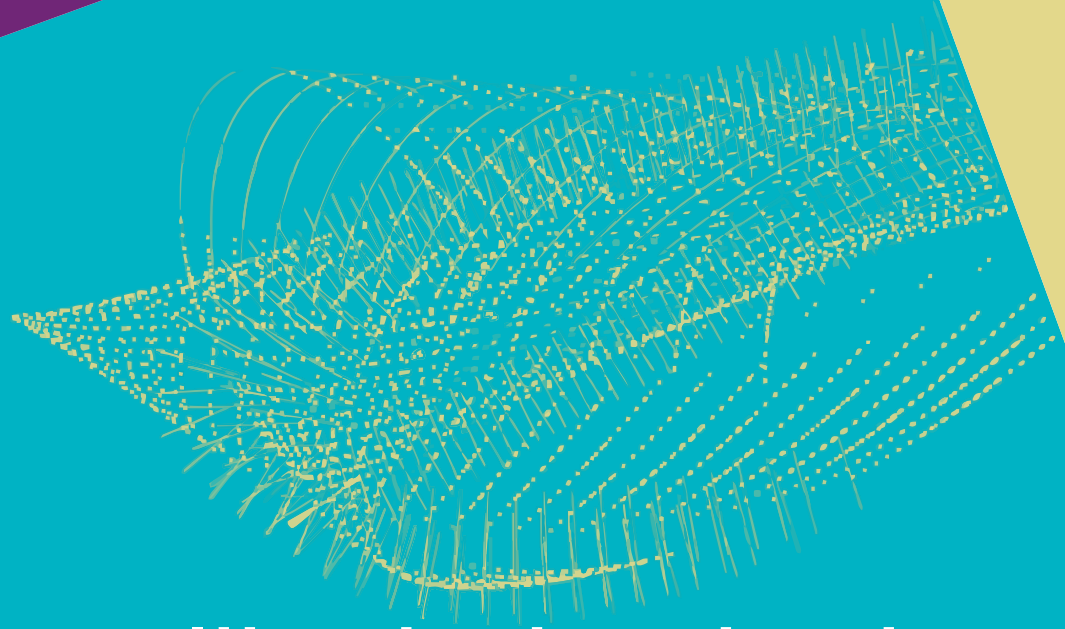
Nikhef

ALICE

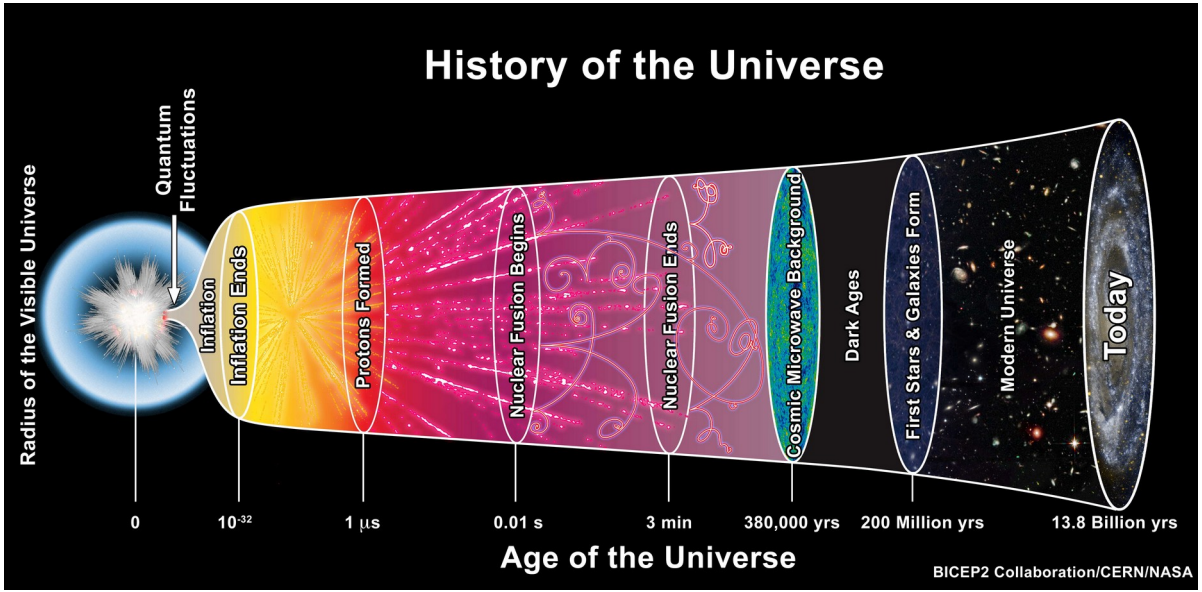


Searching for QGP-like behavior in Oxygen-Oxygen collisions

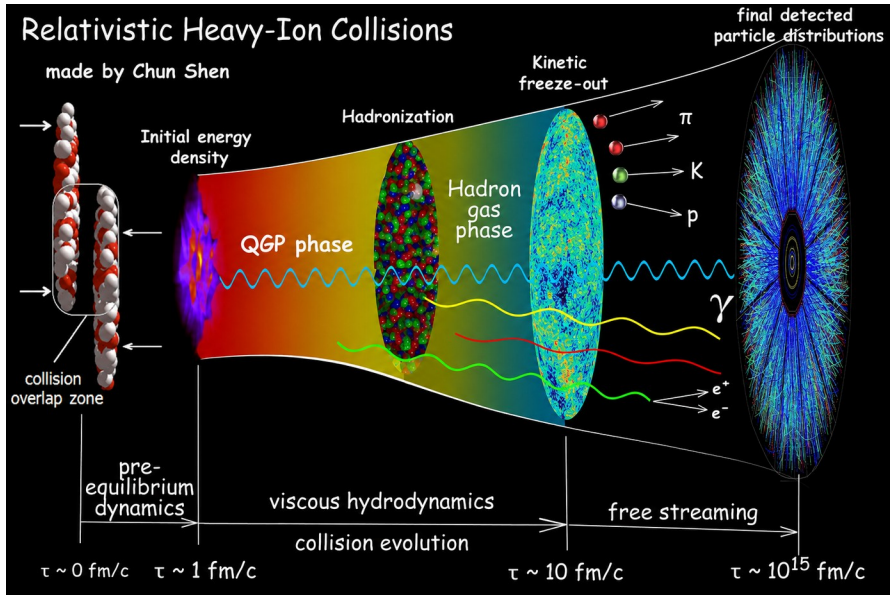
Pieter van Asseldonk

Investigating the quark gluon plasma

