

Results of new 9-cell cavities RI18 and RI19 processed and tested at JLab

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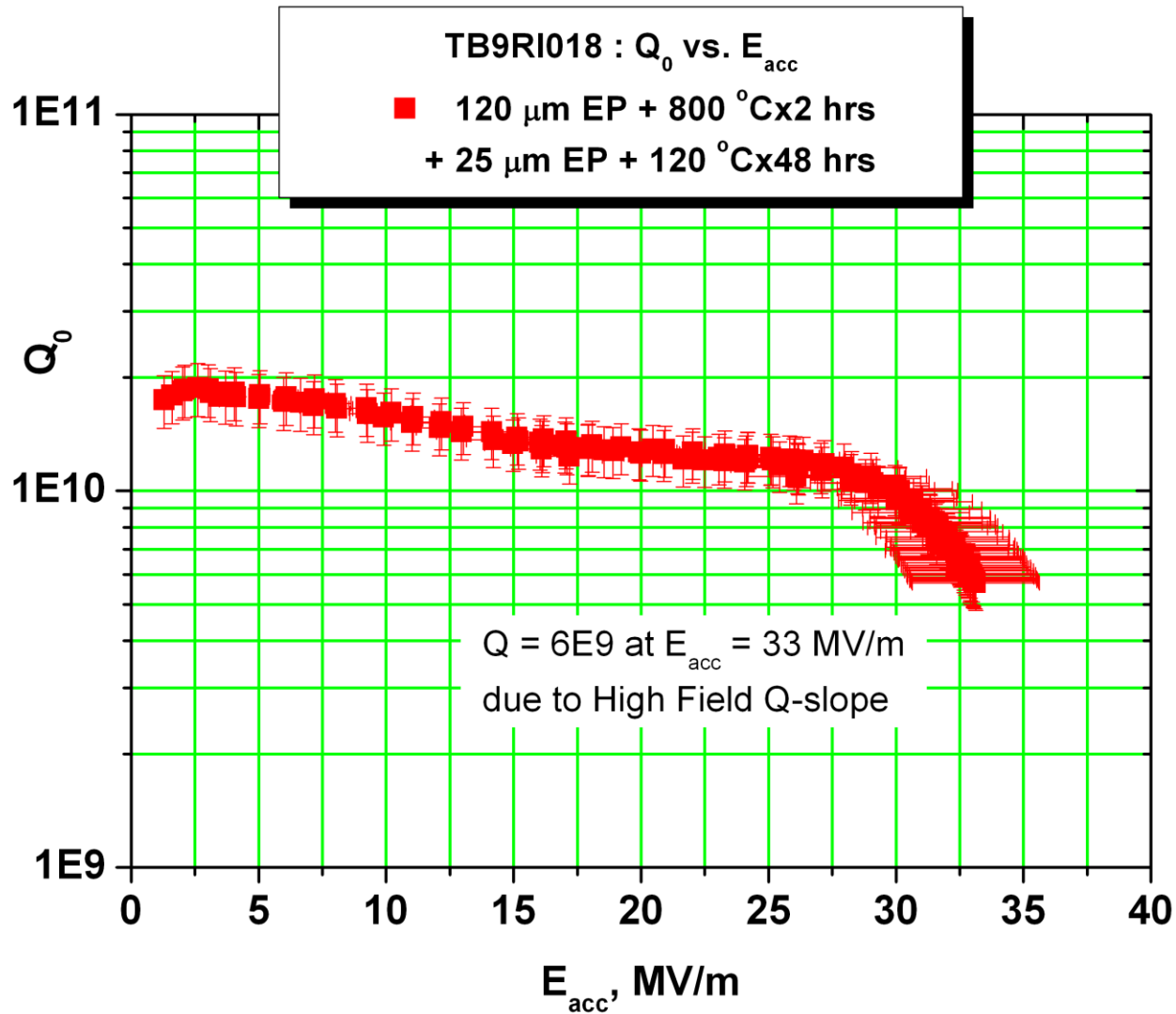
June 22, 2010

