



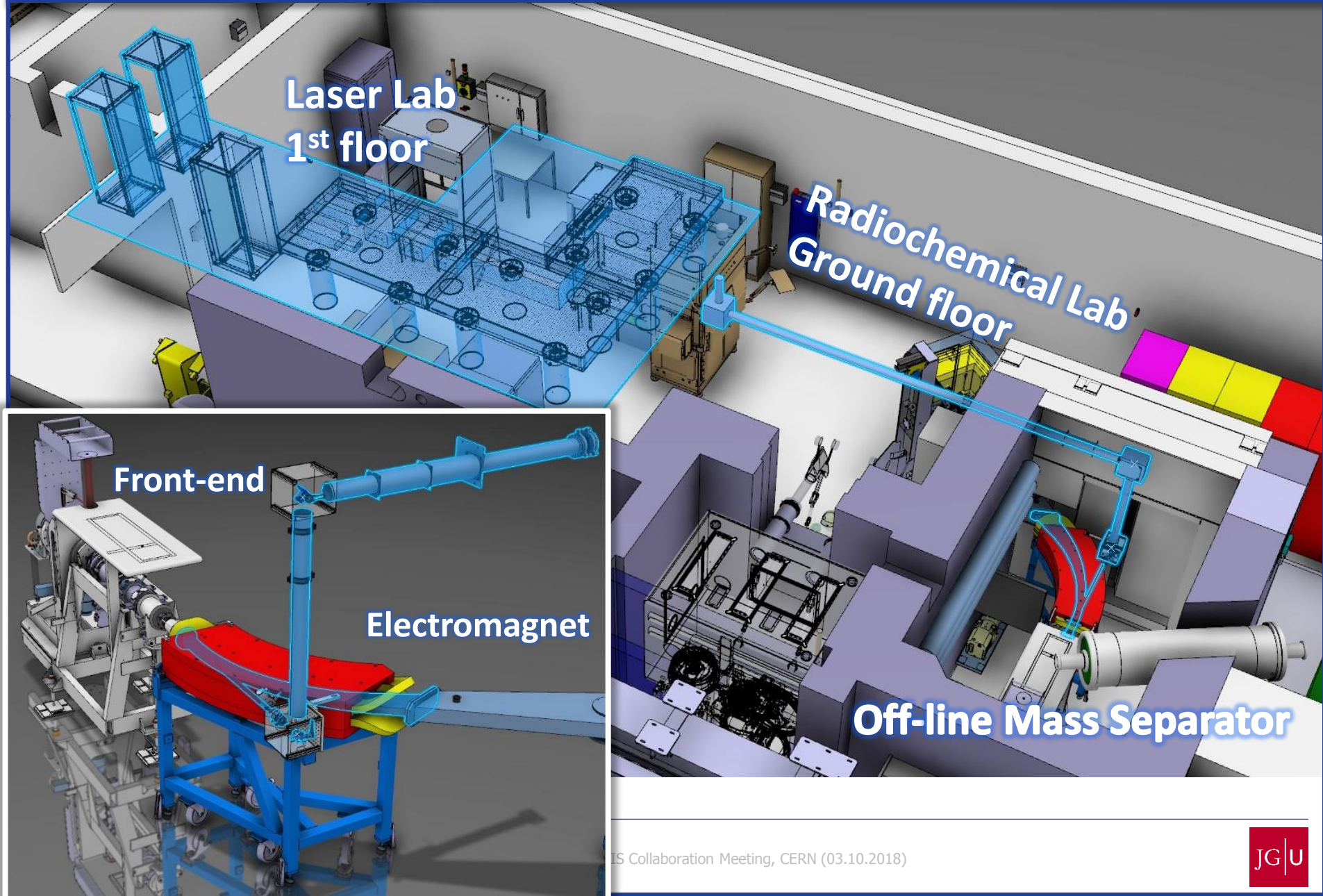
JOHANNES GUTENBERG
UNIVERSITÄT MAINZ

MELISSA: MEDICIS Laser Ion Source Setup

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