



Coordinator report

Karl Johnston

- Update on setups and space
- Beam requests and brief discussion of 2021 schedule
- INTC news and summary of outcomes.

Physics at ISOLDE: 2020

Most plans have been shelved or affected in some way

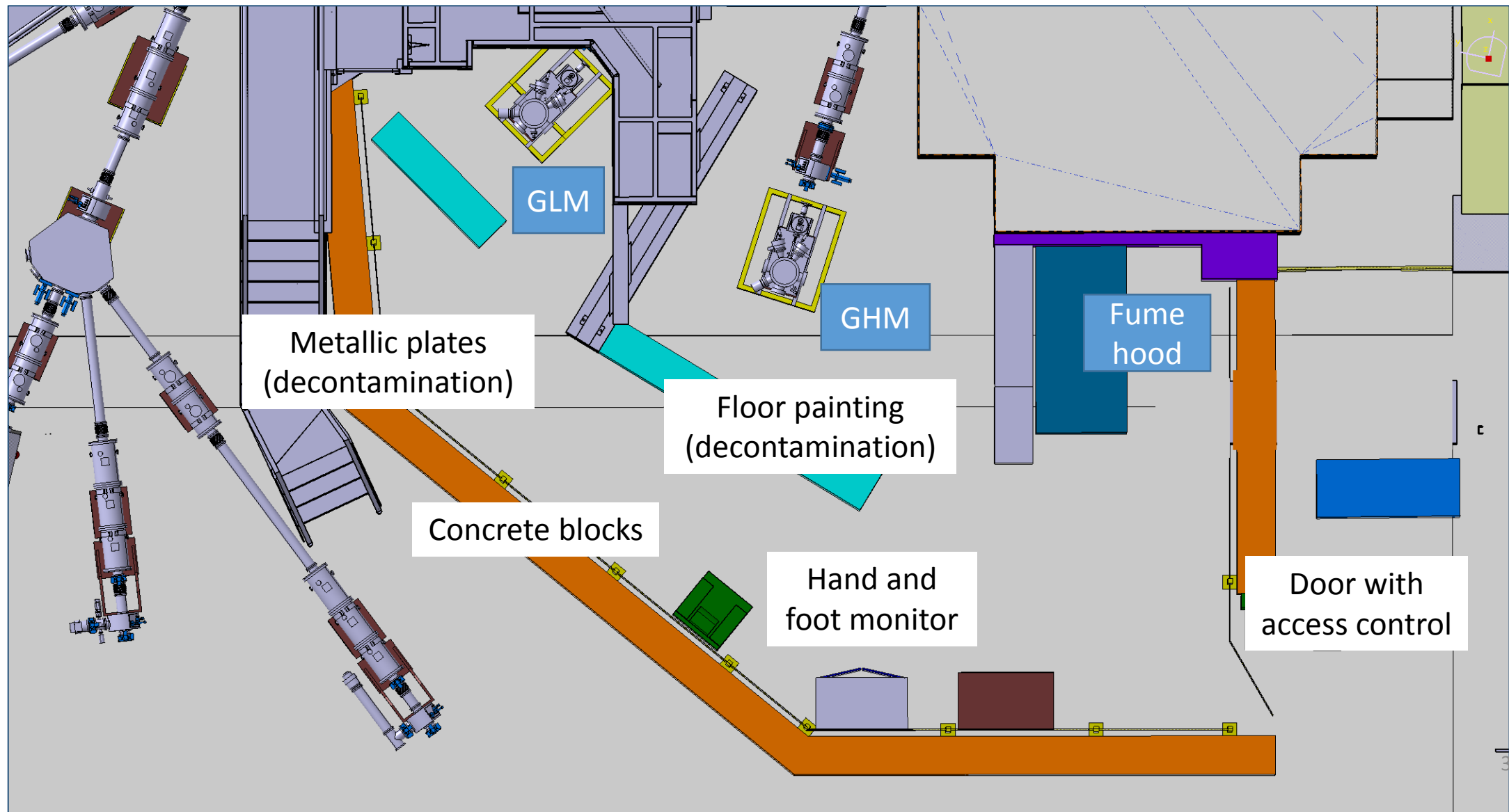
Original plans:

- Removal of NICOLE
- Installation of MIRACLS in its place
- Upgrade of TAS vacuum system
- Upgrade of VITO magnet
- ISOLTRAP realignment etc
- ISS detector insertion and upgrades
- SPECMAT tests
- GLM/GHM rebuilding
- WISARD upgrade

