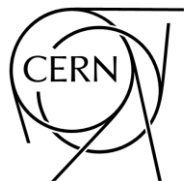
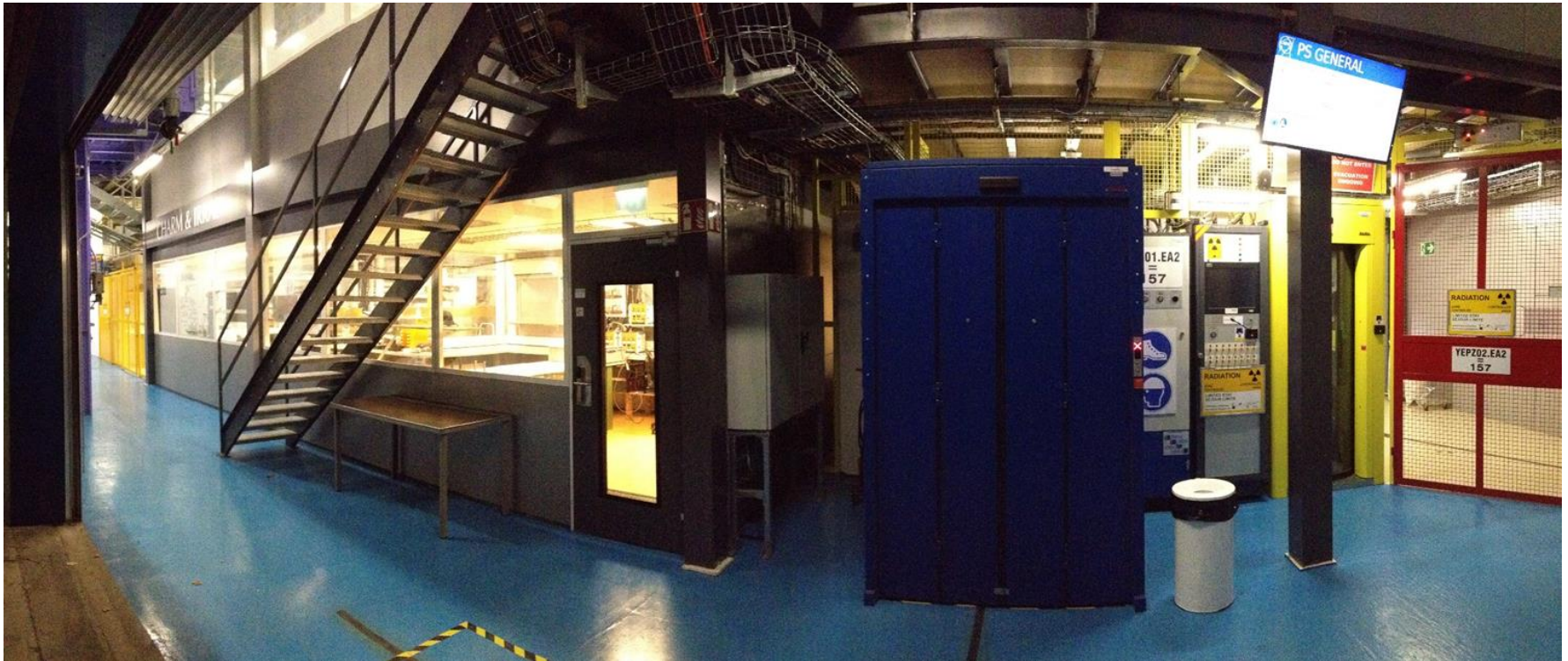


EA-IRRAD Facility: Summary of run 2018

Federico Ravotti (EP-DT) on behalf of **IRRAD**, **CHARM** (EN-SMM & STI) and **CSBF** (HSE-RP) teams



