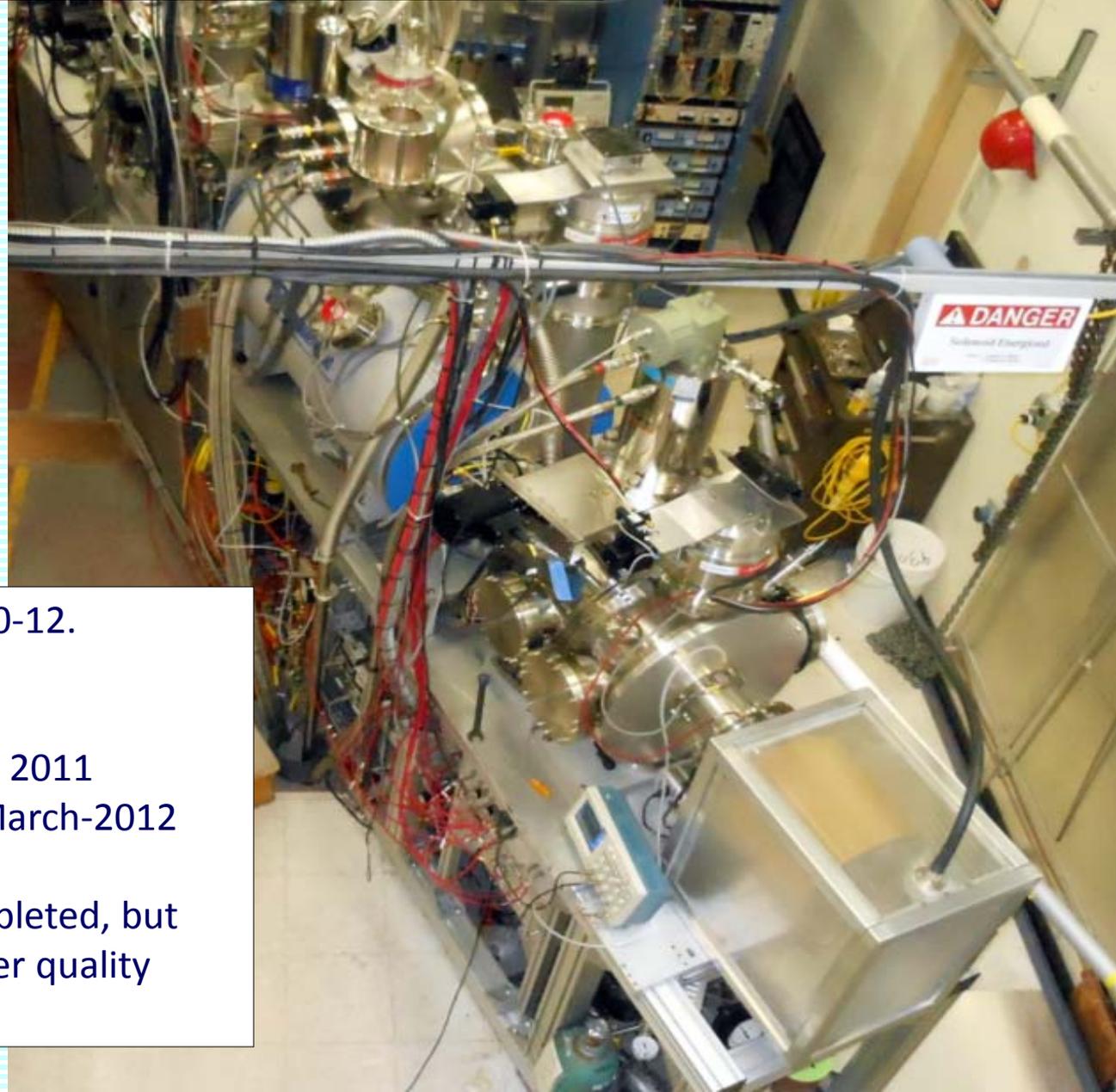


# Polarized source upgrade.



Source upgrade project -2010-12.