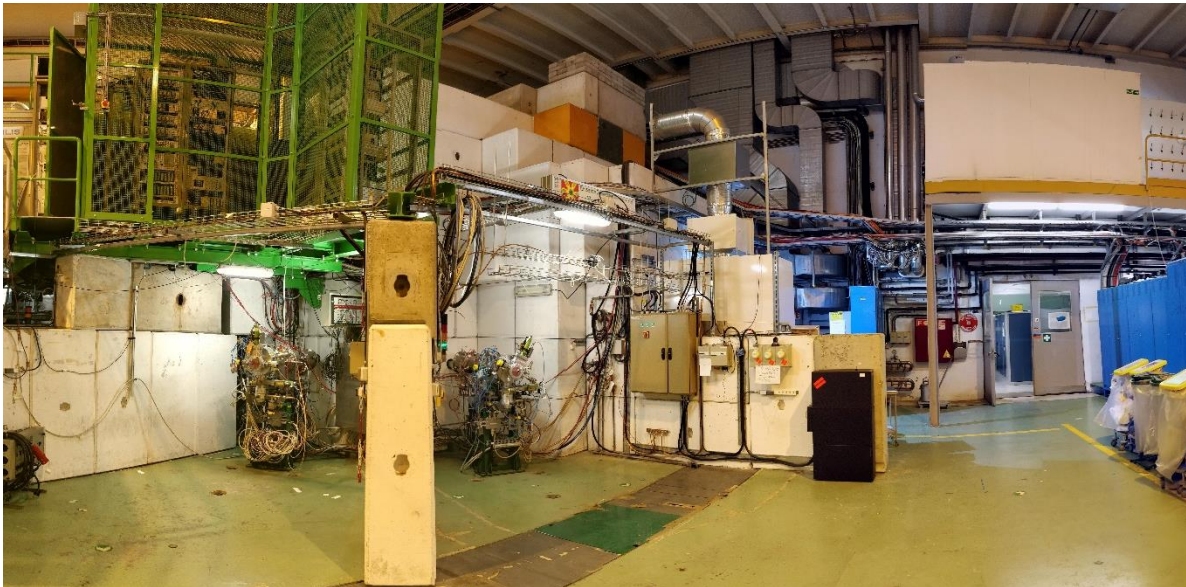
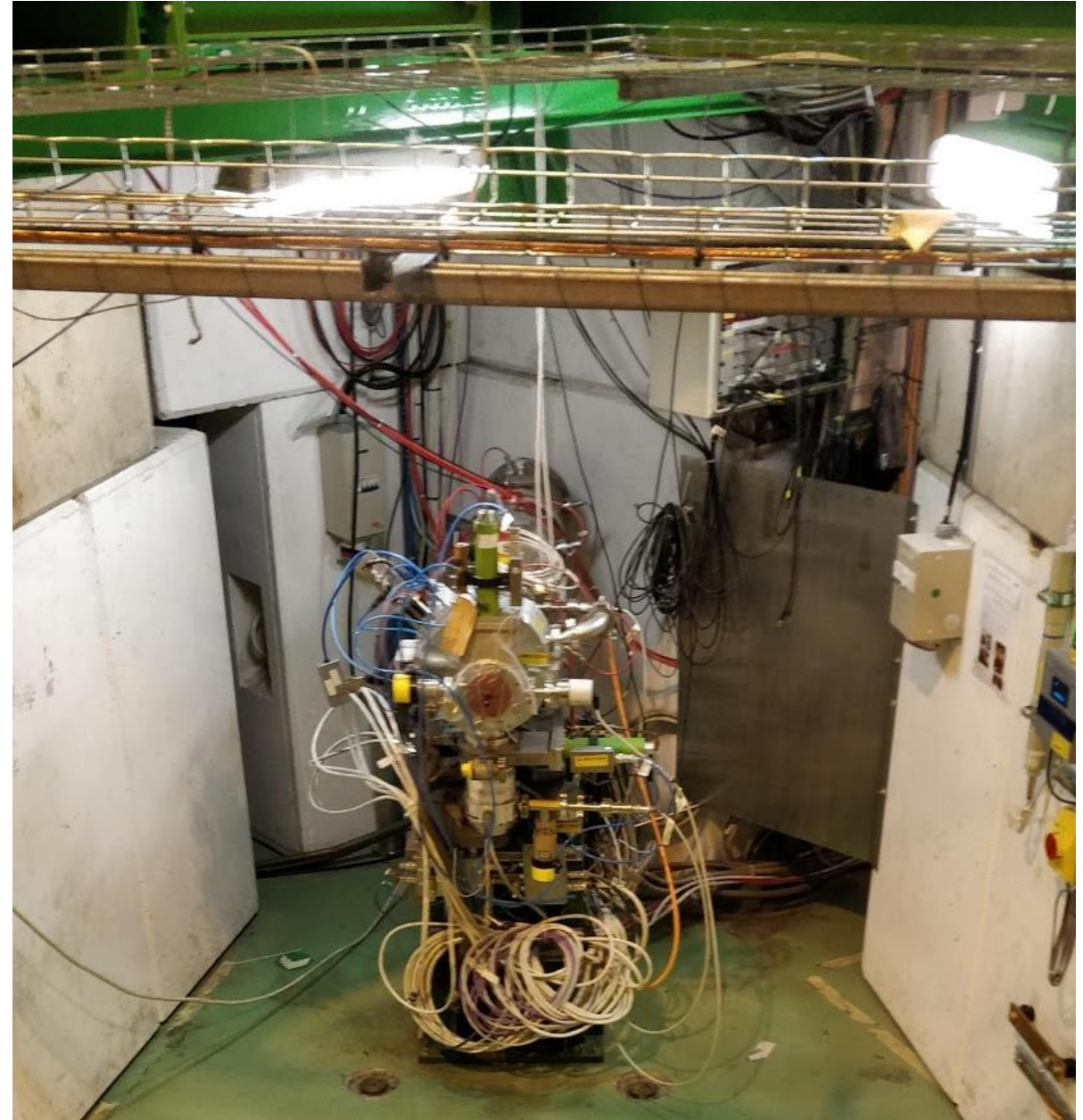
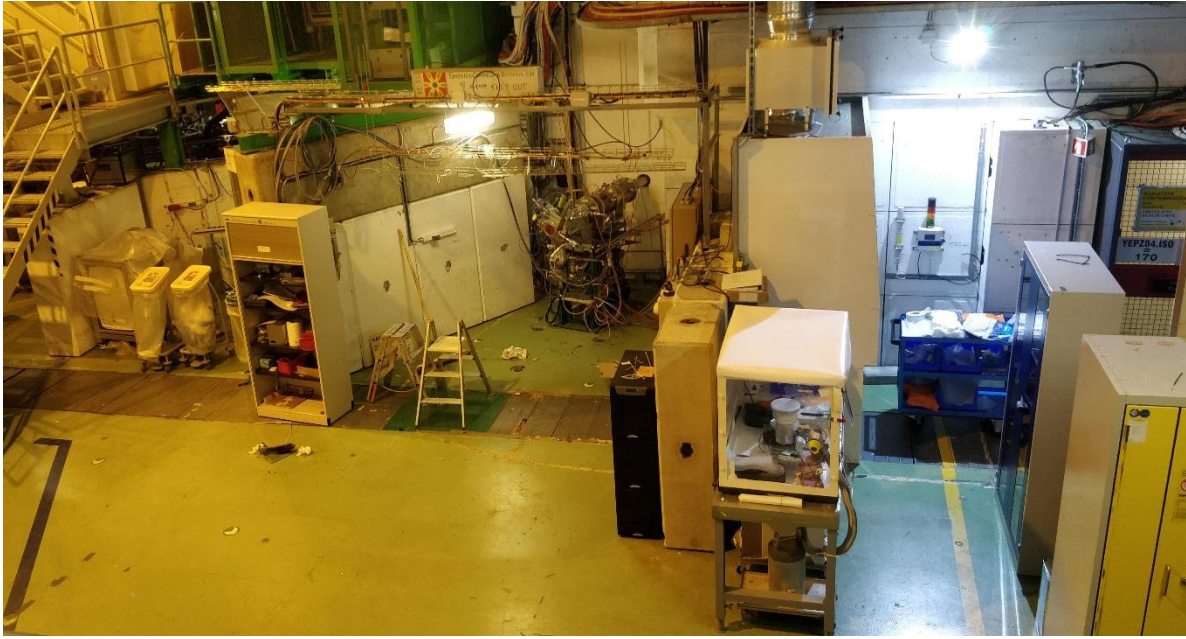


- Safe mode from March 13th till May 18th.
- Since then gradual restart till mid-September when groups were expected to be back on-site.
- With increase in cases return to 60% teleworking and now 100% for those who can. (so technical and commissioning work continues)
- On-site justification required for those who need to be present, but no limitation to numbers yet

