

DRD1 H4(PPE134) 2024 Test Beam

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Generic and Application driven R&D

Technologies: Micromegas, uRWELL, uRGroove, GEM
Application: High Rate, Timing, Calorimetry
Readout: Capacitive Coupling, Resistive Sharing

Project driven R&D

FCC-muons uRWELL/TIGER

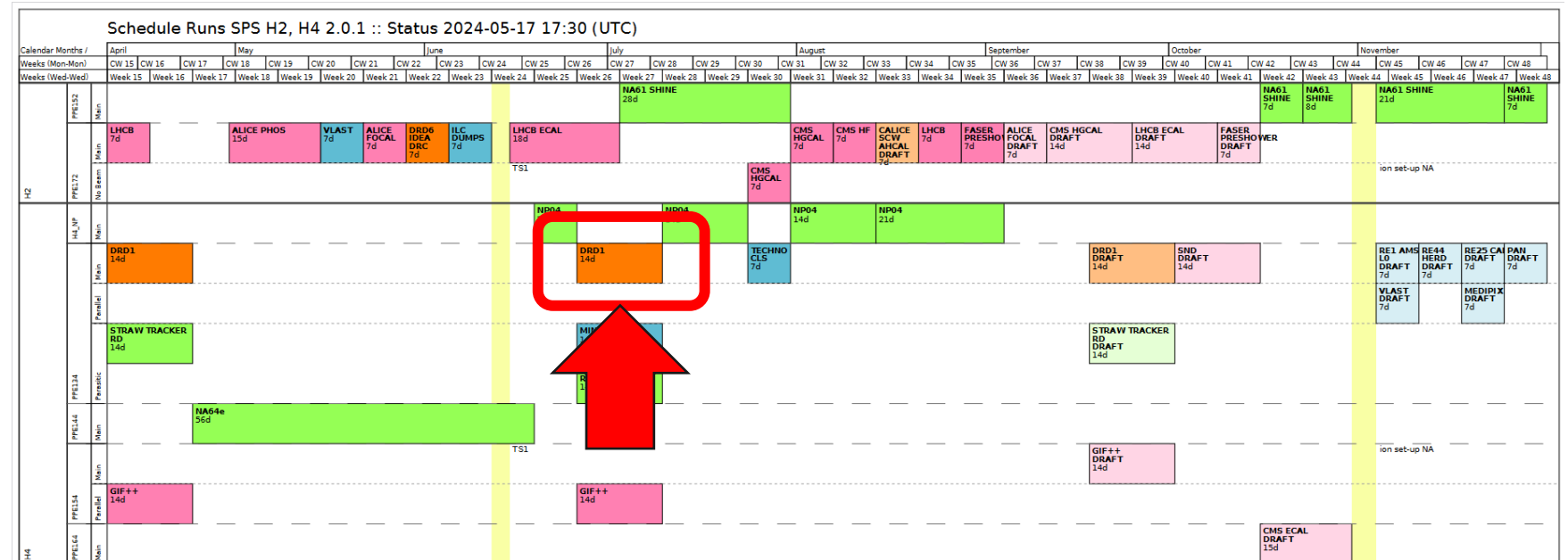
Detector Commissioning

Twin TPC for MIXE

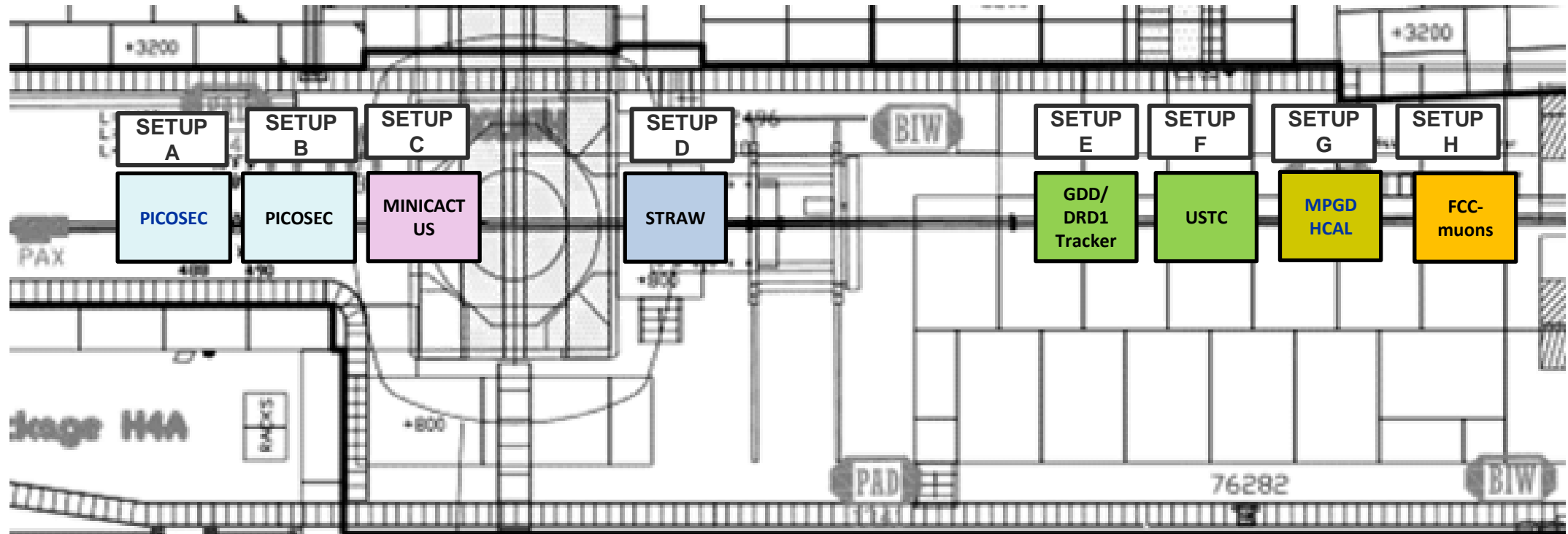
FE electronics and DAQ

