

CERN-ISOLDE *ISOLDE & n_TOF Committee*

Klaus Blaum

INTC Chair (*from 1 Jan 2013 until 31 Dec 2015*)
[about 15 committee meetings at CERN per year]

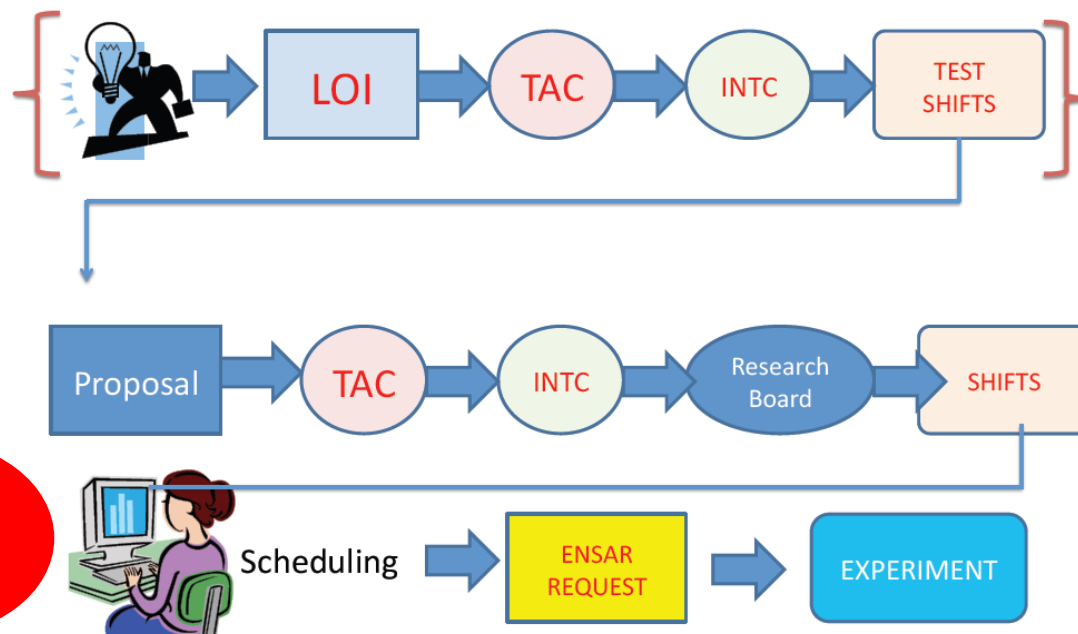
Maria Borge

ISOLDE Group Leader and Spokesperson

Magdalena Kowalska

ISOLDE scientific coordinator and INTC scientific secretary

**Klaus Blaum, MPI for Nuclear Physics, Heidelberg
for the INTC**