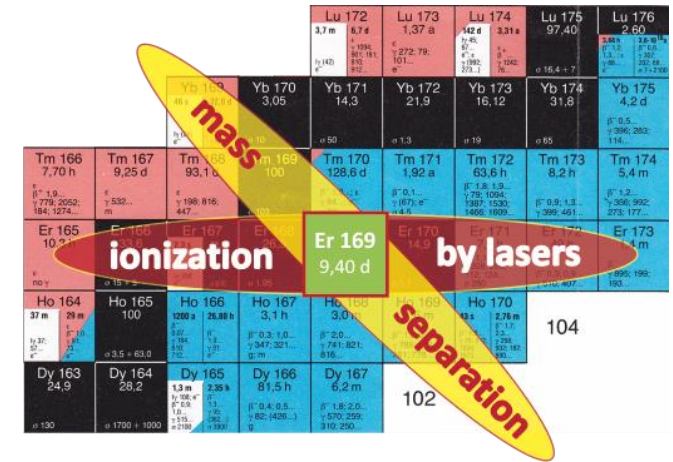
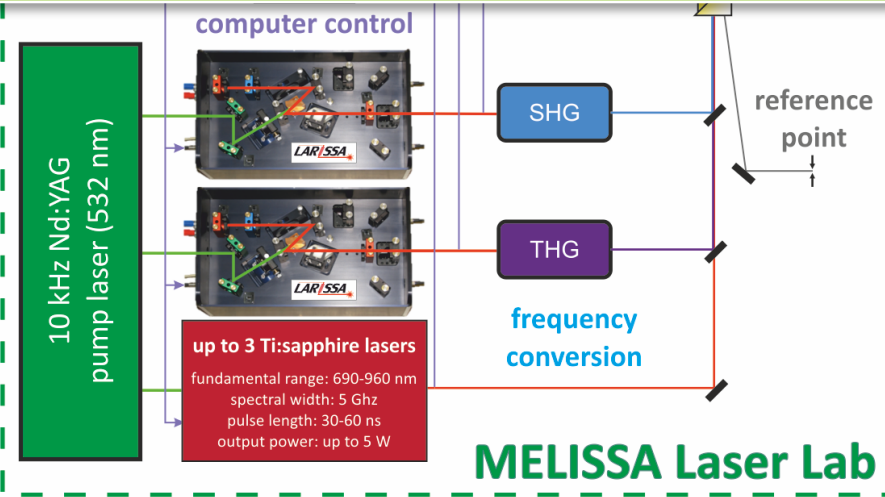
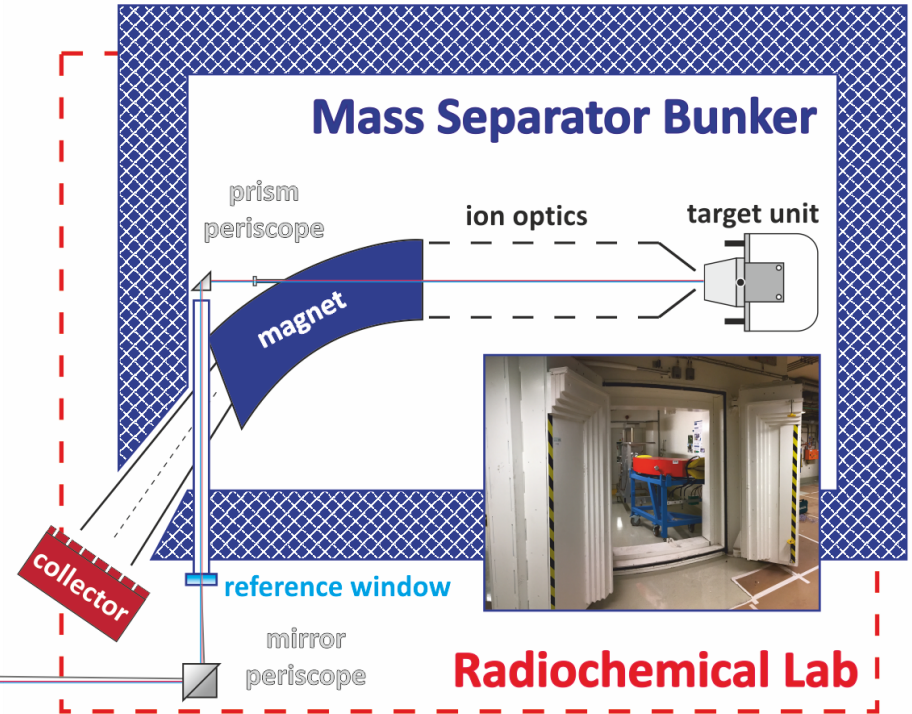
¹Institute of Physics, University of Mainz, Germany

