

# Joint COMPASS and COMPASS++/AMBER TB

19 January 2021

*Stefano Levorato*

## AGENDA

- Introduction Joint TBs meeting
- Approval of the Agenda of the last TB
- Communications
  - Winter shutdown and presence on site
  - COMPASS new technician
  - COMPASS archive in 892
  - Entering CERN from 1 MARCH
  - Change of timing and dates of the TB
  - Flammable gas system renovation: Atex zone and Gas MW2
  - STRAW 3 HV modules
  - TRAKA box
  - Raw water/chilled water status at COMPASS
  - C<sub>4</sub>F<sub>10</sub> Gas RICH-1 radiator delivery
  - PT Gunn Diode update
  - Clean Room update
  - ECAL0 Space storage area
  - Remote support devices

Joint COMPASS Technical Board and C++/AMBER Technical Board meeting	
Tuesday 19 Jan 2021, 08:30 → 18:00 Europe/Zurich	
892/1-D20 (CERN)	
Videoconference Rooms COMPASS Technical Board <a href="#">Join</a> 892/1-D20	
09:00	09:05 Approval of the minutes 2020_Nov_3_minut...
09:05	09:45 Communications from the TC Speaker: Dr Stefano Levorato (INFN Trieste (IT) and CERN)
09:45	09:55 Detector Survey Speaker: Dr Stefano Levorato (INFN Trieste (IT) and CERN) Survey_COMPASS.p... Survey_COMPASS.p...
09:55	10:10 RICH-1 update status Speaker: Shuddha Shankar Dasgupta (INFN Trieste (IT))
10:10	10:20 RICH-1 activity planning Speaker: Silvia Dalla Torre (Universita e INFN Trieste (IT)) dallatorre_RICH_TB...
10:20	10:35 H1 Planning Speaker: Benjamin Moritz Veit (Johannes Gutenberg Universitaet Mainz (DE))
10:35	10:50 Coffee Break
10:50	11:10 PT status and planning Speakers: Michael Pešek (Charles University (CZ)), Norihito Doshita (Yamagata University (JP))
11:10	11:30 RICH-WALL and MWPC planning Speakers: Daniele PanZieri (Universita e INFN Torino (IT)), Maxim ALEXEEV (Universita e INFN Torino (IT))
11:30	11:40 DC4 planning Speaker: Stephane Platichkov (Université Paris-Saclay (FR))
11:40	12:00 Cold Silicon Status Speakers: Christian Dreisbach (Technische Universität Muenchen (DE)), Dr Stefano Levorato (INFN Trieste (IT) and CERN) COMPASS_Silicon_... COMPASS_Silicon_...
12:00	14:00 Lunch Break
14:00	14:10 COMPASS GEM update Speakers: Prof. Bernhard Ketzler (University of Bonn (DE)), Jonathan Floethner (University of Bonn (DE)), Dr Stefano Levorato (INFN Trieste (IT) and CERN) GEM04_test_and P... GEM04_test_and P... Stefano_Levorato_T... Stefano_Levorato_T...
14:10	14:30 DAQ status and planning Speaker: Igor Kononov (Technische Universität Muenchen (DE))
14:30	14:40 IKAR-TPC positioning Speaker: Dr Stefano Levorato (INFN Trieste (IT) and CERN)
14:40	14:55 IKAR TPC status and planning Speaker: Oleg Kiselev (GSI - Helmholtzzentrum für Schwerionenforschung GmbH (DE))
14:55	15:10 PRM scintillating fibers Speaker: Martin Jan Lohkamp (Technische Universität Muenchen (DE))

Joint COMPASS and COMPASS++/AMBER Technical Boards meeting

This meeting (and the next ones) sees the presence of experts/responsible persons of (sub)-detectors needed for the C++/AMBER phase I not yet in the COMPASS spectrometer setup. It is extended also to physics coordinator. Dynamic list.

The **approved C++/Amber** phase I includes the proton radius (PRM), the anti proton production cross section ( $\bar{p}XS$ ) and Drell Yann measurements (DY).

