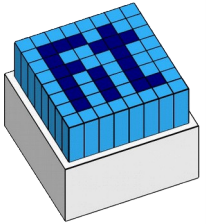


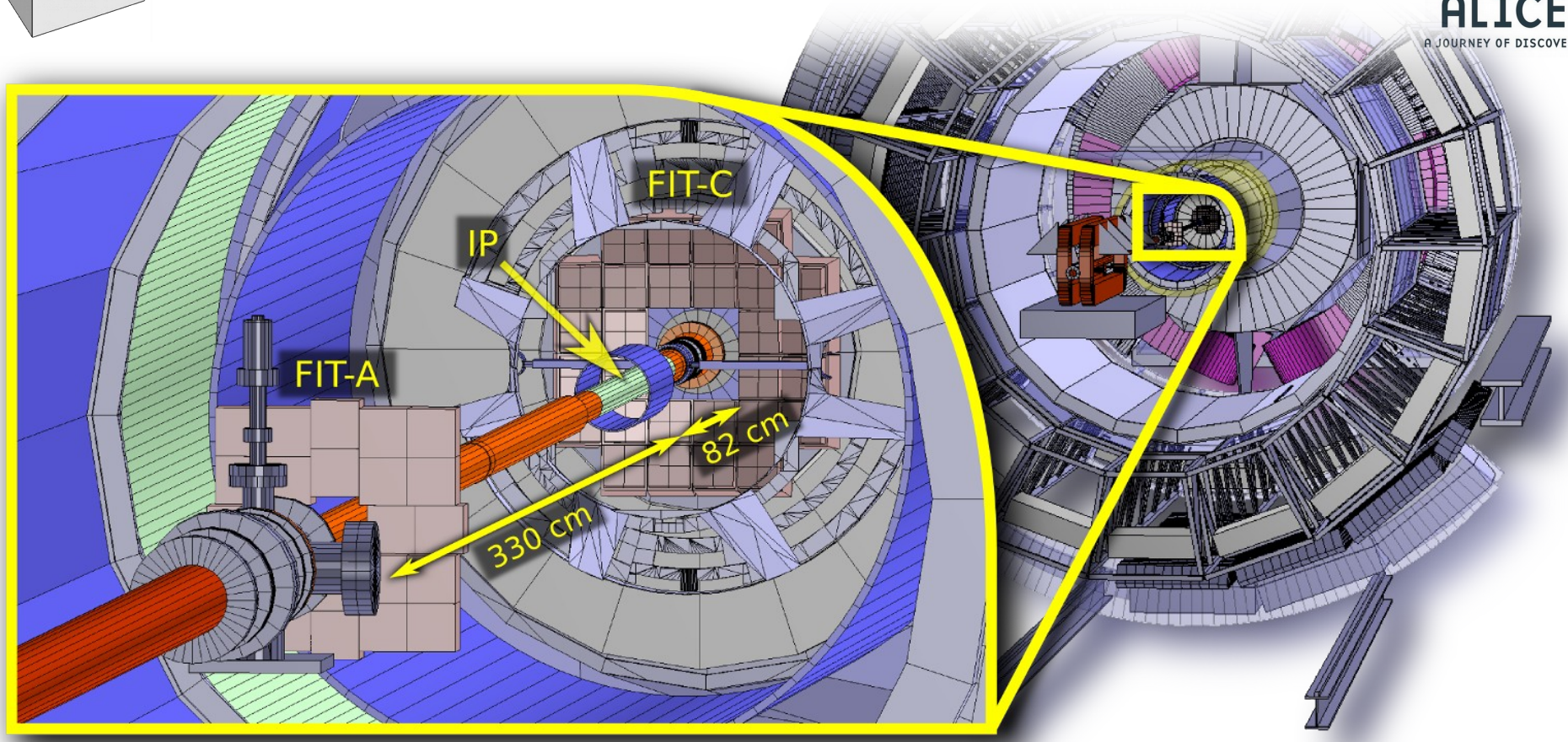
FIT beam test at T10
19.09 – 3.10

PS/SPS User’s meeting
27.09.2018, CERN

Maciej Slupecki
University of Jyvaskyla, Finland

UNIVERSITY OF JYVÄSKYLÄ

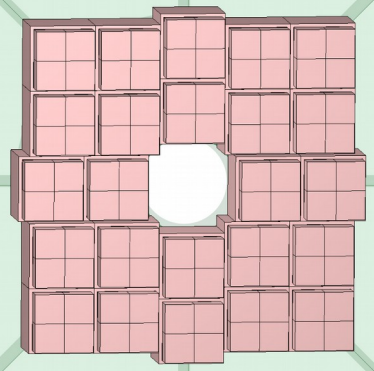
FIT after ALICE Upgrade



Goals of the Fast Interaction Trigger Detector

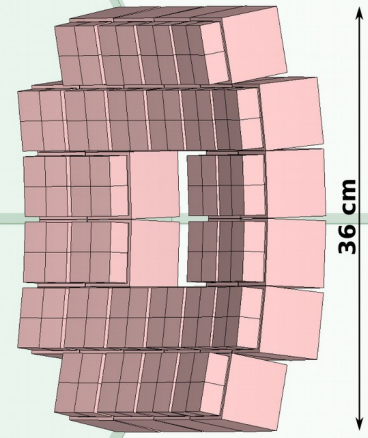
- **Luminosity** monitoring & feedback to LHC