In the early universe

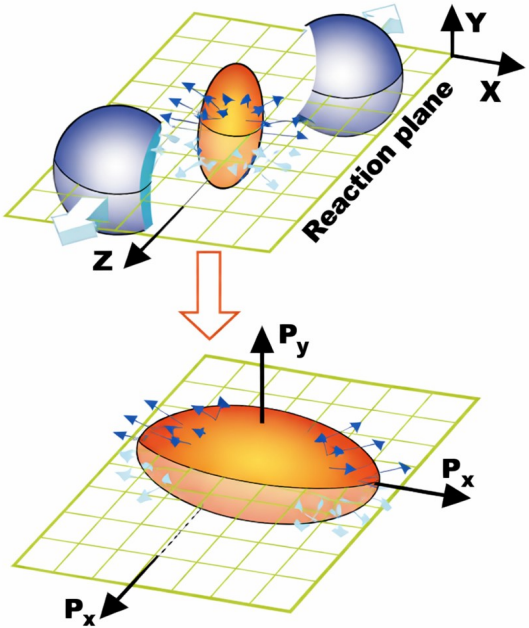


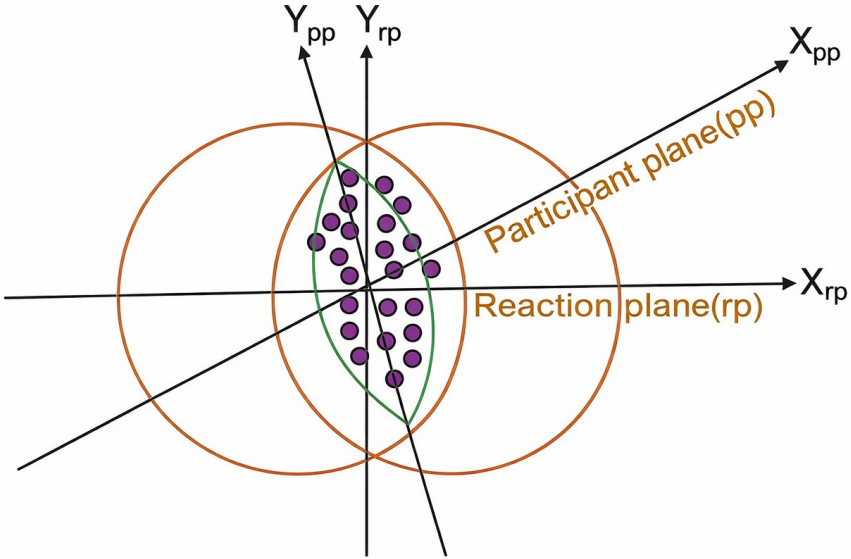
Reproduced in the LHC



Elliptic flow

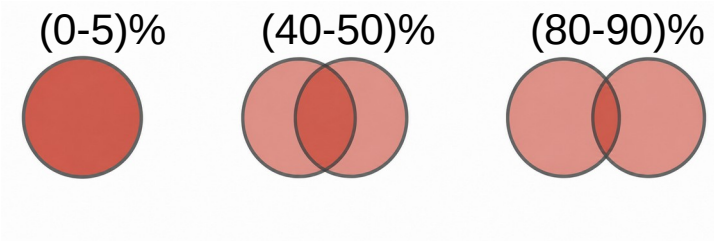
- Geometry and initial fluctuations.