For the PRM: physics coordinator **Jan Friedrich**,

1. TPC and its gas system **Oleg Kiselev** and **Alexander Vasilyev**
2. Fibre stations **Martin Losekamm**

ALPIDE silicon tracker and Triggerless DAQ **Maxim Alekseev** and **Igor Konorov**

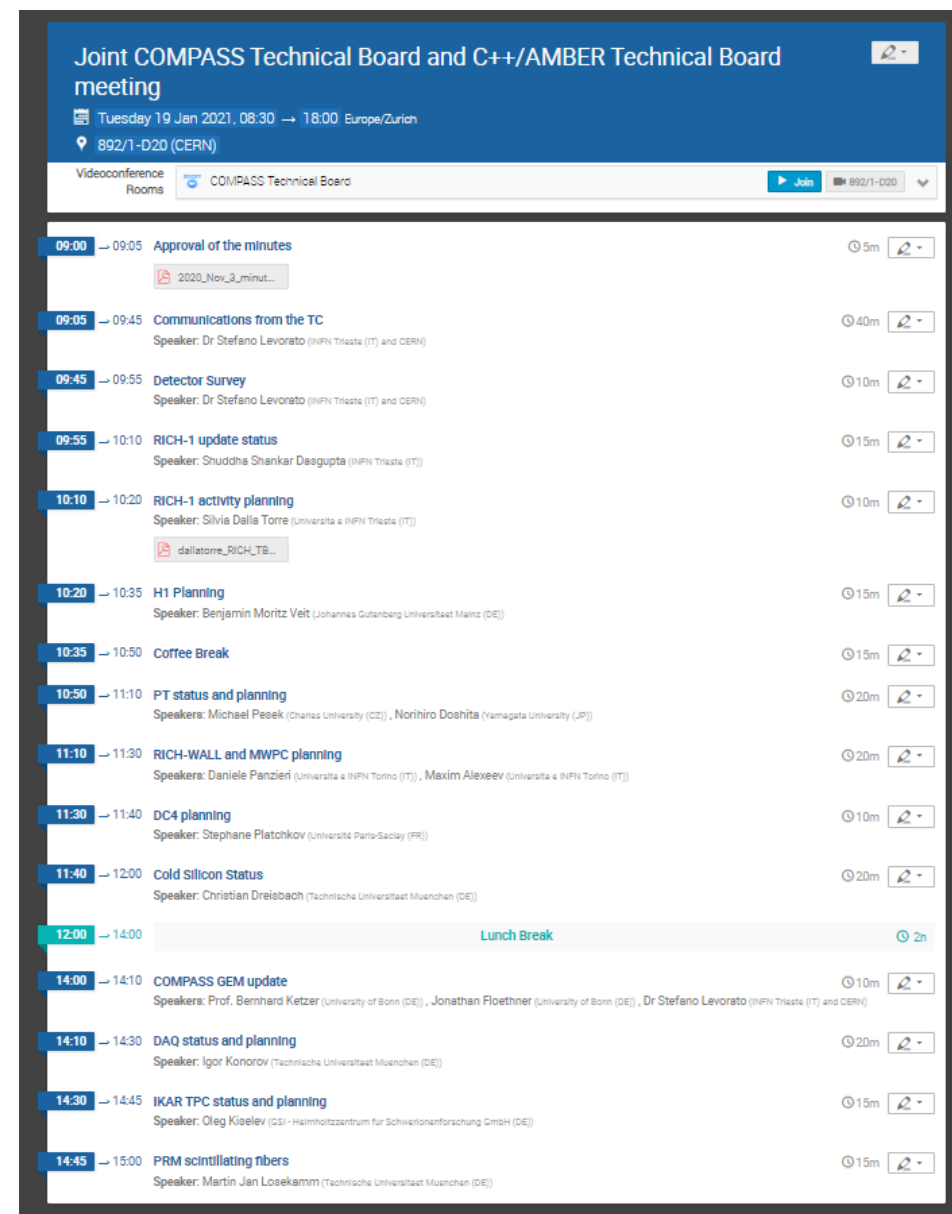
$\bar{p}XS$ : physics coordinator **Paolo Zuccon**

DY: physics coordinators **Paul Reimer** and **Marcia Quaresma**

→ **COMPASS TB members should “wear the hat” of AMBER TB members**

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892/1-D20 (CERN)