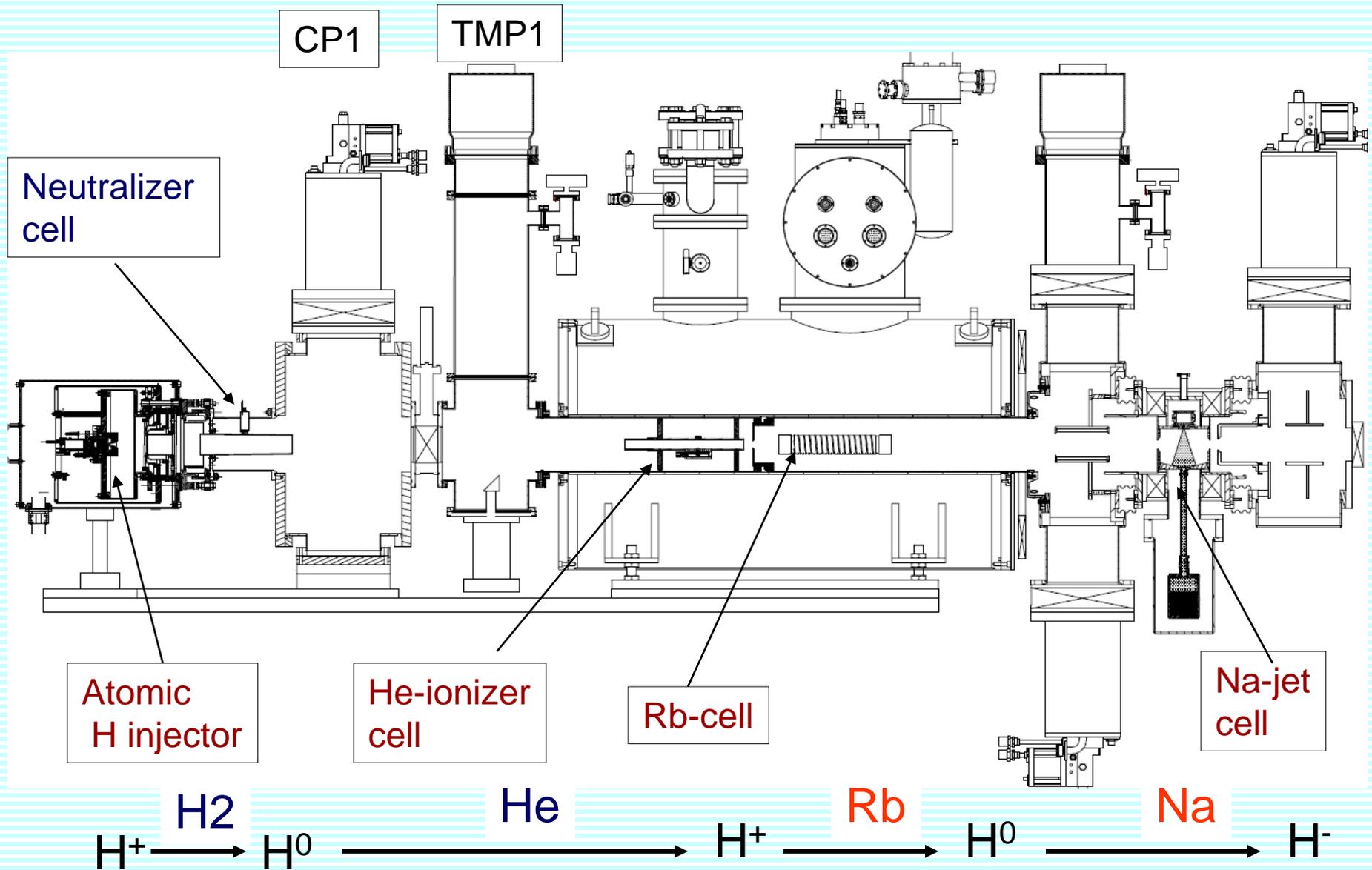
Main component delivery:

Atomic Beam Source- August 2011

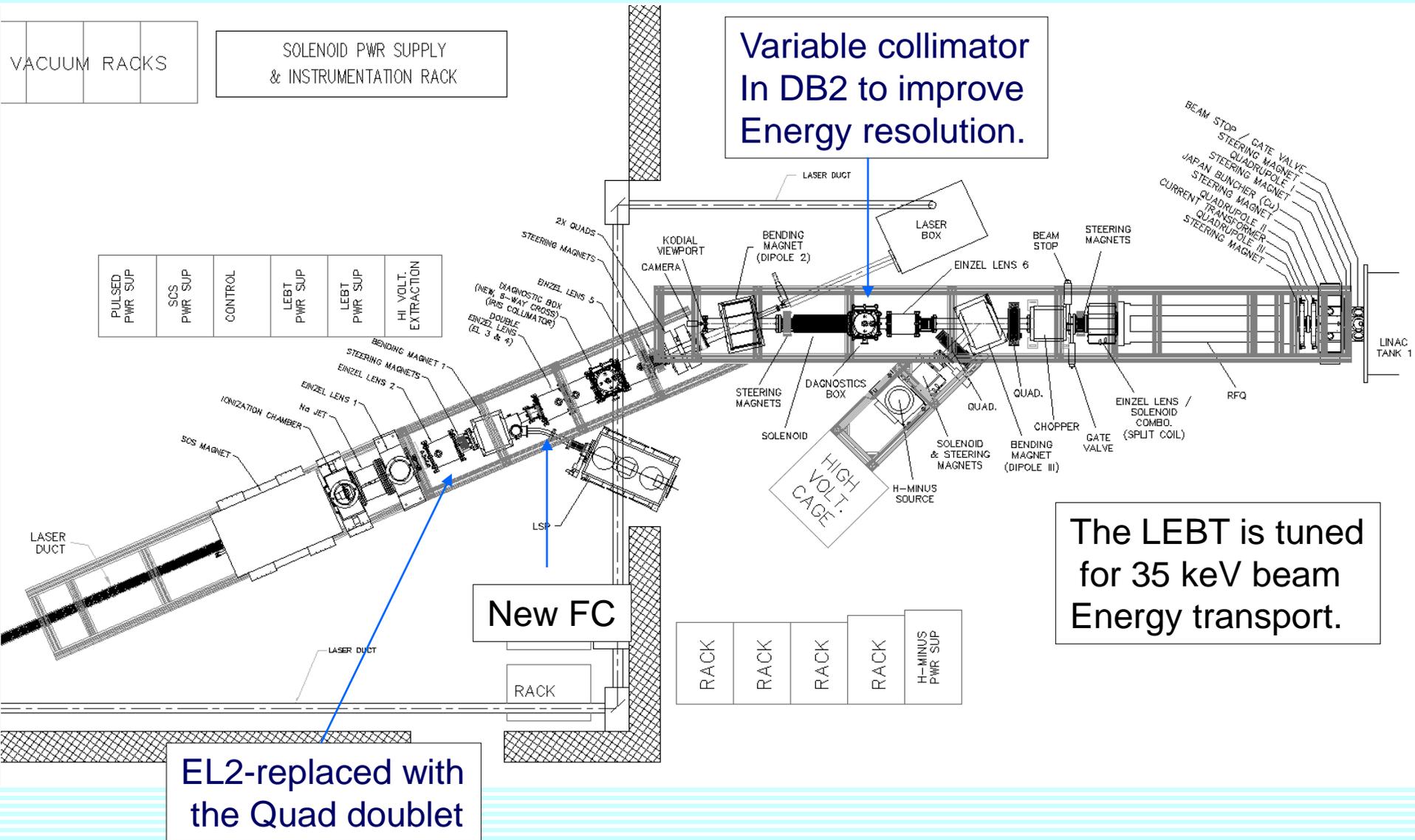
Superconducting solenoid- March-2012

The development is not completed, but the new source delivers better quality beam in this Run-13.