  - Essential for the operation of ALICE
- Fast Interaction **Trigger**
  - Online Vertex determination
  - Minimum Bias and centrality selection
  - Rejection of beam/gas events
  - Veto for Ultra Peripheral Collisions
- **Multiplicity → Centrality** and **Event Plane**
- **Collision time** for Time-Of-Flight particle ID

FIT A-side



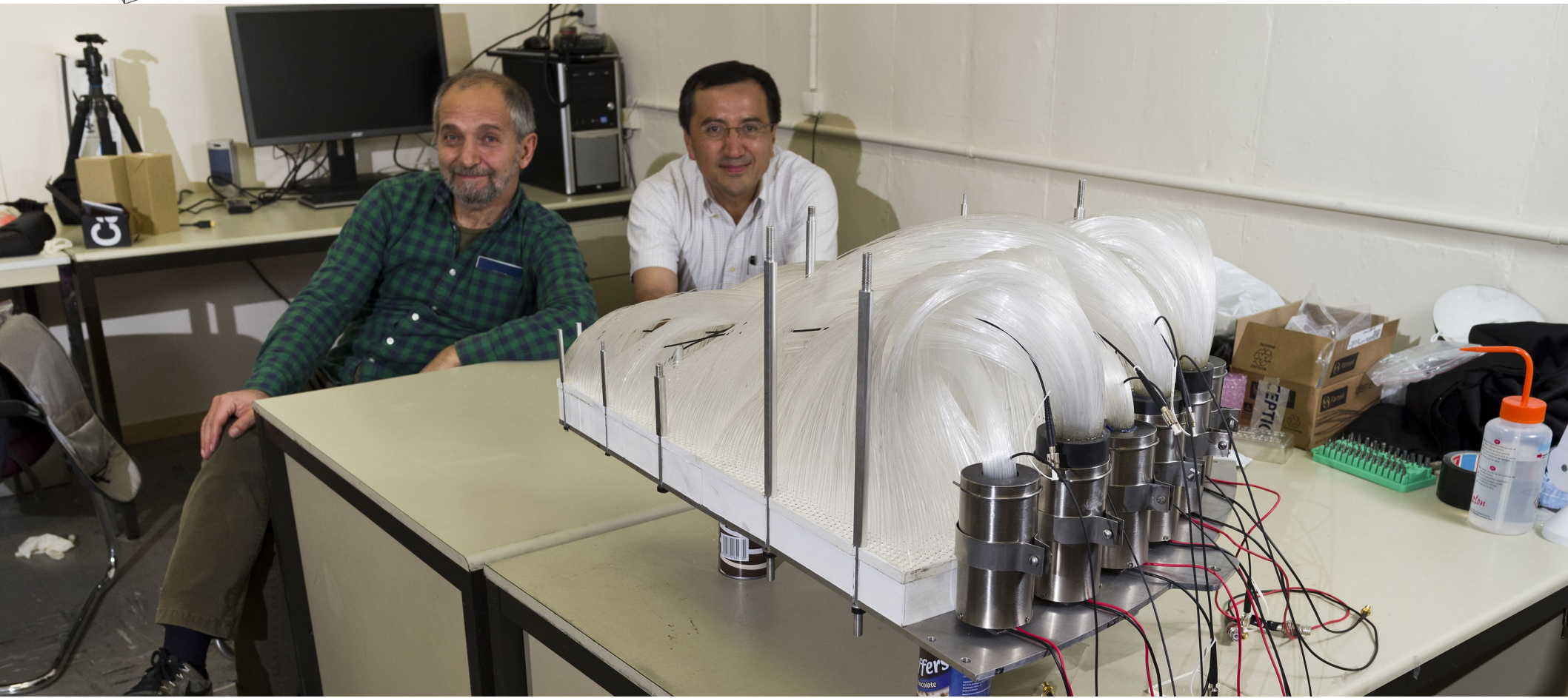
T0A+: 3.8 ≲ η ≲ 5.0
V0+: 2.2 < η < 5.0
V0+ diameter: 148 cm

