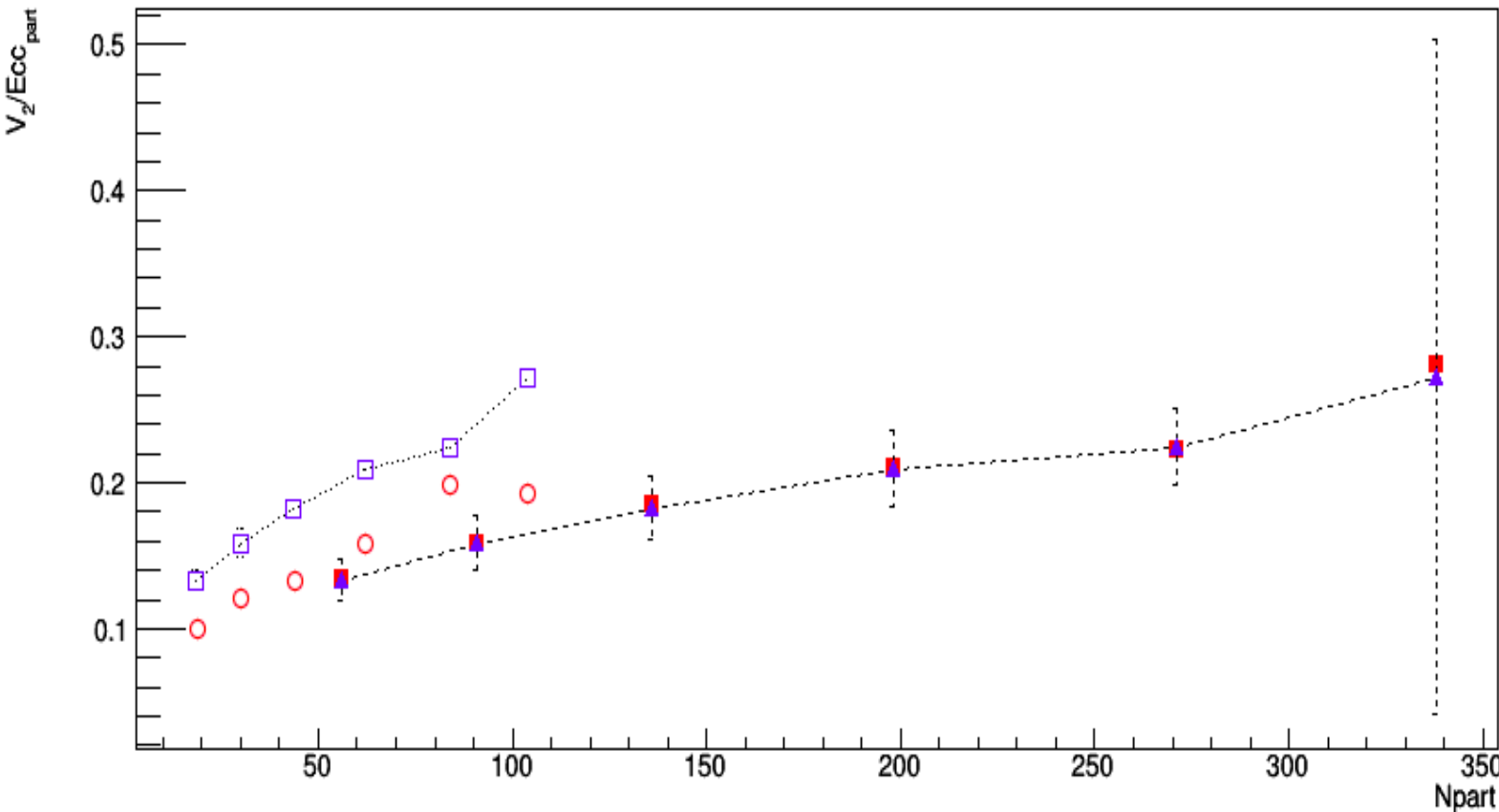
■ V_2/Ecc_{part} Au-Au

Correlation between V_2/Ecc_{std} and N_{part} at energy 200 GeV



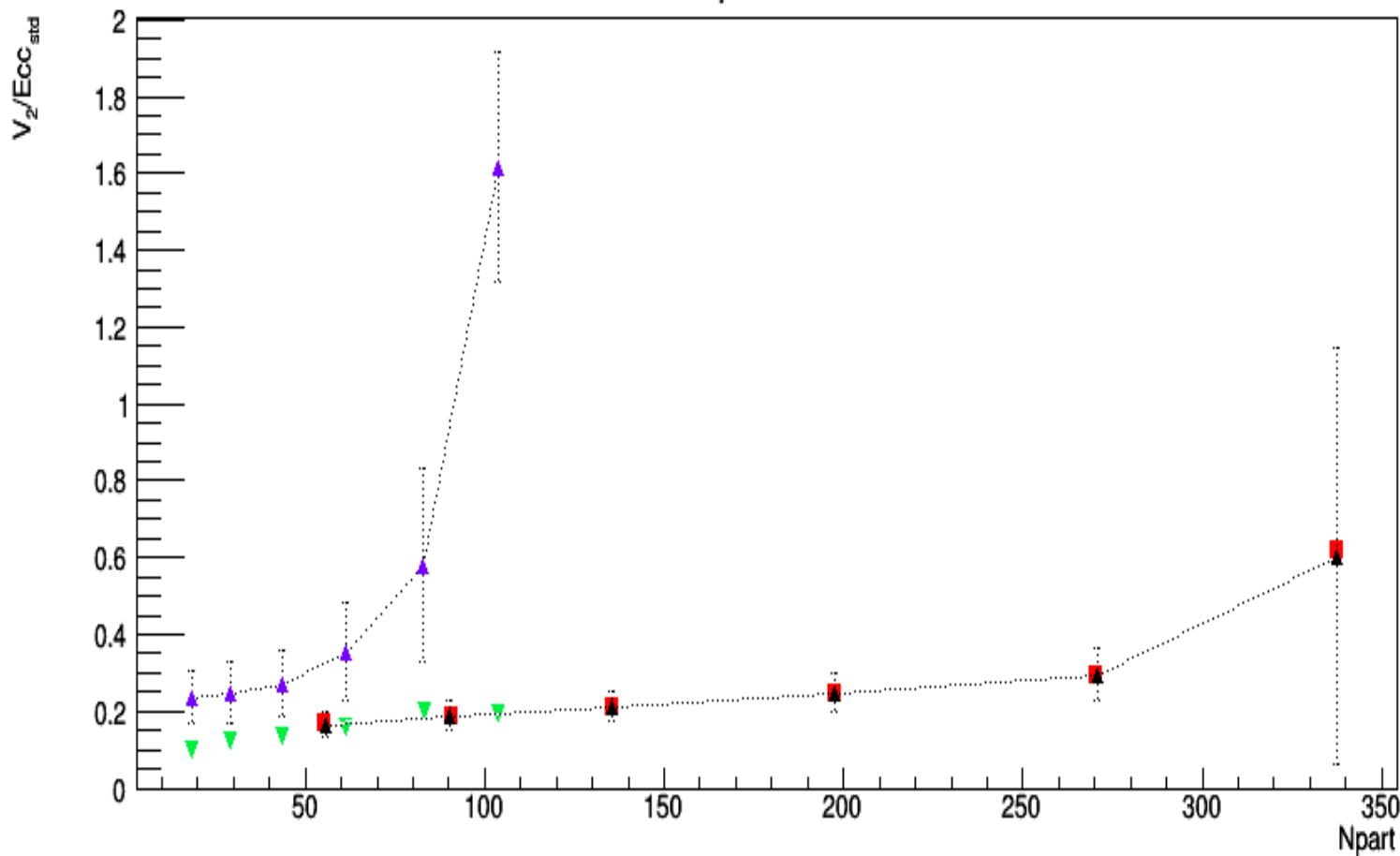
- ▼ V_2/Ecc_{std} Cu-Cu
- V_2/Ecc_{std} Au-Au

Correlation between V_2/Ecc_{part} and N_{part} for Au-Au and Cu-Cu at energy 200GeV



- V_2/Ecc_{part} Cu-Cu Glauber
- V_2/Ecc_{part} Au-Au Glauber
- V_2/Ecc_{part} Cu-Cu PHOBOS Glauber
- ▲ V_2/Ecc_{part} Au-Au PHOBOS Glauber

Correlation between V_2/Ecc_{std} and N_{part} for Au-Au and Cu-Cu at energy 200GeV



- ▼ V_2/Ecc_{std} Cu-Cu Glauber
- V_2/Ecc_{std} Au-Au Glauber
- ▲ V_2/Ecc_{std} Cu-Cu PHOBOS Glauber
- ▲ V_2/Ecc_{std} Au-Au PHOBOS Glauber

Conclusion:

- With increasing the number of participating nucleus, standard eccentricity is decreasing
- With increasing the number of participating nucleus, participant-plane eccentricity is decreasing
- With increasing the number of participating nucleus, the value $V2/EccPart$ is growing
- The value $V2/EccStd$ behaves thus that with growing the number of participating nucleons it is increasing
- The correlation between $V2/EccStd$ and $Npart$, $V2/EccPart$ and $Npart$ coincide within errors with the same graph plotted on the PHOBOS experiment