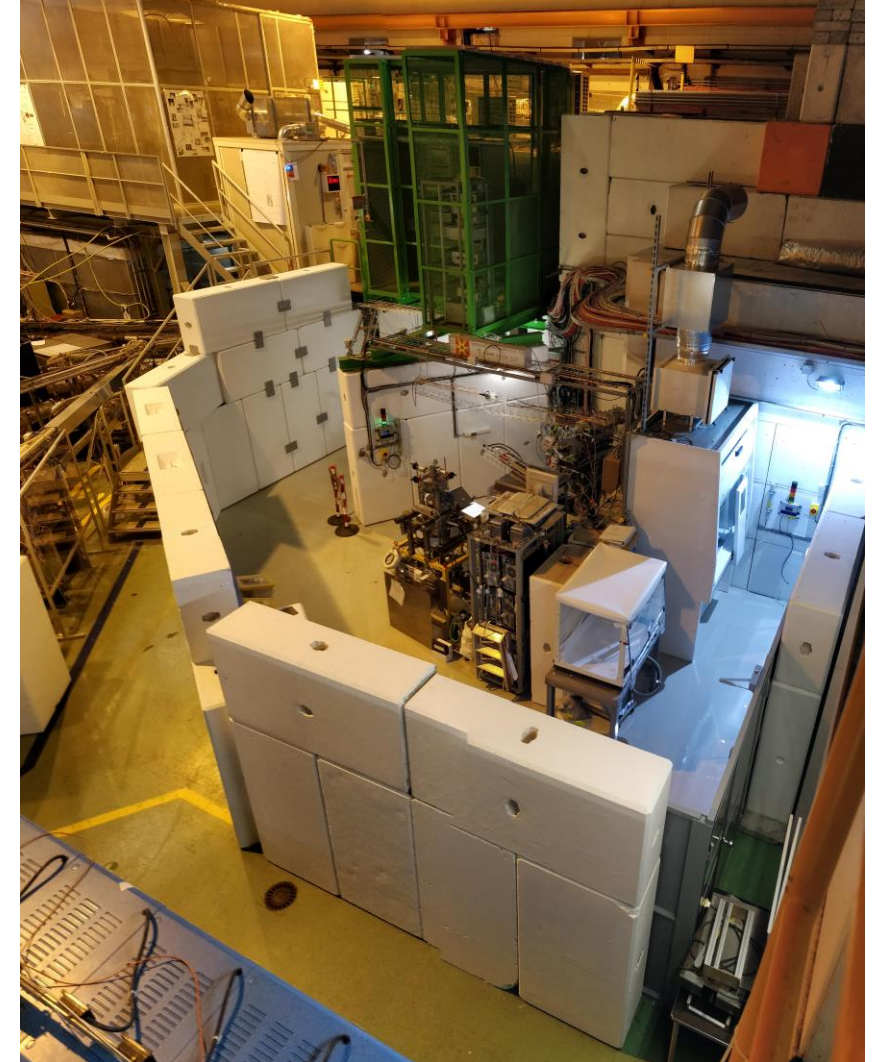
GLM/GHM consolidation

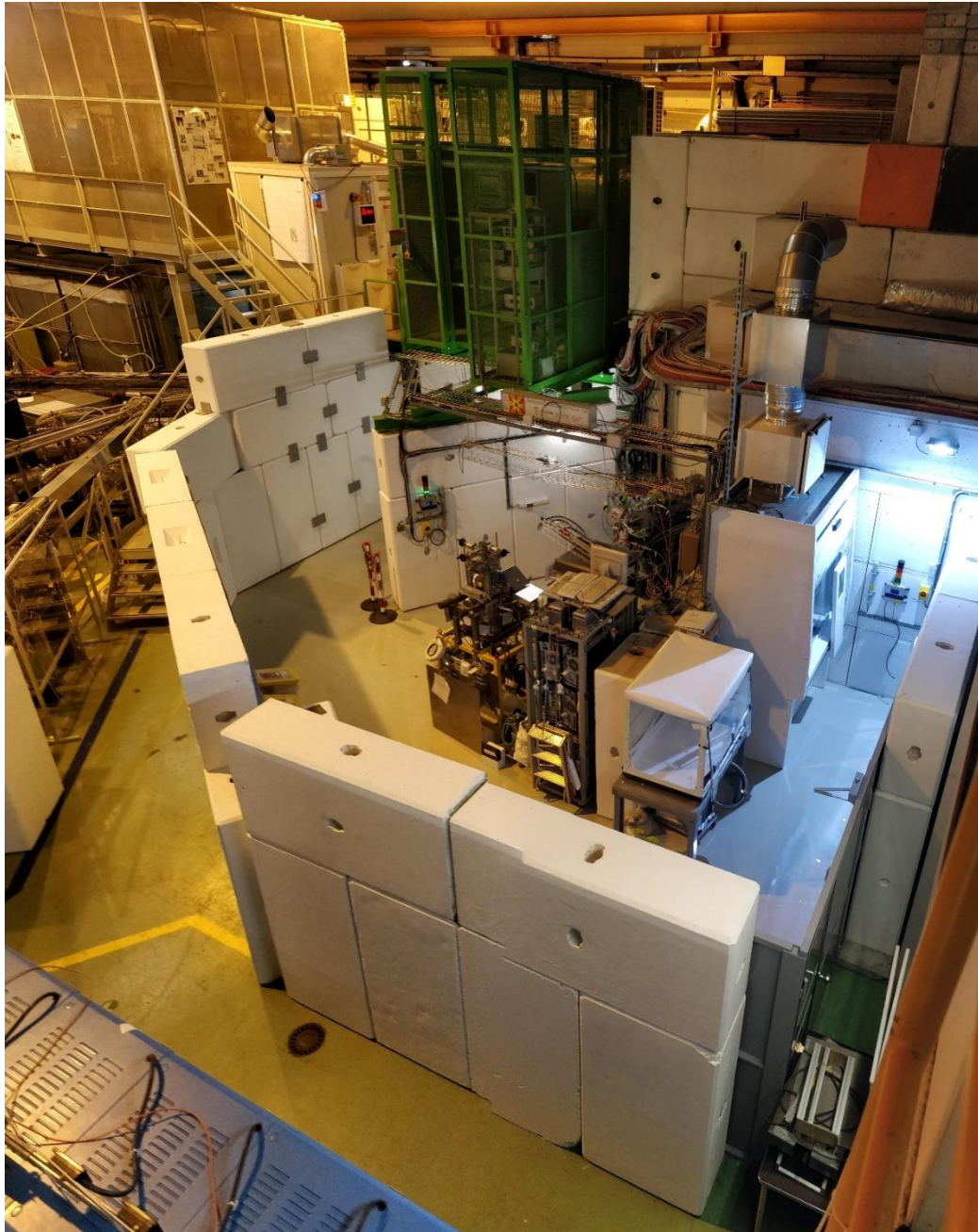


Removal of blocks and equipment in August



Establishment of perimeter and shielding blocks





Situation as of 4/11/20

Installation of equipment in 2 weeks. Access system in 2021.

Will be classified as limited stay area (during beam).

Old access under stairs has gone but space available between LA1 and LA2



NICOLE



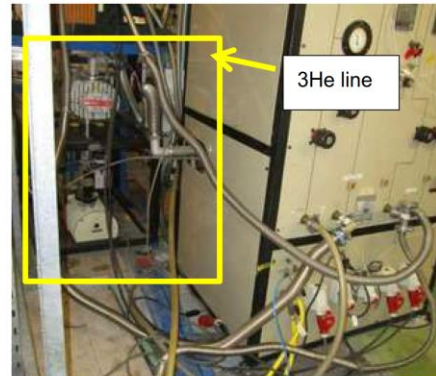
NICOLE system



5. Remove all vacuum bellows, water lines, electric lines and high pressure air line.



If possible, we want to keep 3He line. If not possible, you can remove these vacuum



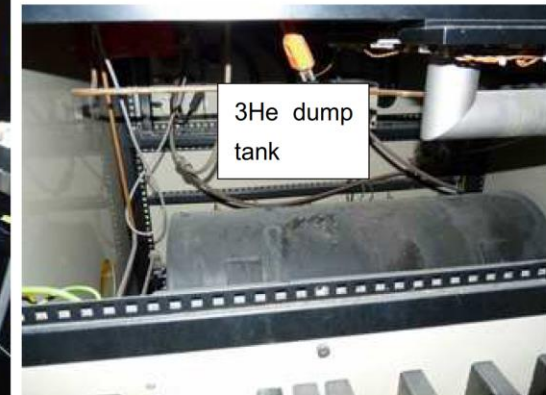
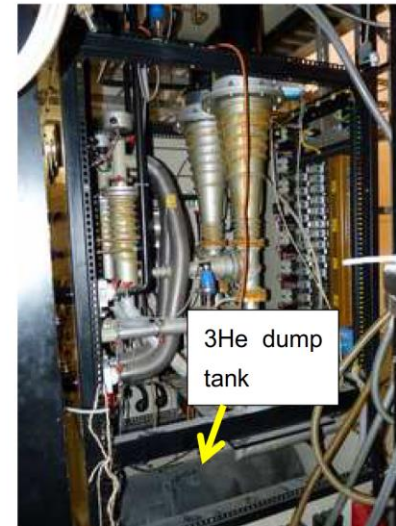
You can remove bellows of N2 trap.