FIT C-side



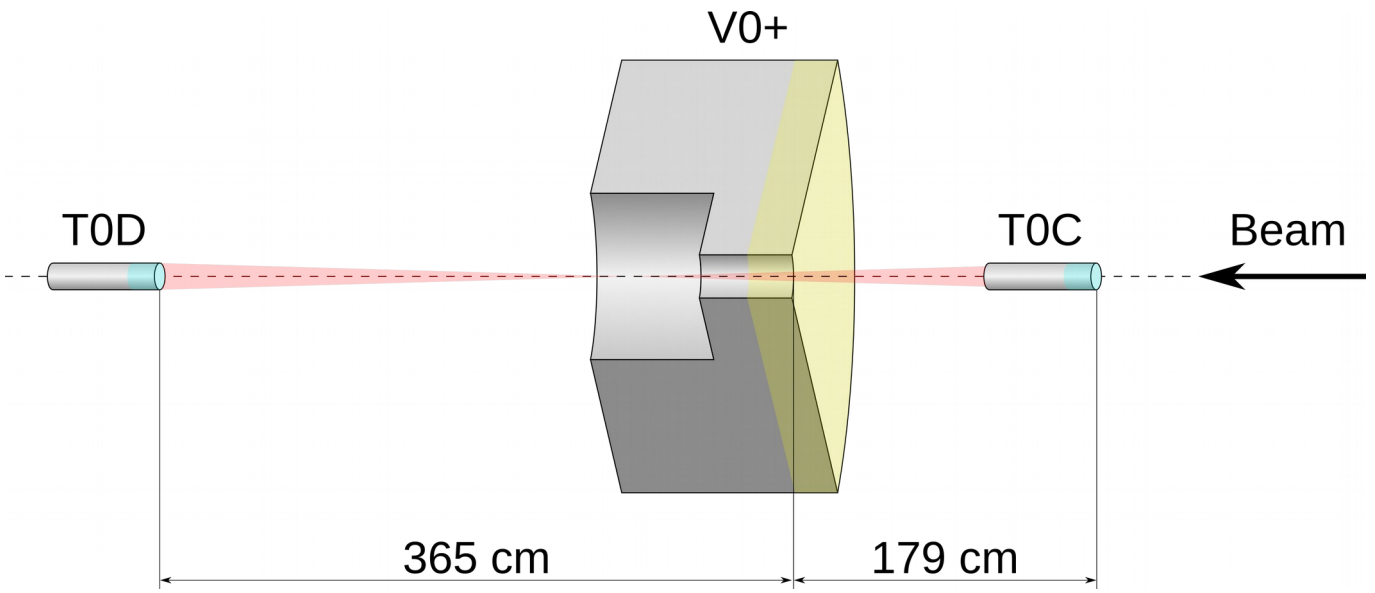
T0C+: -3.4 ≲ η ≲ -2.3

Detector prototype assembly
1/8th of full V0+ detector



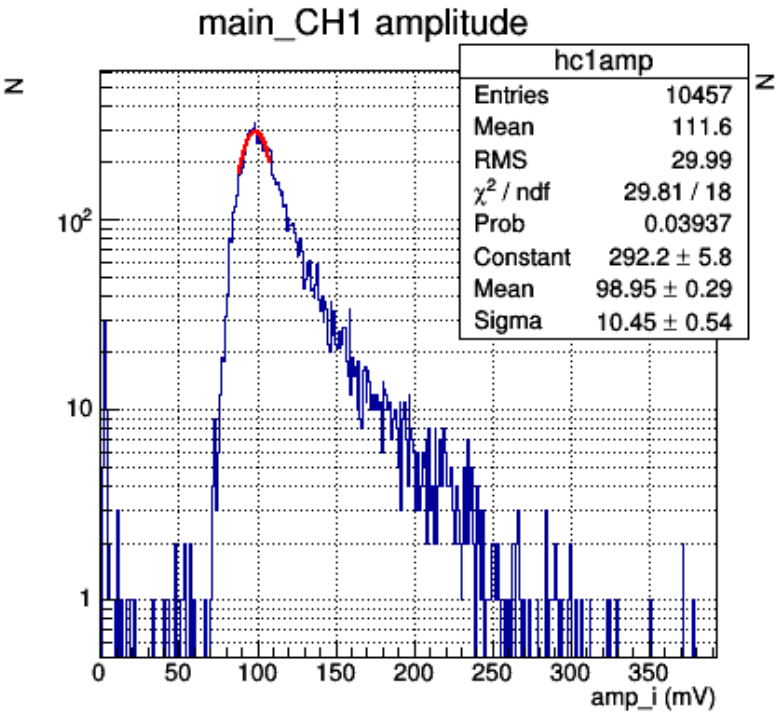

Chocolate

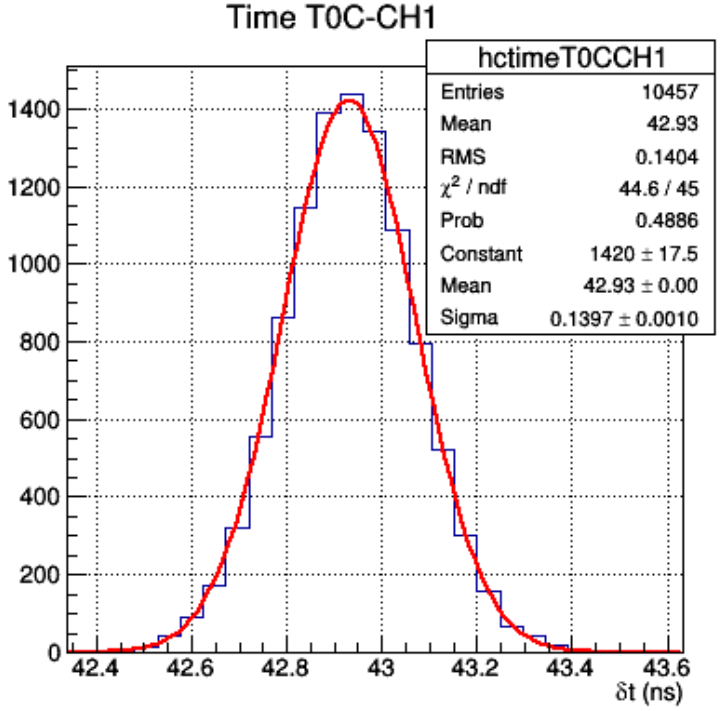
Goals of the beam test



- Surface uniformity scan
- Time resolution check
- Cross-talk checks
- Test of mechanical design and servicing solutions
- Effects related to bent fibers (signal attenuation, cross talk)