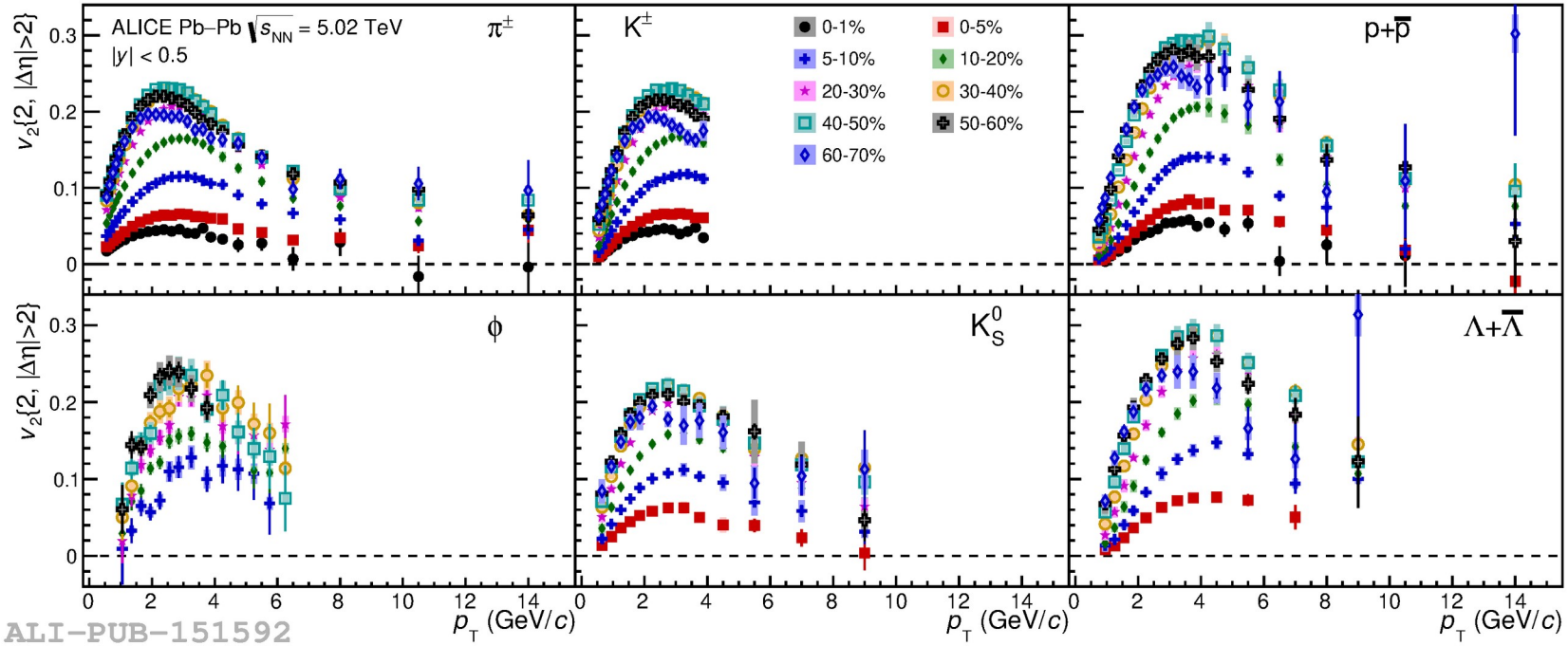




Elliptic flow in Pb-Pb

- Results from run 2 Pb-Pb

