

HADES 2022. Lines of work and Highlight

Current team: A. Blanco, L. Lopes, P. Fonte and J. Saraiva

Lines of work:

- RPC-TOF-W upgrade and operation.

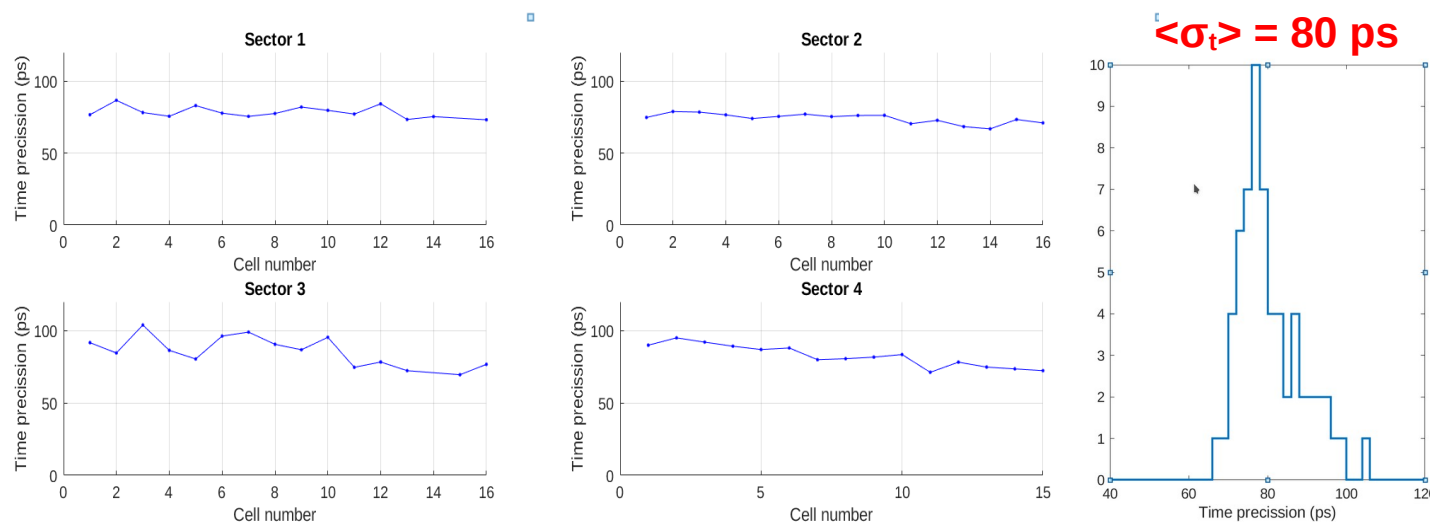
Production beam time (Feb 22) of the RPC-TOF-W (equipped with new DAQ system ~ 2300 ch).

- Design and construction of the RPC-TOF-FD.

Full TOF-FD constructed and installed @ GSI (Dec 21). 6 weeks of operation (Feb 22) at a higher working temperature to improve the counting rate capability of the system, **the first implementation of its kind in the world.**

600 Hz/cm² at 31.5 °C and a x4 demonstrated.

NIMA 1050 (2023) 168182, NIMA 1045 (2023) 16765



HADES. SOWT and next years planning

Strengths & opportunities

- The skills and accumulated know-how on the construction of RPCs allowed us to build a detector able to run within specifications and flawlessly during all campaigns, and which probably is **the detector of its kind with best performance in the world.**
- The performance and reliability demonstrated by the **RPC-TOF-W** is a good **recommendation letter** for other experiments.
- The **RPC-TOF-FD** has demonstrated the viability of increasing the count rate capability of a RPC detector by increasing the operating temperature.
- HADES collaboration is a **source of state of the art, customizable (for us) Hardware.**
- **GSI/FAIR** is a very interesting place for **opportunities.**

Could be in the origing of recent collaboration with R3B

Weaknesses & threats

- The reduced number of team members and their commitments with other projects.
- The lack of funding may strongly compromise all the group activities. Collaboration strongly support the group.
- The **loss of the data analysis component** weakens the group.
- The apparent **un-attractiveness of HADES physics.**

For the moment we managed to survive including building a new detector.

Short-term plan: keep low profile and detectors running.