Approved:
June: 76 out of 180 shifts
Nov: 95 out of 364 shifts
approved

11 external members including chair

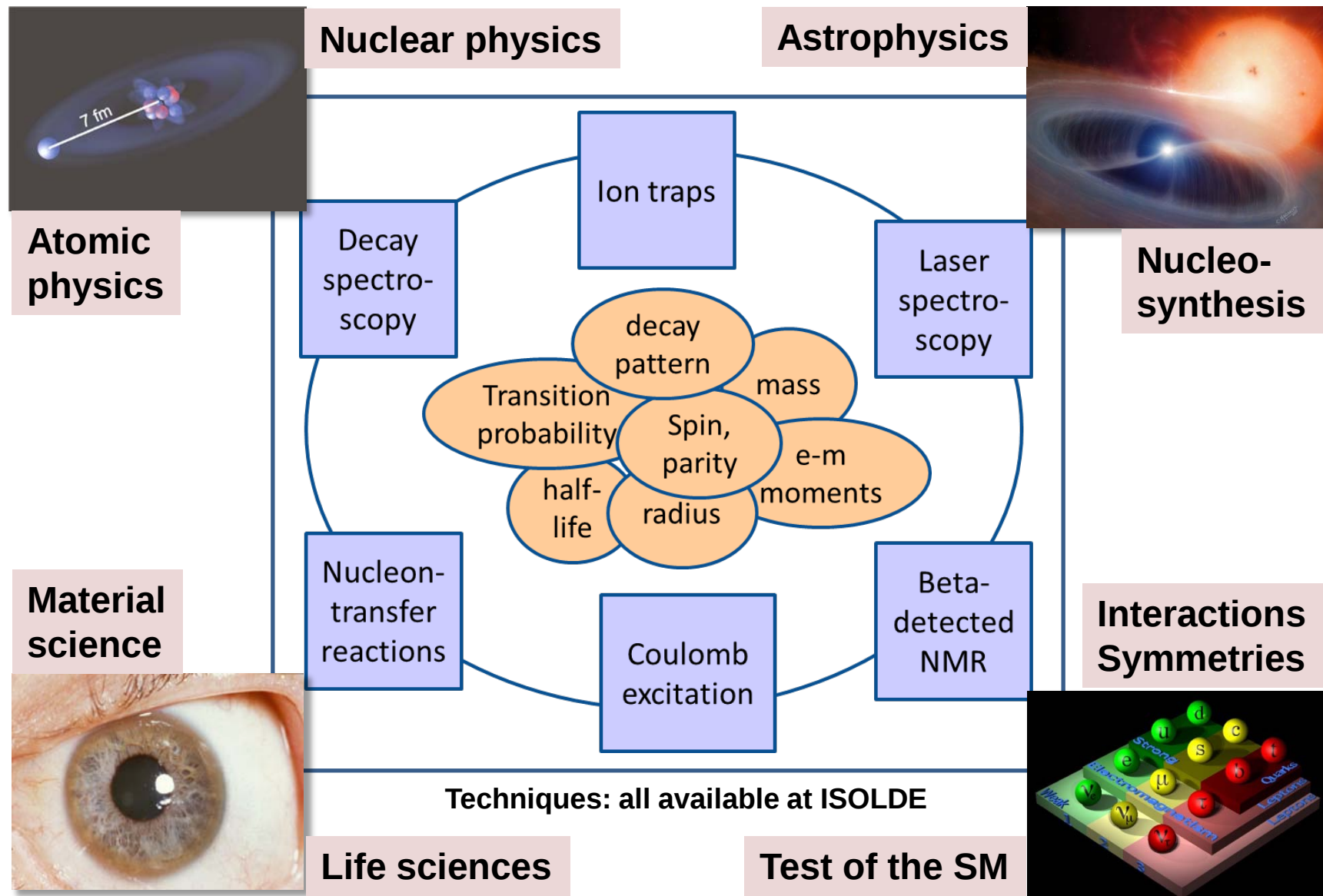
N. Alahari, B. Blank, K. Blaum, M. Block, W. Catford, G. De Angelis, J. Dobaczewski, A. Junghans, E. McGlynn, Z. Salman, J. Vaagen

2 referees per proposal appointed 2-3 weeks before meeting; in special cases (bio-chem) external referees appointed

