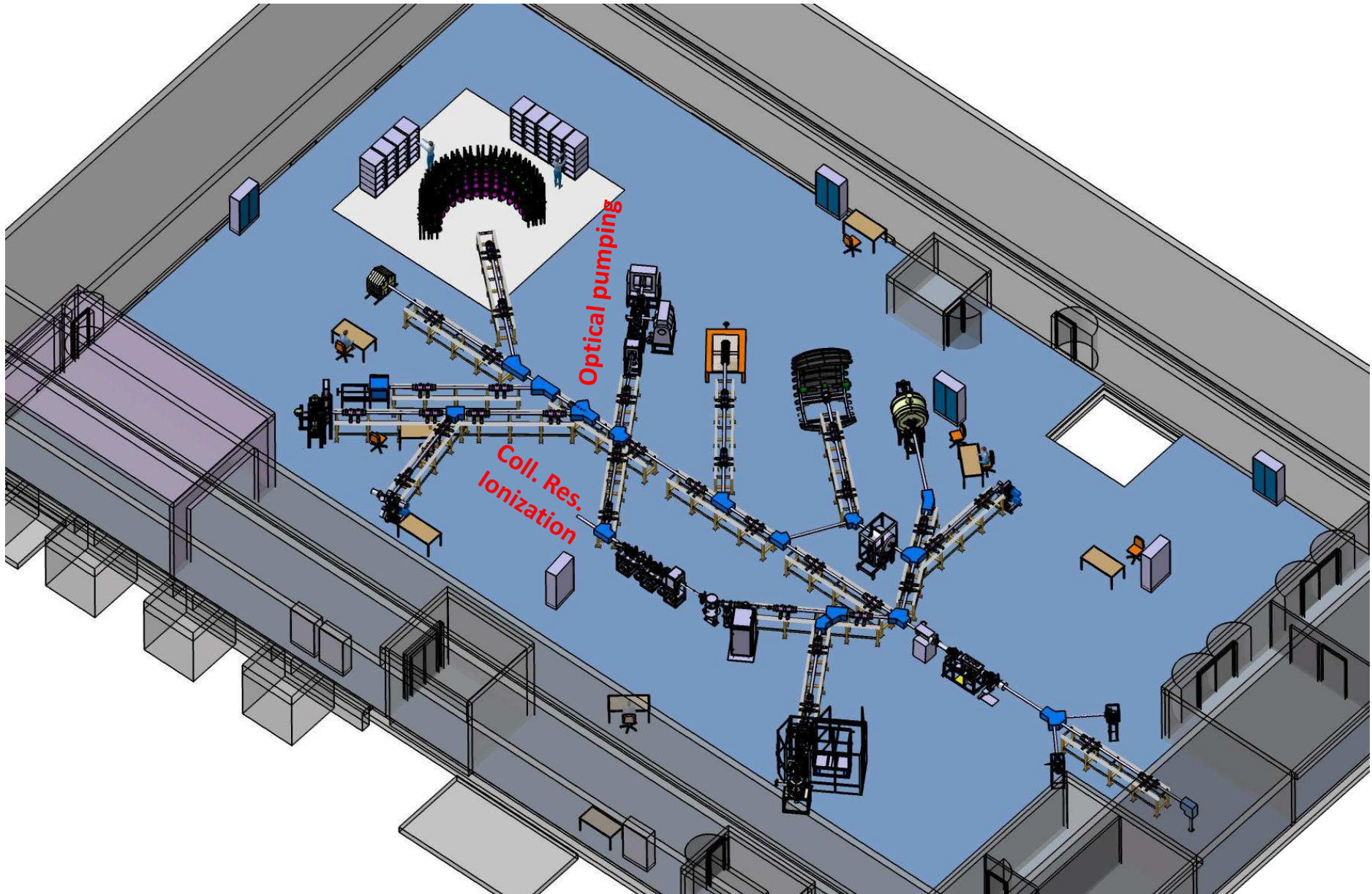
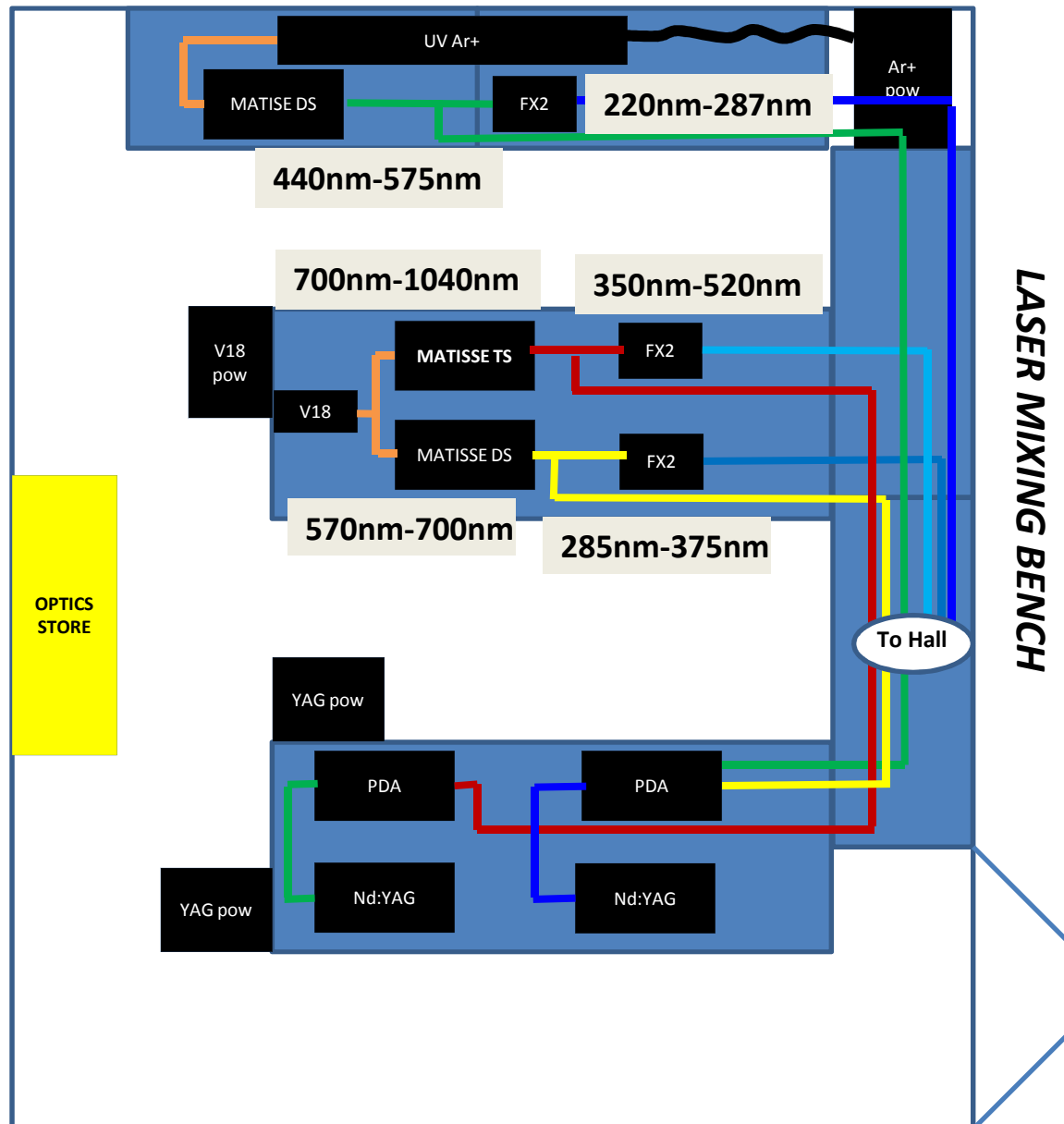