# OPPIS with atomic H injector layout.

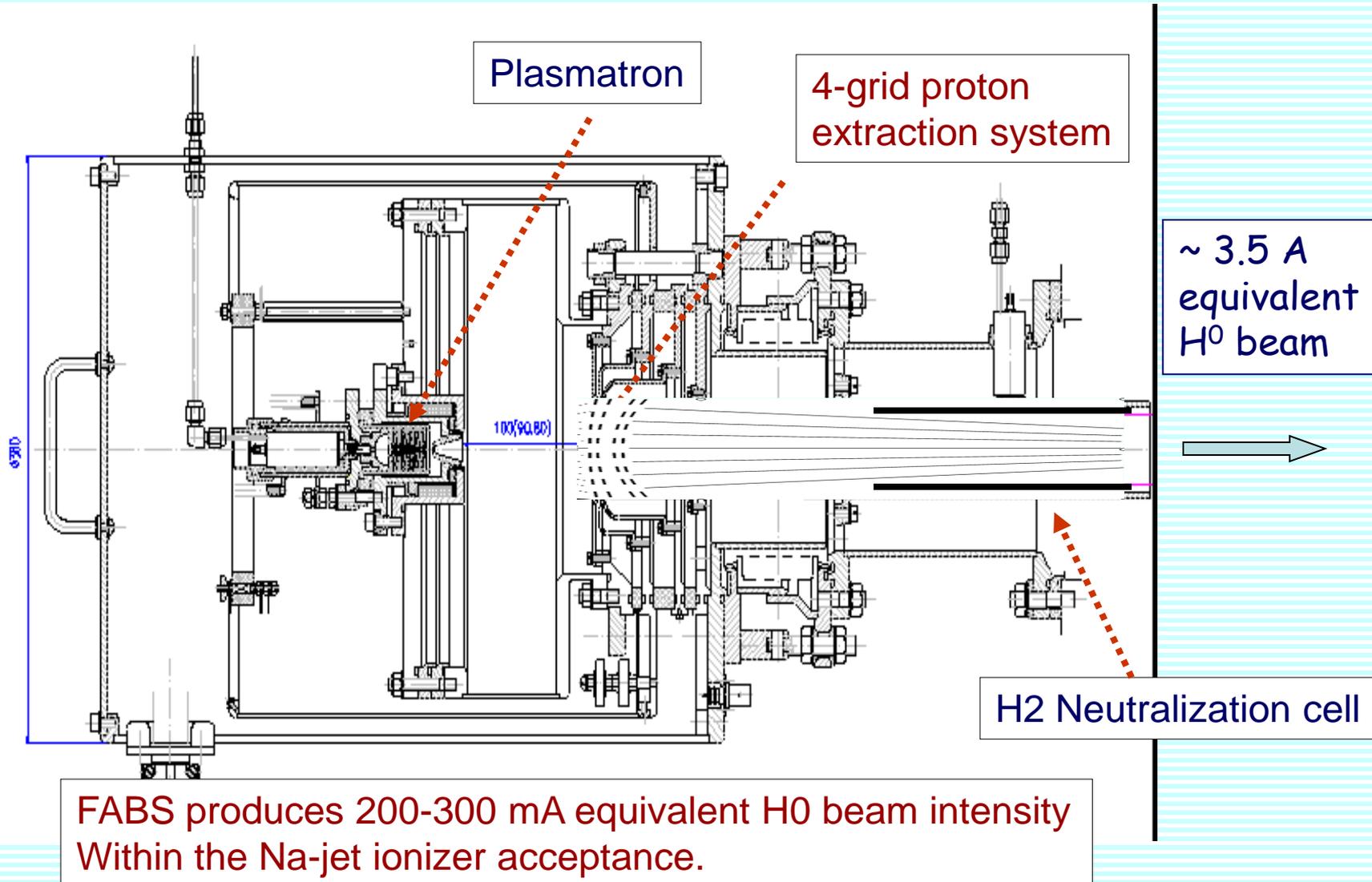


# Changes in the Low Energy Beam