Videokonferenz Rooms COMPASS Technical Board [Join](#) 892/1-D20

Time	Topic	Speaker(s)	Duration
09:00 → 09:05	Approval of the minutes		5m
09:05 → 09:45	Communications from the TC	Dr Stefano Levorato (INFN Trieste (IT) and CERN)	40m
09:45 → 09:55	Detector Survey	Dr Stefano Levorato (INFN Trieste (IT) and CERN)	10m
09:55 → 10:10	RICH-1 update status	Shuddha Shankar Dasgupta (INFN Trieste (IT))	15m
10:10 → 10:20	RICH-1 activity planning	Silvia Dalla Torre (Universita e INFN Trieste (IT))	10m
10:20 → 10:35	H1 Planning	Benjamin Moritz Velt (Johannes Gutenberg Universitaet Mainz (DE))	15m
10:35 → 10:50	Coffee Break		15m
10:50 → 11:10	PT status and planning	Michael Pesek (Charles University (CZ)), Norihiro Doshita (Yamagata University (JP))	20m
11:10 → 11:30	RICH-WALL and MWPC planning	Daniele Panzeri (Universita e INFN Torino (IT)), Maxim Alexeev (Universita e INFN Torino (IT))	20m
11:30 → 11:40	DC4 planning	Stephane Platchkov (Universitd Paris-Saclay (FR))	10m
11:40 → 12:00	Cold Silicon Status	Christian Dreisbach (Technische Universitaet Muenchen (DE))	20m
12:00 → 14:00	Lunch Break		2h
14:00 → 14:10	COMPASS GEM update	Prof. Bernhard Ketzler (University of Bonn (DE)), Jonathan Floethner (University of Bonn (DE)), Dr Stefano Levorato (INFN Trieste (IT) and CERN)	10m
14:10 → 14:30	DAQ status and planning	Igor Kononov (Technische Universitaet Muenchen (DE))	20m
14:30 → 14:45	IKAR TPC status and planning	Oleg Kiselev (GSI - Helmholtzzentrum fuer Schwerionenforschung GmbH (DE))	15m
14:45 → 15:00	PRM scintillating fibers	Martin Jan Losekamm (Technische Universitaet Muenchen (DE))	15m

The COMPASS Spectrometer has been set in winter mode shutdown since the end of the DRY run. During the Christmas break only one intervention to verify its health due to the electrical network power glitch on 28/12/2022

No intervention on the SPECTROMETER needed, all systems fine and still smoothly operating so far.

Regular refilling of PT target material by Nori during the break too.

At the moment on site: on daily basis Nori Doshita, Michael Pesek, Christophe Pirez, Vincent Andrieux, Marketa Peskova Moritz Veit, Martin Zemko and the TC.

**From:** TI Control Room  
**Sent:** 28 December 2020 21:42:51 (UTC+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna  
**To:** tioc-major-event-created-distribution (Group where announcements of new Major Events will be sent)  
**Subject:** New major event created: Glitch 400kV Genissait-Vielmoulin

A major event was recorded by the TI operator on shift:

**Glitch 400kV Genissait-Vielmoulin**

Started: Monday, Dec 28, 2020 21:31  
Status: Open  
Unit: EN-EL  
Location: Cern  
20:14 multiple alarms on PSEN  
at the same time a lot of alarms on Helpalarm  
confirmation from EDF : creux tension sur ligne GENNIAT-VIELMOULIN

TI report: possible to restart the majority of the installations  
called piquets EN-CV, SMB, EN-EL to restart the rest

<...  
[View event](#)

Cyril Cot the former technician at COMPASS left.

We have a new technician since December 2020: Eric THABUIS.

He is not new to CERN (TE-CRG) but new to us. We went for a preliminary visit at COMPASS.

At the moment he is missing training courses, i.e. CRANE (He has subscribed for the courses that the moment are not possible/reduced due to COVID).


Keep in mind for the next month(s) interventions. In case we need crane.

Issue with COMPASS archive at 892: AMS is going to build a new a clean room → soil reinforcement and storage removal




URGENT request of freeing the space.





## CERN and Covid-19



**Recent news**

- Number of positive cases from CERN's personnel since beg of pandemic: **281** (none contracted on-site)
- Current telework framework (100% telework mandatory for people who can telework and are not needed on site) extended until end of Feb. This is still aligned with recent (tighter) restrictions in CH and F.

**Covid-19 testing at CERN**

RT-PCR tests started with support of a medical lab in Meyrin (Proxilis):


- tested at Proxilis: suspected cases, close contacts and people coming from high-risk countries (the latter only when presence on site is crucial for CERN's activities)
- tested on-site (as of 25 Jan): vulnerable people or people who have to travel for professional reasons (once current restrictions lifted); periodic tests of exposed groups (e.g. control-room shifters)
- duration of isolation (suspected cases) or quarantine (close contacts) determined by Medical Service based also on test results

**Covid-19 vaccination**

- Personnel, family members and retirees resident in France or CH will be called by the Host State in which they reside according to priority, i.e. vulnerable and exposed people first. CERN is making sure that our community is included in the national plans. Swiss-card holders resident in France can be vaccinated in CH.
- CERN is exploring with Host States possibility of on-site vaccination → will take time as current vaccine's availability limited, and distribution restricted to few designated centres in the countries.