EATM meeting, 19/03/2019

EA-IRRAD Facilities

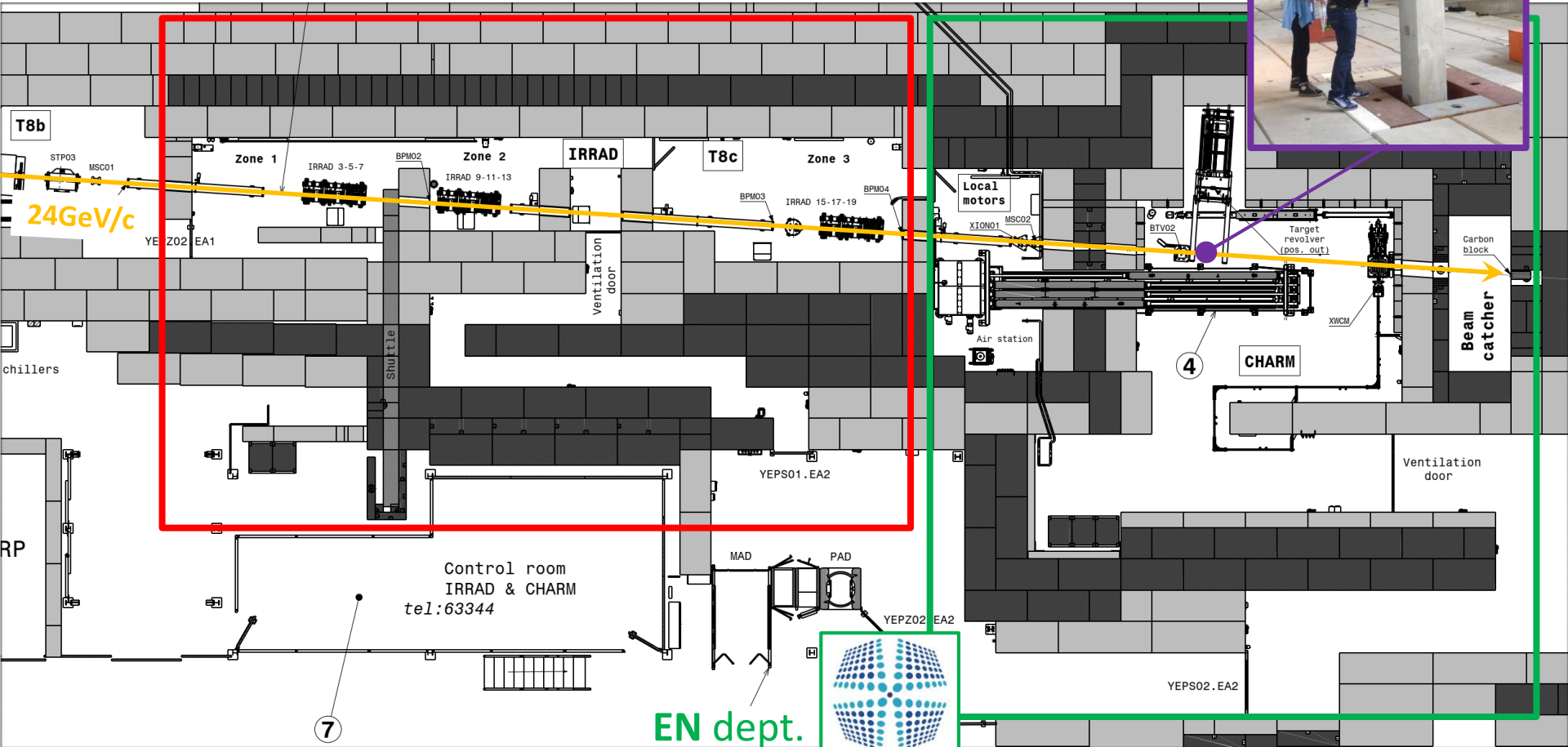


EP dept.

