

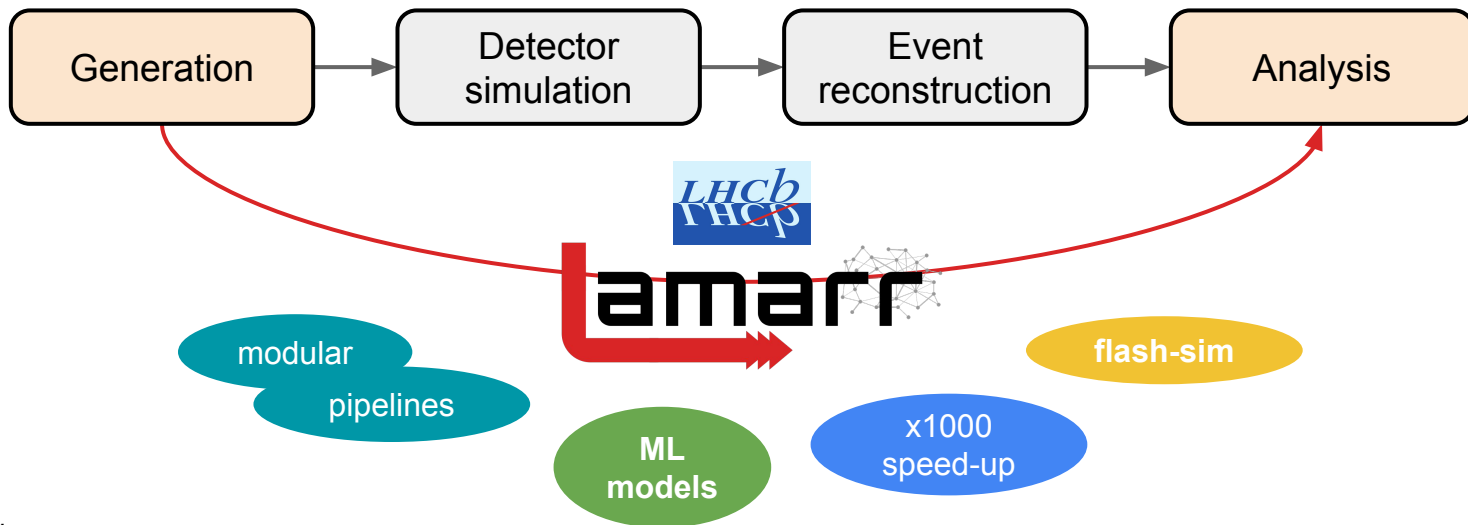


- ✓ Simulations are **crucial** for High Energy Physics experiments
- ✓ Detailed Simulation is computationally **very expensive**
- ✓ Detailed Simulation **not scale** for the future experiment demands



Viable solutions?

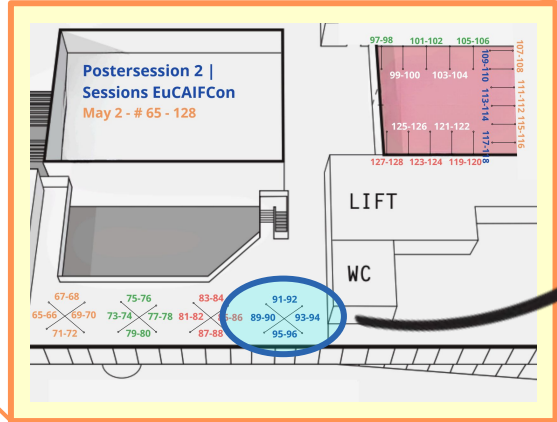
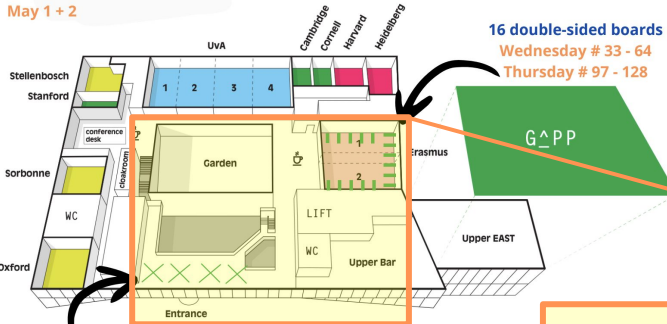
- ❌ Renouncing to increase statistics → **lower demand**
- ✅ Developing **faster options** for simulation → at LHCb, **Lamarr**





Do you want to know more about Lamarr?

Poster sessions EuCAIFCon
May 1 + 2



The flash-simulation of the LHC experiment using the Lamarr framework

1. Motivation
Detailed simulation of a detector between particles and the LHC detector is a complex task. This work presents a fast simulation framework for the LHC experiment. The framework is designed to be used for the simulation of the LHC experiment. It is designed to be used for the simulation of the LHC experiment. It is designed to be used for the simulation of the LHC experiment.

2. Fast simulation of the beam simulation
The fast simulation of the beam simulation is a complex task. This work presents a fast simulation framework for the LHC experiment. The framework is designed to be used for the simulation of the LHC experiment. It is designed to be used for the simulation of the LHC experiment.

3. Charged particles in the PIT system
The fast simulation of the PIT system is a complex task. This work presents a fast simulation framework for the LHC experiment. The framework is designed to be used for the simulation of the LHC experiment. It is designed to be used for the simulation of the LHC experiment.

4. Preliminary timing studies
The fast simulation of the timing studies is a complex task. This work presents a fast simulation framework for the LHC experiment. The framework is designed to be used for the simulation of the LHC experiment. It is designed to be used for the simulation of the LHC experiment.

5. Fast simulation of the beam detector
The fast simulation of the beam detector is a complex task. This work presents a fast simulation framework for the LHC experiment. The framework is designed to be used for the simulation of the LHC experiment. It is designed to be used for the simulation of the LHC experiment.

6. Conclusions and outlook
The fast simulation of the LHC experiment is a complex task. This work presents a fast simulation framework for the LHC experiment. The framework is designed to be used for the simulation of the LHC experiment. It is designed to be used for the simulation of the LHC experiment.

7. References
[1] M. Barbetti, et al., *Journal of High Energy Physics*, 2024.
[2] M. Barbetti, et al., *Journal of High Energy Physics*, 2024.
[3] M. Barbetti, et al., *Journal of High Energy Physics*, 2024.
[4] M. Barbetti, et al., *Journal of High Energy Physics*, 2024.
[5] M. Barbetti, et al., *Journal of High Energy Physics*, 2024.