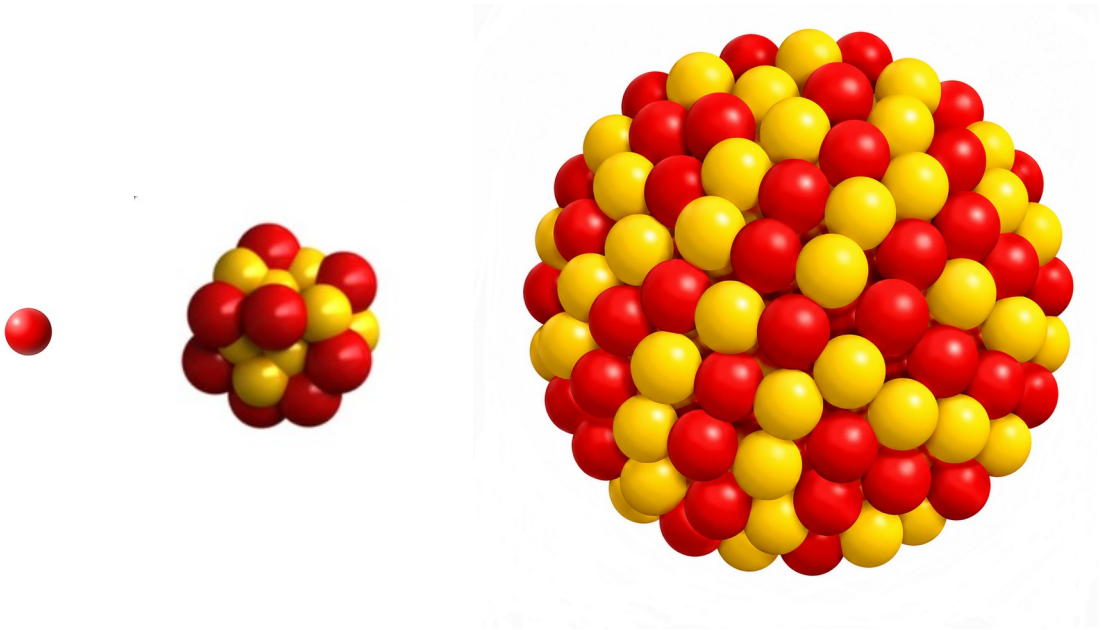


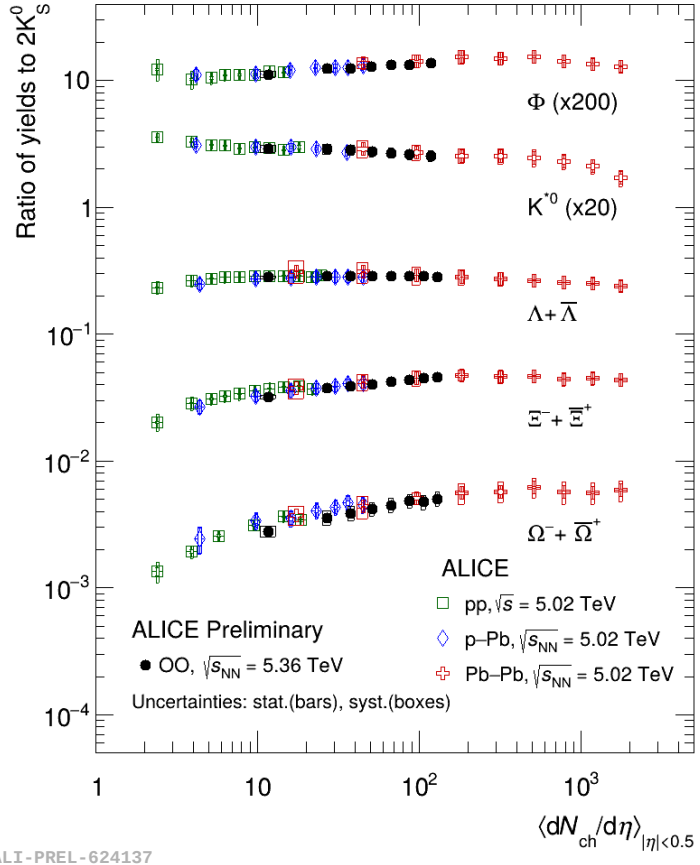


arXiv:1805.04390

