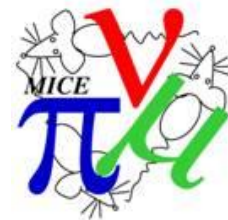


TOF Calibration ++

Y. Karadzhov



List of the available TOF Calibrations



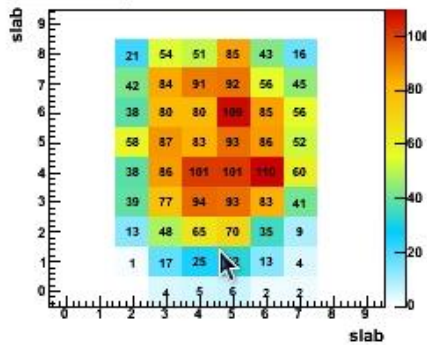
1. December 2009 - corresponds to the runs before 01466 (11 Feb 2010).
2. February 2010 - corresponds to the runs between 01466 and 01558 (11 Feb - 24 Apr 2010).
3. Current calibration - corresponds to the runs after 01558. This is now the default calibration in G4MICE.
4. August 2010 - additional calibration that corresponds to the same run period as the default one. **Be careful !!! This calibration is not complete -
NO CALIBRATION FOR TRIGGER IN TOFO
NO CALIBRATION FOR TOF2**

Nothing unexpected in the performance of the TOF detectors.