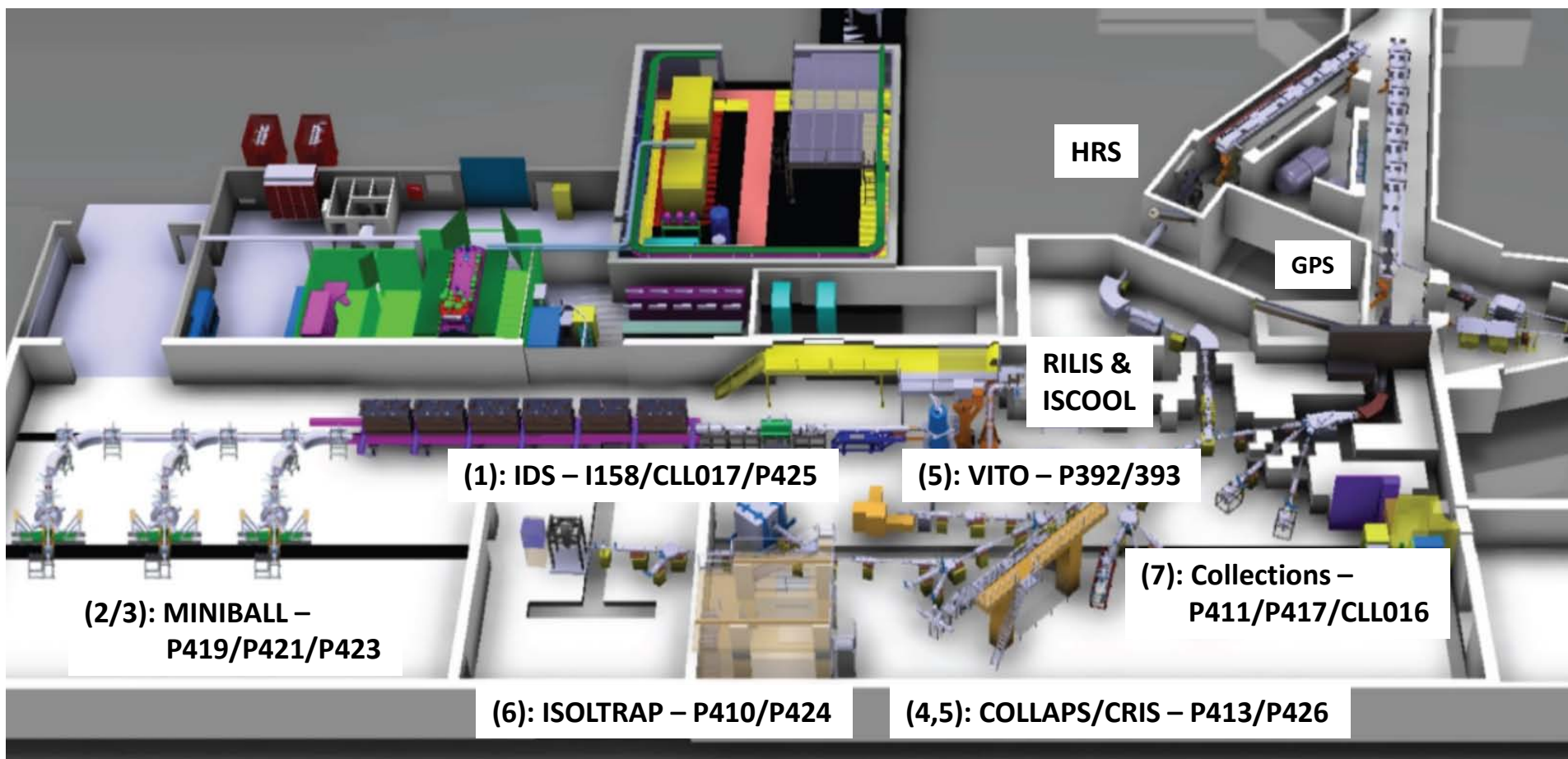
2014 meetings: 12-13 Feb (low-energy status reports), 25-26 June and 5-6 Nov [30 prop/LOIs for ISOLDE and nTOF in 2014]

INTC recommends # of 8h shifts to Research Board – no priority given

Maximum 6 pages for physics case of proposal



- | | | |
|------------------------|------------------------|-------------------|
| (1) Decay spectroscopy | (4) Laser spectroscopy | (7) Applications: |
| (2) Coulomb excitation | (5) Beta-NMR | ➤ Solid state |
| (3) Transfer reactions | (6) Penning traps | ➤ Life Sciences |



Delivered	2014*	2012	2011
Protons		11.5e19	8.05e19
All shifts (IS+LOI+MD)	155	529	463.5
Shifts for IS exp	132	416	313.5
Shifts for LOIs	6.5	15.5	16
REX shifts (IS +LOI)	-	221.5	190.5
Average IS shifts/day	1.52	1.61	1.55

In 2013:
~80 papers
3 Nature
9 PRL

2014 physics:

End-Jul – mid-Dec
(usually May-Dec)

*until 31Oct

Shifts in 2014:

Requested 556
Scheduled 332

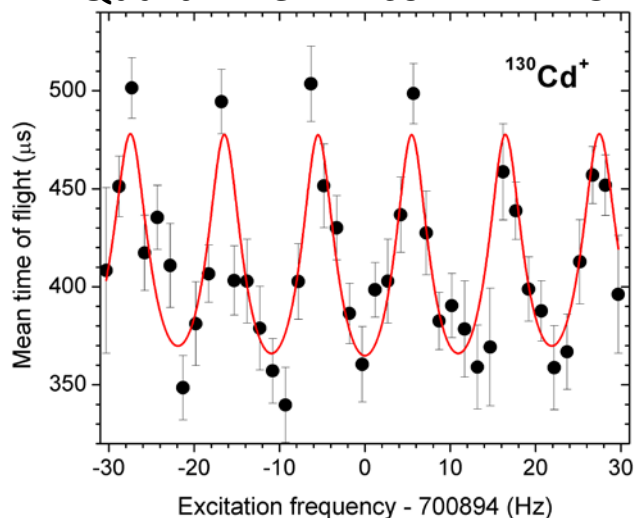
Shift balance – at the end of 2014 run: ca 1500 shifts remaining

Low-energy experiments (assuming 200 shifts delivered in 2014): 670 shifts
Post-accelerated REX-experiments (status reports in Feb15): 206 shifts
Approved for HIE-ISOLDE: 640 shifts

- Rare-earth collections of medical isotopes for PSI, Denmark, Lausanne:
 - ^{149}Tb : targeted alpha therapy. 2014 tests establishing safe usability limits, e.g. kidney damage
 - ^{155}Tb : Very promising results about the effect of Auger electrons for therapy
- ISOLTRAP: masses of $^{130-132}\text{Cd}$ for r-process nucleosynthesis
- In-source spectroscopy of At – WINDMILL and ISOLTRAP
- TISD: boron beams, molten salt, ...
- ^{31}Ar at IDS: beta delayed 2p and 3p emission

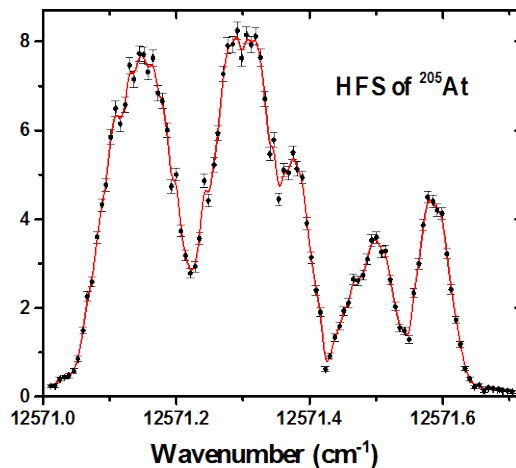
n-rich Cs: ISOLTRAP

Quartz line + n-conv + RILIS

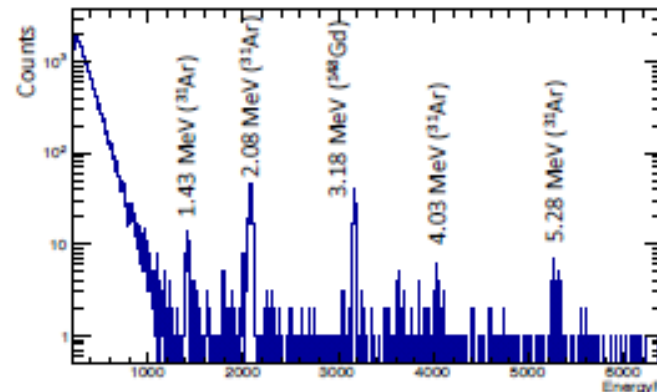
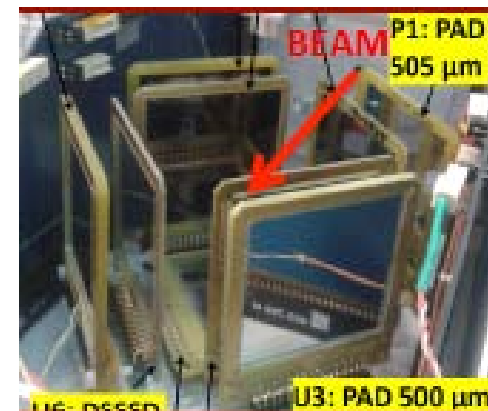


