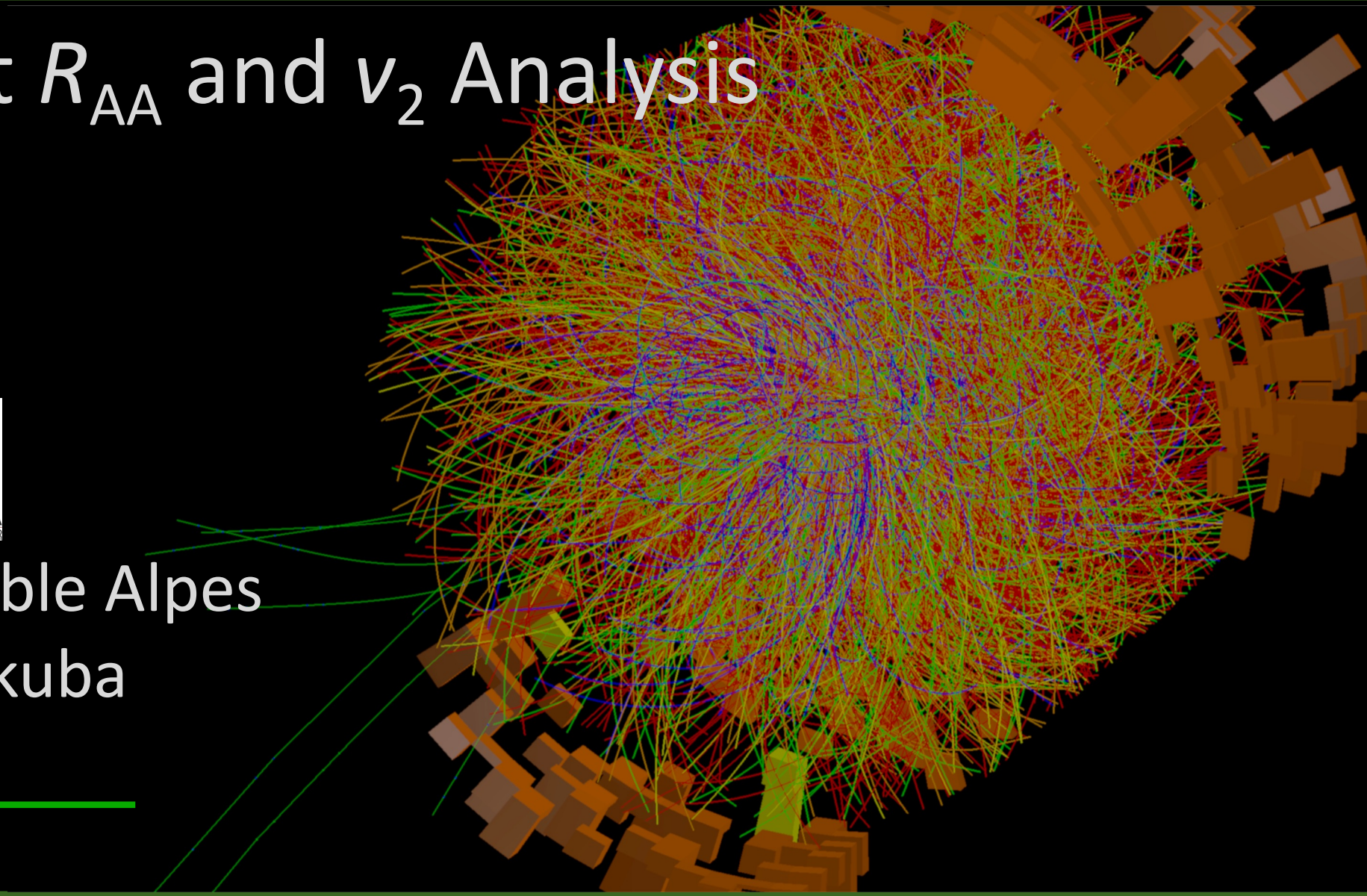
Inclucive Jet R_{AA} and v_2 Analysis



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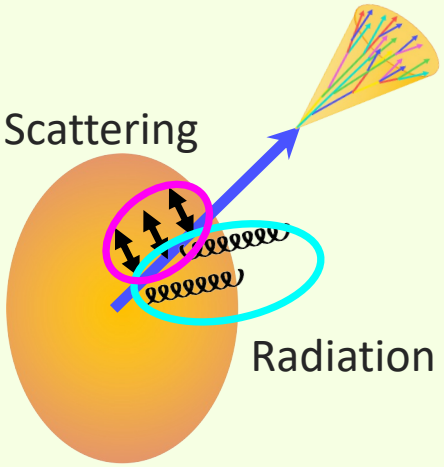
Add v2 measurement