The 24th ILC cavity group meeting

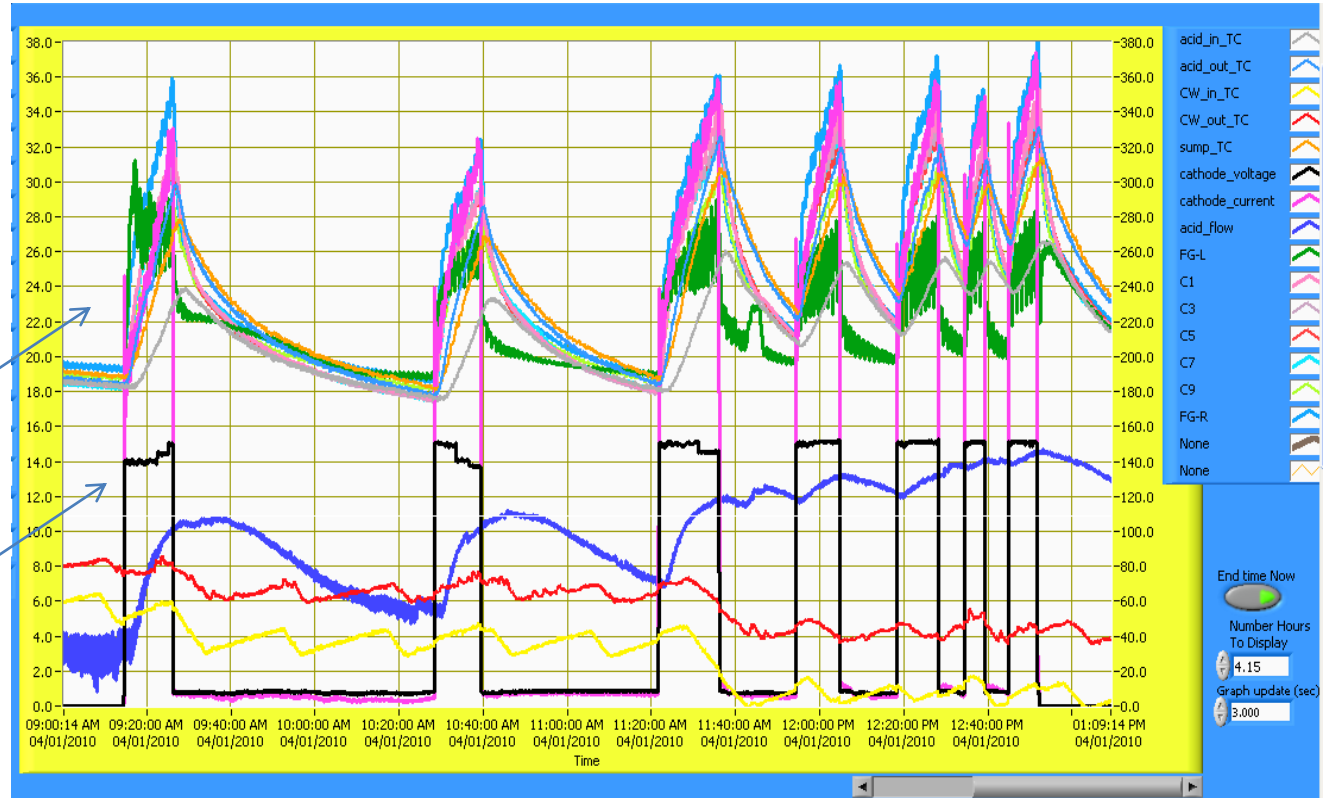
TB9RI018

- Has been received at Jlab 02/19/2010
- No bulk EP at RI
- Followed the standard recipe