CSBF

CERN Shielding
Benchmark
Facility

RP group

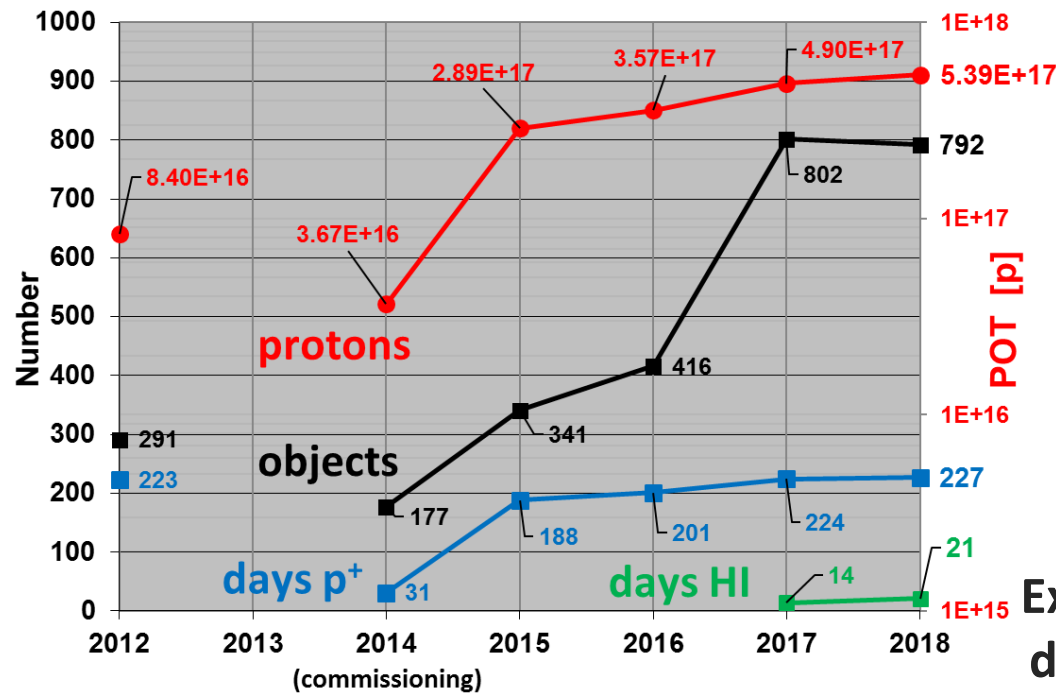


EN dept.

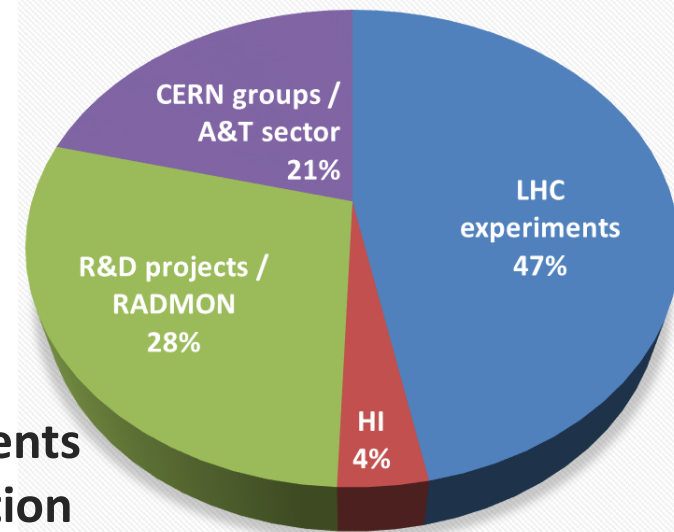


IRRAD: Summary Run 2018

- 81 experiments completed in 2018:
 - 92 users registered in the IRRAD Expt. Data Manager (www.cern.ch/irrad-data-manager)
 - 999 objects declared by the users
 - 792 objects irradiated

