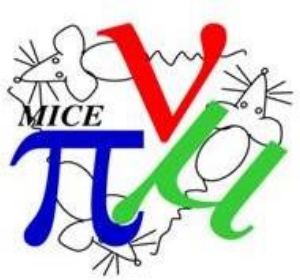



# *TOF updates*

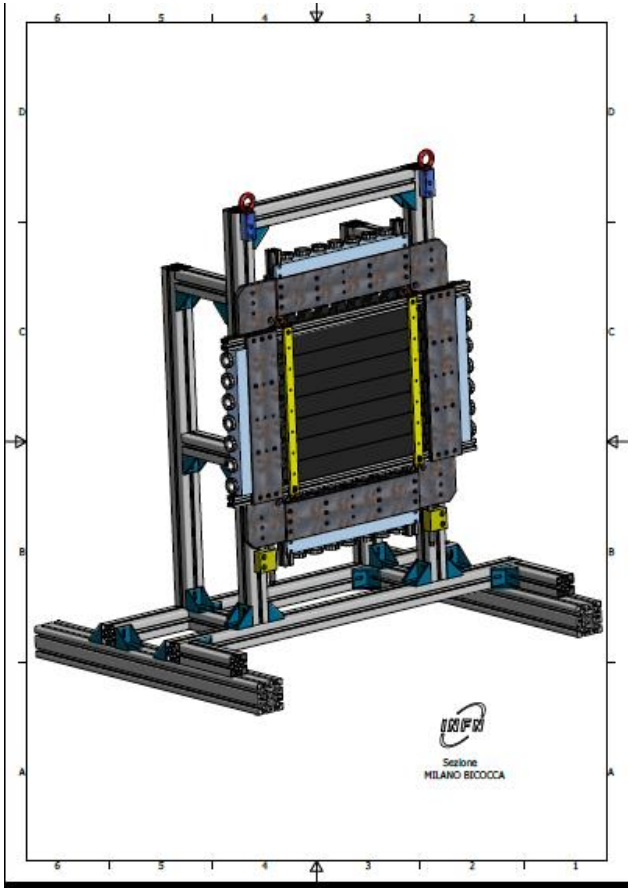
**M. Bonesini**

**Dipartimento di Fisica G. Occhialini**
**Sezione INFN Milano Bicocca**

# Outline

1. TOF hardware status
2. Survey of TOF stations
3. Some data from 2015 run

# Main new issue: TOF1 local shielding

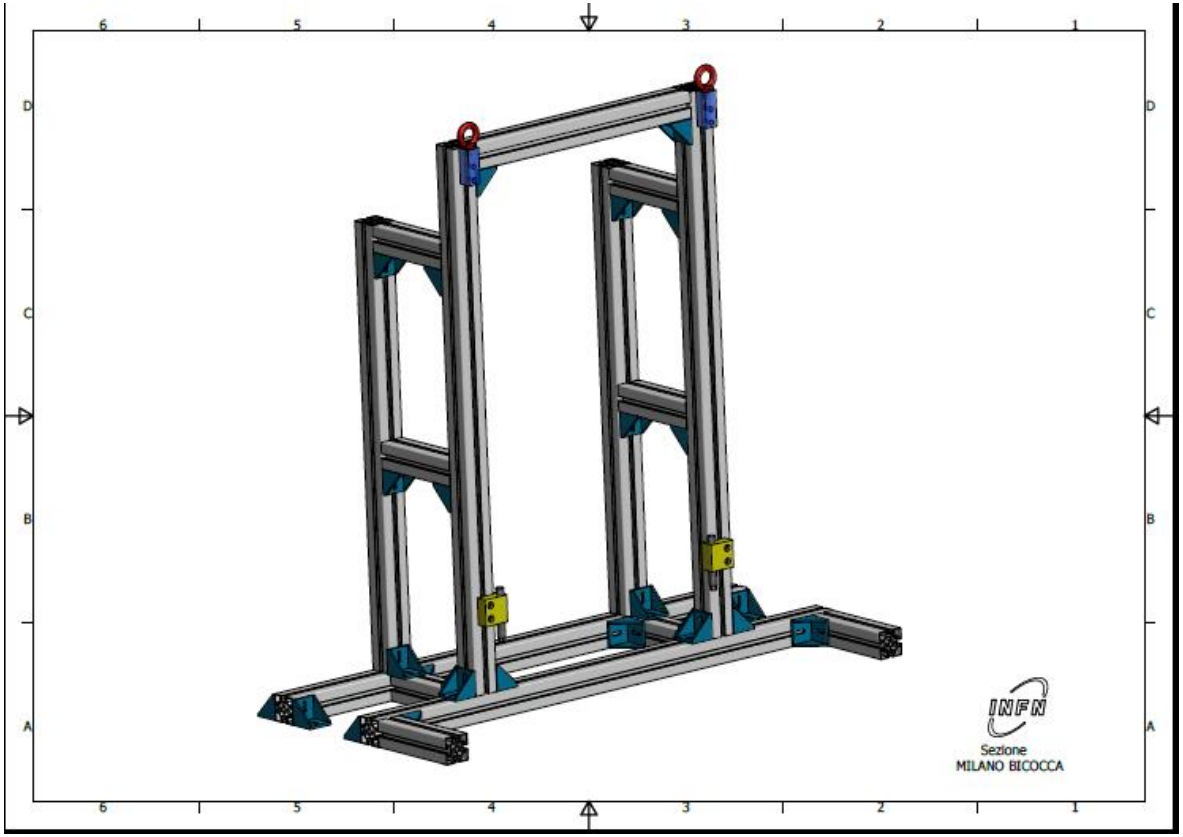



- Keep present mechanics structure for TOF1
- Adds only ARMCO plates for shielding
- to a reinforced structure
- Avoiding to move TOF1 detector from MICE Hall