LUMIERE beamline(s)



Laser room: 55 m²



Techn. Data - Optical Pumping line

- Dimension (m³): 5*4*3
- Heaviest equipment (kg): 2000

- Electric power (kW): 30 kW
 - 230 V: 10*16 A
 - 400 V: 2*32 A
- Dissipated power (kW): < 20
- Maintained power (kW): 0

- Electronics racks: 2
- Stations : 4 + ethernet link

- Beams:
 - intensity: > 1000 pps
 - emittance : 20 π .mm.mrad
 - purity > 0 %
 - stable ions for tuning?

- Gas (embedded bottles):
 - Liquid He (cooling): 50 l, 0 bars
 - N₂, Ar (vacuum break.): 50 l, 200 bars

- Cooling:
 - Water : 5 bars, 4 m³/h
 - Liquid N₂, Ar: 0-40 l/day - manual filing occasionally
 - Liquid He : 0-40 l/day - manual filing rarely

- Pumping:
 - low vacuum : 50 m³/h
 - high vacuum : 1200 l/s

- Other needs:
 - compressed air

- Specific needs: crane

Techn. Data - CRIS line

- Dimension (m³): 6*4*3
- Heaviest equipment (kg): 2000

- Electric power (kW): 30kW
 - 230 V: 10*16 A
- Dissipated power (kW): < 20
- Maintained power (kW): <20

- Electronics racks: 3
- Stations : 3 + ethernet link

- Beams:
 - intensity: > 1 pps
 - emittance : 20 π .mm.mrad
 - purity > 0%
 - stable ions for tuning: yes

- Gas (embedded bottles):
 - He (cooling): ? l, No
 - N₂ (vacuum break.): 50 l, 200 bars

- Cooling:
 - Water : 5 bars, 4 m³/h
 - Liquid N₂: 0l/day
 - Liquid He: 0l/day

- Pumping:
 - low vacuum : 60 m³/h
 - high vacuum : 1800 l/s

- Other needs:
 - compressed air

- Specific needs: ?

