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Cryoplants at Helmholtz-Zentrum Berlin

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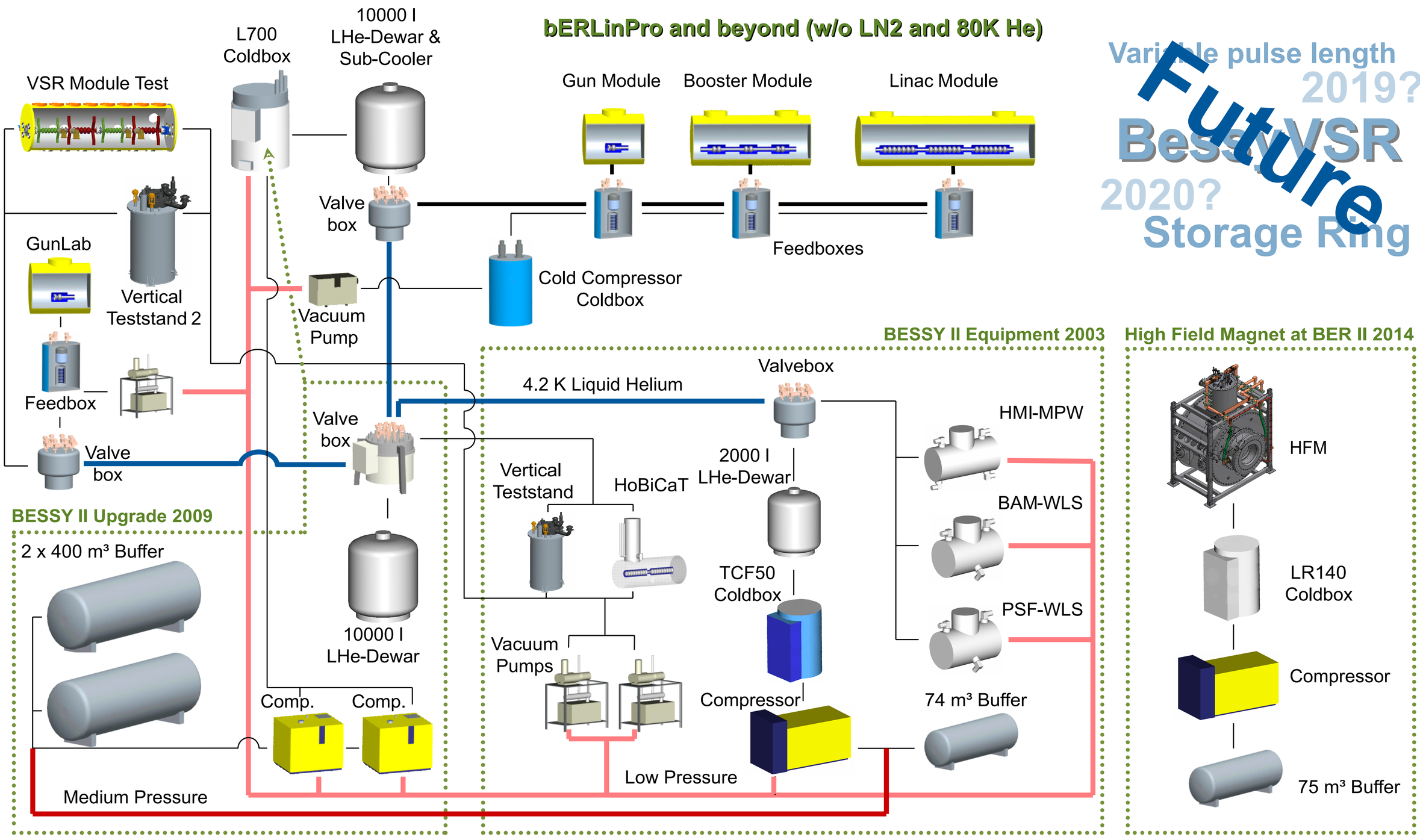
ABSTRACT: **The Helmholtz Zentrum Berlin (HZB) operates three helium liquefiers/refrigerators at two sites. The supplied systems are insertion devices at BESSY II, the High Field Magnet at BER II and 1.8 K test facilities for superconducting cavities.**
The next big challenge will be installing the cryogenic infrastructure of the superconducting Energy Recovery Linac (bERLinPro) within the next years. Therefore one of the liquefiers will be moved into the new bERLinPro building. A new 10,000 liter dewar, three feed boxes and a cold compressor coldbox are the other main components of the infrastructure. Furthermore warm process vacuum pumps, a valve box, an 80 K helium system and several rigid and flexible transfer lines will be needed.
The infrastructure of all existing and upcoming installations is shown.



Status

- Gunlab is shortly before commissioning.
- Vertical Teststand 2 is in fabrication. Commissioning is scheduled for summer 2017.
- Relocation of Liquefier L700 is scheduled for summer 2017.
- BERLinPro: Cold Compressor box, feed boxes and helium dewar in fabrication, to be delivered in July 2017, installation until end of 2017, commissioning starts early 2018. Different auxiliary systems such as transfer lines, a valve box, LN2 dewar, an 80K-System are in different status between „ordered“ and „specification has been started“.
- BessyVSR technical design study has been reviewed. Main idea for Cryogenics: Cold compressor coldbox plus a valve box and one or two feed boxes. Funding application is running.

REFERENCES

(1) D. Pflückhahn, „Operational experience with a helium plant and distribution system at BESSY II“, CryoOps Vancouver (2010)

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www.helmholtz-berlin.de/projects/berlinpro/bpro-overview_en.html