A bridge from pp to Pb-Pb

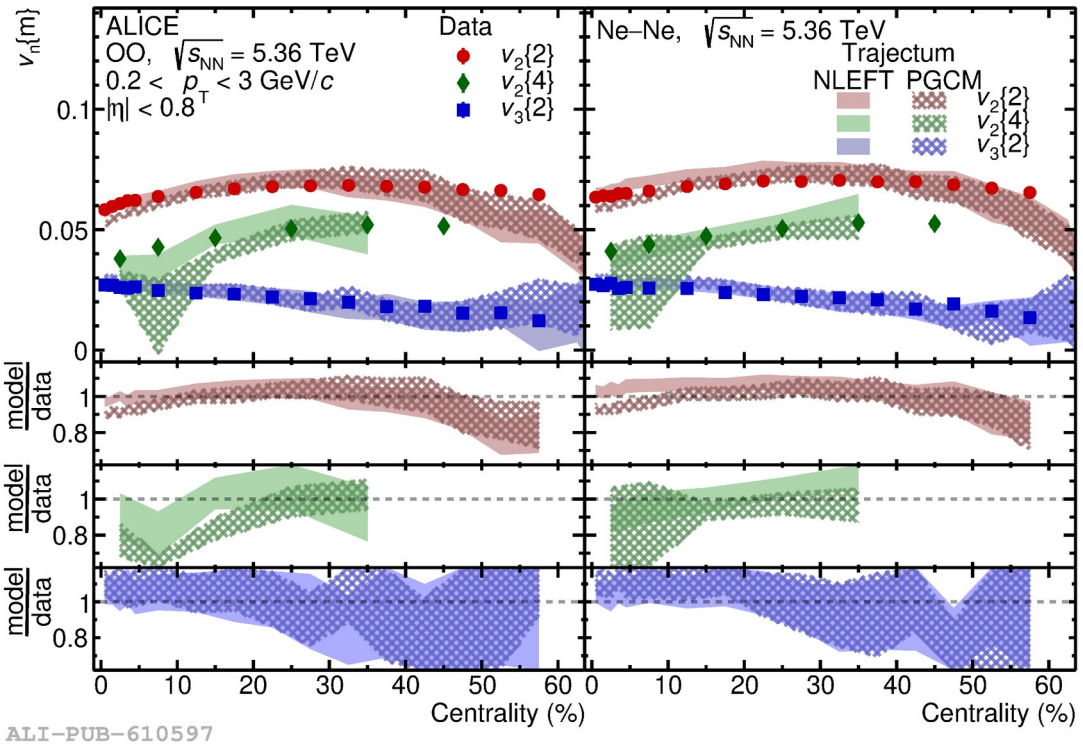
- New O-O runs in the LHC.