NICOLE removal was due for March 2020.....not possible

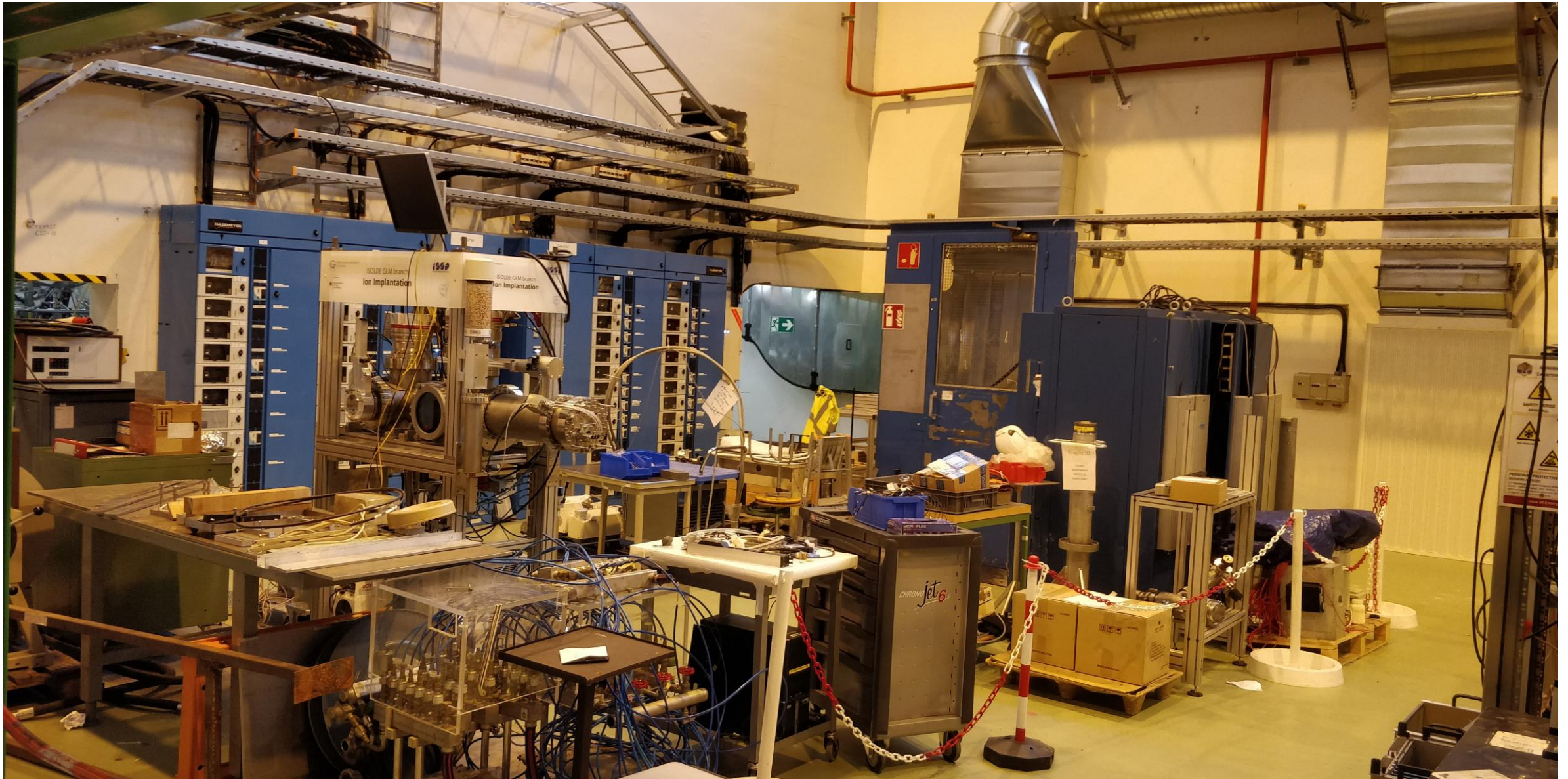
Instructions received from Taka late September. Once space is cleared in the extension this will be moved there....

Will be done with remote assistance from NICOLE team

6. 3He dump tank. 3He gas is very expensive. So we want to keep it. The dump tank is bottom circulation system. There are two tanks. Please handle with care.



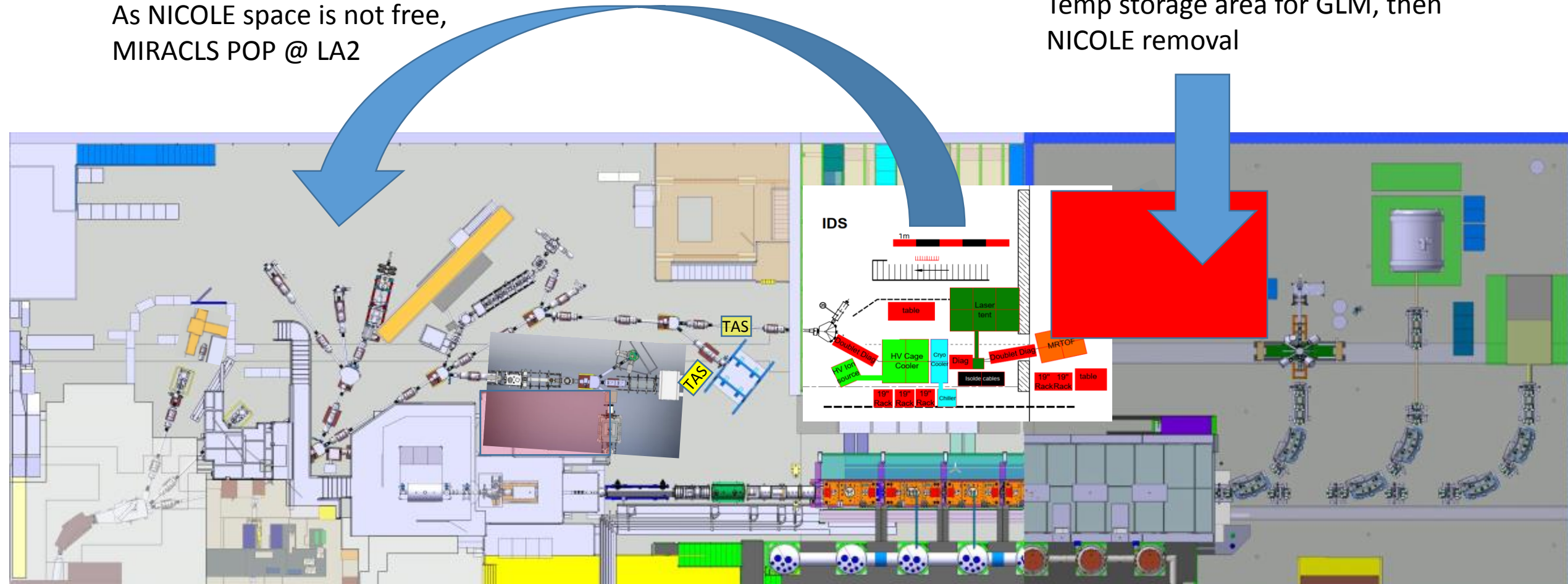
Removal of storage cupboards and clean-up. Space available beside Miniball