Techn. Data - Laser room

- Dimension (m³): 6*10*3
- Heaviest equipment (kg): 2000

- Electric power (kW): 80KW
 - 230 V: 9*16 A
 - 400 V: 1X120 A, 1*32 A
- Dissipated power (kW): <20Air, <70Water
- Maintained power (kW): <70kW

- Electronics racks: 2
- Stations : 4 + ethernet link

- Pumping:
 - low vacuum : 2*6.2 m³/h dry
 - high vacuum : 2*60 l/s dry

- Gas (embedded bottles): N₂ or 9bar air line.

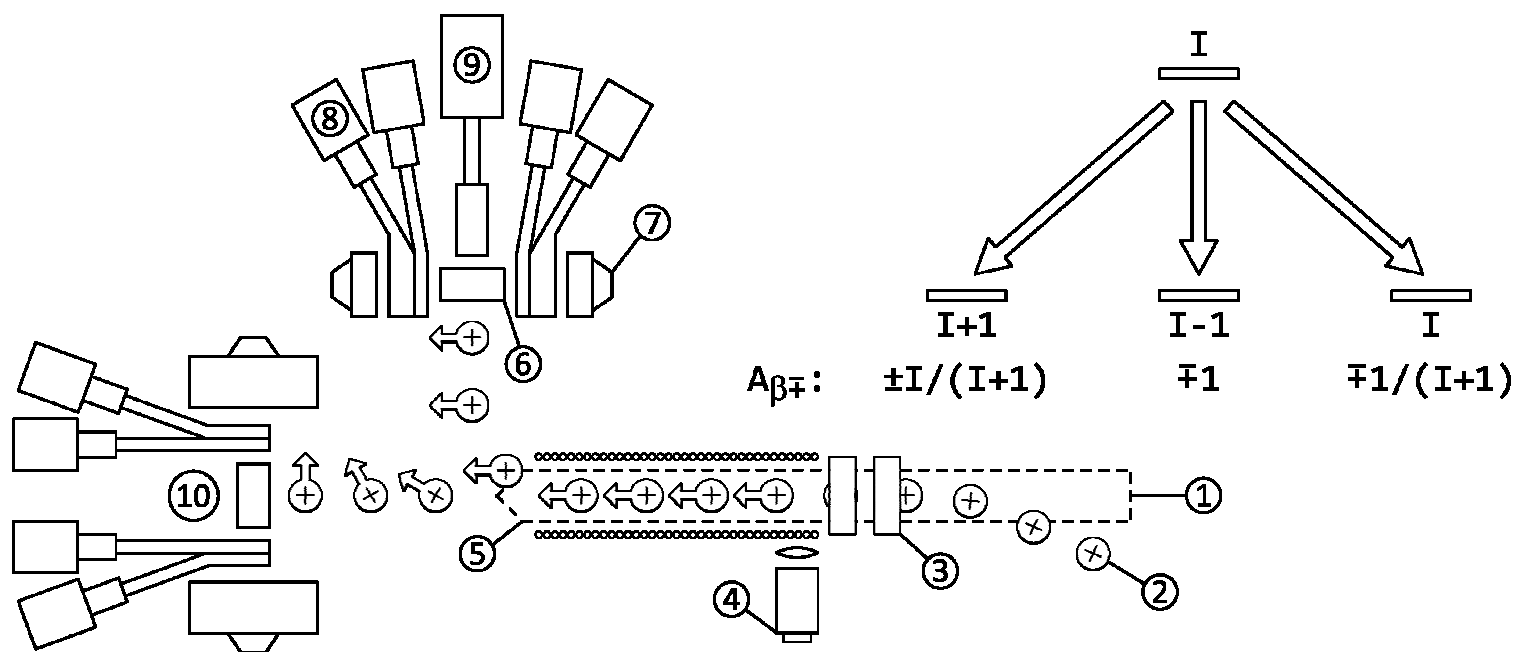
- Cooling:
 - Water : 2*20 l/s; < 10ppm Ca.; pH 6 to 8; resistivity>100KOhm-cm

- Specific needs:
 - Air conditioning/climatization: <±0.5°C degree
 - Air quality: class C room(s); Laminar flow air boxes over optical benches.

- Other needs:
 - 2 separate laser rooms preferable
 - medium term storage area: 15 m²
 - chemical lab : 10 m²



LINO - Laser Induced Nuclear Orientation at ALTO



ANR application
IPNO, GANIL, CSNSM, LPC Caen