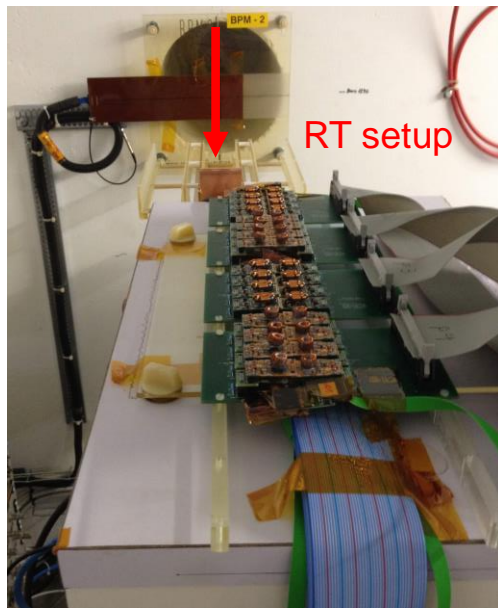


Experiments distribution



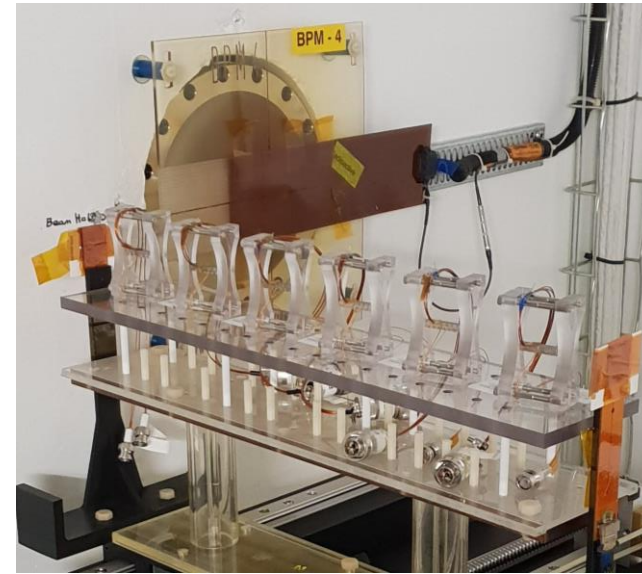
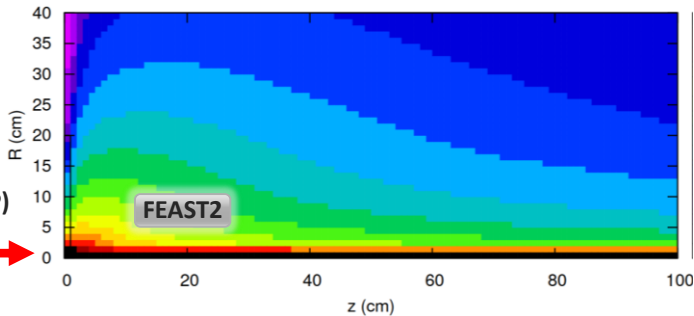
IRRAD: Experiments Run 2018

2x FEAST2 DC/DC converters test in cold-box & RT with “thin” 10mm Cu target (EP-ESE)



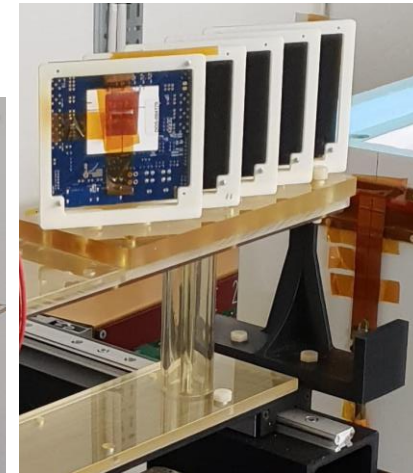
IRRAD 10mm Cu Target

$\Phi_{1\text{MeVeq}}$ simulations with Cu target
© R. Froeschl (HSE-RP)



Piezo actuators for Crystal Collimation, Vacuum, Cryogenics, etc. (EN,TE)

RD53A modules for ATLAS ITk



CHARM: Proton Run 2018



- No free slots in the 2018 planning. All the operational weeks booked

- 32 users in the 2016

- 25 users in the 2017

- **61 users in the 2018**

- 3 users running all year: TE/VSC, TE/MPE, HSE/RP

- Coordination of the access: RP, EN/SMM and EN/HE

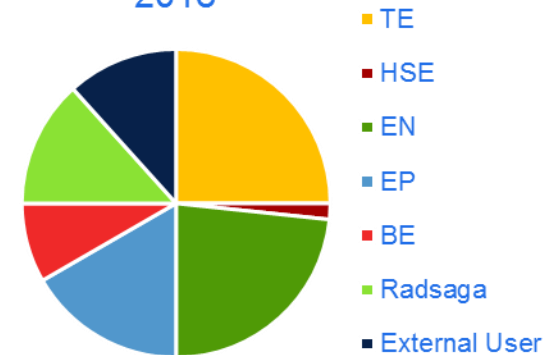
- Installation/Removal of test equipment: every Wednesday