Straw, VMM3a and TPC

Wed. 26/06/2024 – Wed. 10/07/2024

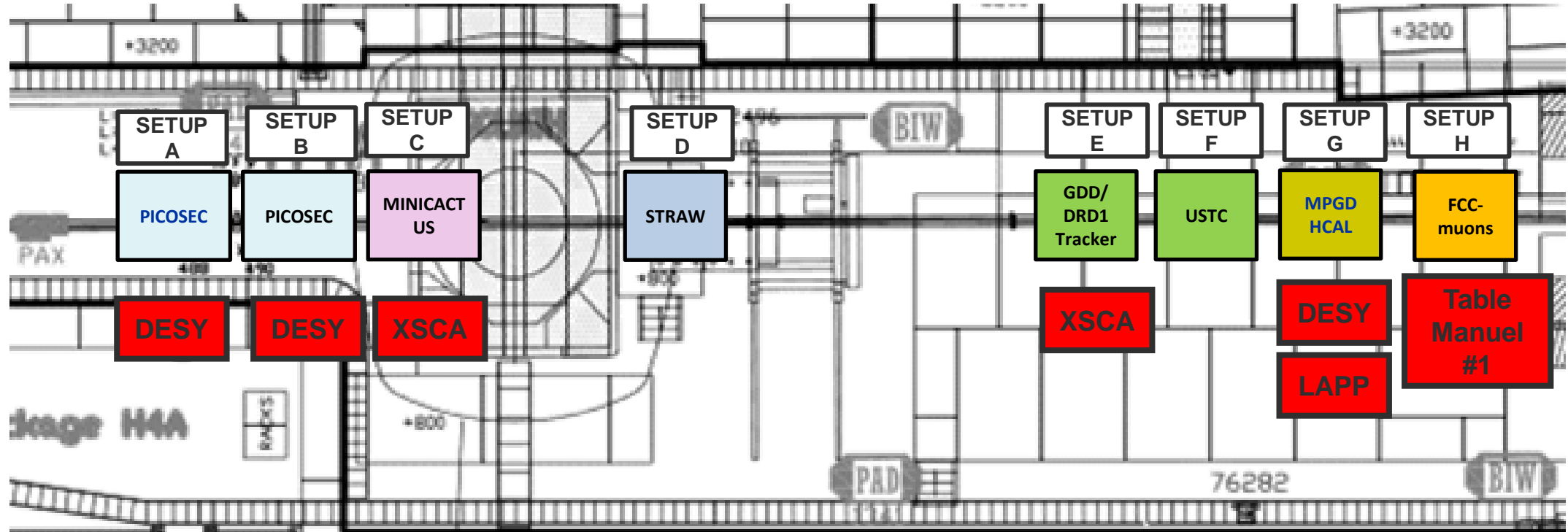


BEAM H4, PPE134 – INSTALLATION (DRD1, June 26 – July 10)



- SETUP A, B: PICOSEC (F. Brunbauer, M. Lisowska)
- SETUP C: MINNICACTUS (P. Schwemling)
- SETUP D: STRAW (T. Enik, K. Kuznetsova)
- SETUP E: GDD/RD51 Tracker (K. Floethner)
- SETUP F: USTC (Y. Zhou)
- SETUP G: MPGD HCAL (L. Longo, A. Pellecchia)
- SETUP H: FCC-muons (G. Cibinetto)