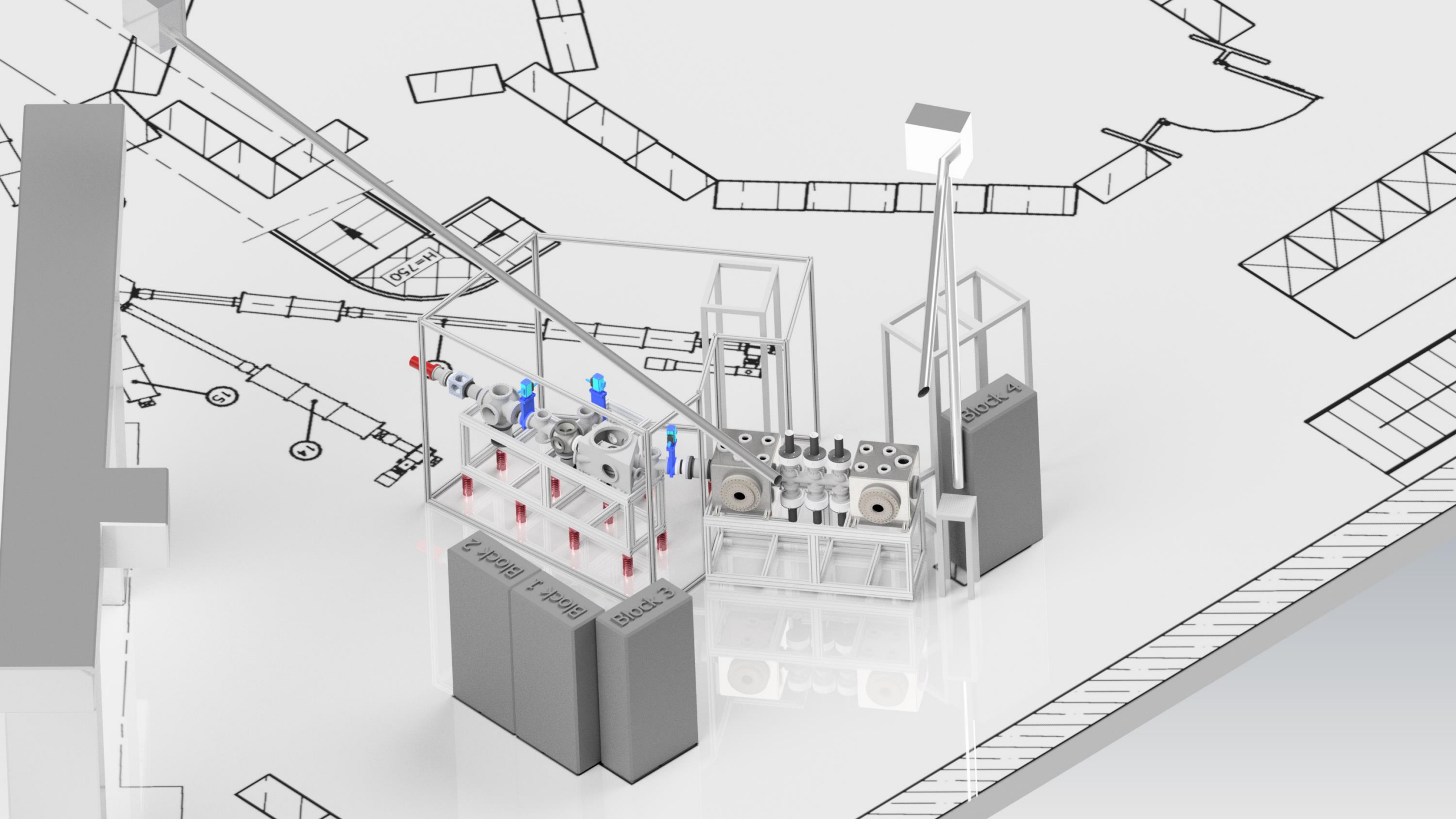


MIRACLS plan B

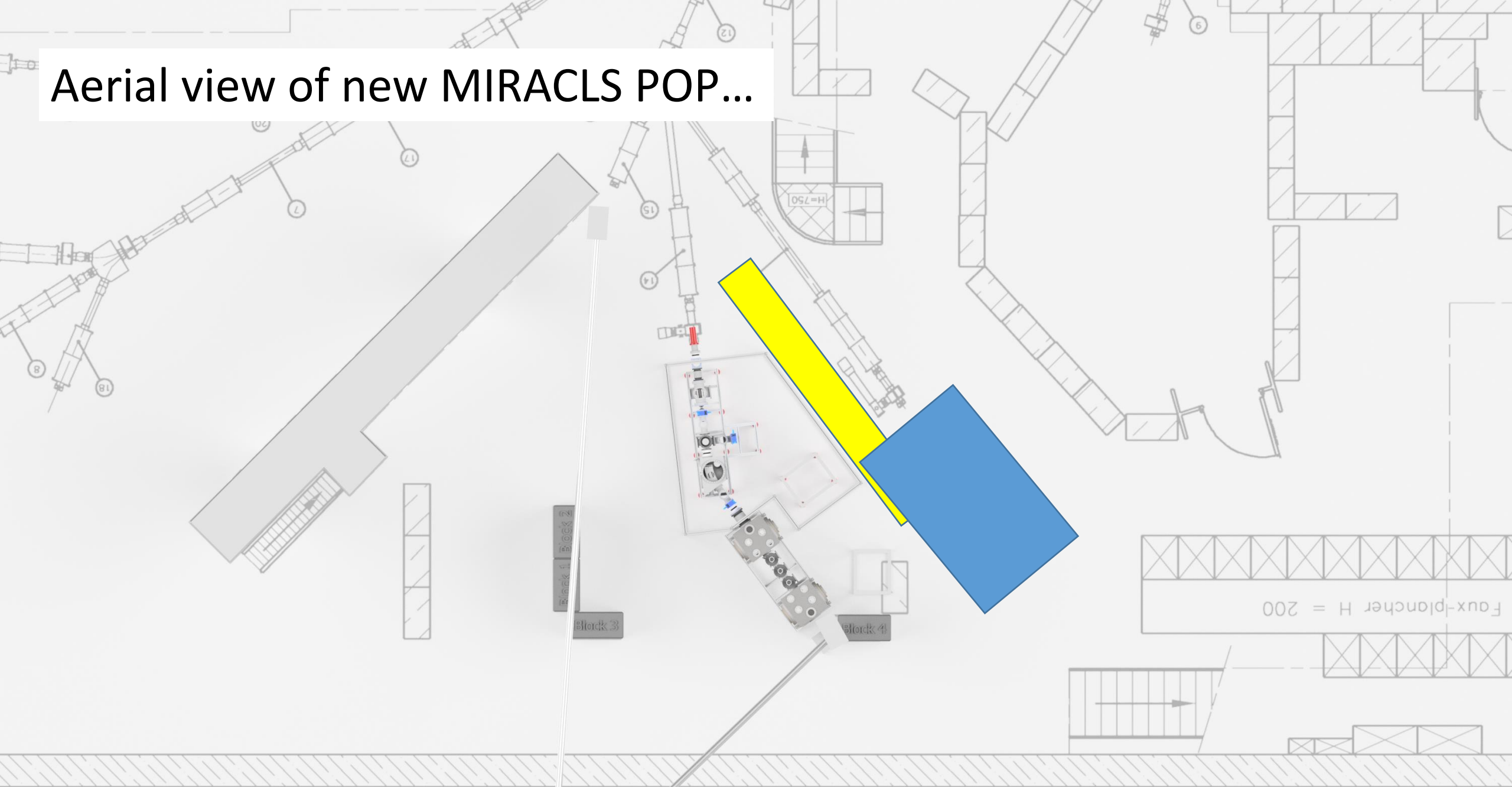
As NICOLE space is not free,
MIRACLS POP @ LA2

