WG7 Common Test Facilities

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Webpage: https://drd1.web.cern.ch/activities-wg7

Mail to contacts: DRD1-WG7-convenors@cern.ch

Subscritpion to mailing list: https://e-groups.cern.ch/e-groups/EgroupsSubscription.do?egroupName=drd1-wg7

WG7 Forum: https://drd1-forum.web.cern.ch/

Common Activities and objectives

Detector Laboratories Network
Common Test Beam
Irradiation Facilities
Specialized Laboratories
Instrumentation and Software Sharing
Test Facilities Database

DETECTOR LABORATORIES NETWORK

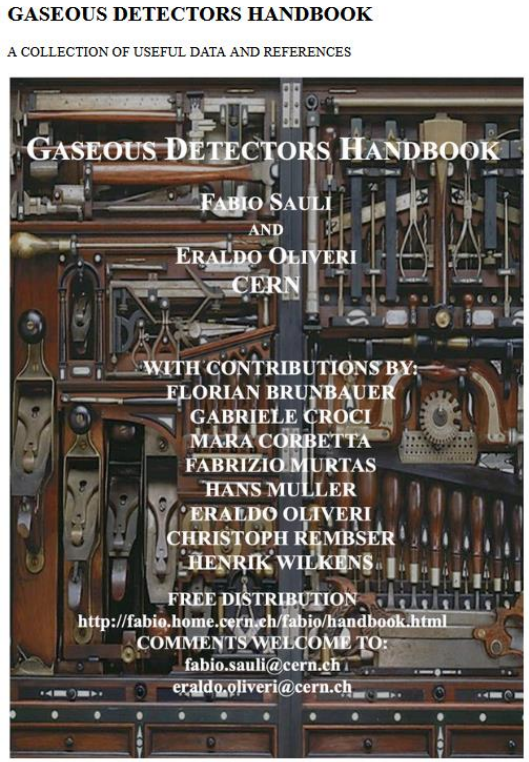
Reference	Description	Deliverable Nature
D7.1.1	Estabilishment of a Detector Laboratories Network	Network and Webpage
D7.1.2	Identify and define available and required characterization techniques and methods	Report
D7.1.3	Update and review laboratory handbook	Handbook

Table 23: WG7 - Objective 7.1: Detector Laboratories Network

Next step: identify laboratory that could be part of the network. Preliminary search done to verify the interest in the community. To be extended to all technologies and geographical areas

Laboratory	Institute	Country	Cont.	Covered Tech.	Contact Person
MPGD	USTC	China	AS		Y. Zhou
SINP	SINP	India	AS		N. Majumdar
Weizmann	WIS	Israel	AS		S. Bressler
Kobe	Kobe U.	Japan	AS		A. Ochi
IRFU/CEA	IRFU/CEA	France	EU		T. Papaevangelou
FTD	Bonn	Germany	EU		M. Ball
DDG	LNF	Italy	EU		G. Bencivenni
GDD	CERN	Switzerland	EU		E. Oliveri
JLAB-MPGD	JLab	USA	NA		K. Gnanvo
MSU	MSU	USA	NA		M. Cortesi
IFUSP	IFUSP	Brazil	SA		M. Bregant