**Proximeter**

Essential for rapid, comprehensive, sustainable contact-tracing → to break infection chain and protect health of people on-site. Mandatory as of 1 March.  
 1000 out of 10000 distributed so far → please book a slot to collect yours:  
<https://www.cern.ch/proximeter-dist>







# 2021 Calendar

January		February		March		April		May		June		July		August		September		October		November		December			
1	Fr		1	Mo		1	Th		1	Sa		1	Th		1	Su		1	Fr		1	Mo		1	We
2	Sa		2	Tu		2	Fr		2	Su		2	Fr		2	Mo		2	Th		2	Tu		2	Th
3	Su		3	We		3	Sa		3	Mo		3	Sa		3	Tu		3	Fr		3	We		3	Fr
4	Mo		4	Th		4	Su		4	Tu	TB	4	Fr		4	We	Confinement	4	Sa		4	Mo		4	Sa
5	Tu		5	Fr		5	Mo		5	We		5	Sa		5	Th		5	Su		5	Tu		5	Su
6	We		6	Sa		6	Tu	AM	6	Th		6	Su		6	Fr		6	Mo		6	Sa		6	Mo
7	Th		7	Su		7	We		7	Fr		7	Mo		7	We		7	Tu		7	Su		7	Tu
8	Fr		8	Mo		8	Th		8	Sa		8	Tu		8	Th		8	Fr		8	Mo		8	We
9	Sa		9	Tu		9	Fr		9	Su		9	We		9	Fr		9	Th		9	Tu		9	Th
10	Su		10	We		10	Sa		10	Mo		10	Th	SPSC	10	Tu		10	Fr		10	We		10	Fr
11	Mo		11	Th		11	Su		11	Tu		11	Fr		11	We		11	Sa		11	Th		11	Sa
12	Tu		12	Fr		12	Mo	DIS	12	We		12	Sa		12	Th		12	Su		12	Fr		12	Su
13	We		13	Sa		13	Tu	SPSC	13	Th		13	Su		13	Fr		13	Mo		13	Sa		13	Mo
14	Th		14	Su		14	We		14	Fr		14	Mo		14	We		14	Tu	AM	14	Th		14	Tu
15	Fr		15	Mo		15	Th		15	Sa		15	Tu		15	Th		15	We		15	Fr		15	We
16	Sa		16	Tu		16	Fr		16	Su		16	We		16	Fr		16	Th	CM	16	Sa		16	Th
17	Su		17	We		17	Sa		17	Mo		17	Th		17	Sa		17	Fr		17	Su		17	Fr
18	Mo		18	Th		18	Su		18	Tu	TB	18	Fr		18	Su		18	We		18	Th		18	Sa
19	Tu	TB	19	Fr		19	Mo		19	We	AM	19	Sa		19	Mo		19	Th		19	Tu		19	Su
20	We	SPSC	20	Sa		20	Tu		20	Th	CM	20	Su		20	Fr		20	Mo		20	We		20	Mo
21	Th		21	Su		21	We		21	Fr		21	Mo		21	Sa		21	Tu		21	Th		21	Tu
22	Fr		22	Mo		22	Th		22	Sa		22	Tu		22	Th		22	We		22	Fr		22	We
23	Sa		23	Tu	AM	23	Fr	TB	23	Su		23	We	AM	23	Fr		23	Th		23	Tu		23	Th
24	Su		24	We		24	Sa		24	Mo		24	Th		24	Sa		24	Fr		24	We		24	Fr
25	Mo		25	Th	CM	25	Su		25	Tu		25	Fr		25	Su		25	Sa		25	Mo		25	Sa
26	Tu		26	Fr		26	Mo		26	We		26	Sa		26	Mo		26	Tu		26	Fr		26	Su
27	We	AM	27	Sa		27	Tu		27	Th		27	Su		27	Th	(AM)	27	Mo		27	Sa		27	Mo
28	Th		28	Su		28	We		28	Fr		28	Mo		28	We		28	Tu	TB	28	Th		28	Tu
29	Fr					29	Mo		29	Th		29	Tu		29	Th		29	We		29	Fr		29	We
30	Sa					30	Tu		30	Fr		30	We		30	Fr		30	Th		30	Tu		30	Th
31	Su					31	We		31	Mo		31	We		31	Mo			Sa		31	Tu		31	Fr