Transport Line.

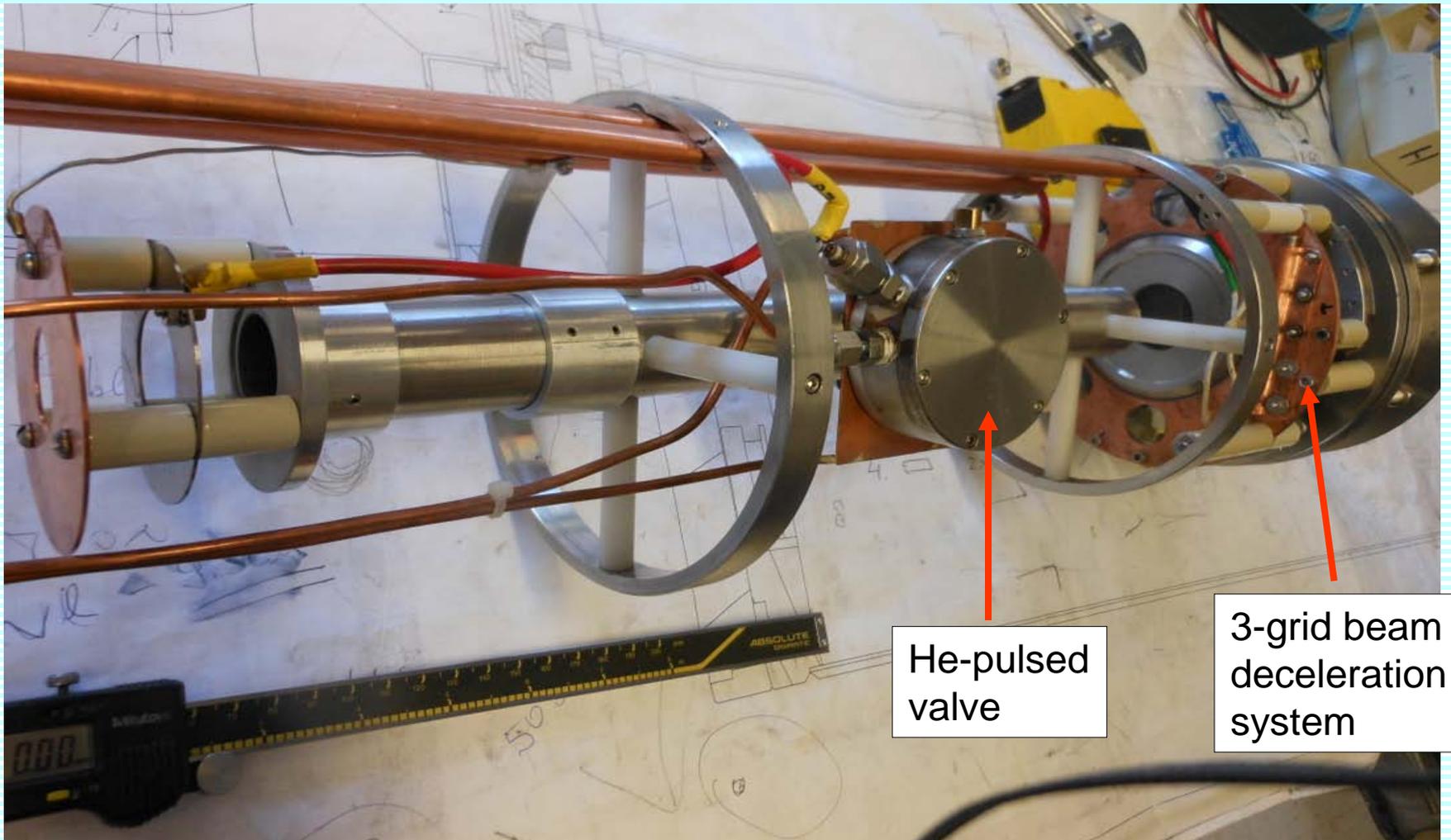


The LEBT is tuned for 35 keV beam Energy transport.

