

# **H8 Beamtime ATLAS Micromegas**

## **5. June – 19. June 2024**

**Theodoros Alexopoulos, NTUA Athens**

**Nikolaos Kanellos, NTUA Athens**

**Foteini Kollitsi, NTUA Athens**

**Giannis Mesolongitis, NTUA Athens**

**Spyridon Kompogiannis, Aristotle University of Thessaloniki**

**Givi Sekhniaidze, INFN Napoli**

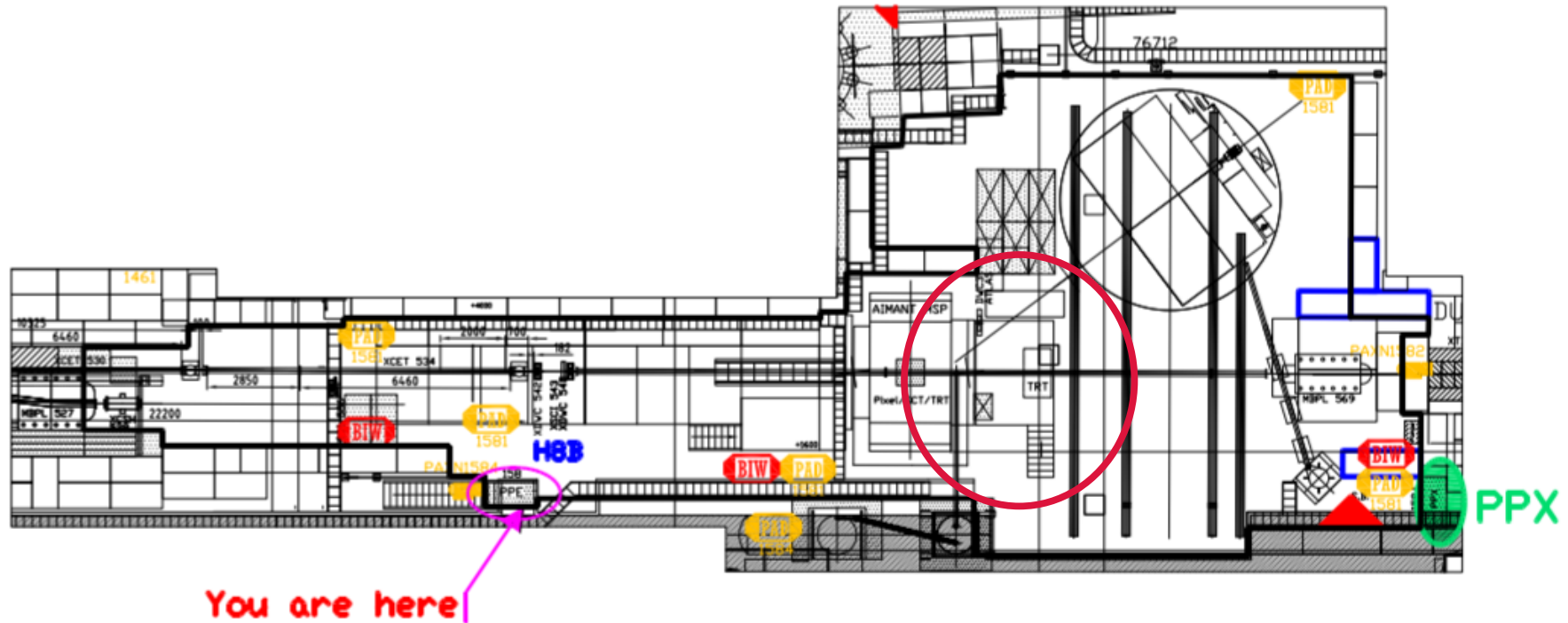
**Valerio D'Amico, LMU Munich**

**Fabian Vogel, LMU Munich**






**Ralf Hertenberger, LMU Munich**



# Beam H8 - PPE158



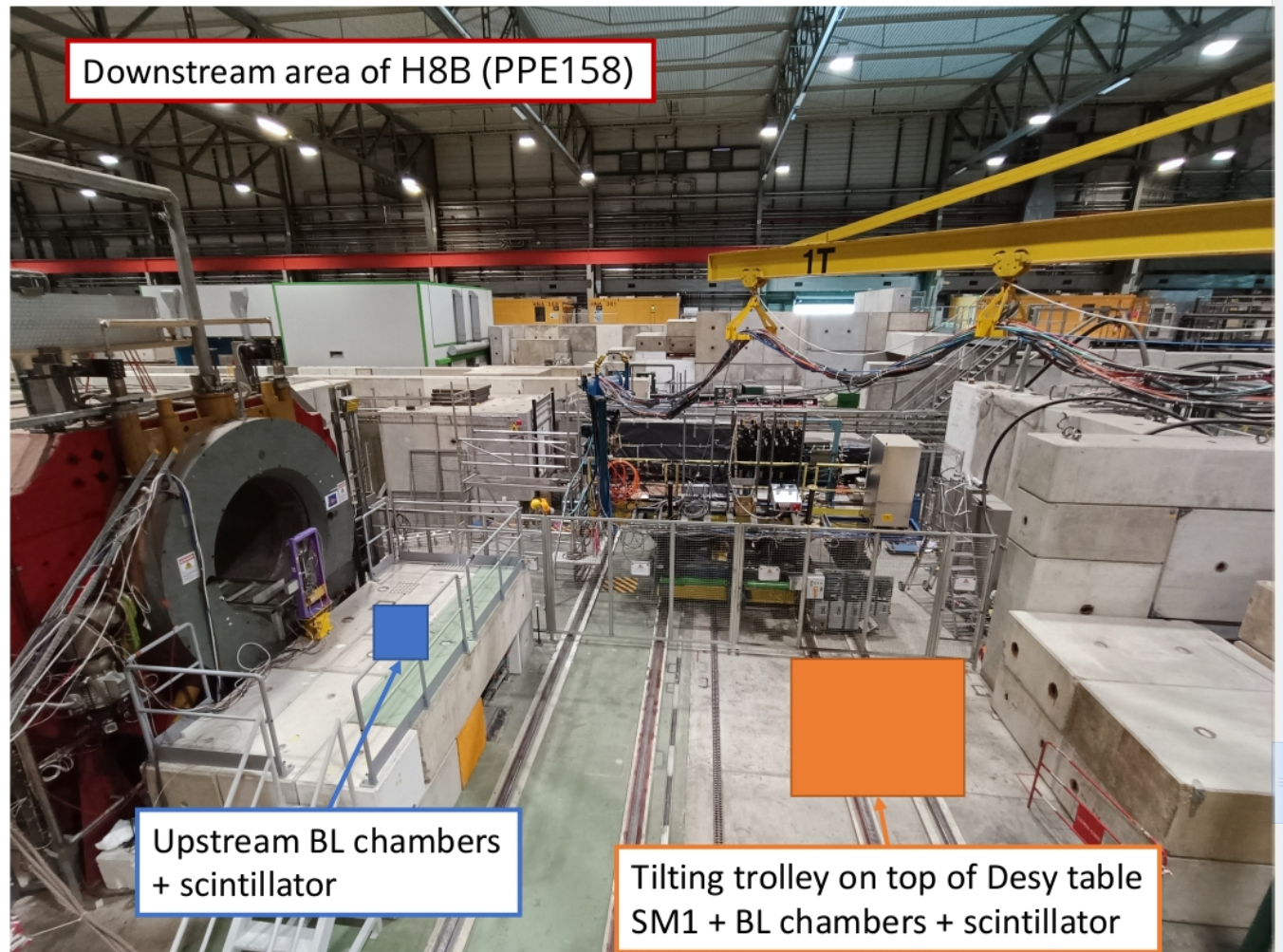
You are here

- 1  Exit door PPX / PPG
- 1  Patrol box
- 3  Flash Beam Imminent Warning
-  Radiation display
-  Radiation monitor

For access problems  
please contact CCC: 77500

# Location

- **We will be in the downstream area**
- Upstream BL chambers setup will be on the platform (beam height 125 cm)
- Tilting trolley will be on the orange Desy table, about 5 m distant from the upstream chambers
- Desy table will be fixed on concrete blocks of 40 cm height, placed next to the rails
- Lowest position of the Desy table is about 68 cm + the 40 cm of the blocks
- Final base height is 108 cm
- Beam height is 280 cm from the floor and 125 cm from the floor of the upstream balcony