TB9RI018 : 1st RF test result following the first light EP



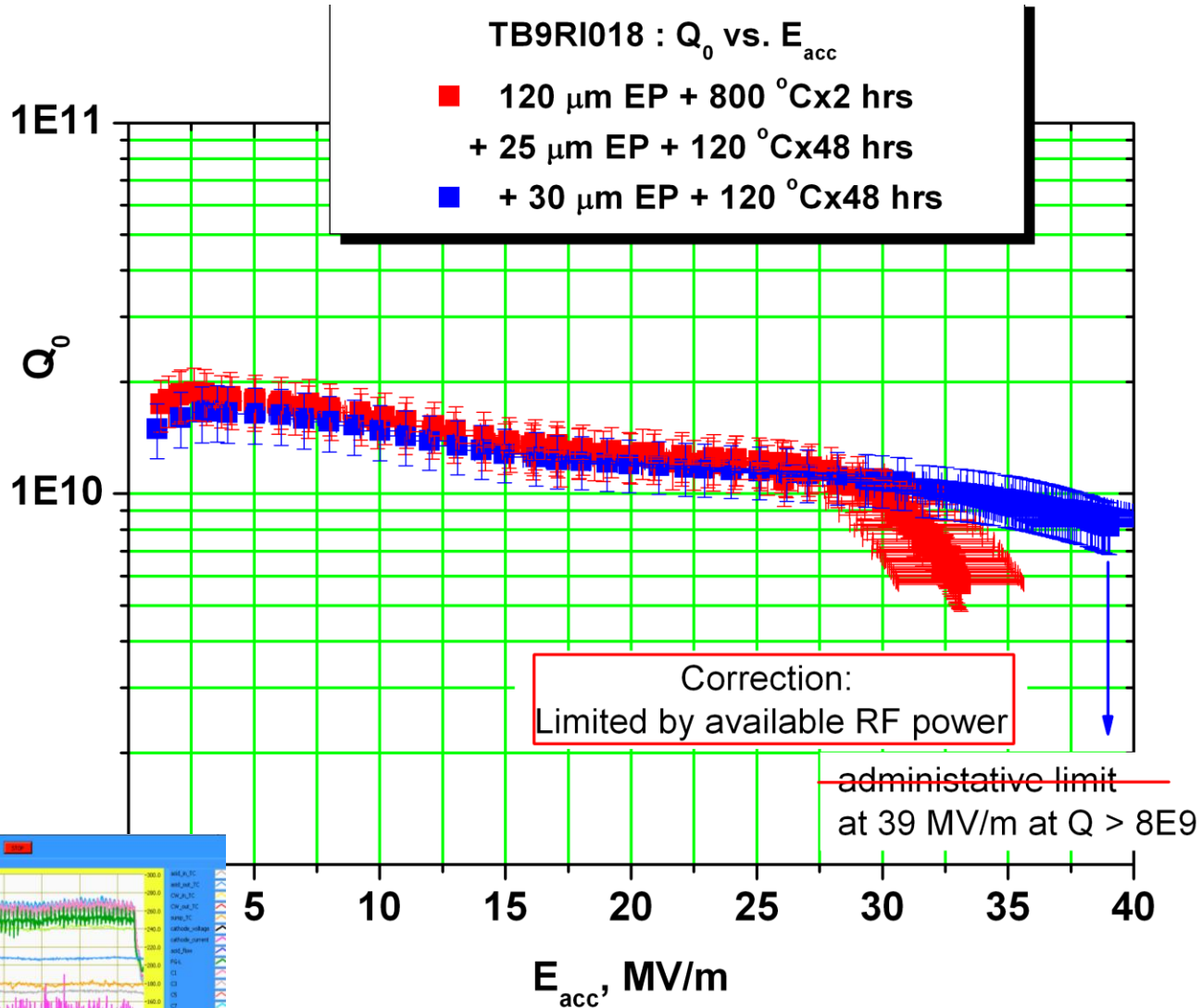
We suspect that the Q-slope was caused by non-optimal EP. Perhaps, water was introduced into the etching solution during acid mixing.