# "Fast Atomic Beam Source", BINP 2011



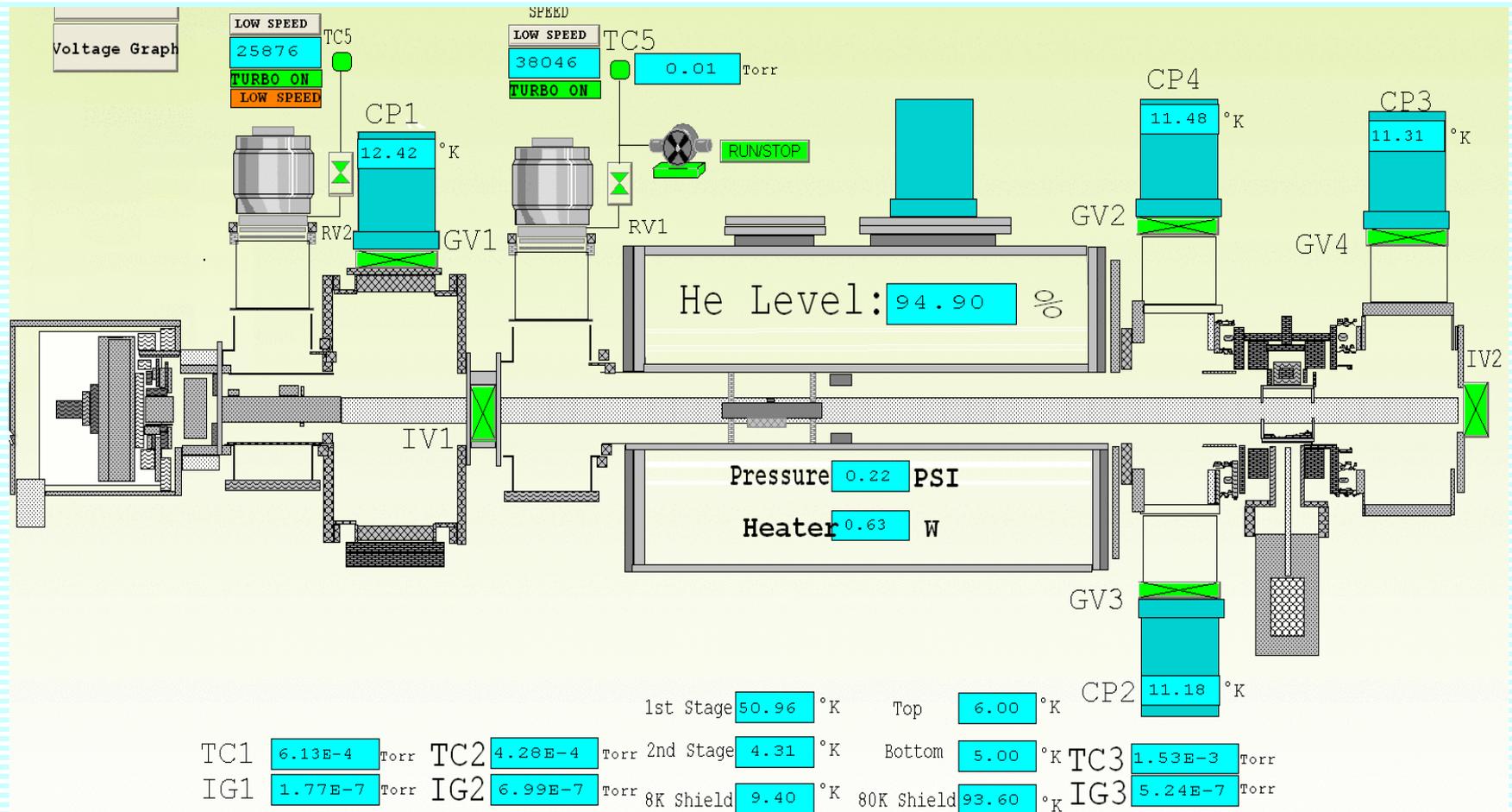
# He-ionizer cell and three-grid energy separation system.



He-pulsed valve

3-grid beam deceleration system

# New PLC interlock and monitoring system is part of the source upgrade.



Yuri Bezpalko

## Source intensity and polarization.

- Reliable long-term operation of the source was demonstrated.  
Febr. 14 - March 18
- Very high suppression of un-polarized beam component was demonstrated.
- Small beam emittance (after collimation for energy separation) and high transmission to 200 MeV.

Rb-cell, Temp., deg C	85	90	95	
Linac Current, $\mu\text{A}$	235	295	360	
Booster Input $\times 10^{11}$	4.0	4.8	5.6	
Pol. %, at 200 MeV	82 %	80%	77%	

# Polarization measurements at 200 MeV, March 1-4