Preliminary and Incomplete



http://fabio.home.cern.ch/fabio/handbook.html

Contributions Today

COMMON TEST BEAM

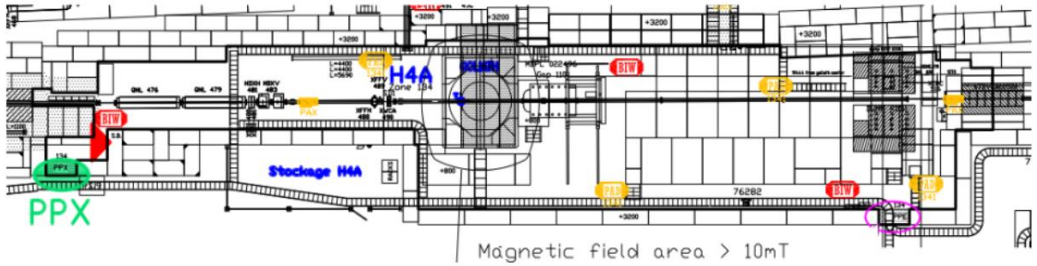
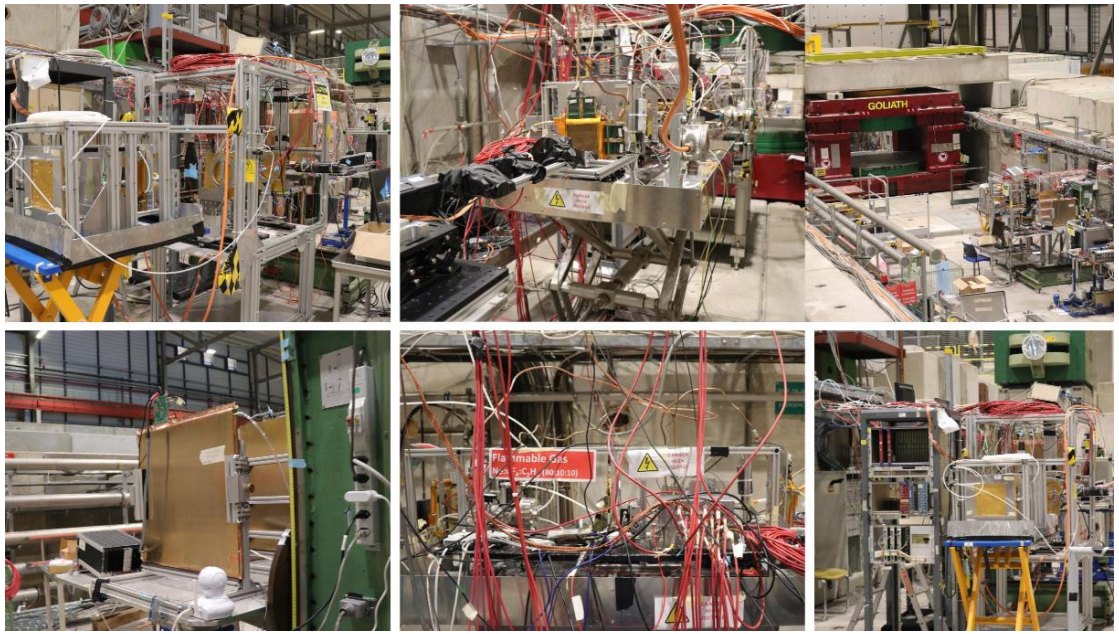


Fig.2: CERN North Area SPS Extraction line, H4 Beam line (PPE134/EHN1)



Reference	Description	Deliverable Nature
D7.2.1	Design and Upgrade the gas system for the test beams	Gas system
D7.2.2	Tracking and Timing Beam Telescopes with different GD technologies	Telescopes
D7.2.3	Develop a DCS for power supplies, environmental parameter monitoring	Control system
D7.2.4	Support the development of a common DAQ for Test Beam	Common Test Beam DAQ
D7.2.5	Identify test beam facilities with potential local support from DRD1 members	Database of facilities