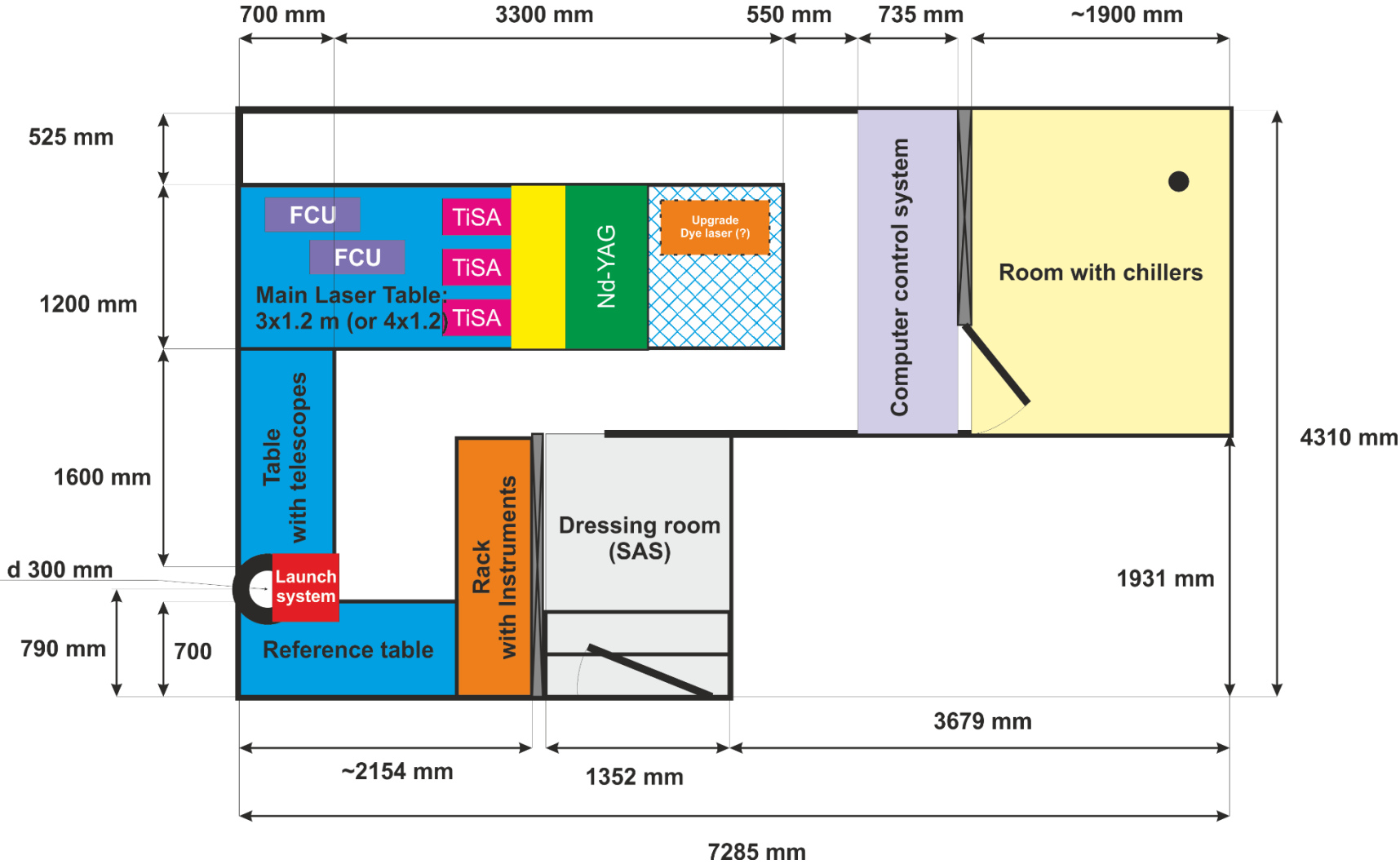
²EN department, CERN, Geneva, Switzerland



Merits of the use of the Laser Ion Source:

- **Element selective** ionization – excellent ion beam purity;
- **Highly efficient** ionization process – faster extraction of the desired radioisotopes;
- **Decrease of the production time** – no need to wait till the decay of contaminants;
- **Lower work temperature** of the ion source – less contaminations in a final product;
- **High specific activity** products;
- **Unique set of radionuclides:** Tb, Er, Ac, Sc, Lu...





