



**Project:**  
**Charged particle production in Xe+Xe collisions**

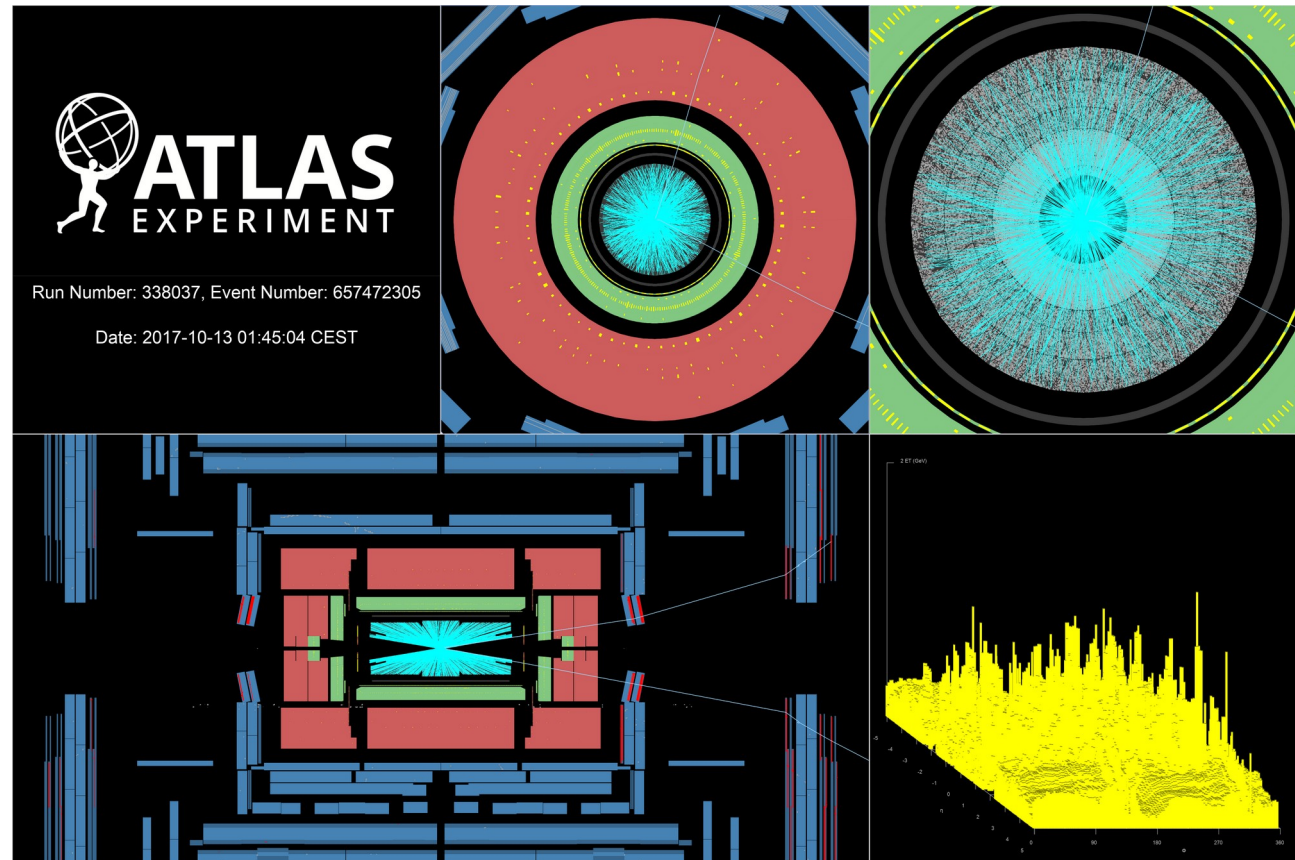
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# Xe+Xe collisions

**Large Hadron Collider collides mostly protons, but for about a month each year it provides also collisions of nuclei. In 2017 xenon-xenon collisions at the energy 5.44 TeV were recorded.**

**Example of  
Xe+Xe collision**

**large number of  
particles are  
produced**



# Charged particle reconstruction

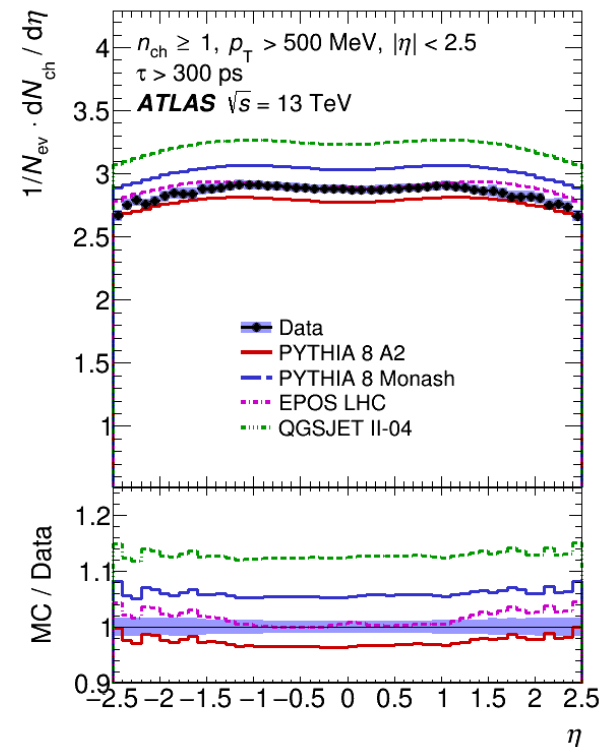
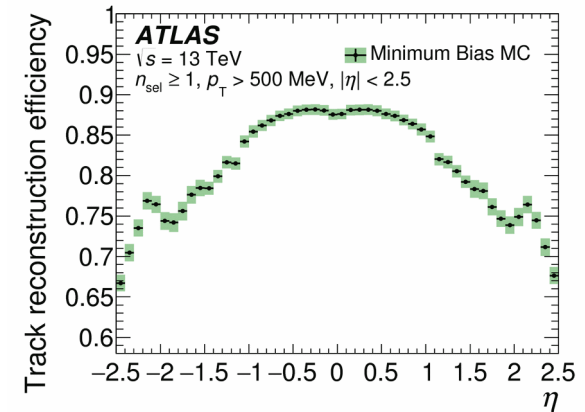
One of the first measurements is reconstruction of the properties of charged particles production.

Such analysis was done for pp collisions

From Monte Carlo simulations one needs to obtain efficiency of charged particles reconstruction as a function of:

- pseudorapidity
- transverse momentum

They can be used to correct results of measurements to obtain real values and distributions.



# Xe+Xe collisions

In this PPSS project the same type of analysis will be performed using data and simulations of Xe+Xe collisions

From Monte Carlo:

- histograms of basic „true” variables compared to
- histograms of the same variables from reconstruction

From data:

- histograms of variables from reconstruction and after corrections
- final histograms of real values of variables