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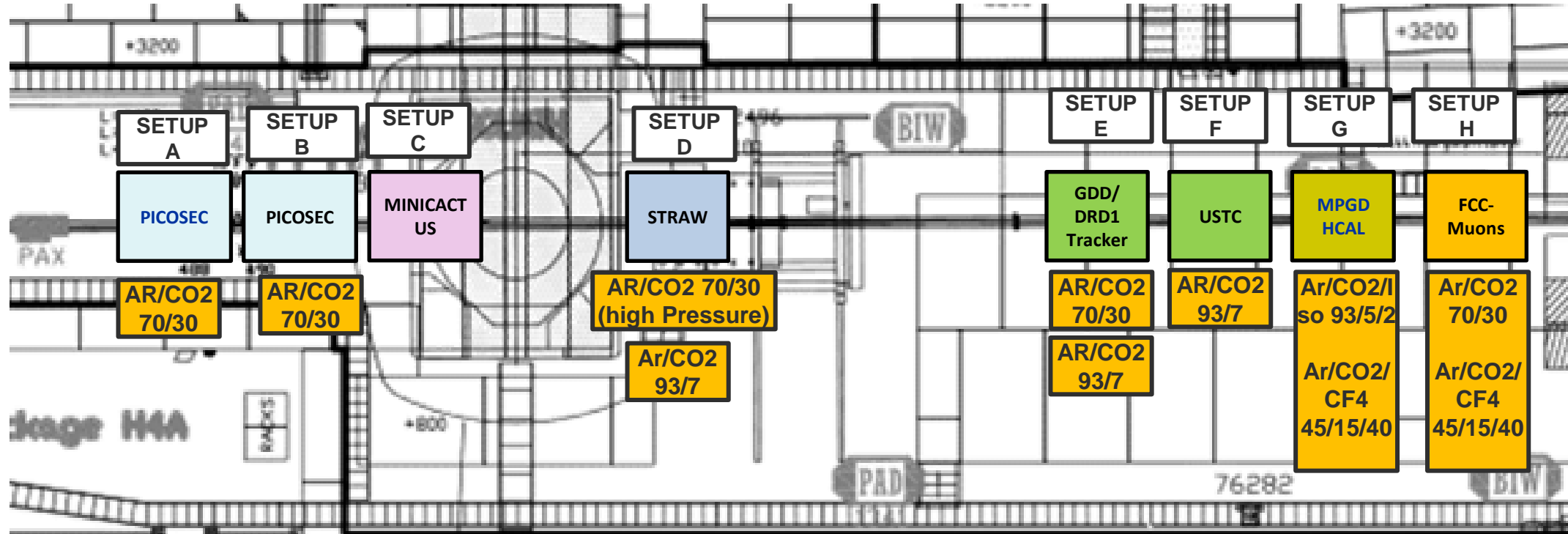


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SUMMARY:

- 3 x Desy Table
- 2 x XSCA table
- 1 x LAPP table
- 1x Manual #1

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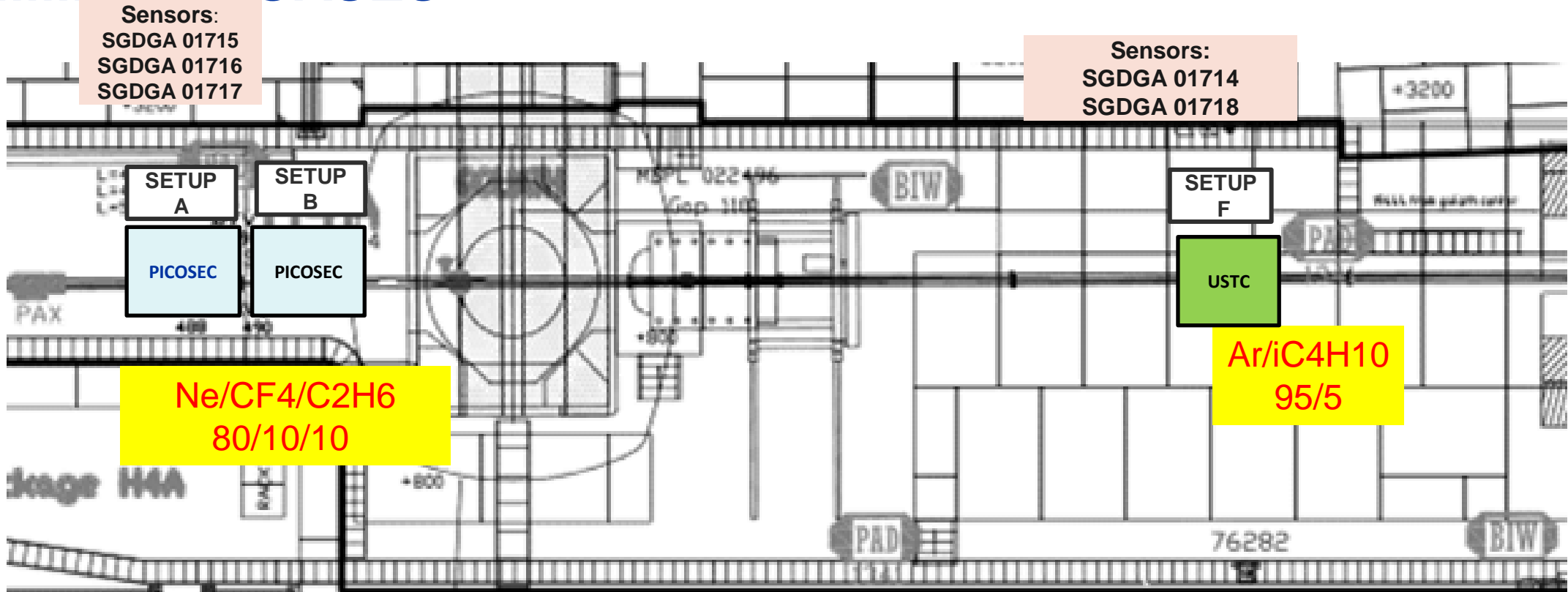
UPSTREAM PANEL

1. Ar/CO2 70/30 (A, B)
2. Ar/CO2 70/30 (F)
3. He/CO2 90/10 - 70/30
4. Ar/CO2 [HP] 70/30 (C)
5. Ar/CO2 93/7 (C)

DOWNSTREAM PANEL

1. Ne-C2H6-CF4 (A,B)
2. Ar/iC4H10 95/5 (G)
3. Ar/CO2/iC4H10 93,5,2; Ar/CF4/iC4H10 88/10/2 (D)
4. Ar/CO2 93/7 (F, G)
5. Ar/CO2 70/30 (H)

FLAMMABLE GASES



- SETUP A, B: PICOSEC micromegas:
Ne/CF4/C2H6 80/10/10 (LINE 51 from 909)
- SETUP F: USTC uRGroove:
Ar/iC4H10 95/5 (LINE 31 from 909)

SENSORS IN GAS ZONE (887-R-C47) :
Distribution rack of gases coming from 909
SGDGA-01710 (middle)
SGDGA-01711 (bottom)

(New) Gas barrack with distribution panel (887-R-C47):
SGDGA-01712 (bottom)
SGDGA-01713 (top)

Beam Requirements

- **Mostly muons (highest intensity as possible)**
- **Pions shifts high rate**

GOLIATH

- **Not needed**

Backup

Outlets (PPE134)

EHN1, 887, H4(PPE 134)

Upstream Goliath

<https://network.cern.ch/sc/fcgi/sc.fcgi?Action=SearchForDisplay&Location=887-R-001>

0887/R-001 3707/01

0887/R-001 3707/02

Downstream Goliath (middle zone)

<https://network.cern.ch/sc/fcgi/sc.fcgi?Action=SearchForDisplay&Location=887-R-4010>

0887/R-4010 4010/01

0887/R-4010 4010/02

Downstream Goliath (end zone)

<https://network.cern.ch/sc/fcgi/sc.fcgi?Action=SearchForDisplay&Location=887-R-001>

0887/R-001 4410/01

0887/R-001 4410/02

Outlets (Control Room)

--- CONTROL ROOM ---

<https://network.cern.ch/sc/fcgi/sc.fcgi?Action=SearchForDisplay&Location=887-1-A47>

887/1-A47 4515/02

887/1-A47 4516/01

887/1-A47 4516/02

887/1-A47 4615/02

887/1-A47 4616/01

<https://network.cern.ch/sc/fcgi/sc.fcgi?Action=SearchForDisplay&Location=887-1-B41>

887/1-B41 4115/01

887/1-B41 4115/02

887/1-B41 4116/01

887/1-B41 4116/02

887/1-B41 4215/01

887/1-B41 4215/02

887/1-B41 4216/02

887/1-B41 4315/01

887/1-B41 4315/02

887/1-B41 4316/02

Additional tables in 887-R-C41 (storage close to H4)



LAPP Table (Max Chefdeville)



Blue Table



Alu Support