Air conditioning and ventilation



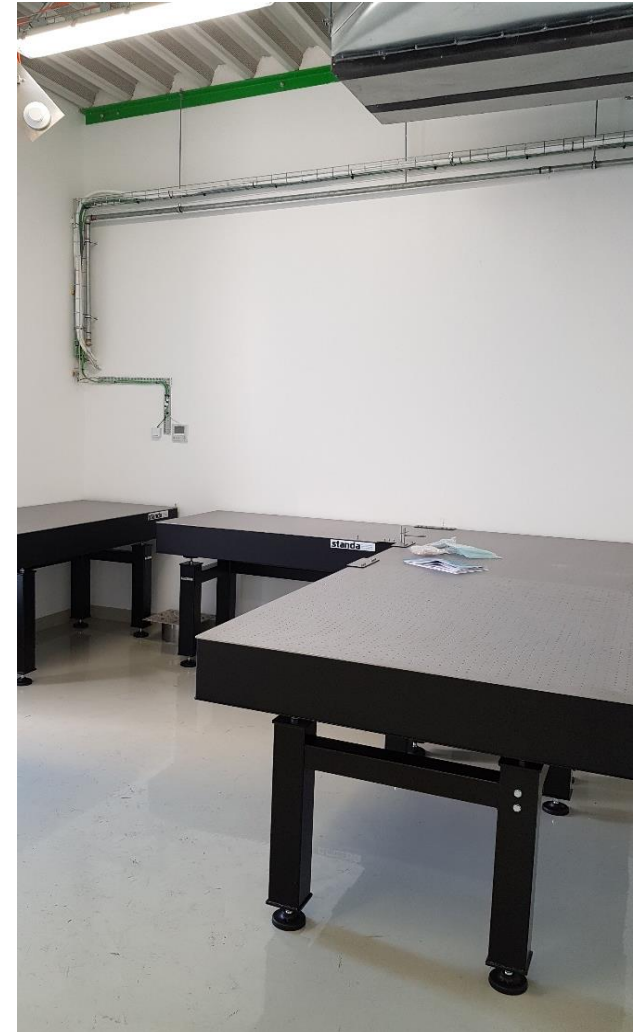
Installed in June-July 2018

Optical Tables

Refurbishing of walls and floor in August



Delivered to CERN in August
Installed in September