Status of the TOF Calibration

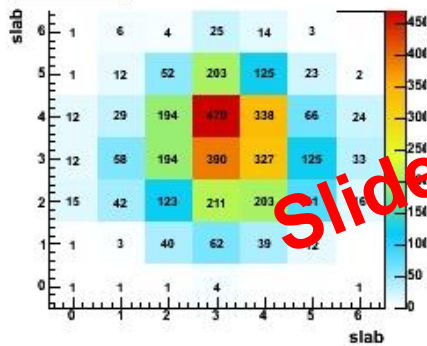
TOF0 profile



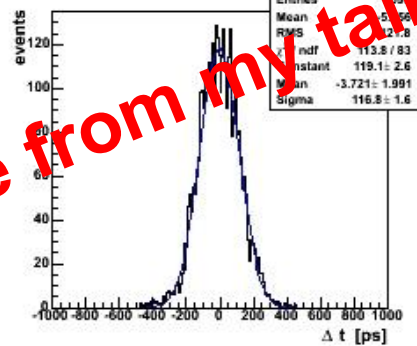
TOF0 resolution



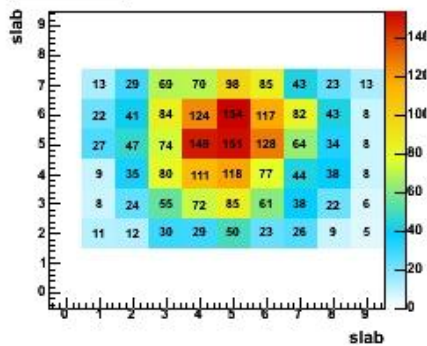
TOF1 profile



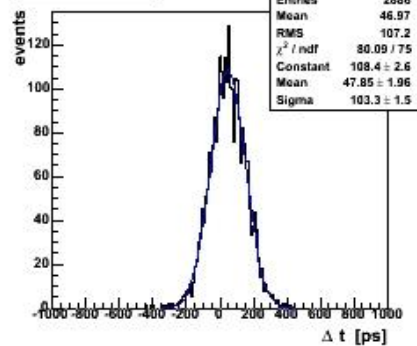
TOF1 resolution



TOF2 profile



TOF2 resolution



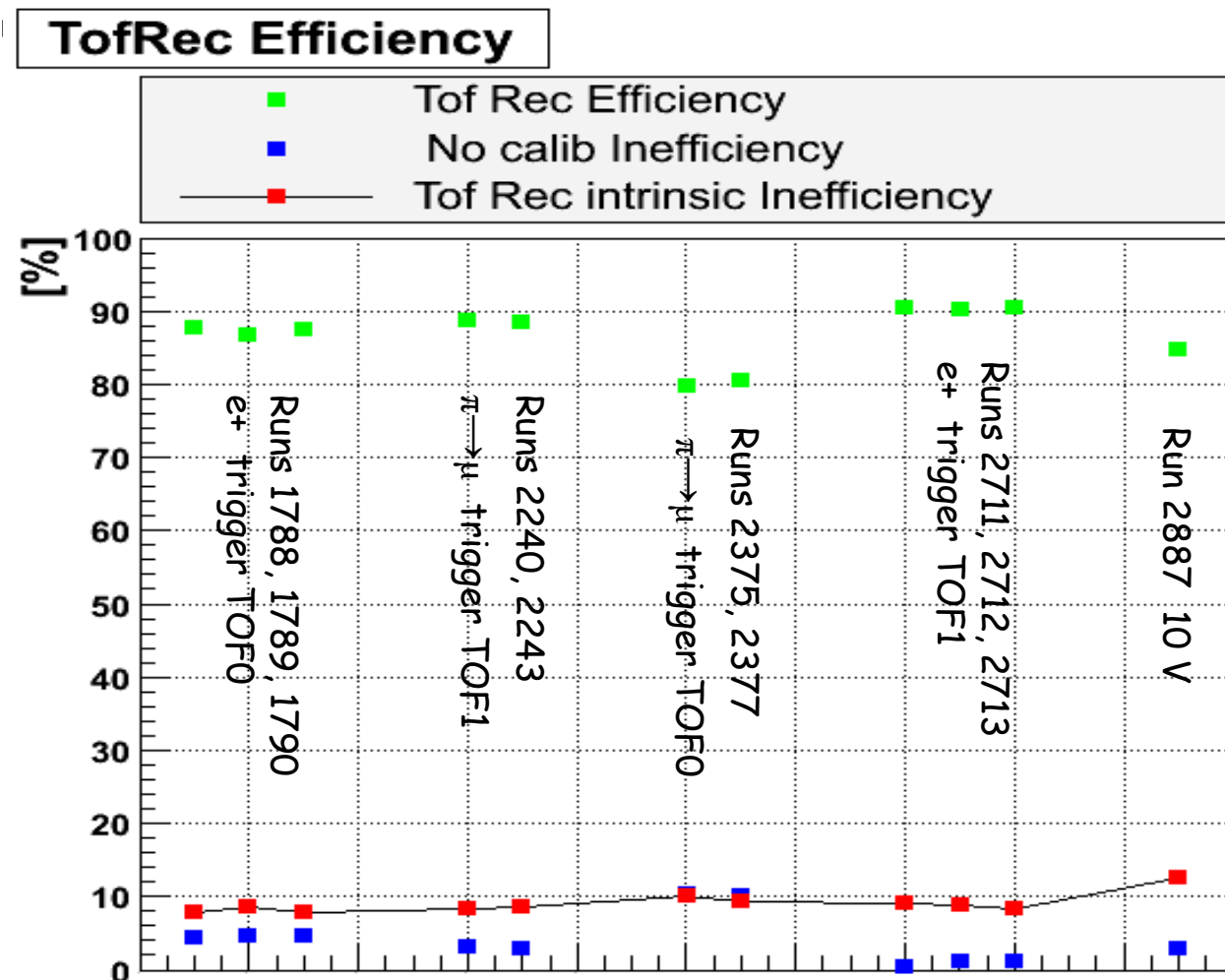
Time resolution after the calibration:

- TOF0 - 51ps;
- TOF1 - 58ps;
- TOF2 - 52ps.

Be careful. These distributions depend on the beam shape, therefore the resolution is different in the different runs! Also these distributions are blind for some systematic effects.

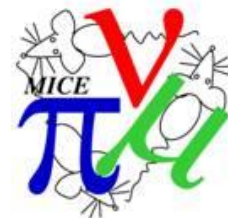


Reconstruction efficiency





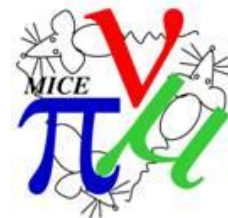
Interface between ToFRec and Configuration Database



- The client code for communication between G4MICE and Configuration Database is now improved and debugged.
- The TOF Reconstruction can now communicate with the Configuration Database. For the moment this is used only to set the proper trigger at the beginning of the run.
- Next step is to use DB to load the proper calibration and cabling.
- See DBExample application for an example how to get information from the Configuration Database.



Conclusions



1. The performance of the TOF detectors is stable , but the resolution depends from the beam profile.
2. Intrinsic inefficiency of the reconstruction is stable.
3. Interface between TofRec and Configuration Database is almost done.
4. Documentation and example application are under development.