At: WINDMILL + ISOLTRAP

(MR-ToF) HFS of 21 isotopes

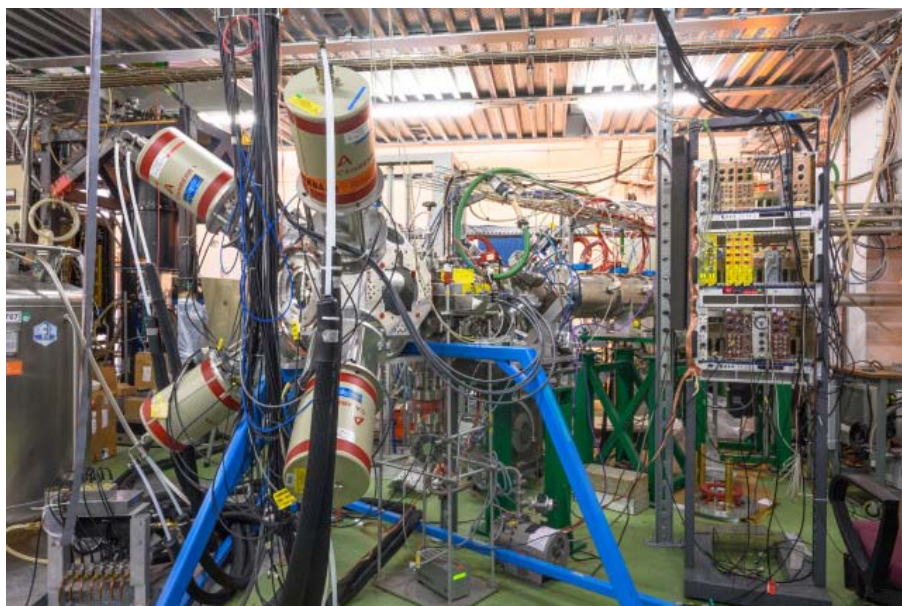


^{31}Ar at IDS



- IDS: ^{206}Hg , ^{31}Ar : 1-2 ions/s for > week, target survived CERN-wide 3h power cut
- The TATRA setup from Bratislava – new ISOLDE group and setup
- ^{11}Li for Caen and Madrid groups – 1000 ions/s for > week, n-detectors at LA1
- VITO line : first physics experiment planned for December

^{31}Ar at IDS



^{11}Li at LA1

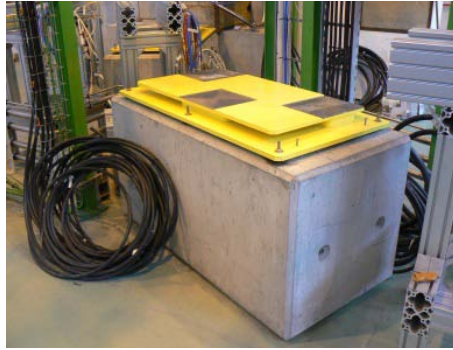


Number of beam hours promised -full contract	5200
Number of beam hours 01/09/2010 - 31/10/2014	7866.4
Estimated number of Users - full contract	400
Number of Users 01/09/2010 - 31/10/2014	397
Estimated number of days - full contract	2800
Number of days 01/09/2010 - 31/10/2014	2384
Estimated number of projects - full contract	60
Number of projects 01/09/2010 - 31/10/2014	87

Major ISOLDE upgrade

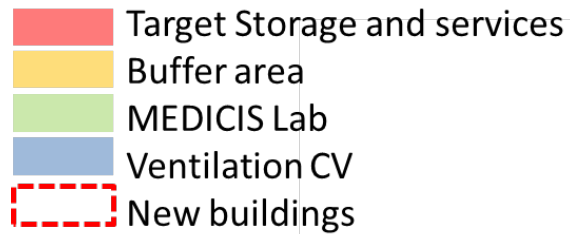
Extension of the ISOLDE hall → HIE-ISOLDE