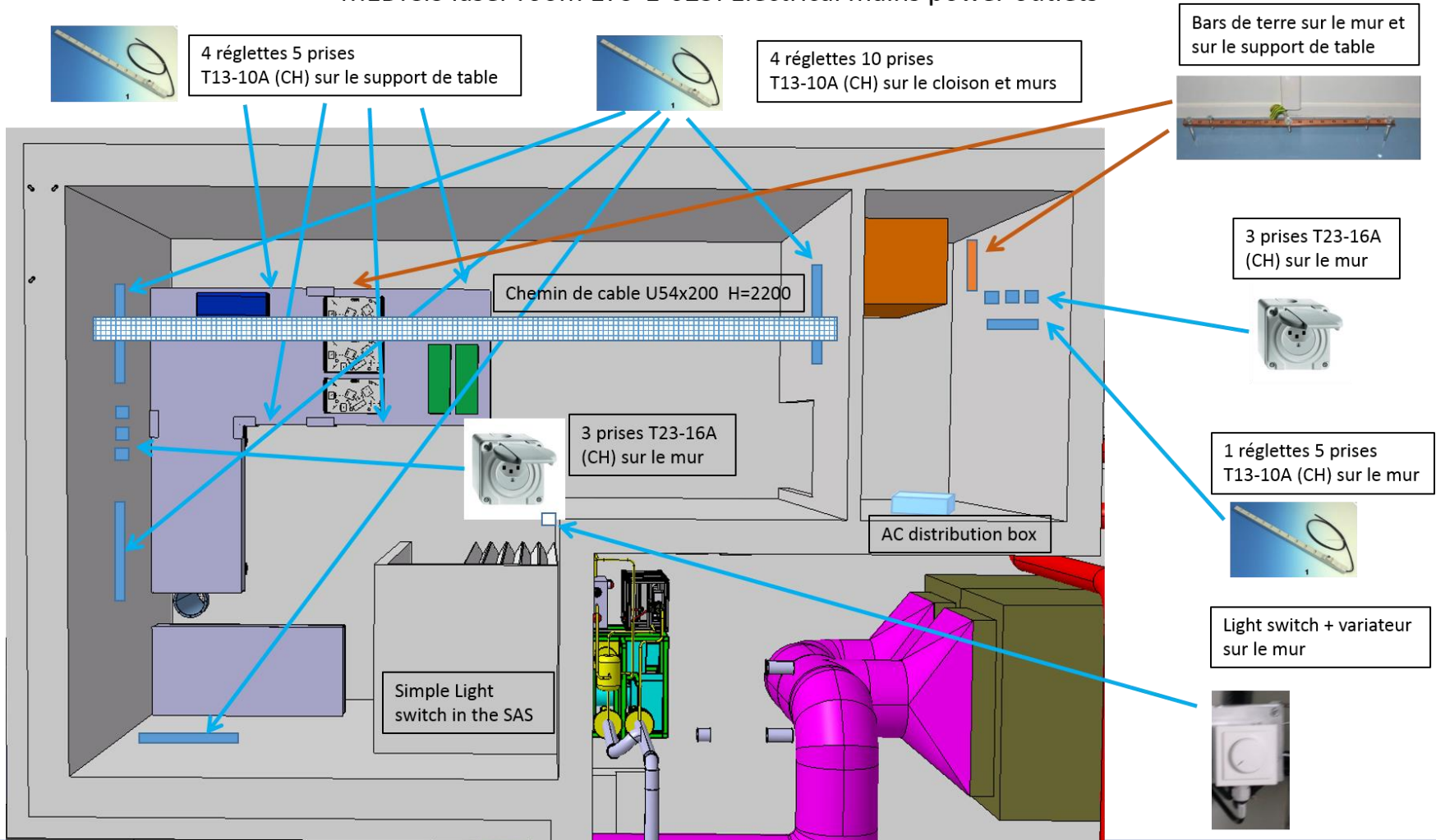
Chiller room and SAS



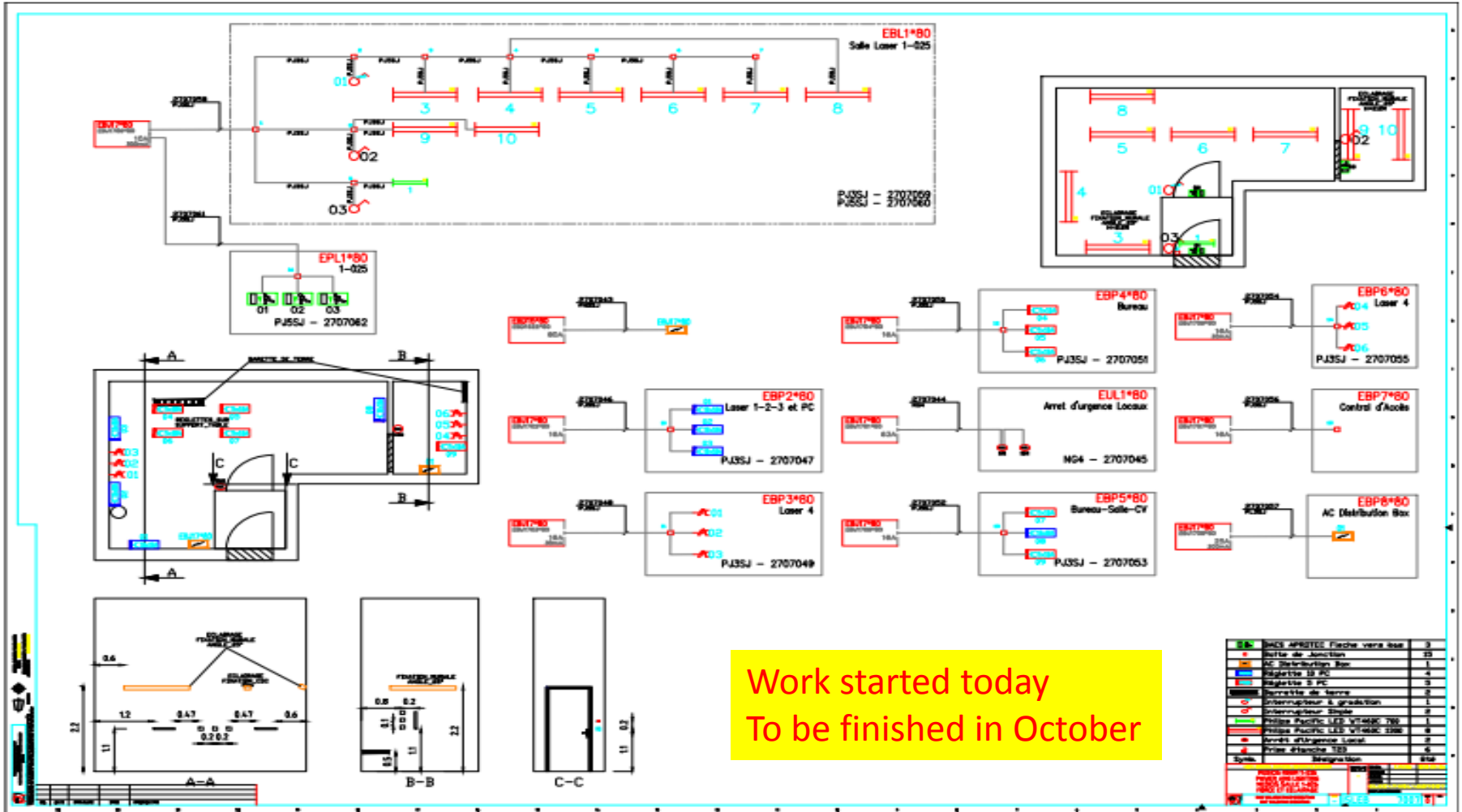
Constructed in September

Electrical network, grounding

MEDICIS laser room 179-1-025: Electrical mains power outlets