CM
AM
TB TB meeting
SPSC
conference
holiday

  Afternoon  
  Morning

- 19 Jan Morning
- 23 Mar Afternoon
- 04 May Morning
- 06 July Afternoon
- 28 Sep Morning
- 16 Nov Afternoon

East Area				
AD/ELENA				
North Area				
NorthArea_LS2-Restart	16/11/2018	01/03/2022		
Important dates	852d	02/07/2018	13/12/2021	
TDC2 TCC2 BA80	629d	16/11/2018	18/06/2021	
BA81 / TT81 / TT82	629d	16/11/2018	18/06/2021	
EHN1	849d	10/09/2018	01/03/2022	
EHN2 / M2	682d	16/11/2018	01/09/2021	
Open days	2d	14/09/2019	15/09/2019	
Gas network renovation (908)	65d	16/11/2020	26/02/2021	
Flammable et Neutral	1w	16/11/2020	20/11/2020	
Rack installation	1w	19/11/2020	25/11/2020	
Pipes connection	1w	26/11/2020	02/12/2020	
Exhausts + Inertage + Pneumatique	1w	03/12/2020	09/12/2020	
Controle Connection + CV (ATEX)	1w	22/02/2021	26/02/2021	Contr
Buffer zone	1d	16/11/2018	16/11/2018	
SM1 magnet test	2w	19/11/2018	30/11/2018	
Alignment MBPL TT84	1w	03/05/2021	07/05/2021	
Test magnets no access (Heat-run, Coils mc)	12d	16/11/2018	03/12/2018	
Renovation pont PR-545	2w	12/08/2019	23/08/2019	
Renovation pont PR-539	5w	16/09/2019	18/10/2019	
Target Tests	3mo	21/09/2020	11/12/2020	

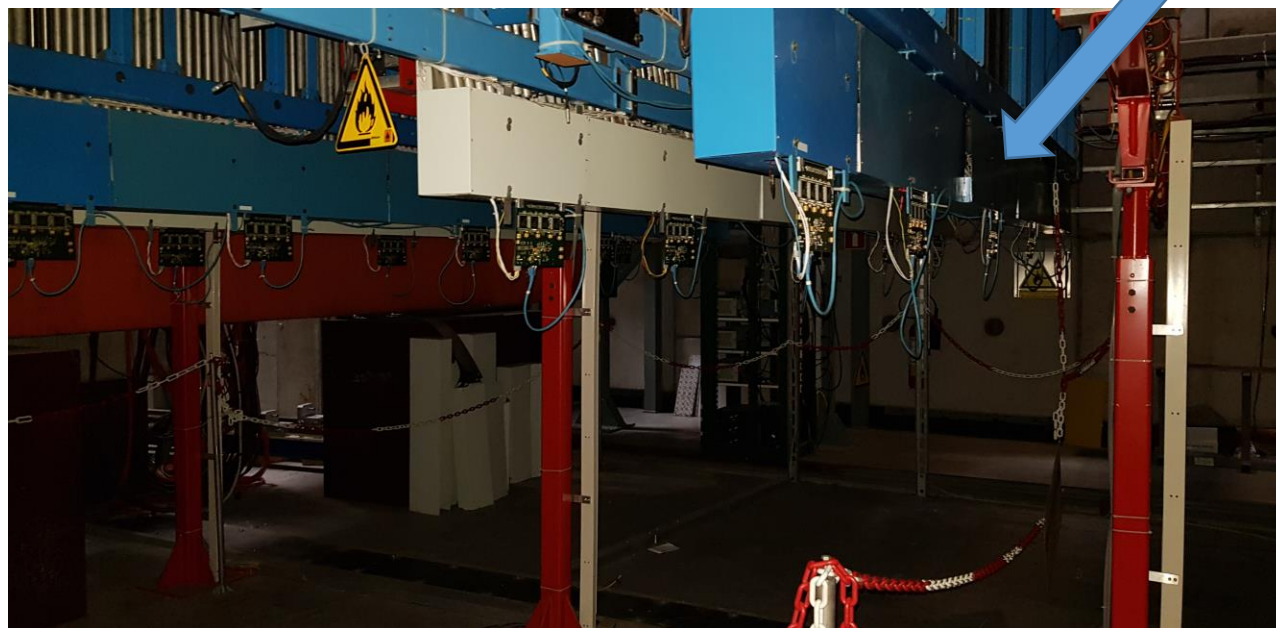
Task: Controle Connection + CV (ATEX)  
22 February 2021 - 26 February 2021

Responsible Groups: EN-CV  
Planning Contact:  
WorkType/Project: NA-CONS  
Track-It:  
IMPACT:  
External Link:

Flammable gas renovation ongoing, flammable system test foreseen at the end of February, flammable gas back in mid/end April.