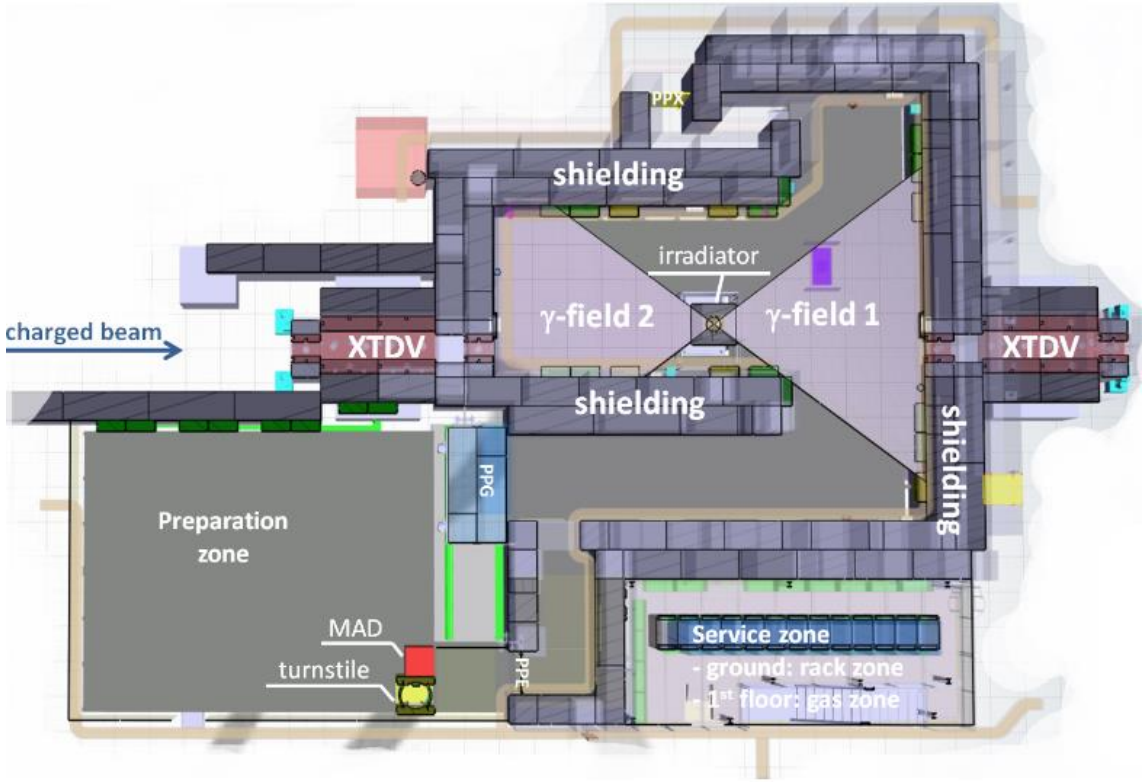
Table 24: WG7 - Objective 7.2: Common Test Beam Facilities

Continuing the modus operandi (*) in RD51 (presented later today), expand to all technologies and identify groups that can contribute to the common objectives.

Contributions Today

(*) https://indico.cern.ch/event/1327482/contributions/5692502/attachments/2767765/4821432/RD51-WG7-Final.pdf

IRRADIATION FACILITIES



Reference	Description	Deliverable Nature
D7.3.1	Irradiation facility gas system: Identify the gas system for the irradiation test	Design of an upgraded Gas system
D7.3.2	Equip Beam Telescopes using different GD technologies	Beam Telescope
D7.3.3	Develop a DCS for power supplies, environmental parameter monitoring	Control system
D7.3.4	Support the development of a common DAQ	Common DAQ
D7.3.5	Identify irradiation facilities with potential local support from DRD1 members	Database