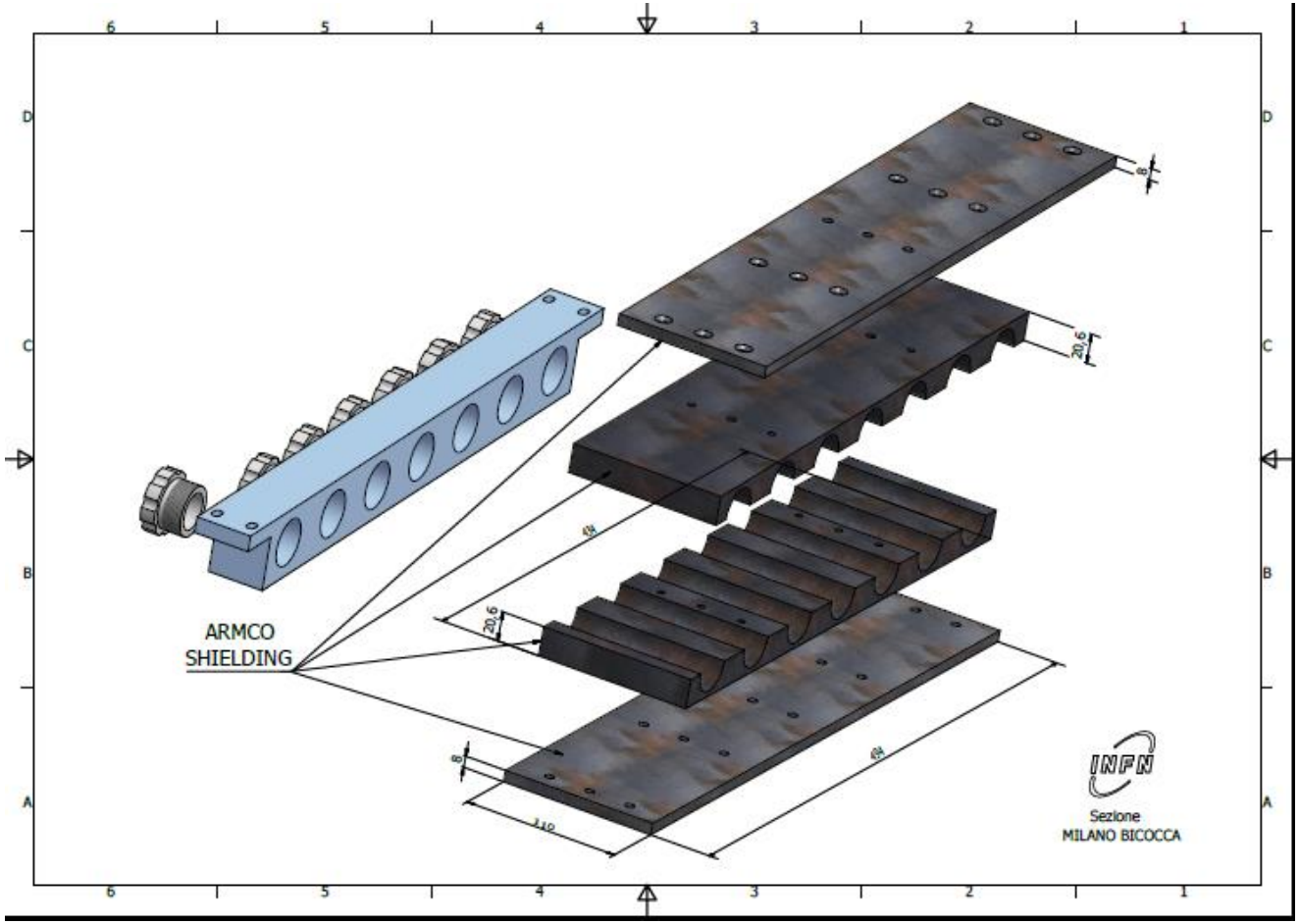
**OPERATIONS:**

- Survey of existing TOF1
- Costruction at INFN MIB of local shielding pieces and new support
- Installation at RAL