First evidence of collective behavior

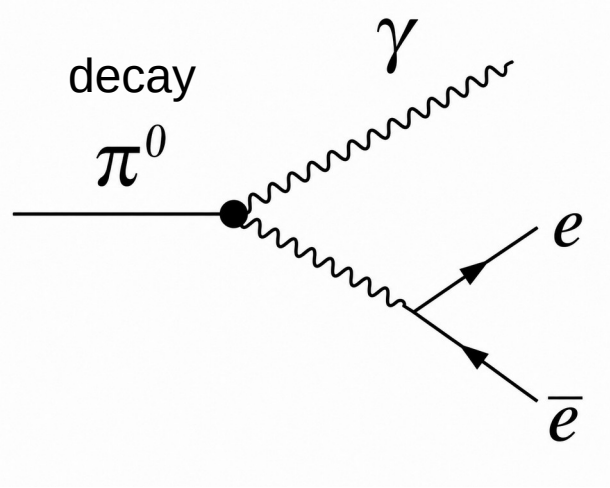
- Comparison against hydrodynamical models like Trajectum.



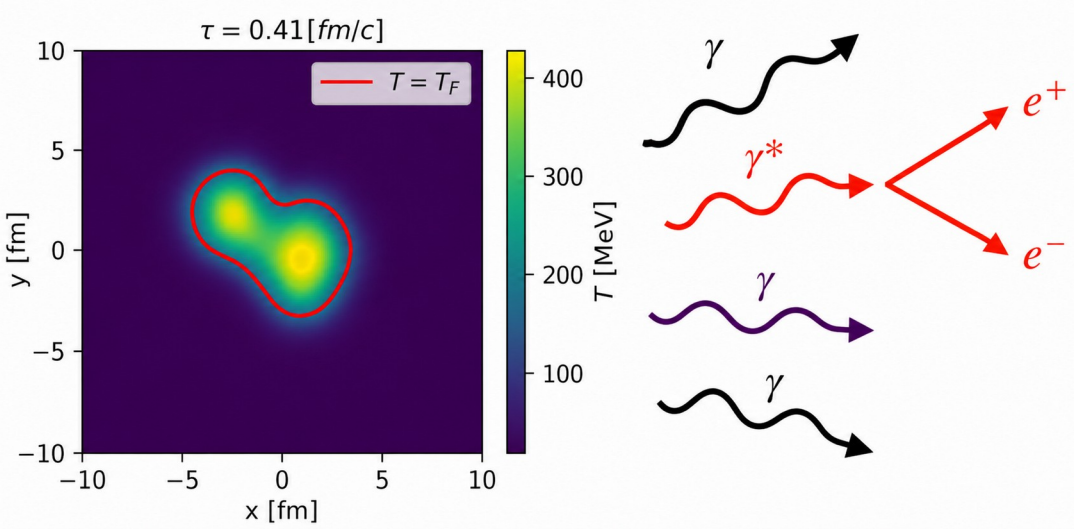
arXiv:2509.06428

Flow from EM-radiation

- Retains information from moment of production.
- Many sources of electromagnetic radiation!
  - Thermal.
  - Particle decays.