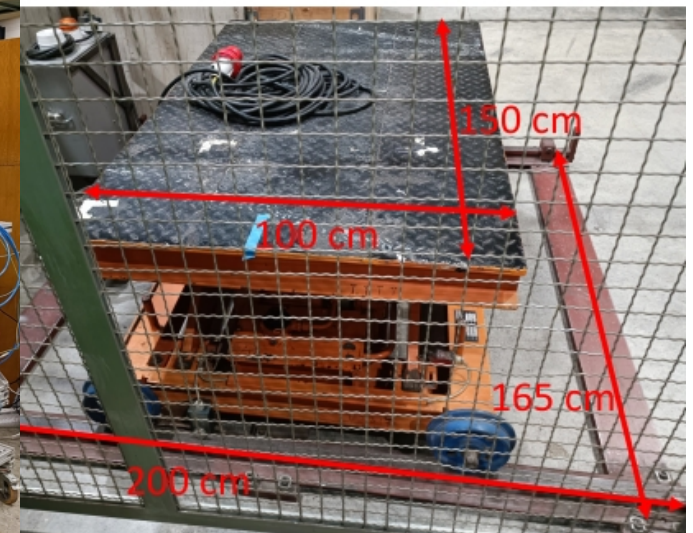
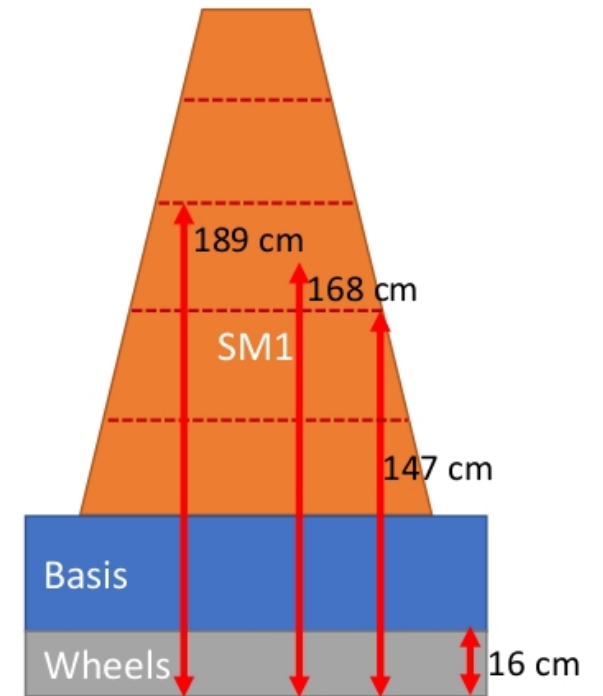
2 concrete blocks are needed in "downstream" area

+ DESY table

our "tilting trolley" will sit on DESY table  
( SM1 chamber + 2 ref.chambers)

