



Readout System Enhancements for ATLAS ITk Project

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Agenda

**Introduction
HL-LHC & ITk**

**Our Progress
Acknowledgements**

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ATLAS & the Inner Detector

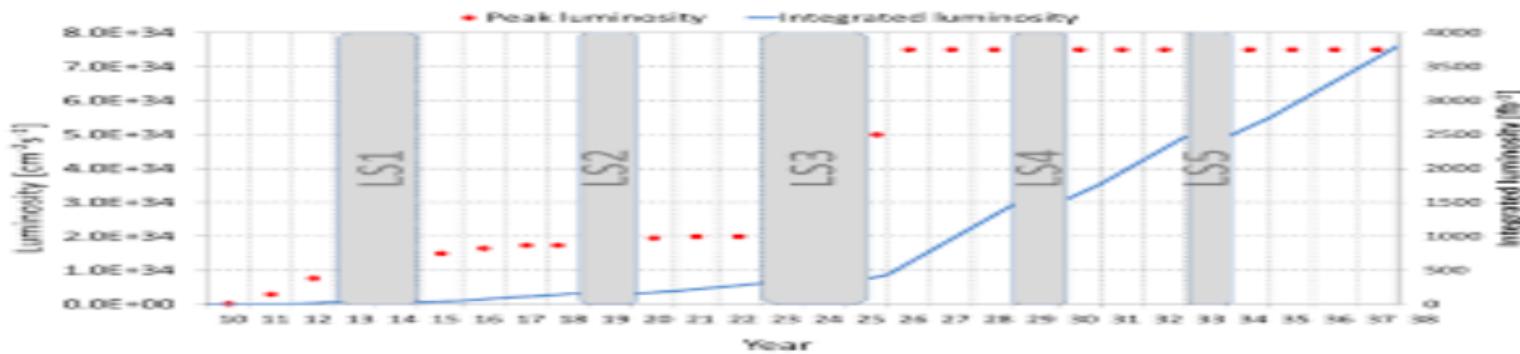
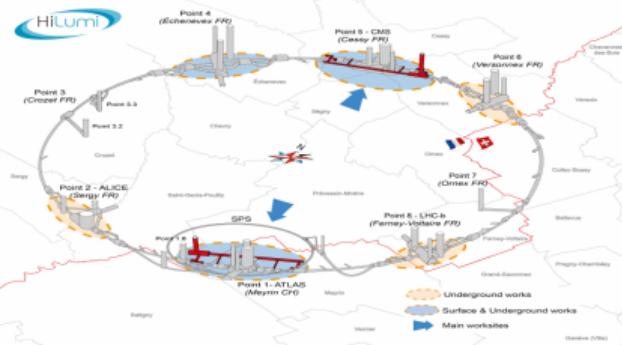
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High Luminosity LHC & ITk Upgrades

x10 increase in instantaneous luminosity!

- $L = 1\text{e}73 \text{ fb}^{-1} \text{ s}^{-1} \rightarrow L = 1\text{e}74 \text{ fb}^{-1} \text{ s}^{-1}$
- More particles, more problems



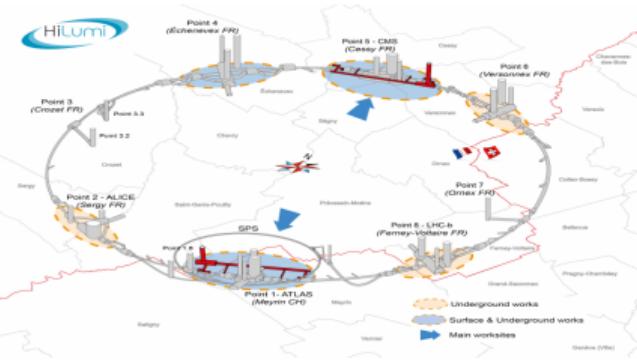
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The inner detector has insufficient:

- ▶ radiation hardness
 - ▶ granularity
 - ▶ bandwidth



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