FLOW DETERMINATION

1. WHAT IS MEASURED EVENT BY EVENT

$$\frac{dE_T}{d\varphi} = \frac{E_T}{2\pi} + a_1 \cos\varphi + b_1 \sin\varphi + a_2 \cos(2\varphi) + b_2 \sin(2\varphi) + b_3 \sin(3\varphi)$$

The calorimeter has six sextants

→ **six measured E_{Ti} values :**

$E_{T1}, E_{T2}, E_{T3}, E_{T4}, E_{T5}, E_{T6}$

→ **six Fourier's coefficients :**

$a_0 \ (= \frac{E_T}{2\pi})$, a_1, b_1, a_2, b_2, b_3

$$\frac{dE_T}{d\varphi} = \frac{E_T}{2\pi}\left(1 + 2*|v_{1ev}|\cos(\varphi - \varphi_{1ev}) + 2*|v_{2ev}|\cos(2(\varphi - \varphi_{2ev})) + \ldots\right)$$

- ***directed anisotropy*** $|v_{1ev}| = \frac{\pi}{E_T}\sqrt{a_1^2 + b_1^2}$ $\varphi_{1ev} = A\tan\frac{b_1}{a_1}$
- ***elliptic anisotropy*** $|v_{2ev}| = \frac{\pi}{E_T}\sqrt{a_2^2 + b_2^2}$ $\varphi_{2ev} = \frac{1}{2}A\tan\frac{b_2}{a_2}$

measured for each event

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