Renovation in the COMPASS GAS area: new mechanical support installed for the racks; cable deployment ongoing

In the COMPASS hall, will start soon only one request from the installation company for the MW2 area.



Request to uninstall the F1 TDC cards. Stainless steel container for flammable gas to be moved below the detector.

Safer operation, can I/we proceed ?

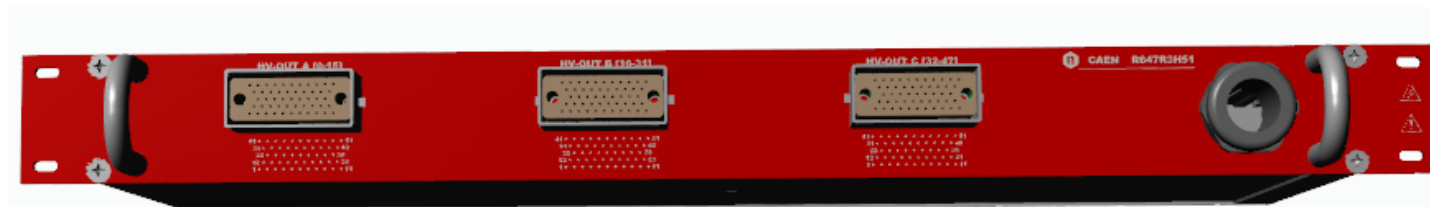
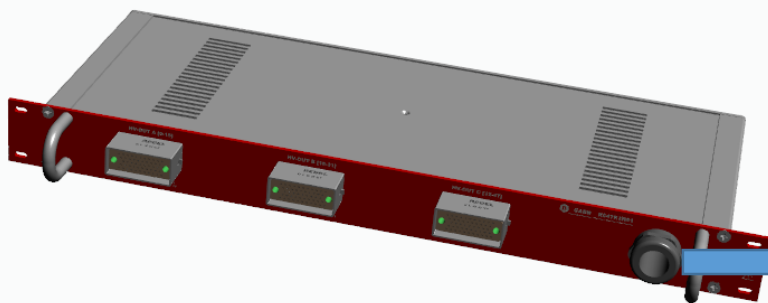
Replacement of the old ISEG HV power supply system → CAEN A7030DP



6 X 16 = HV channels on EQN 20 025p



Modules and mainframe ordered. Modules received on January 2021, integrated in the LHC inventory, not yet tested at the EPOOL since they were out of the CAEN CERN convention. Preliminary tests from us (Christophe) soon. Mainframe still to be received. Open issue the interface from the Redel to Radial connector type. Discussed the technical solution with CAEN →



→ To the A7030

Rack mounted device  
Delivery expected beginning of March 2021



Agreement in the last TB for its payment and installation in the 888 hall. Installed next to the buffer zone of HN2, near the first large door of 888

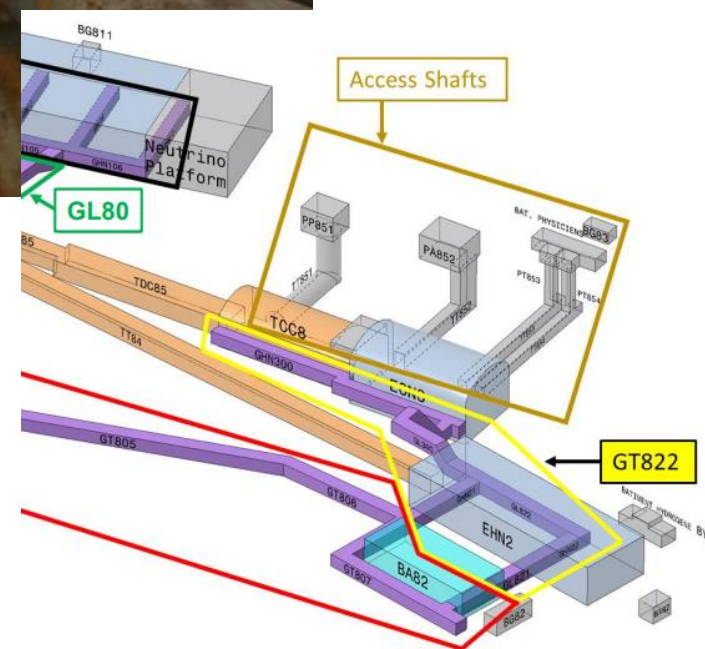


Not yet operative, missing electrical connections and the training course for its use.