Temperatures of the cells

Applied voltage

TB9RI018 : 2st RF test result following the second light EP



Next steps for TB9RI018

- TB9RI018 will be shipped back to FNAL for cryomodule (CM2) inclusion
- TB9RI018 was pre-tuned prior to the final EP:
 - Pi-mode freq. at 2K was 1299.782 MHz
 - Field flatness tuned to 97%

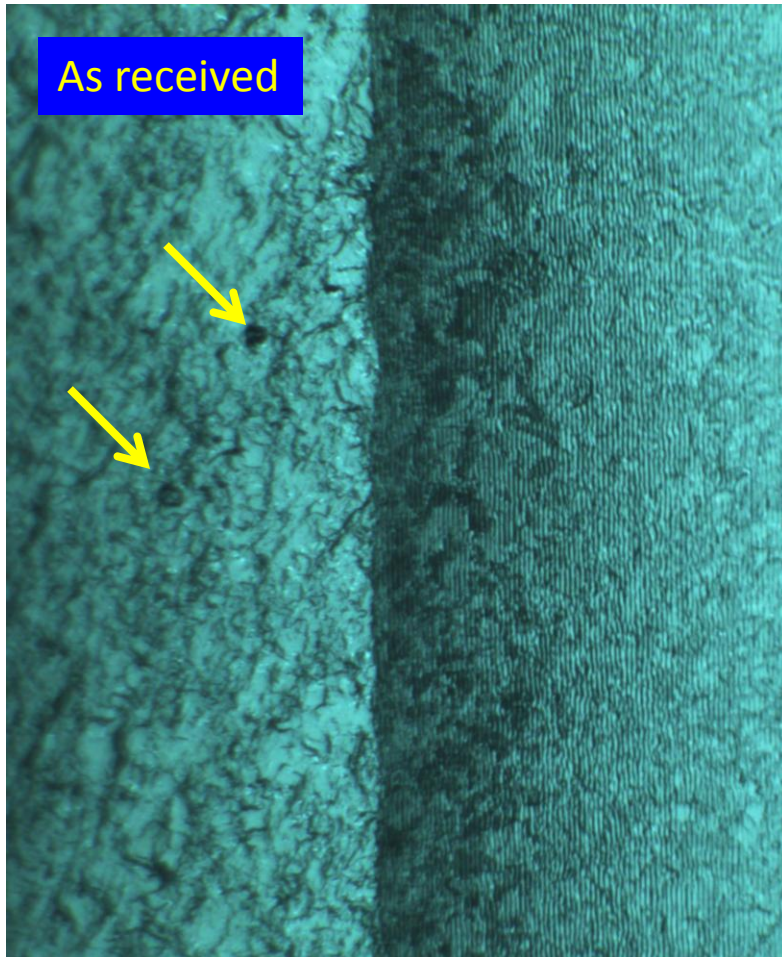
TB9RI019

- Has been received 03/12/2010
- No bulk EP at RI.
- Followed the standard recipe