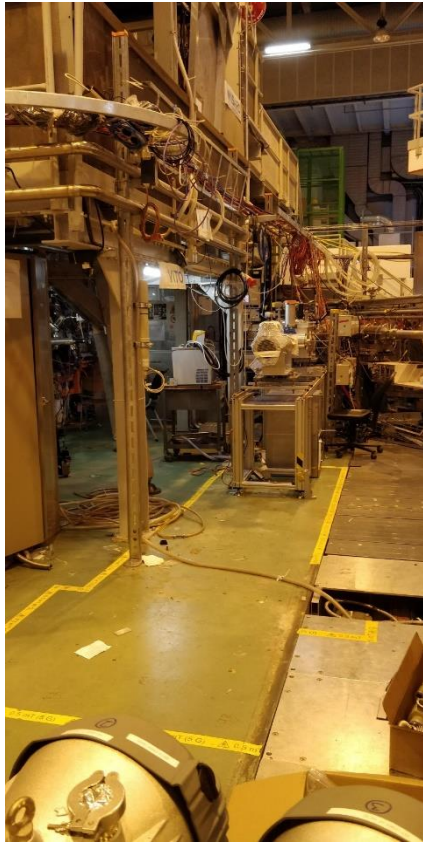
Temp storage area for GLM, then
NICOLE removal





Aerial view of new MIRACLIS POP...





Other setups



VITO installation for superconducting magnet ongoing. (rail system supported with infrastructure funds)

Upgrade of WISARD crane (supported with infrastructure funds)

TAS upgrade delayed due to COVID issues: ready for 2021?

Brief update from INTC and LOIS 2020



CERN-INTC-2020-001 / INTC-I-208
06/01/2020

Letter of Intent to the ISOLDE and Neutron Time-of-Flight Committee

Endorsed science but note that space needs to be found for this setup.
Expect working in Gottingen in Summer 2021

[6.01.2020]



CERN-INTC-2020-003 / INTC-I-209
08/01/2020

Letter of Intent to the ISOLDE and Neutron Time-of-Flight Committee

Endorse

PUMA: antiProton Unstable Matter Annihilation
January 6, 2020



CERN-INTC-2020-007 / INTC-I-210
08/01/2020

Potentially interesting science: requires clarification of science cases

Spectrometer at ISOLDE

Jan - 8th - 2020



CERN-INTC-2020-008 / INTC-I-211
08/01/2020

Letter of Intent to the ISOLDE and Neutron Time-of-Flight Committee

Endorse

eMMA - Development of a magnetic material investigation apparatus at ISOLDE for the investigation of magnetic materials

[8.01.2020]



CERN-INTC-2020-011 / INTC-I-212
10/01/2020

Endorsed science but note that space needs to be found for this setup.
Magnet delays...perhaps only late 2021 in Essen

January 8th 2020



CERN-INTC-2020-012 / INTC-I-213
10/01/2020

Endorse the science case although feasibility needs to be demonstrated due to space constraints

0



CERN-INTC-2020-013 / INTC-I-214
13/01/2020

Letter of Intent to the ISOLDE and Neutron Time-of-Flight Committee

(Following I-190, I-191, I-194, I-195 2020)

Endorse

The SpecMAT active target

January 13, 2020



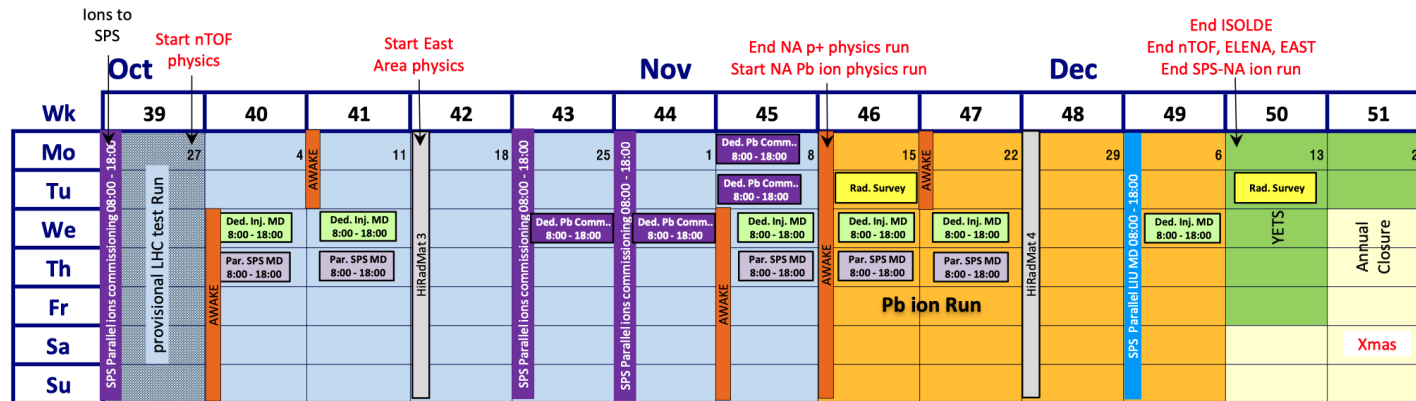
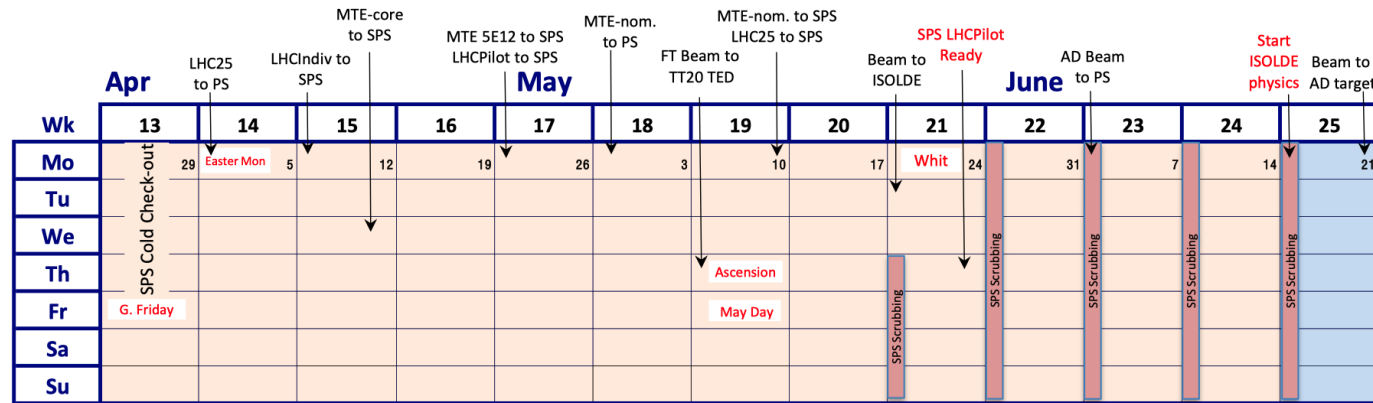
CERN-INTC-2020-015 / INTC-I-215
13/01/2020