Table 25: WG7 - Objective 7.3: Commmon Irradiation Facilities

First step: GIF++
understand access modality and needs in the community

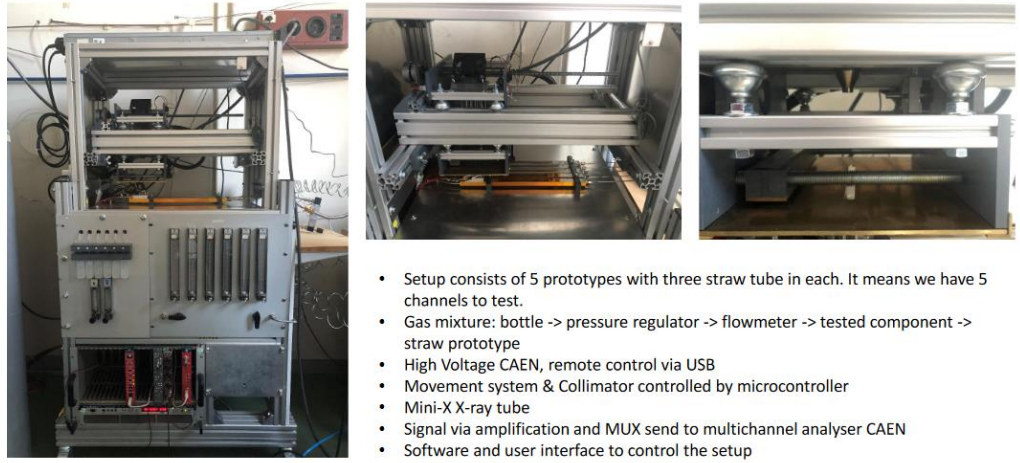
Contributions Today

SPECIALISED LABORATORIES

Reference	Description	Deliverable Nature
D7.4.1	Consolidation and maintenance of the existing ATLAS-TRT outgassing test setup	Outgassing Test Setup
D7.4.2	Identify ageing study setups available in the collaboration and prepare a database	Report Webpage
D7.4.3	Database for outgassing and ageing effect of the material tested	Report Webpage
D7.4.4	Development of standardised and easy to use gas analysis modules	Design and construction of prototypes

Table 26: WG7 - Objective 7.4: Specialised Laboratories

TRT automated ageing setup (3rd generation of the setup)



- Setup consists of 5 prototypes with three straw tube in each. It means we have 5 channels to test.
- Gas mixture: bottle -> pressure regulator -> flowmeter -> tested component -> straw prototype
- High Voltage CAEN, remote control via USB
- Movement system & Collimator controlled by microcontroller
- Mini-X X-ray tube
- Signal via amplification and MUX send to multichannel analyser CAEN
- Software and user interface to control the setup

- Strong link with WG3
- Contact with experiments running outgassing tests to identify synergy
- Common Test Setup

Contributions Today

INSTRUMENTATION AND SOFTWARE SHARING

Reference	Description	Deliverable Nature
D7.5.1	HW&SW Development of standardised gas mixing and distribution units for detector under test	Design and construction of prototypes
D7.5.2	Development of standardised flow-meter setups to monitor the supply and/or return flow mixture	Design and construction of prototypes
D7.5.3	Survey of existing hardware equipment at common infrastructure	Online documentation
D7.5.4	TWIKI page with module manuals and schematics	Online documentation
D7.5.5	Survey of need for common libraries	Online documentation
D7.5.3	Development of general purpose libraries for data taking	Software libraries

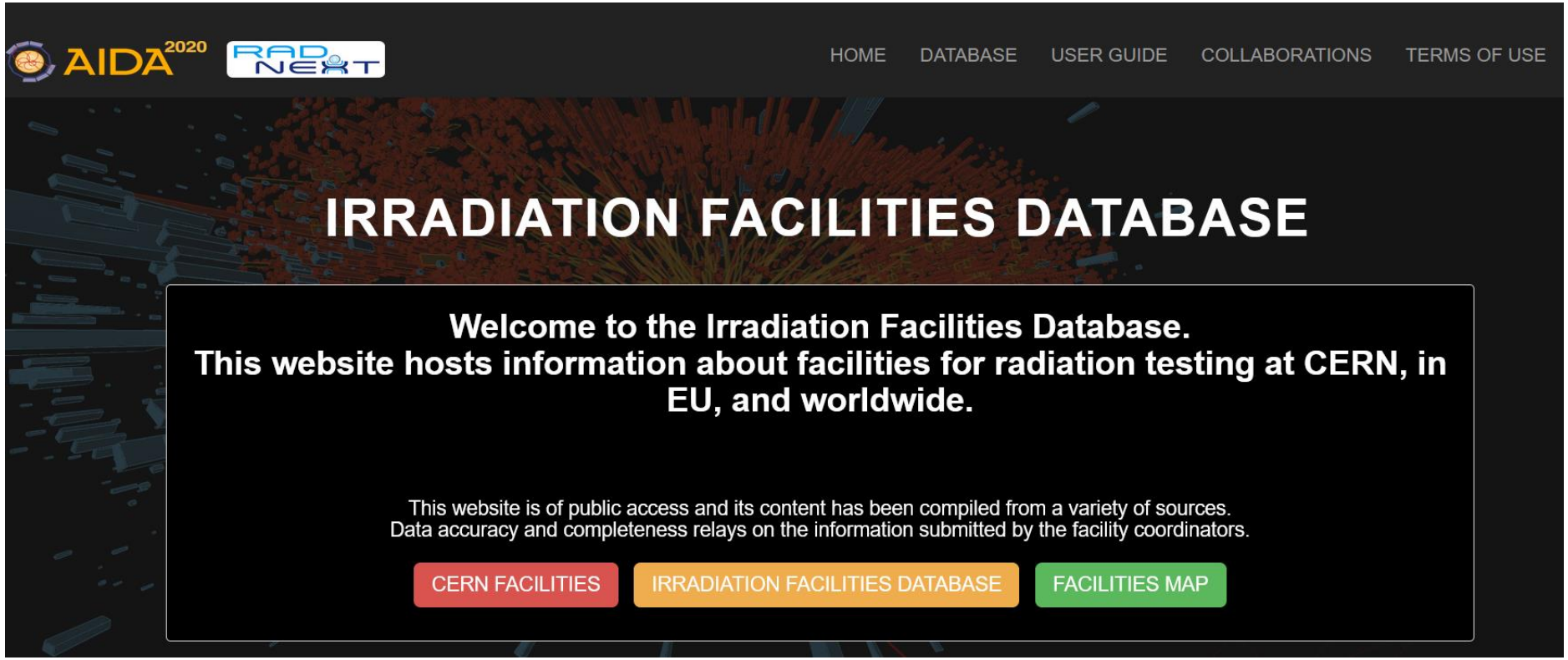
Table 27: WG7 - Objective 7.5: Instrumentation and software sharing