- Full support during dry run & test preparation for cabling and organization

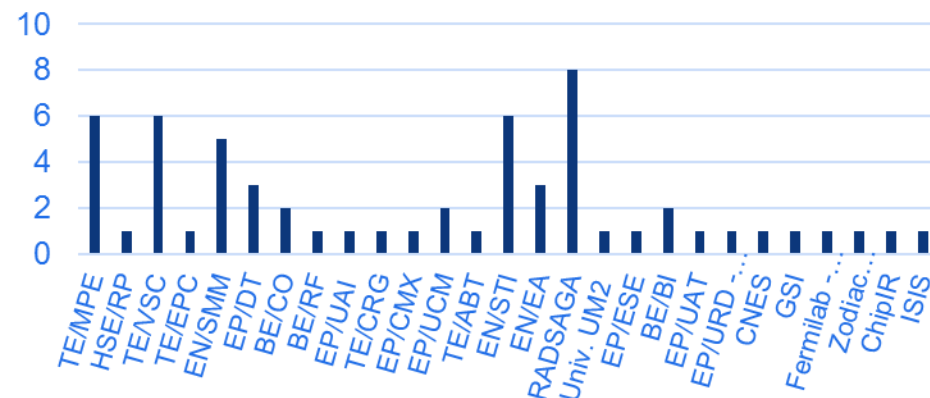
- Online dosimetry with the RadMon system



Users by department/institute in 2018



Count of Experiment/Group 2018



Proton On Target

	2017		2018	
Cu	2.85E+17	80.05%	3.49E+17	74.92%
Al	4.71E+15	1.32%	1.68E+15	0.50%
AlH	1.36E+16	3.82%	1.63E+15	0.04%

CHARM: Heavy Ion Run 2018



- Three weeks of irradiation
- All the operational weeks booked
 - Dosimetry runs: HI beam characterization
 - 15 users in 2018



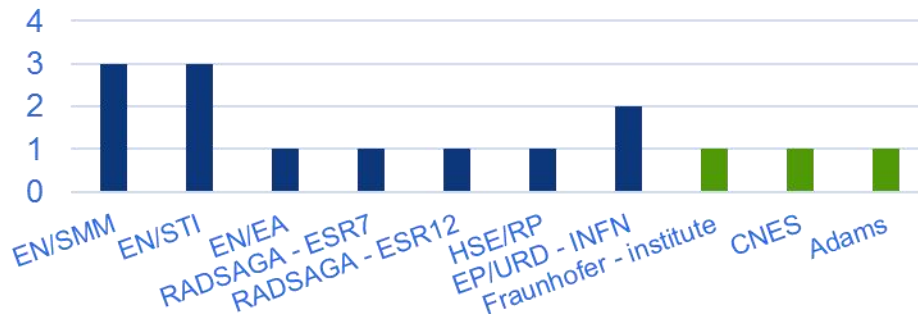
- Installation/removal of equipment every day: 2 or 3 accesses/day (25 in total)



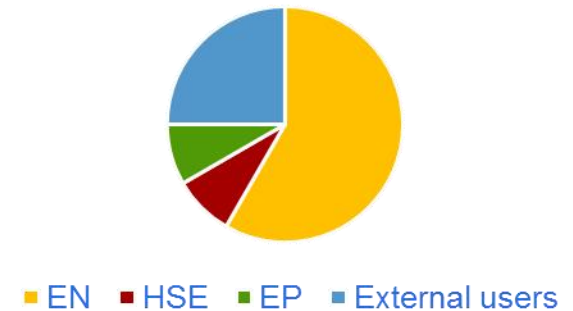
- Full support for the organization (cabling, planning, etc.), during tests installation, irradiation (communication with CCC), also late afternoon, night.