Electrical network, grounding



Work started today
To be finished in October

Pump Lasers: ready to ship



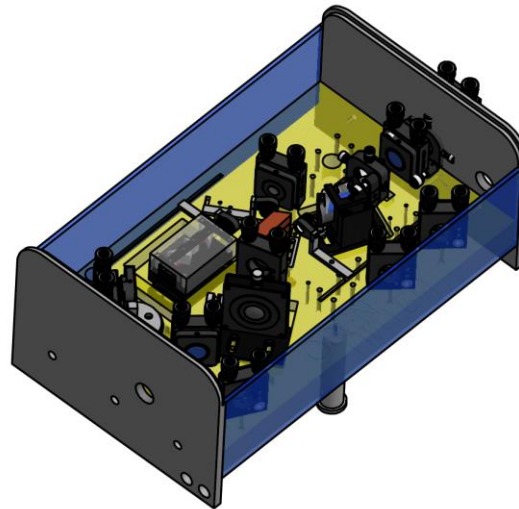
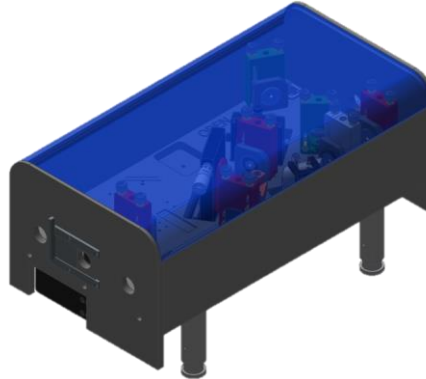
Home



