



**High
Luminosity
LHC**

Report from LARP CM24

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At HL-TC of 28 May 2015



The HiLumi LHC Design Study is included in the High Luminosity LHC project and is partly funded by the European Commission within the Framework Programme 7 Capacities Specific Programme, Grant Agreement 284404.



13-15 May 2015 – at Fermilab

- Usual format
 - 1 plenary session
 - Followed by parallel sessions
 - Then a final plenary session with summaries from // sessions and a few further talks.
- Main topics:
 - IT Quads,
 - CC
 - AP & WBFS
 - Collimations (e-lens in particular)
 - Toohigh fellows

Magnets

- Steady progress
 - First QXFS model is near completion (test by end of 2015).
 - Discussion about cable specifications
 - Final tuning essential for getting good price!
 - Starting Functional Requirements
 - Aperture : enough? Too much?
 - Many discussions that will give fruits by next October meeting

Crab Cavity

- Very good progress, and now detailed engineering...
- Crises of end 2015 (Niowave) has been almost mitigated: use of J-Lab as final manufacturer
- Both DQW and EFD are on track (with proper prioritization)
- UK playing a role as cryo-module.
- SPS test may slip... but quality first. Back up plan and test area still not clear to me. To be followed up.
- Impedance: this issue has been reduced **but not overcome**. We need to arrive to more firm conclusions, to rule it out as show stopper (or not...)

Collimation

- Lay-out near to final
- Worry for Mo-Graphite! Not clear what is the sequence of actions to wipe it out...
- E-lens:
 - discussion about test bench (decision in June?)
 - Oliver is in charge to lead the process to decide or not for halo control (hollow e-lens) as baseline.
 - Discussion of use e-beams for LRBB compensation

General

- For first time the HiLumi LHC budget was presented by DOE
 - 181 M\$ (vs. Request of 220 \$)
 - Half glass: retain the full view... and fight to increase.
- ICA CERN-DOE signed



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