Preliminary results
Examples of time and amplitude distributions

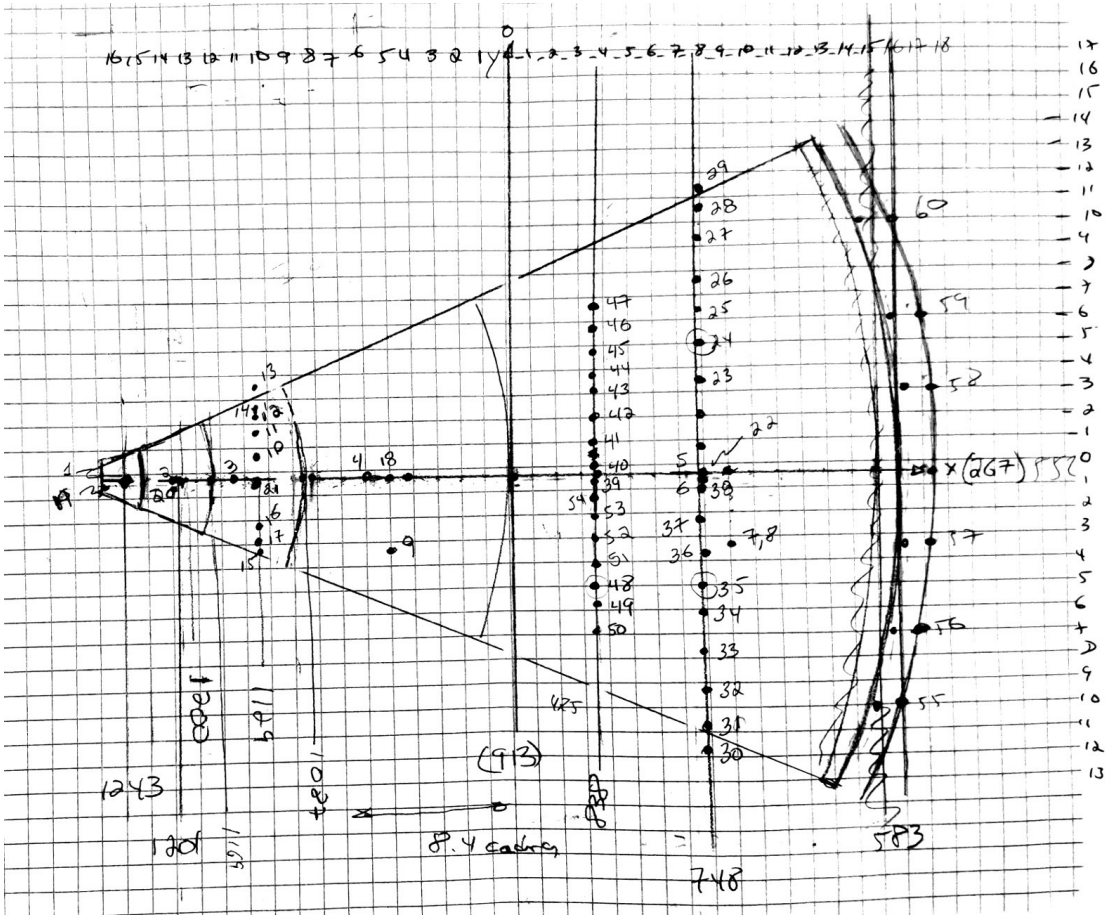




Time resolution ~140 ps for the inner ring

- For outer ring: 300 ps due to larger pitch of the optical fibers

Status of surface scan



Thank you for the beam

ALICE
A JOURNEY OF DISCOVERY