# New TOF1 support structure



# Mechanical pieces

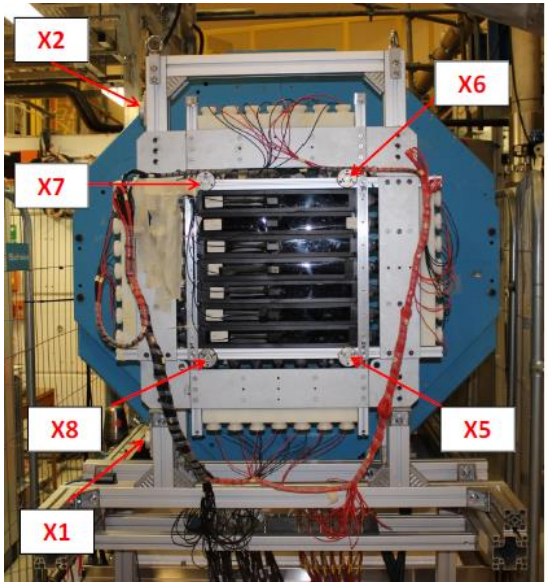


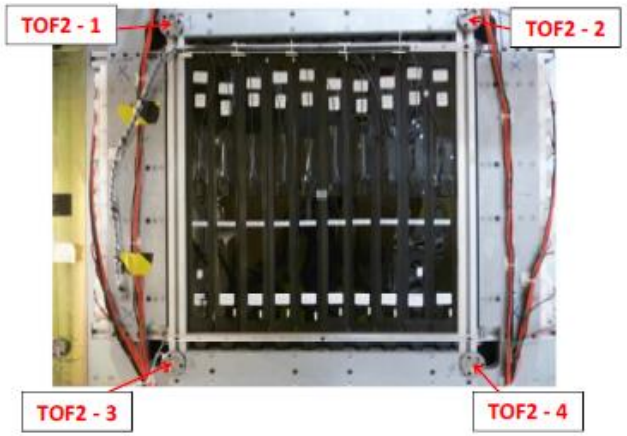
# Some images of the operations

# Foreseen hardware operations

- As many operations were done on TOF1/TOF2 (crane up/down of TOF1, sliding upstream of TOF2/KL/EMR) many PMT cables' labels has gone "banana". We will try to check everything just before CM43 (MB+AdB)
- In the same time we will check PMTs

# TOF1/TOF2 survey



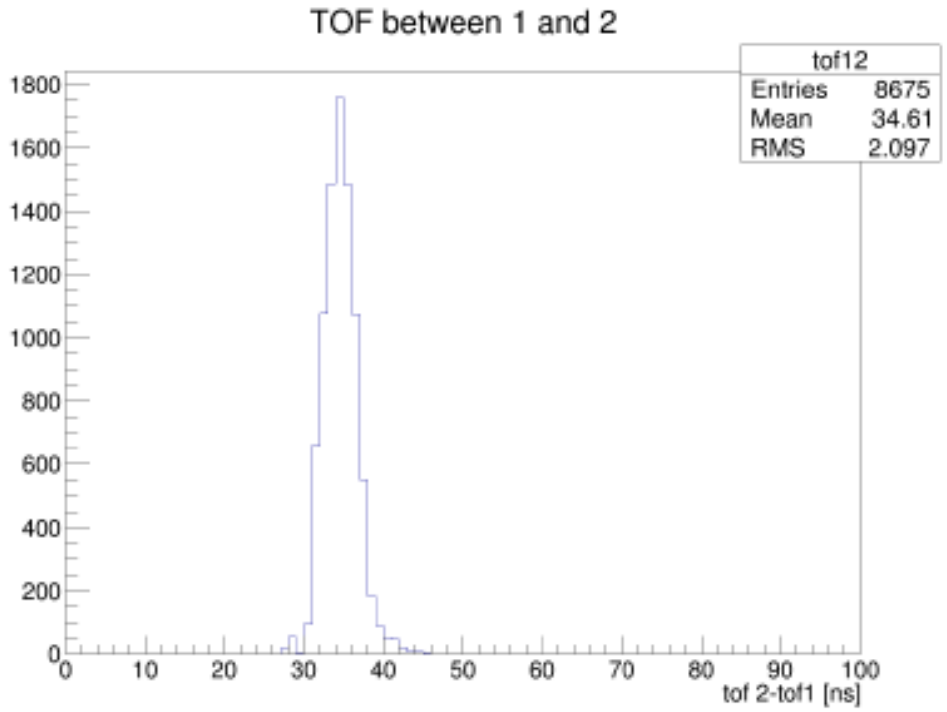

- 8 survey points for TOF1 (on its frame)
- Last survey on 28/07/15
- overall RMS for point error 0.02 mm

- 4 survey points on TOF2
- Last survey 20/07/15

# Readiness of TOF system for STEP IV

- The TOF system (TOF0,TOF1,TOF2) is working smoothly since 2009 and we do not foresee problems for STEP IV operations
- The only difference is the presence of fringe fields from solenoids (but shielding must work is simulations were correct)

# Just one plot from C. Rogers




- From July data
- TOF0/TOF1 calibrated

# Conclusions

- Local shielding of TOF1 implemented to reduce operation risks
- TOF system is ready to take STEP IV data. The only problem we fear is that PMTs are now ~ 6 years old and we have not many spares
- documentation has been updated (eg local operations of TOF HV, thanks AdB)