Endorse: Space has grown considerably: minimise? Repeat the need for stable beams

January 11, 2020

Update on schedule for 2021

Original draft schedule....



Original draft schedules for 2021:

Start ISOLDE physics: 21 June

Start nTOF physics: 27 Sept

End of 2021 physics: 13 Dec

BUT meant almost no YETS...LHC starting commissioning 1 Feb 2022

Updated draft for 2021:

Need for YETS in 2021/22:

Accelerators stop W 41-45(??) 21 – W 4 22

Start ISOLDE physics: 21 June

Start nTOF physics: 27 Sept

End of 2021 physics: 11 Oct – end Oct/beginning NOV....

Need to keep services running to allow for winter physics programme at ISOLDE.

Situation to be reviewed in mid-March 2021

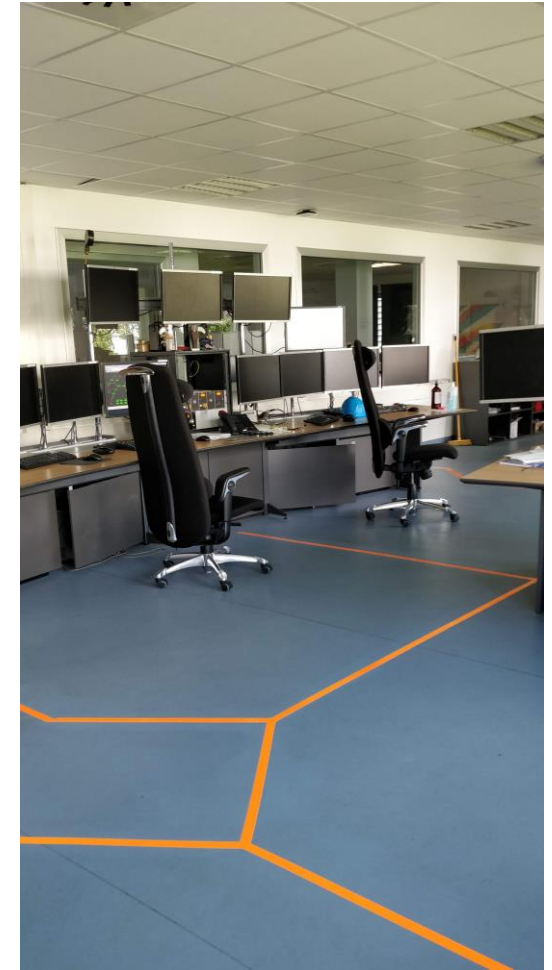
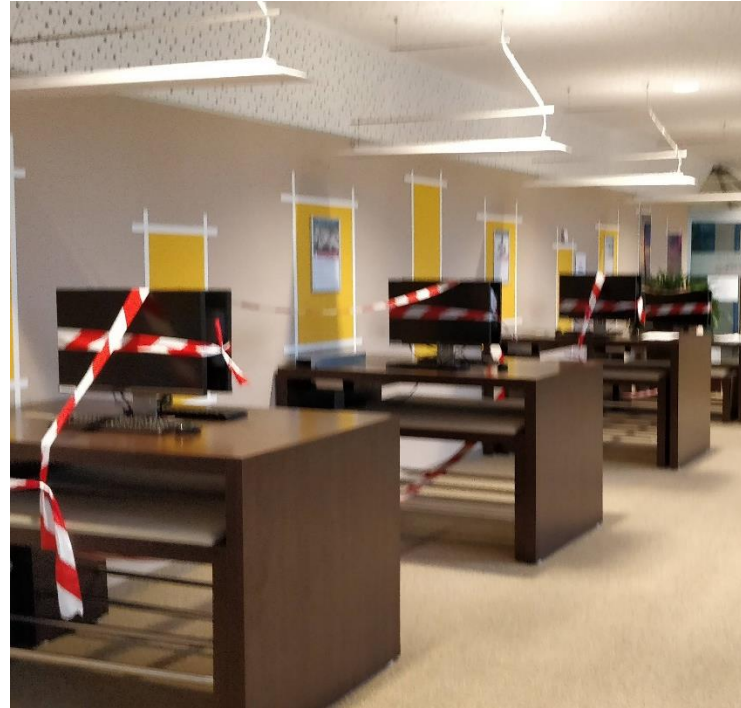
Beam requests 2021

- To allow time for targets to be produced, will send out beam requests earlier than usual.
- Once the draft schedule is known more firmly (sometime late November, before Research board) to all approved experiments and those likely to be approved by RB in December.
- Return in Mid-January to allow target allocation well in advance due to reduced capacity.
- Experiments in February will be eligible for beam in 2021 but difficult to guarantee (unless can be combined)
- Operations in 2021....expect travel restrictions to still be in place, local groups will have even more of a role to play. Remote access will have to be considered.
- Targets being prepared, re-use of some units from 2018 also foreseen (once they pass their vacuum tests)
- Potential for generous winter physics programme in 2021.

Training, Access etc

Safety trainings for users suspended (trainer unable to travel in 2020). I have permission to give the courses till end of 2020...to be seen for 2021. New electrical course is being prepared for EP staff/users (which could replace our hands-on course). But also delayed due to covid.

If measures continue....running experiments will not be straightforward.