D. Voulot

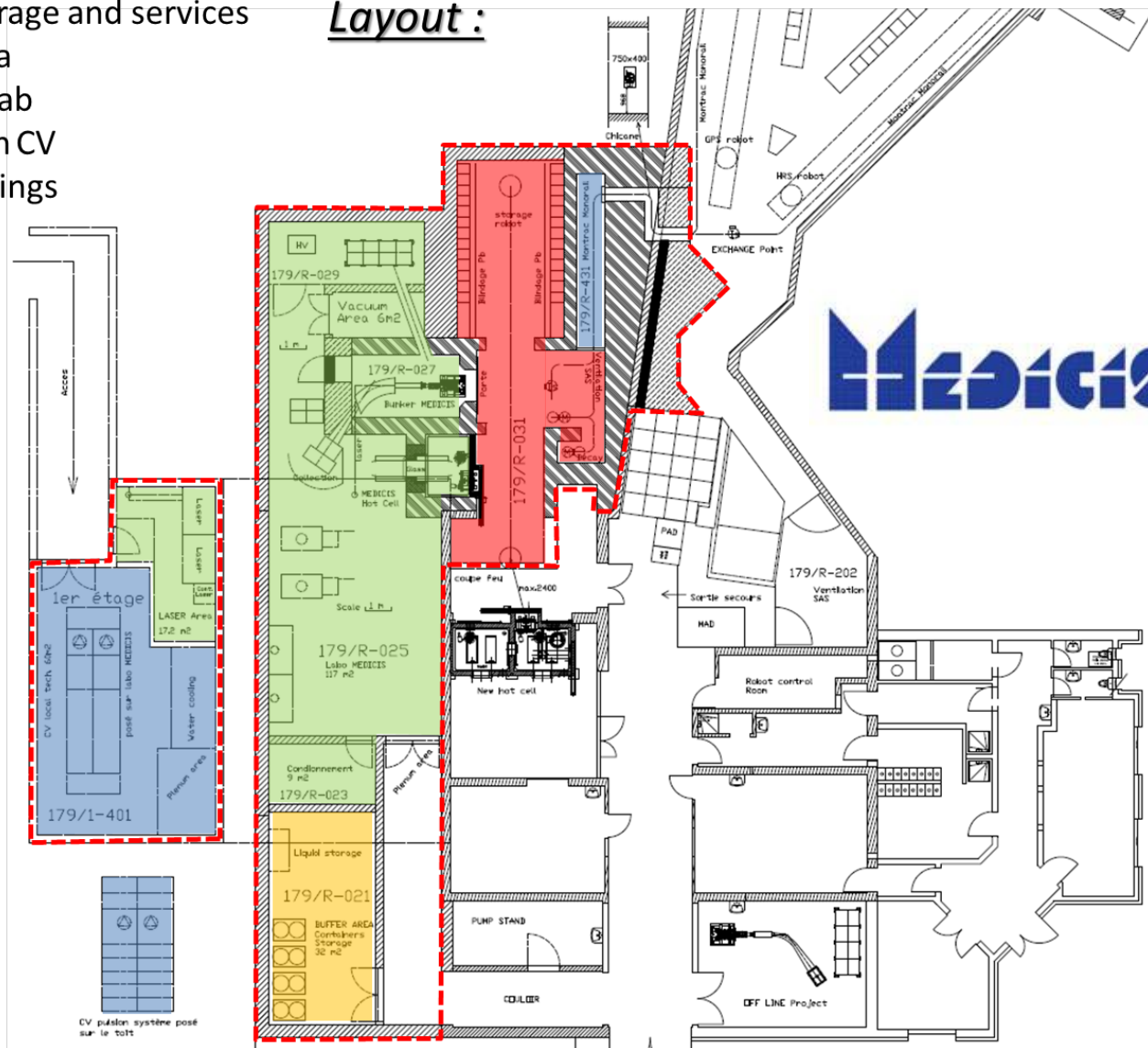


New labs and control room → building 508





Layout :



**Thanks to
Maria and Magda
for excellent teamwork!**

**Thank you
for your attention**