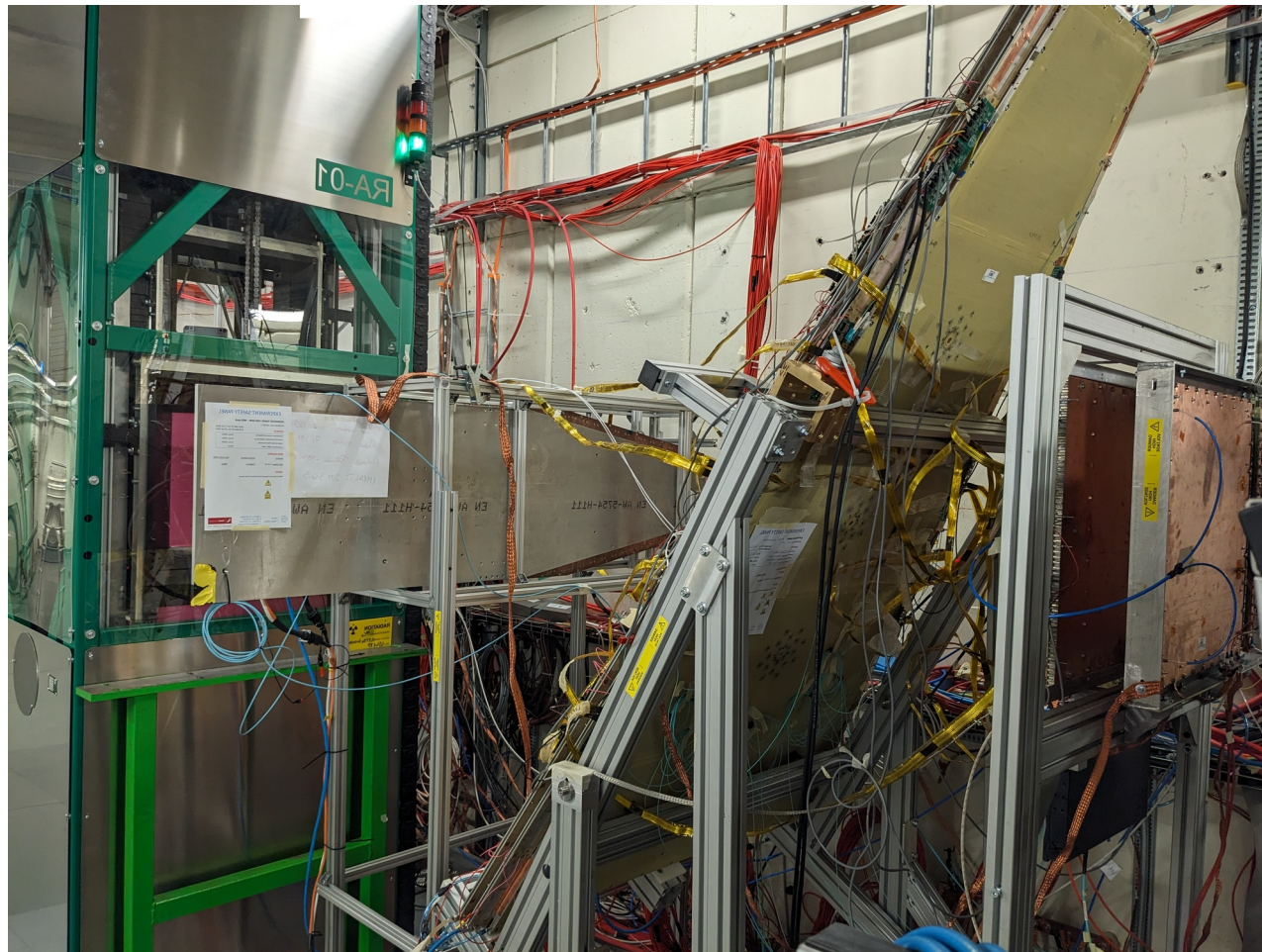
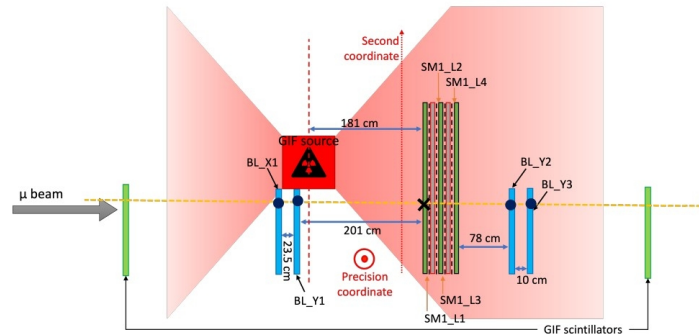
reference  
chambers

"tilting  
trolley"



DESY table





setup used in  
GIF++ 2023

SM1 +

2 ref. chambers

# Available Is/Are:

exp. setup tested in BB5 since 2 weeks ( successful )

chiller for eltx-cooling is available ( movable by hand )

installation of gas-lines and gas-system  
will be performed by ourselves

2 x 50l Ar:CO<sub>2</sub>:C<sub>4</sub>H<sub>10</sub> 95 bar is available  
1 bar working pressure, non-burnable

internal transport to Preveessin on 3./4. June  
storage in GIF++ preparation zone

ISIEC document is prepared  
safety inspection 5. June 17h

# Requirements:

**5. June 2024:**

**crane in the morning ( before noon ):**

- **2 concrete blocks for rails ( Desy table )**
- **DESY table**
- **detectors:**
  - **SM1 on tilting trolley**
  - **2 reference chambers ( upstream )  
incl trigger scintillators**
  - **2 reference chambers ( downstream )**
- **2 racks ( crates )**
- **CAEN HV frame**
- **???**





# Plan:

high statistics investigation of the surface of sector 3 of SM1 M40  
in fine granularity

scan every 5 cm of sector 3 in 2 dimensions  
perpendicular beam and 20 deg + 30 deg tilted incidence  
requires DESY table / platform

$3 * ( 12 * 8 ) = 288$  beam positions / measurements @ 500k events

125k pions (150 GeV) per spill or a bit more => 4 spills per data point

=> 1 week of uninterrupted data taking

100 l premixed gas Ar:CO<sub>2</sub>:C<sub>4</sub>H<sub>10</sub> 93:5:2 is available (non-burnable)

detector setup is assembled, tested @ H4, 4 reference tracker, VMM

flow meters, pressure sensors, etc. available  
needs installation in H8