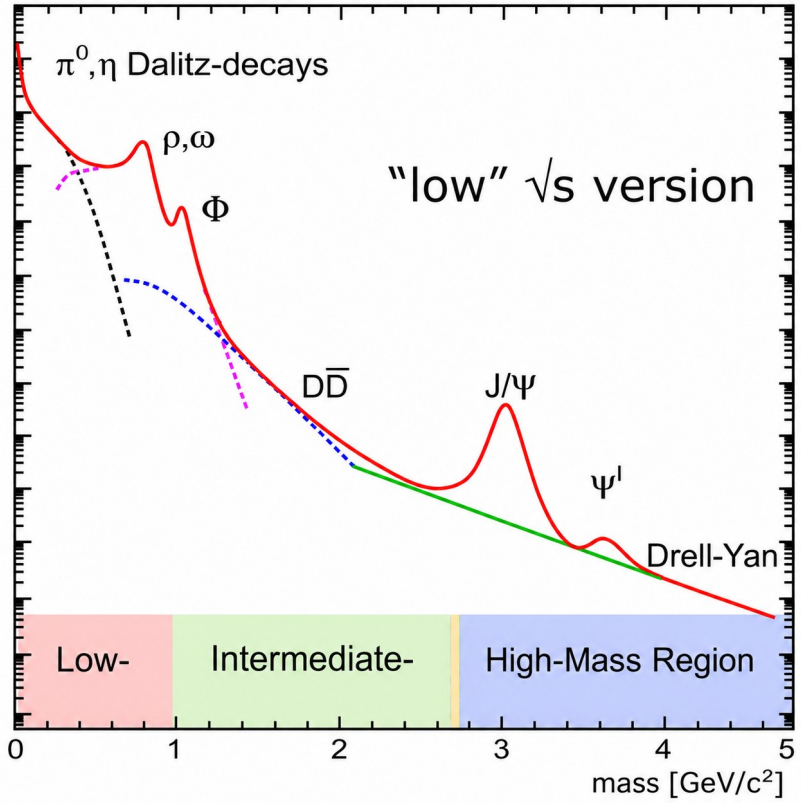


thermal



Dielectron sources

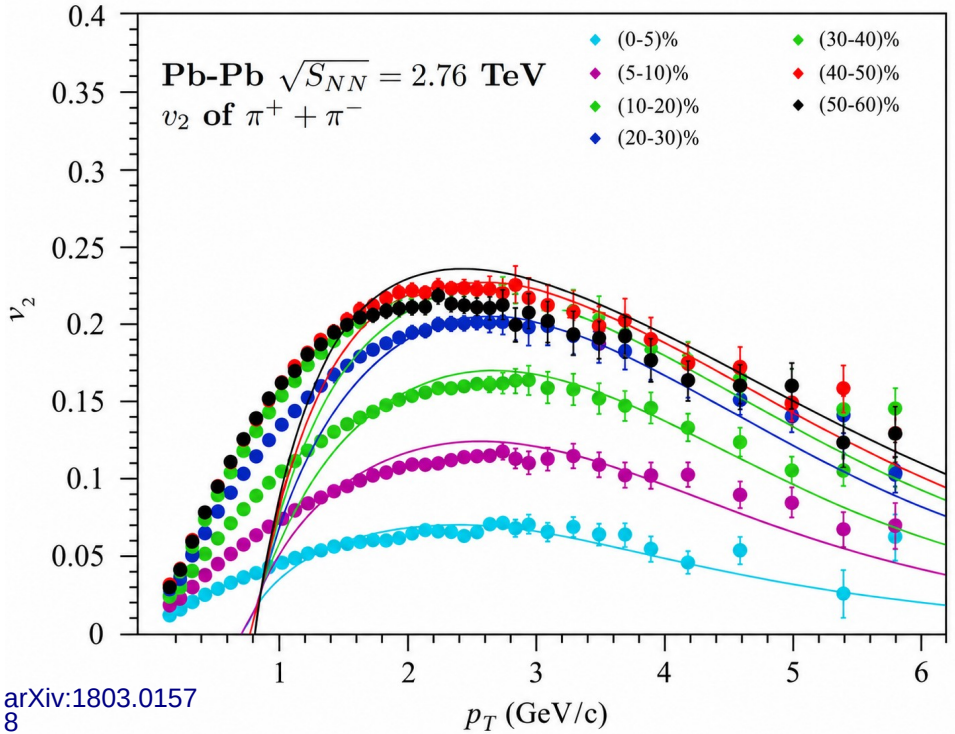
- The sources of dielectron pairs vary depending on the invariant mass region.
- Analysis goal: measure dielectron flow in **pion region**, low mass region and the j/psi region in Oxygen-Oxygen collisons.