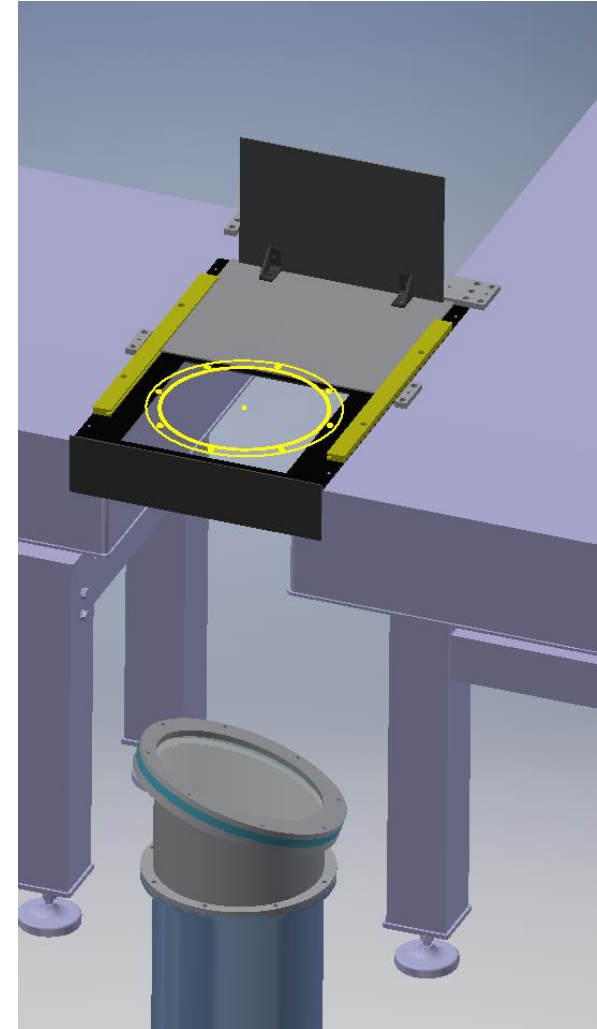
and their key specifications at one glance

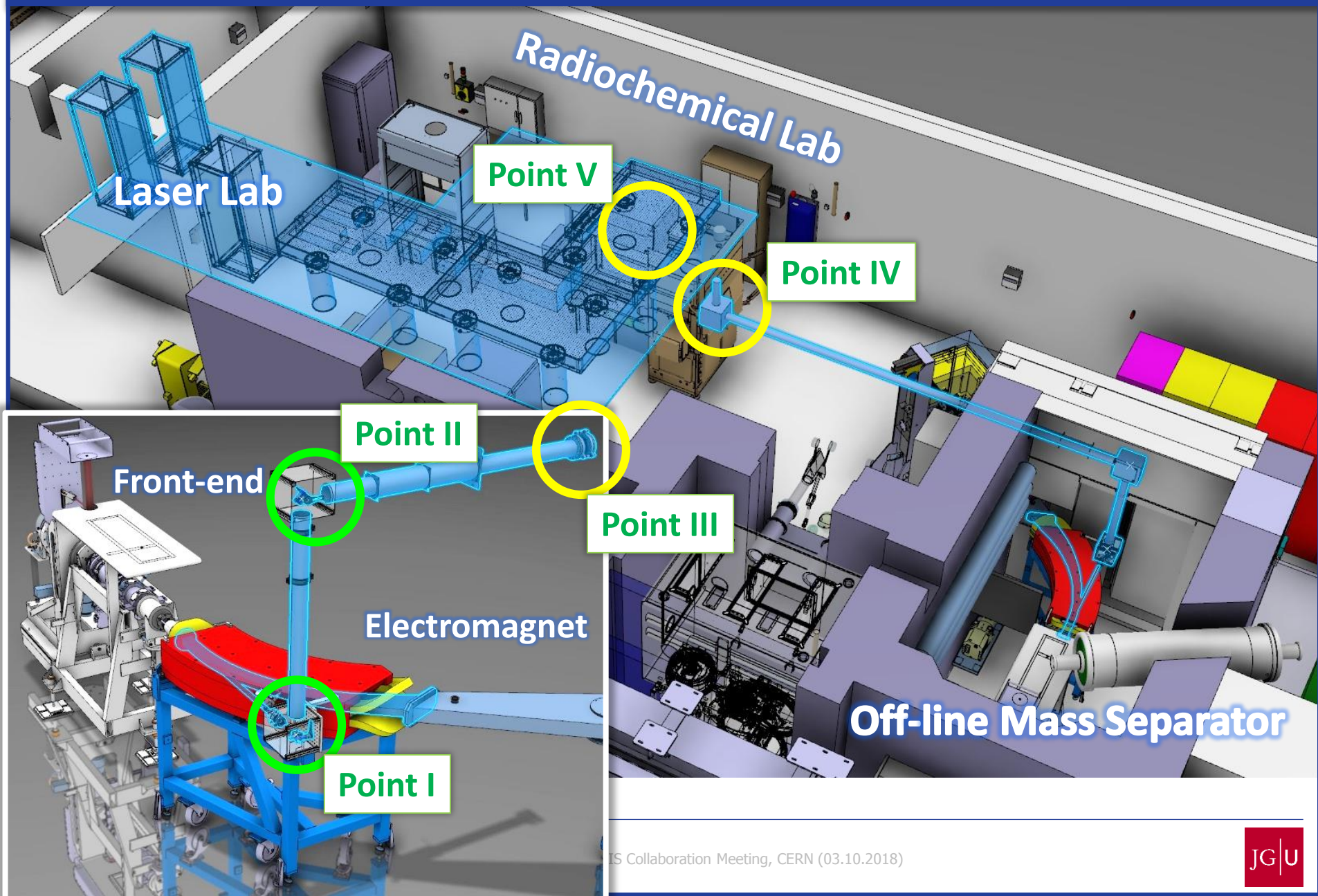
and IR, output powers from 0.3 to 50W and pulse widths from 6 to 200ns.