Starting a discussion with WG3, WG4 and WG5 conveners to identify:

- HW/SW available already available that can be shared
- WH/SW in progress that could profit from support coming from other groups in DRD1
- Not existing but required

Detector Test Facilities Databases

http://irradiation-facilities.web.cern.ch/



Updating existing database with facilities available in the community (if not listed already).

Communication Channels & Contacts

Webpage, e-group and mailing list, forum

Webpage

Working group 7

Common test facilities

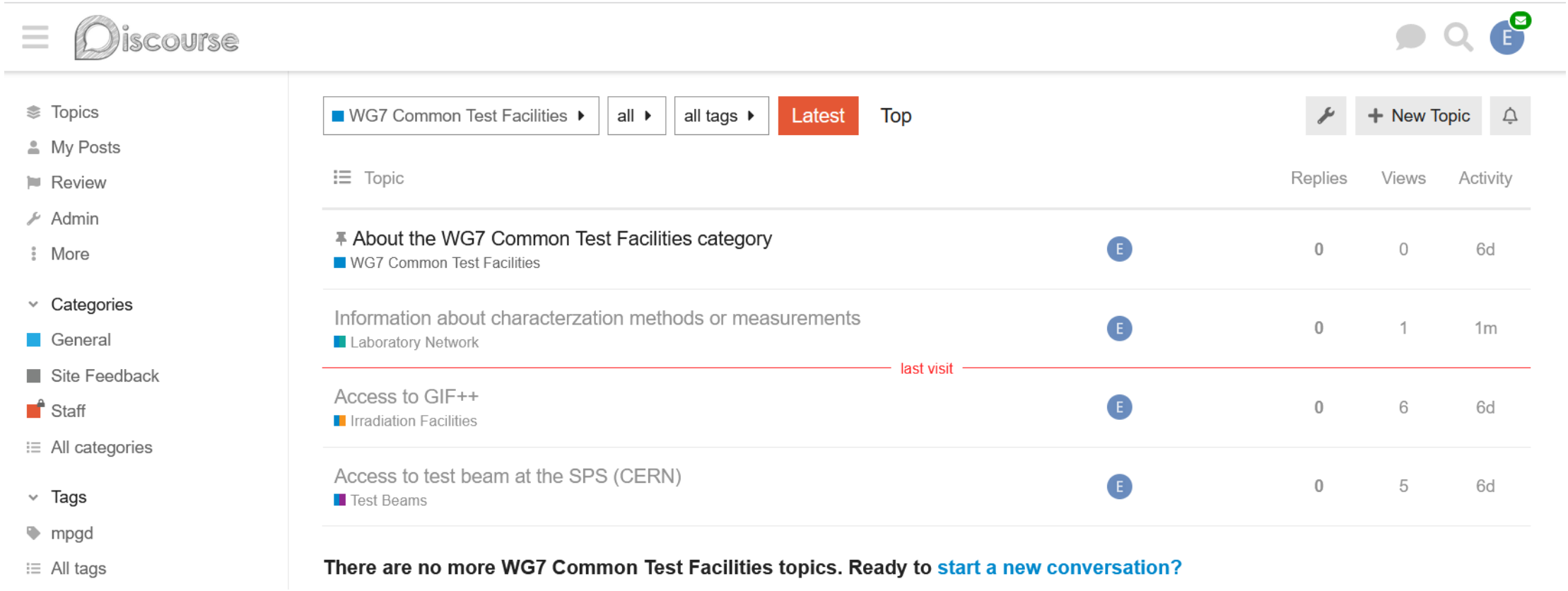
Contacts: Y. Tsipolitis, E. Oliveri, R. Guida, G. Iaselli, A. Ferretti