Count of Experiment/Group 2018

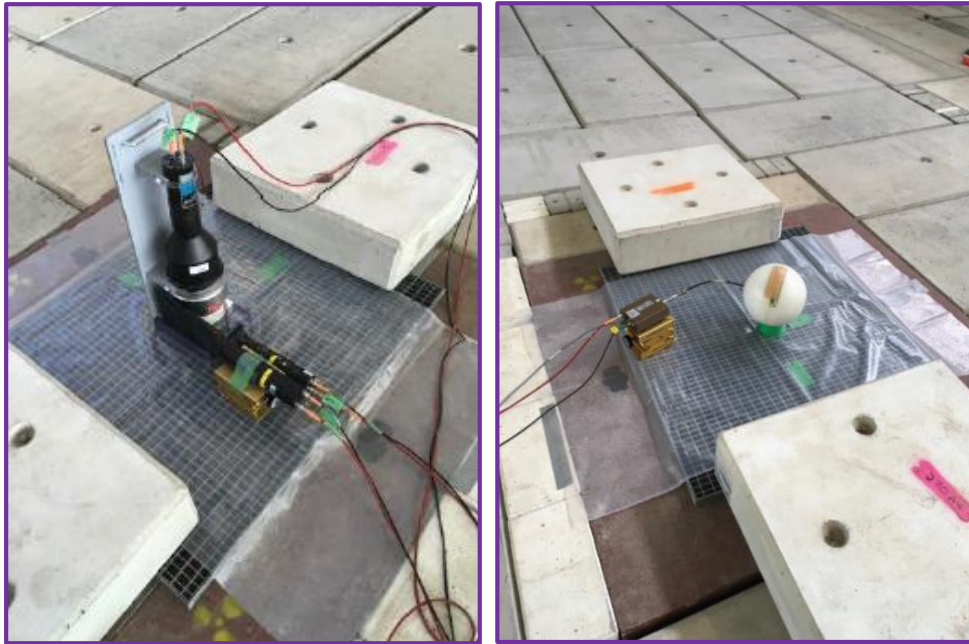


Users by department/institute in 2018

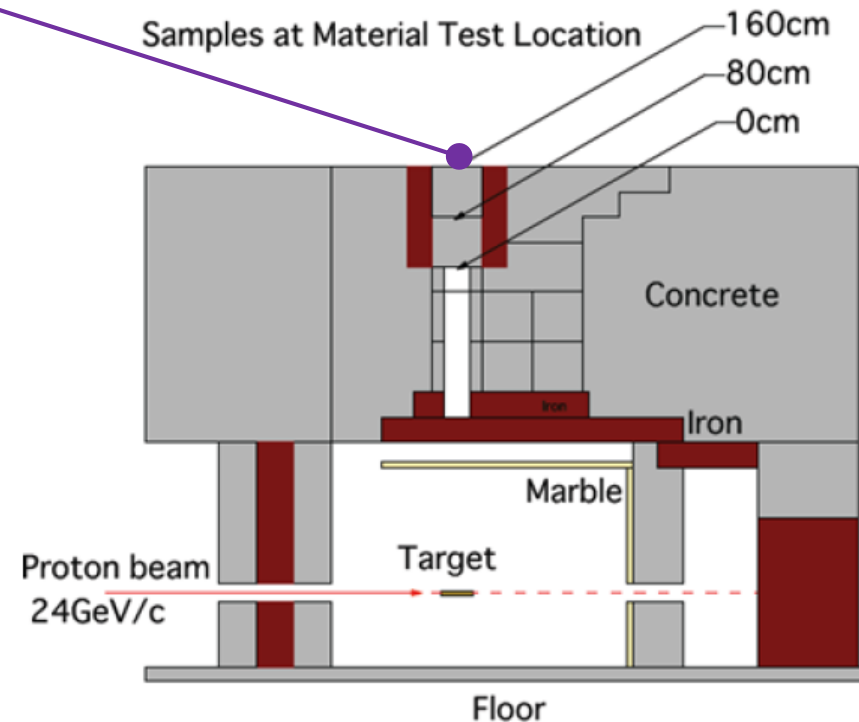


CSBF: “RP week” 2018

- ❑ 22-29 August 2018
- ❑ Neutron spectrum measurement on the roof (NE213 and Bonner Spheres)



- ❑ Various shielding configuration
- ❑ Foil activation at the material test location
- ❑ Measured of induced radioactivity in air



CSBF: “RP week” 2018

- ❑ Inside CHARM
- ❑ Installation of a Cu target with $\varnothing=8\text{cm}$ and 10cm thickness in beam direction:
 - measurement of angular distribution of neutron yield from target
 - activation-foils in the target room
 - neutron spectrum measurements in the access maze (NE213 and Bonner Spheres)
 - activation-foils in the access maze

EA-IRRAD teams would like to thank BE-OP, EN-EA -HE, HSE-RP and all other groups involved for their excellent support during our 1st run !