Ti:Sa Lasers: done, painting



Interlock system: in design

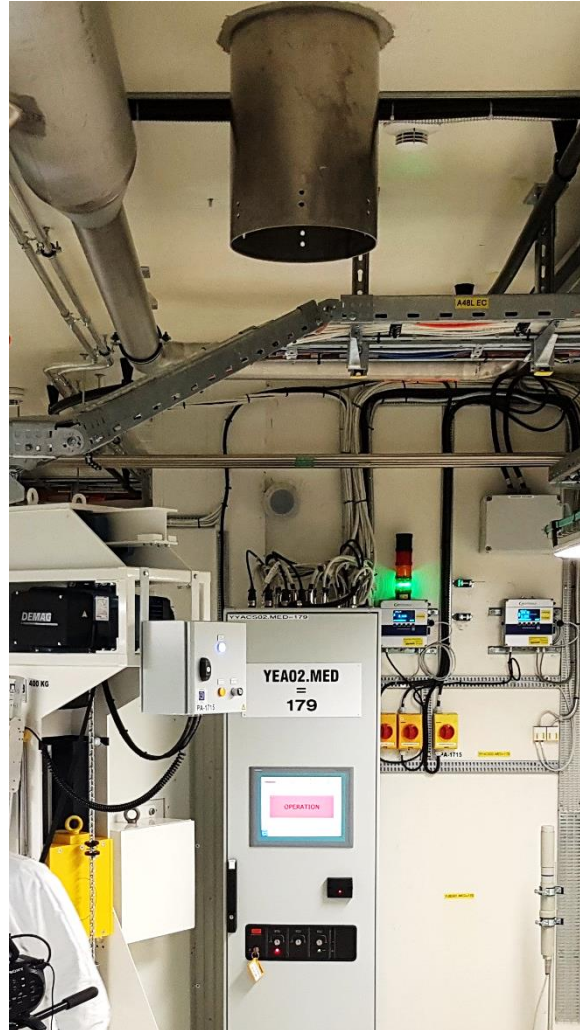




Point 1-2: Completed



Point 3-4: Finalization



Point 5: In workshop



| Task | Activities | Status |
|------------------------------|--|-----------------------------|
| 1. AC and Ventilation system | <ul style="list-style-type: none"> - Split of cold laser room and for hot chiller room - Search for economic solution - Cutting the concrete wall for air channels - Installation by ARCECLIMA and commissioning | Done |
| 2. Cosmetic repair | <ul style="list-style-type: none"> - Walls painting - Resin floor cover | Done |
| 3. Optical Tables | <ul style="list-style-type: none"> - Definition of optimal layout - Procurement and installtion | Done |
| 4. Additional building works | <ul style="list-style-type: none"> - Installation of additional walls for the chiller room and SAS | Done |
| 5. Electricity | <ul style="list-style-type: none"> - Definition of power requirements and network layout - Installation work | In process -> October |
| 6. Laser Safety Measures | <ul style="list-style-type: none"> - Definition of requirements for the interlock system - Installation by BE/ICS | In progress -> November |
| 7. Lasers and optics | <ul style="list-style-type: none"> - Procurement - Installation | In progress -> December. |