Contact email: DRD1-WG7-convenors@cern.ch

DETECTOR LABORATORIES NETWORK

We propose the establishment of a strategic worldwide distributed network of research laboratories to meet the needs of the scientific community. The network would serve as an entry point for the community, providing support and disseminating methodology and instrumentation to facilitate the work of detector scientists. The laboratories in the network would work collaboratively to share expertise, resulting in greater efficiency and cost-effectiveness. The development of this network would also help to increase the value of the laboratories at the national level, showcasing their contributions to cutting-edge research and innovation.

Forum


Discourse
Topics
My Posts
Review
Admin
More
Categories
General
Site Feedback
Staff
All categories
Tags
mpgd
All tags
WG7 Common Test Facilities
all
all tags
Latest
Top
New Topic
Topic
Replies
Views
Activity
About the WG7 Common Test Facilities category
WG7 Common Test Facilities
0
0
6d
Information about characterzation methods or measurements
Laboratory Network
0
1
1m
last visit
Access to GIF++
Irradiation Facilities
0
6
6d
Access to test beam at the SPS (CERN)
Test Beams
0
5
6d
There are no more WG7 Common Test Facilities topics. Ready to start a new conversation?

Egroups and mailing lists

Mail to contacts:

DRD1-WG7-convenors@cern.ch

Subscritpion to mailing list:

https://e-groups.cern.ch/e-groups/EgroupsSubscription.do?egroupName=drd1-wg7

Agenda

15:00 **Intruduction**

Working Group Tasks and Common Objectives

Speakers: Alessandro Ferretti (Universita e INFN Torino (IT)), Eraldo Oliveri (CERN), Roberto Guida (CERN), Yorgos Tsipolitis (National Technical Univ. of Athens (GR))

15:05 **CERN EHN1 Test Beam Facility**

Speaker: Dipanwita Banerjee (CERN)

15:25 **DRD1 Test beam Semi Permanent Installation**

Speaker: Yorgos Tsipolitis (National Technical Univ. of Athens (GR))

15:35 **Test Beam Plans 2024 - PICOSEC Collaboration**

Speaker: Florian Maximilian Brunbauer (CERN)

15:47 **Test Beam Plans 2024 - Resistive MPGD Calorimeter with timing measurement**

Speaker: Luigi Longo (Universita e INFN, Bari (IT))

SPS/EHN1 Test Beam

16:30 **RD Detector Laboratory (904)**

Speaker: David Morse (Northeastern University (US))

R&D LAB

16:45 **GIF++ Irradiation Facility**

Speaker: Martin R. Jaekel (CERN)

17:05 **Long-term and aging studies: the example of CMS Muon system**

Speaker: Katerina Kuznetsova (University of Florida (US))

GIF++

17:25 **Outgassing and Ageing Laboratory**

Speaker: Roberto Guida (CERN)

Specialized Lab