Clarify the jet suppression mechanism



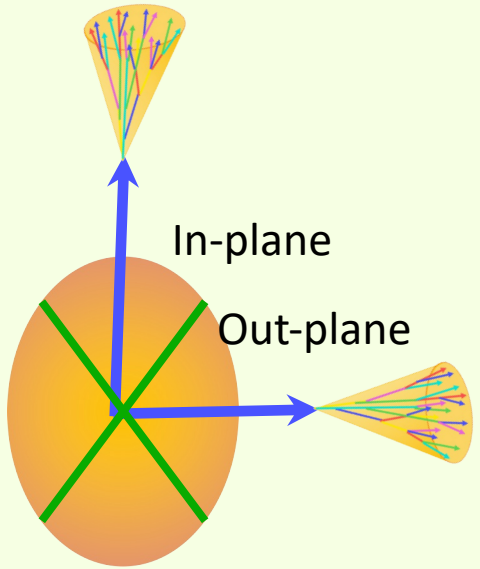
$$v_2^{\text{jet}} = \frac{1}{\text{Res}\{\psi_2^{meas}\}} \frac{\pi}{4} \frac{N_{in} - N_{out}}{N_{in} + N_{out}}$$

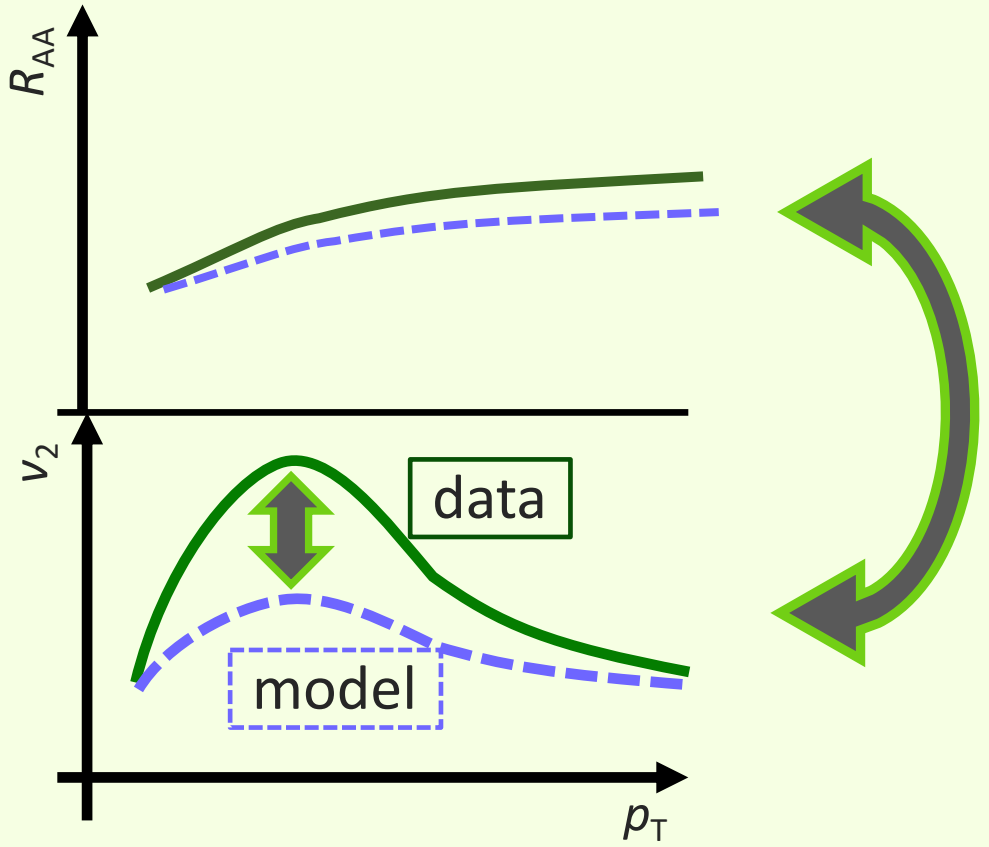
N_{in}, N_{out} : Jet yield at in-plane and at out-of-plane

$\text{Res}\{\psi_2^{meas}\}$: Event plane resolution

Radiation / Scattering dominant?

→ L^2 or L





Radiation / Scattering dominant?