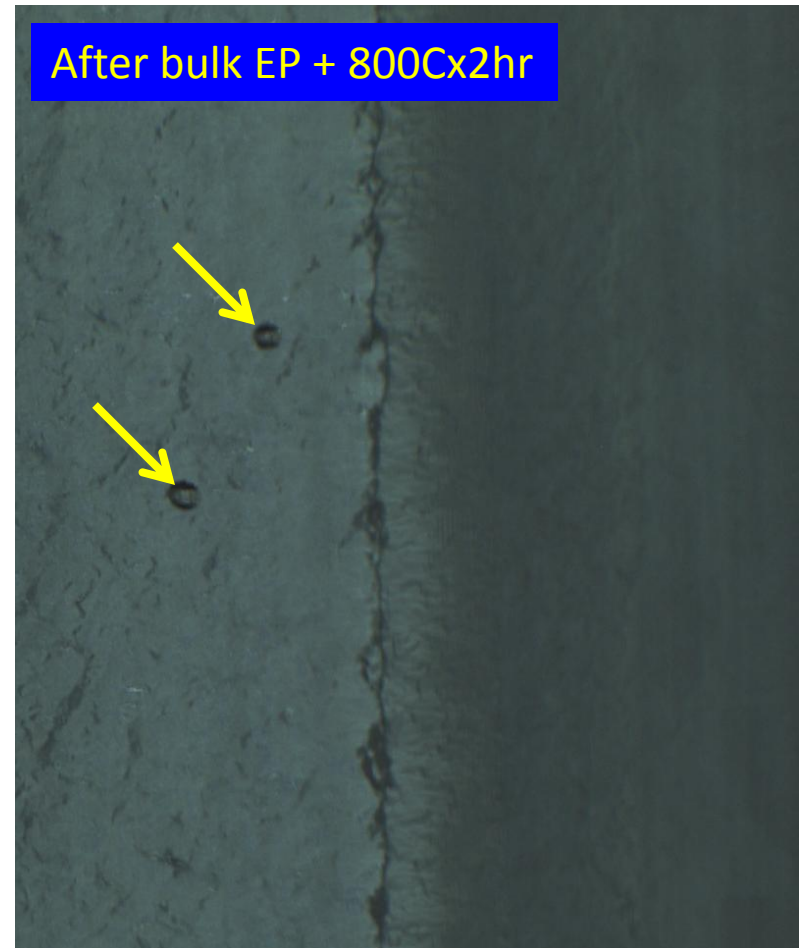
RI19 optical inspection: **overall impression high quality finished surface as received**

A few features are documented and tracked

Equator 1 near weld prep machining line (162mm, 202 degree)



Twin spots ~ 120 um dia.

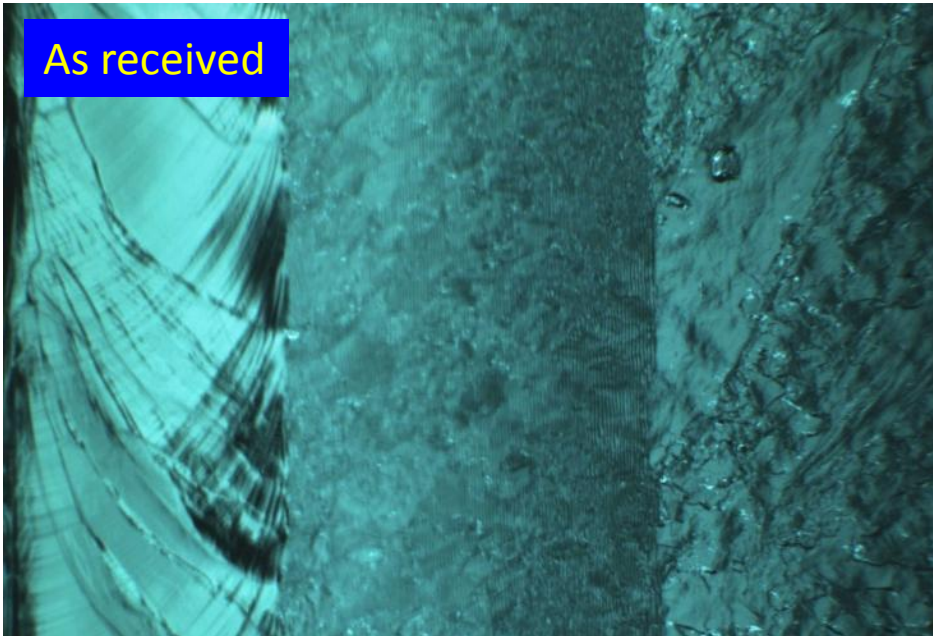


Twin spots remain observable
with an increased diameter

A few features are documented and tracked (continued)

Equator 2 near weld prep machining line (288mm, 18 degree)