Summary from INTC 64

Row Labels	Sum of Shifts requested	Sum of shift awarded	Count of setup
Clarification	59	0	4
Absolute charge radii of radioactive isotopes measured by muonic x-ray spectroscopy at PSI	0	0	1
Measurement of the decay scheme of ^{142}Cs	10	0	1
Nuclear moments of excited states in neutron rich Sn isotopes studied by on-line PAC	27	0	1
Total absorption spectroscopy of neutron-rich indium isotopes beyond N=82	22	0	1
Full	242	242	14
Beta-delayed neutron emission of ^{134}In and search for $i_{13/2}$ single particle neutron state in ^{133}Sn	18	18	1
Development of neutron-rich Tb beams for a systematic study approaching the doubly mid-shell in Rare-Earth nuclei	6	6	1
Development of new rare-earth-free hard magnetic materials	15	15	1
Laser assisted studies of β -delayed fission in $^{178,176}\text{Au}$ and of the structure of ^{175}Au	14	14	1
Laser spectroscopy of neutron-rich tellurium isotopes	18	18	1
Liquid β -NMR studies of the interaction of Na and K cations with DNA G-quadruplex structures	29	29	1
Mass measurement of the self-conjugate ^{98}In for nuclear and astrophysical studies	15	15	1
MIRACLS at ISOLDE: The Charge Radii of Exotic Magnesium Isotopes	17	17	1
Precise measurements of the β -decays of ^9Li and ^8He for reactor neutrino experiments	18	18	1
Quantum colour centers in diamond studied by emission channeling with short-lived isotopes (EC-SLI) and radiotracer photoluminescence	20	20	1
Rotational and Hyperfine Structure of RaF Molecules	48	48	1
Simultaneous spectroscopy of $\gamma\gamma$ - rays and conversion electrons: Systematic study of EEO transitions and intruder states in close vicinity of mid-shell point in odd-Au isotopes	7	7	1
Study of the radiative decay of the low-energy isomer in ^{229}Th	11	11	1
The peculiarities of reduction and doping of vanadium oxides probed by TDPAC spectroscopy at ISOLDE	6	6	1
Partial	77	38.5	4
Beta decay along the rp-process path for accurate stellar weak-decay rates: ^{68}Se and ^{70}Se	18	2	1
Collinear resonance ionization spectroscopy of silver between N=50 and N=82	35	22.5	1
Feasibility studies towards the systematic investigation of the $\beta\beta$ -delayed fission in the neutron-rich actinides. Part I: $^{230,232,234}\text{Fr}$ and $^{230,232,234}\text{Ac}$	5	4	1
Investigation of octupole deformation in neutron-rich actinium using high-resolution in-source laser spectroscopy	19	10	1
Grand Total	378	280.5	22

Summary from INTC 65

Row Labels	▼ Sum of Shifts requested	Sum of shift awarded
[-] Full	221	221
[-] ISOLDE	221	221
A new approach to beta-delayed multi-neutron emission	17	17
Absolute charge radii of radioactive isotopes measured by muonic x ray spectroscopy at PSI	30	30
Charge and spin states of Fe in binary compounds	13	13
Decay spectroscopy of neutron-rich Zn isotopes by total absorption	15	15
Emission Mössbauer spectroscopy of superconducting NbN thin films implanted with magnetic species	9	9
Investigating the key rp process reaction $^{61}\text{Ga}(p,\gamma)^{62}\text{Ge}$ reaction via $^{61}\text{Zn}(d,p)^{62}\text{Zn}$ transfer	18	18
Letter of Clarification to the INTC: INTC-P-557 "Measurement of the decay scheme of ^{142}Cs "	10	10
Probing Energy Efficient Perovskites	34	34
Probing the magicity and shell evolution in the vicinity of N=50 with high-resolution laser spectroscopy of $^{81,82}\text{Zn}$ isotopes	16	16
The (dd,pp) reaction on ^{11}Be : Bringing clarity to our understanding of the structure of ^{12}Be	16	16
The d($^{30}\text{Mg},p$) ^{31}Mg reaction: Probing single-particle behaviour within the "island of inversion"	19	19
Weak interaction studies via beta-delayed proton emission	24	24
[+] nTOF		
[-] Letter of clarification	49	0
[-] ISOLDE	49	0
Investigating shape coexistence in $^{80,82}\text{Sr}$ with β^+/EC decay spectroscopy	19	0
Probing the ^{11}Li low-lying dipole strength via $^9\text{Li}(t,p)$ with the ISS	15	0
Spectroscopy of ^8Be : Search for Rotational Bands Above 16 MeV	15	0
[-] Partial	48	24
[-] ISOLDE	48	24
Beta-decay spectroscopy of neutron-rich Cd isotopes	21	12
Nuclear moments of excited states in neutron rich Sn isotopes studied by on-line PAC	27	12
[+] (blank)		
[+] Postpone till Feb	12	
[-] Not recommended for approval	27	0
[-] ISOLDE	27	0
Laser spectroscopy of neutron-rich and neutron-deficient cadmium isotopes using MIRACLS at ISOLDE	22	0
Precision measurement of the half-life of ^{110}Sn in large and small lattice environments	5	0
Grand Total	357	245

Summary from last three meetings (INTC 63 summarises the status report review)

Row Labels	Sum of Shifts remaining for Run3	Count of Shifts remaining for Run3_2
INTC 63	485	34
INTC 64	285.5	18
INTC 65	245	14
Grand Total	1015.5	66

Row Labels	Sum of Shifts remaining for Run3	Count of Shifts remaining for Run3_2
biophysics	9.5	1
COLLAPS	35	2
Collections: 163Ho	6	1
CRIS	99.5	4
Gandalph	8	1
HIE	271	20
I		
ir		
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PAC r		
WISARD	24	1
Grand Total	1015.5	66

Backlog is back!

Good spread of low energy physics.

**Still quite a miniball backlog.
Otherwise HIE is manageable.**

**2021 will not be a long year, but 2022
promises to be.**

Row Labels	Sum of Shifts remaining for Run3	Count of Shifts remaining for Run3_2
ISS	53	3
HIE	53	3
IS674	18	1
IS676	16	1
IS679	19	1
Miniball	236	14
HIE	236	14
IS483	11	1
IS553	6	1
IS556	36	1
IS557	10	1
IS563	12	1
IS566	10	1
IS587	15	1
IS591	21	1
IS595	21	1
IS597	12	1
IS618	24	1
IS646	21	1
IS654	22	1
IS656	15	1
N/A	644.5	46
XT03: Actar	28	1
HIE	28	1
IS581	28	1
XT03: Corset	12	1
HIE	12	1
IS550	12	1
XT03: Edinburgh	42	1
HIE	42	1
IS543	42	1
Grand Total	1015.5	66

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Please use this [link](#) to submit documents to the INTC.

Document templates:

- **HIE-ISOLDE** high-energy: [MSWord](#), [LaTeX](#)
- **ISOLDE** low-energy: [MSWord](#), [LaTeX](#)
- **n_TOF**: [MSWord](#), [LaTeX](#)

UPCOMING MEETINGS AND DEADLINES

In general the deadline for submission is 6 weeks before a meeting of the INTC. In certain cases – e.g. the February meeting – this deadline may be 4 weeks before the meeting. Full details are listed here:

Meeting 3-4 February

Deadline 6th January 2021

Meeting 23-24 June

Deadline: 12th May 2021

Meeting 9-10 November

Deadline: 28 September 2021

Next Meeting

TUESDAY

3 NOV/20

09:00 (Europe/Zurich)

ENDS: Wed,

04/11/2020 - 14:00

› 65th Meeting of
the INTC

Event



Meeting in February will accept all physics for ISOLDE and nTOF. Call to go out this week