→ L^2 or L

Current Progress

1. Event plane calibration code
 1-1. Test run of the code
 1-2. Apply to PWGJE framework from Flow Group one.
 1-3. Apply this code for train
 1-4. Run train

3. Mearsure the Raw jet for each event plane
 3-1. Test run a simple code that gets event plane[w/o calibration]
 3-2. Impliment more detail v_2 calculation code (on-going)
 3-3. Run train code

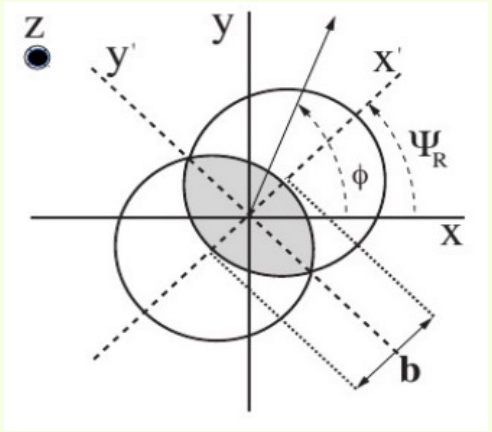
4. Embedding
5. Unfolding
6. Systematic Error

Qnvector Calibration for Event Plane

Flow vector from detector measurement

$$Q_{n,x} = \sum_i \omega_i \cos n\phi_i$$

$$Q_{n,y} = \sum_i \omega_i \sin n\phi_i$$



Event Plane

$$\Psi_n = \frac{1}{n}\arctan\frac{Q_{n,y}}{Q_{n,x}}$$

Qn vector calibration

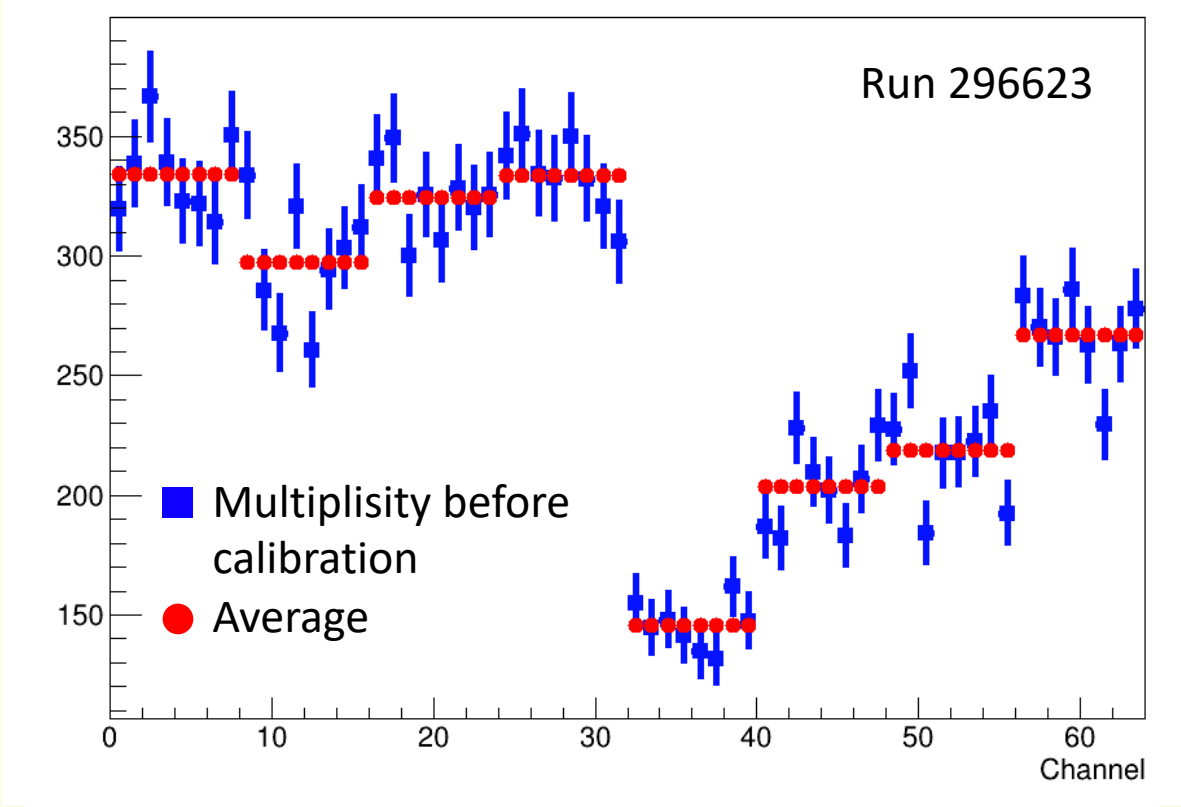
1. Gain eualization of indivdual detector channel