As received



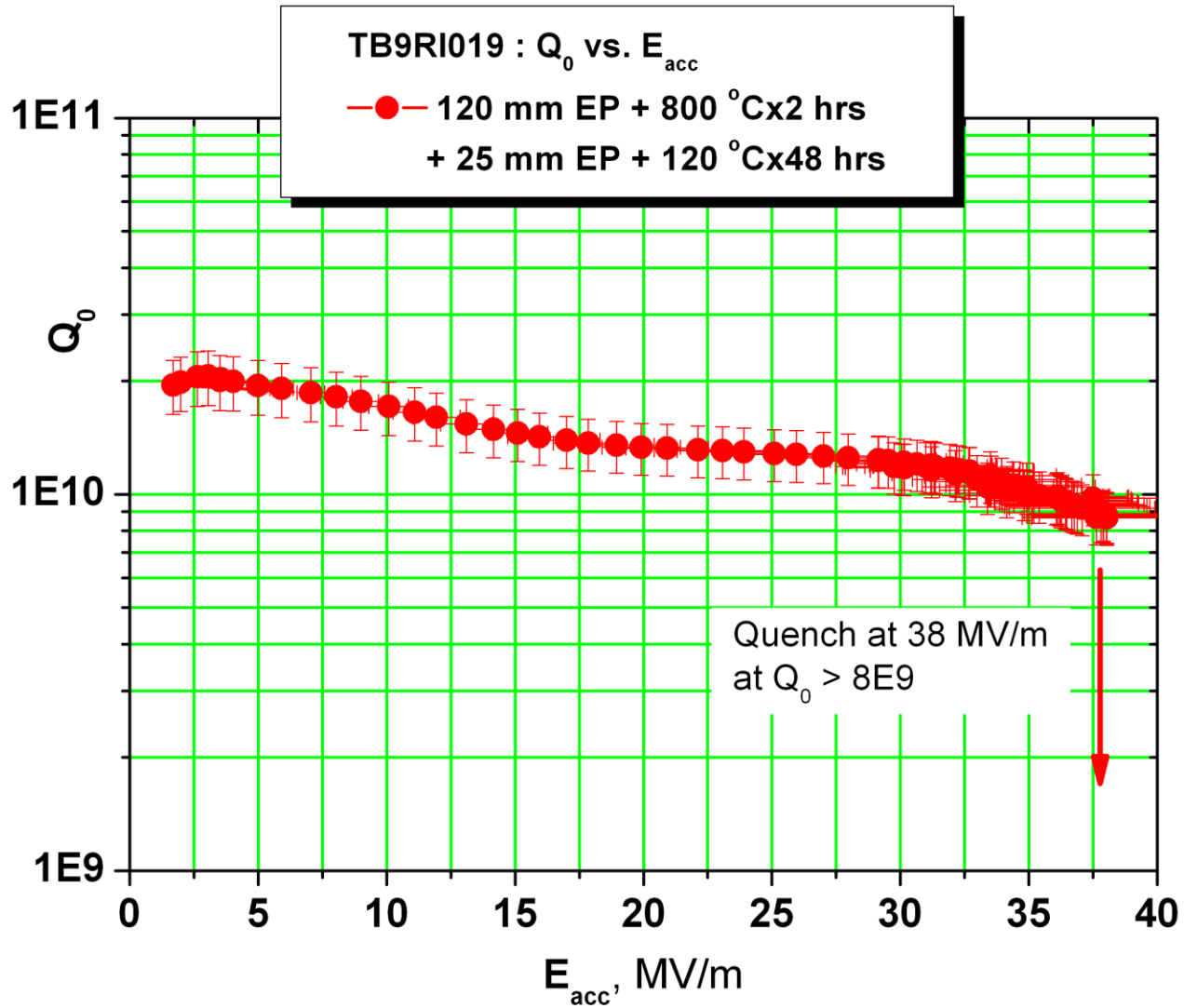
Spot ~ 250 um dia.

After bulk EP + 800Cx2hr



Spot remain visible

TB9RI019 : 1st RF test result following the first light EP



Next steps for TB9RI019

- TB9RI019 reached 38 MV/m with $Q > 8E9$ in the first RF test limited by quench, but lots of X-Rays at highest field
- The cavity was HPR re-rinsed and will be re-tested @JLab