## North Area

- Chilled water interruptions:
  - TT81 + TT82: 16 October 2020 – 29 January 2021.
  - TT84: 16 November 2020 – 26 Mars 2021.
  - Cooling towers (CT2, b 893):
    - Stop from 15 December 2020.
    - Maintenance from 4th to the 15th January 2021.
    - Restart 20 January 2021.
- Cooling stations (demineralized water) will start:
  - BA80 ED: 22 January 2021.
  - BA81 ED: 29 January 2021.
  - BA82 ED: End of January, according to request by NA62.

## Example of defects



Already with respect to the preliminary plan above presented delays have been accumulated, for the time being do not affect our scheduled operations. At the moment ~ 3 weeks delay ( to be confirmed). Work performed in the framework of the technical galleries consolidation.





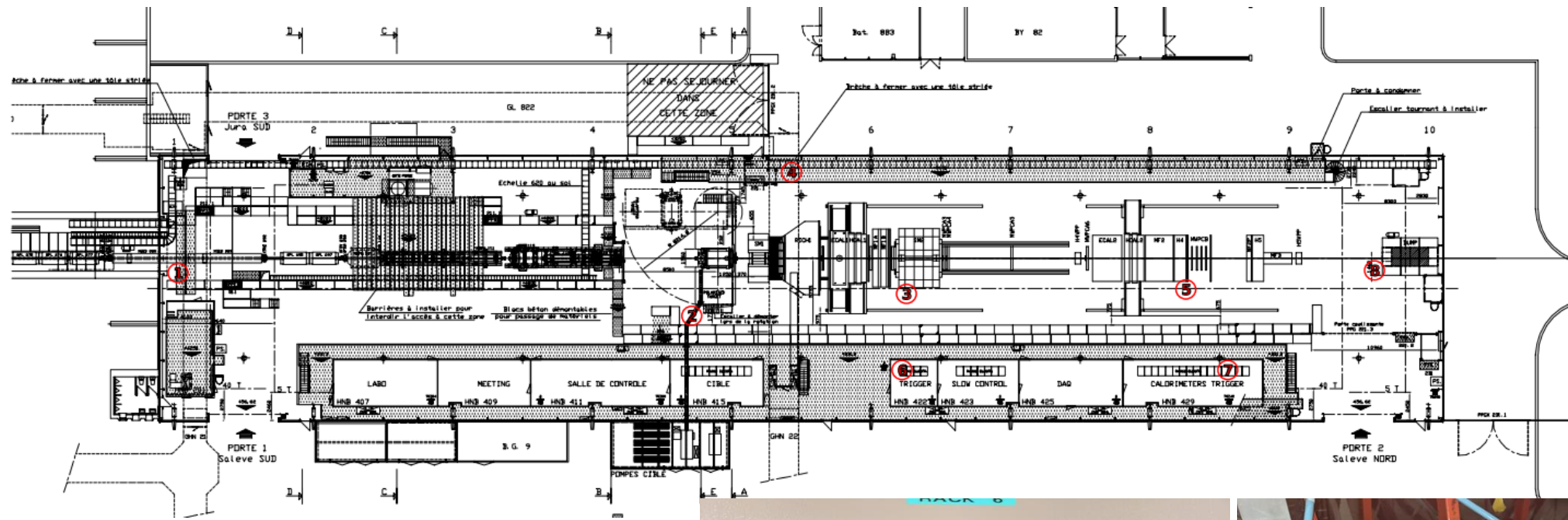
F2 chemicals bottle move in 888 R-024 next to RICH-1 Gas system