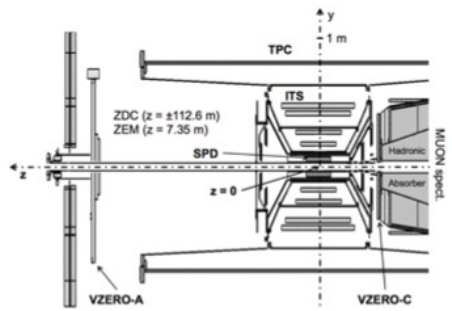
$$M'_c = \frac{M_c}{\langle M'_c \rangle}$$

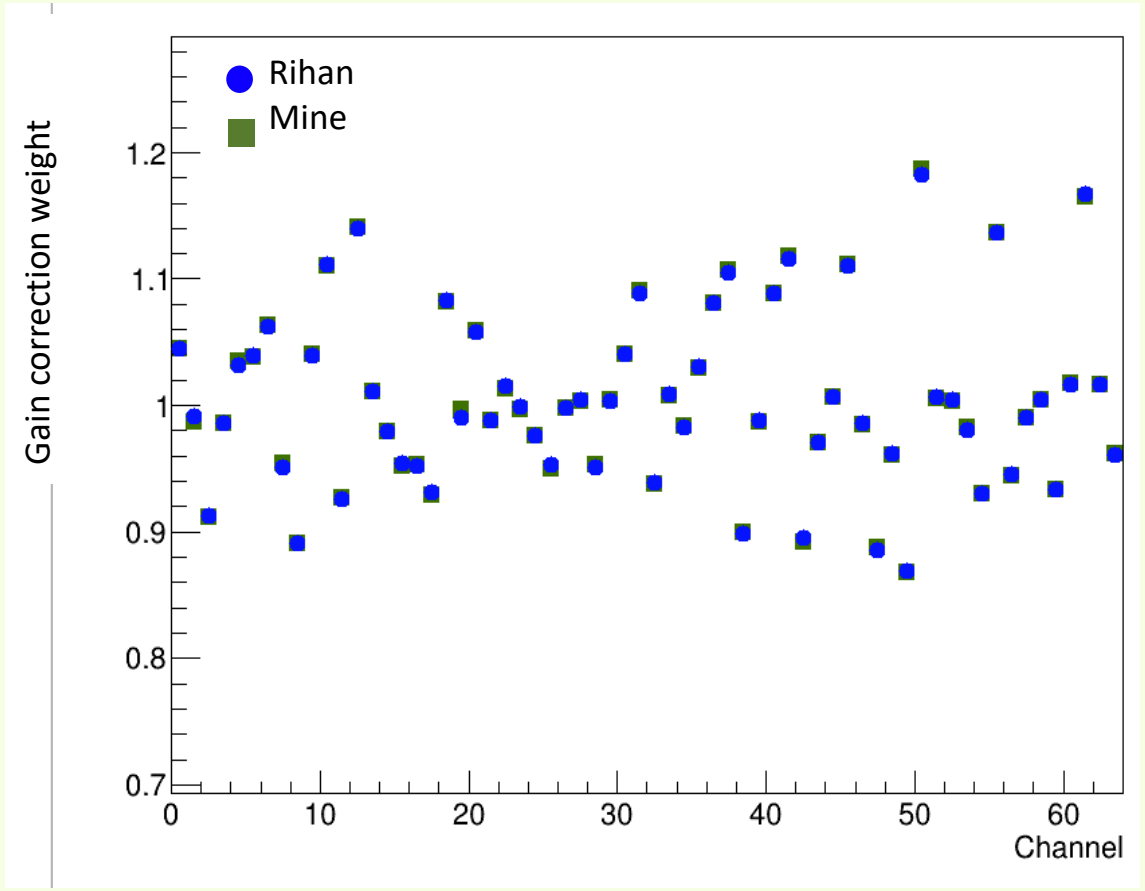
2. Recentring

$$\boldsymbol{q}'_n = \boldsymbol{q}_n - \langle \boldsymbol{q}_n \rangle$$

Gain Calibration







Recentering

2. Recentring

$$q'_n = q_n - \langle q_n \rangle$$