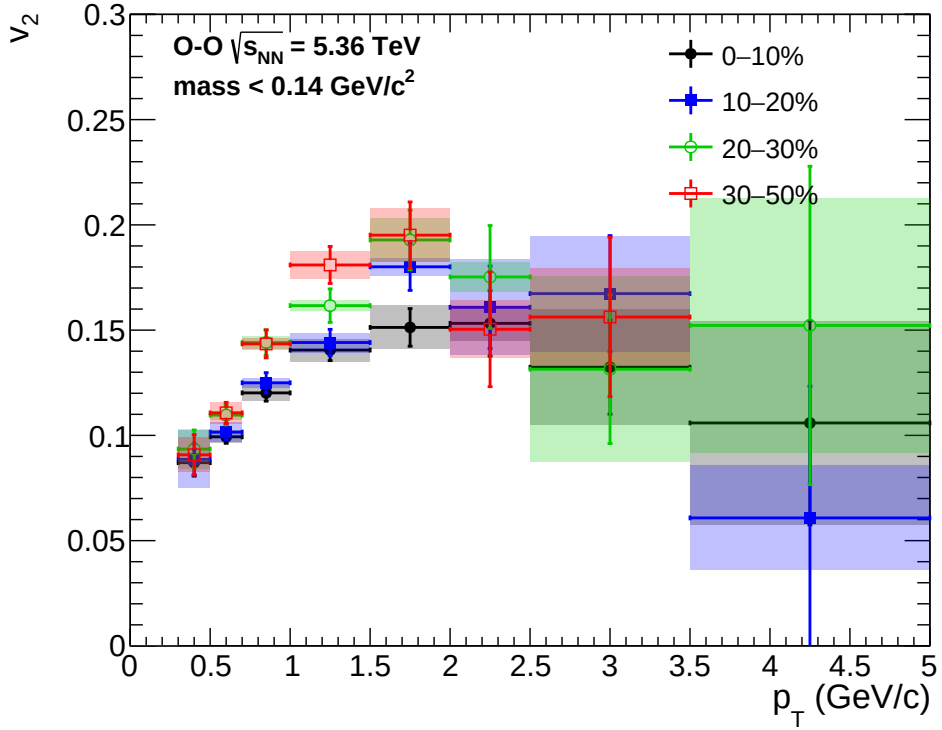
arXiv:1904.12821

Centrality dependence of flow, work in progress

- We observe a small centrality dependence (increase in flow towards mid-central collisions); uncertainties need to be finalized as well as comparisons to model calculations.

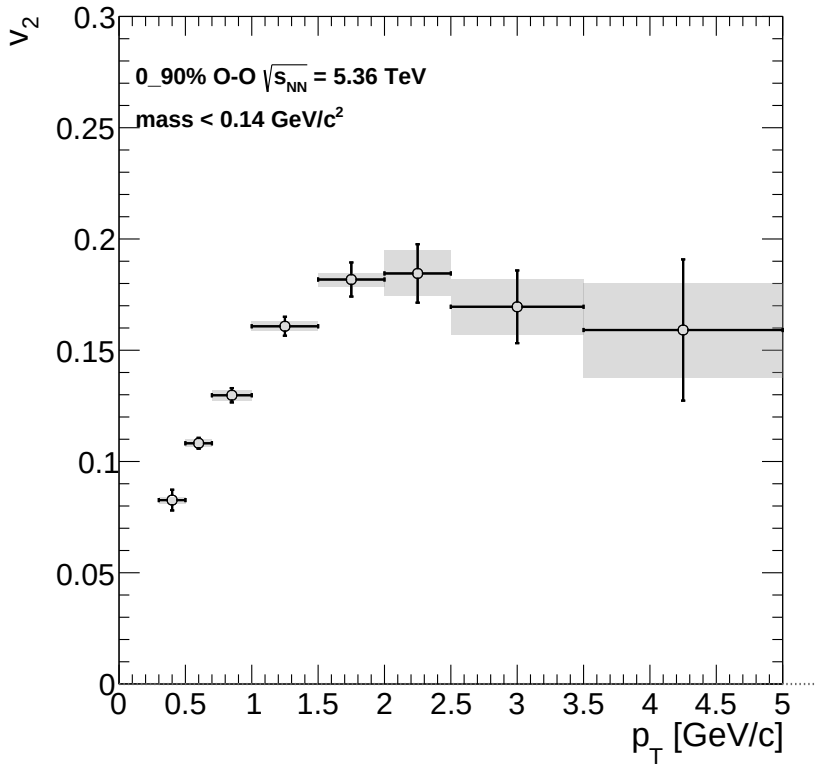


arXiv:1803.01578



Elliptic flow in O-O, work in progress

- Conclusions
  - First ALICE results of elliptic flow O-O using dielectrons.
  - The elliptic flow in O-O shows less of a centrality dependence compared to Pb-Pb collisions. Most likely understood from a model point of view.
  - Next step is to relate the results of the underlying physics.



THANKS!