LHCb gas bottles at the moment stored in 888 R 413



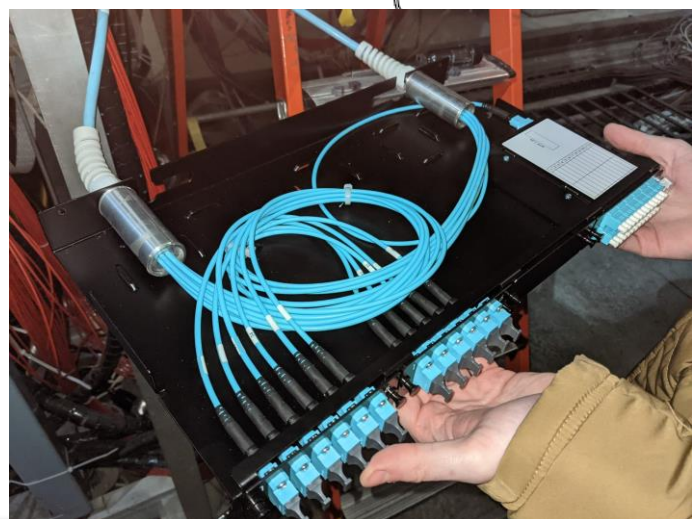
10 Bottles in total

### Fiber installation at COMPASS: update from Moritz



0

Update from Moritz yesterday. First Trunk towards SM2 as been installed and tested Successfully!





Saclay LASER system in DCS Barrack.

Request by safety of an update of the safety document of the device/installation









1) Gunn Diode tested → upgrade needed. Offer received from ELVA 6.8 kCHF, order to be submitted (this week), delivery time 4 weeks after order

2) EIO tubes (finally) sent to CPI CANADA for repair evaluation which costs 4.5 kUSD for each tube. Should receive the offer for the repair soon. Yamagata funds

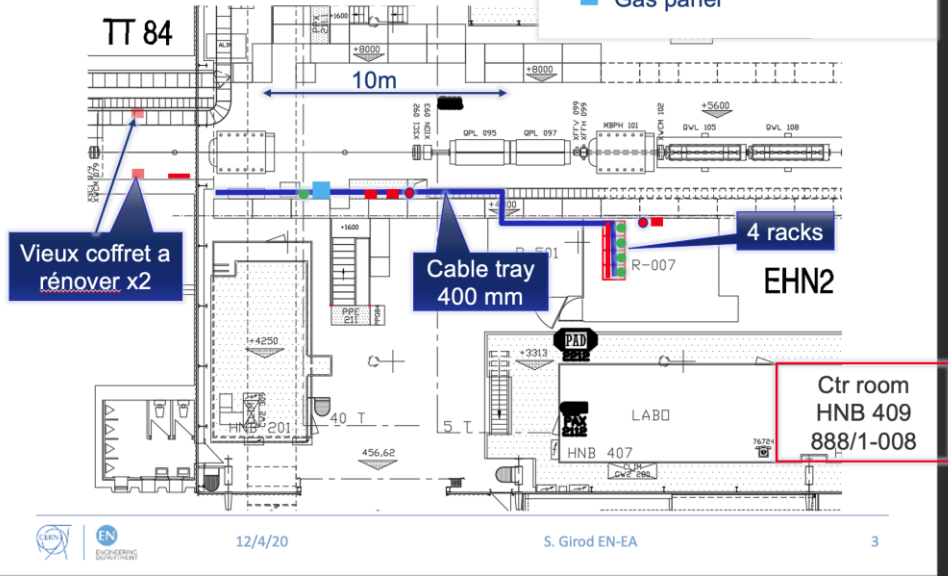


3) For PT the 2021/2022 WP has been prepared by EP-DT: 5 kCHF



### Services b.888 EHN2

- reglettes (10x 6A)
- coffrets 1x 16A + 4x 10A
- Prise 1x 32A
- 2 outlets Ethernet (=1 socket)
- Gas panel



Request of moving the material stored there:  
ECAL0, ECAL0 electronics, LH target



EPSON Moverio 2200

HMT Realwear

Remote assistance devices have been tested, The first during the dry run, the second after it due to its availability Both well performing, same price range ~ 2 kEuro, HMT superior performance and fully hands free. 3 kE with accesories

Customer Name / Kunden Name CERN  
 Address / Adresse Espl. des Particules 1  
 Zip / PLZ 1211  
 City / Stadt Meyrin  
 Country / Land Switzerland

Date / Datum Wednesday, 6 January 2021  
 Reference / Referenz TS202101-596  
 Contact / Kontakt Stefano Levorato  
 e-mail / e-Mail: stefano.levorato@cern.ch  
 Phone / Telefon: +41 75 4114850

Description / Beschreibung	SKU	Quantity / Anzahl	Price / Preis	Amount / Betrag
MOVERIO PRO BT-2200	V11H853040	1	CHF 2,015.00	CHF 2,015.00
RealWear HMT-1	171031-S	1	CHF 2,095.00	CHF 2,095.00
Versandkosten / Shipping Cost		1	CHF 20.00	CHF 20.00

Extremely useful for remote operations  
 your opinion ? Should we purchase a device?  
 Only problem, needs network coverage not present everywhere at COMPASS.