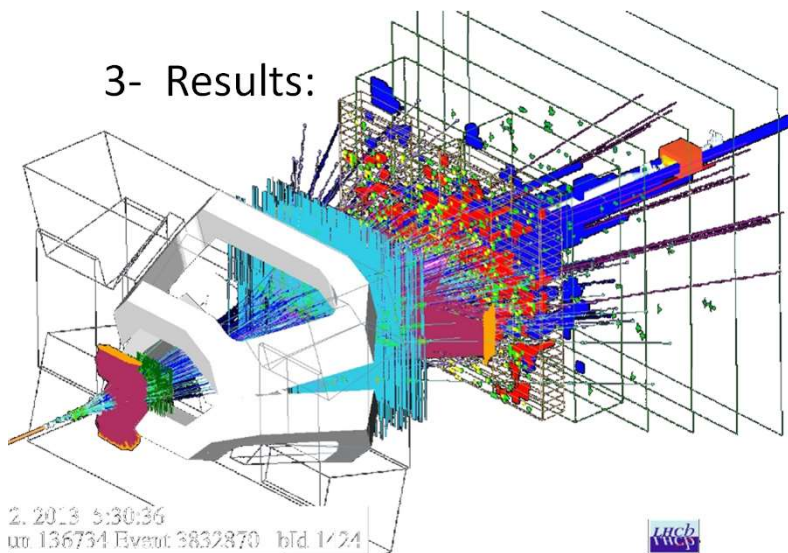


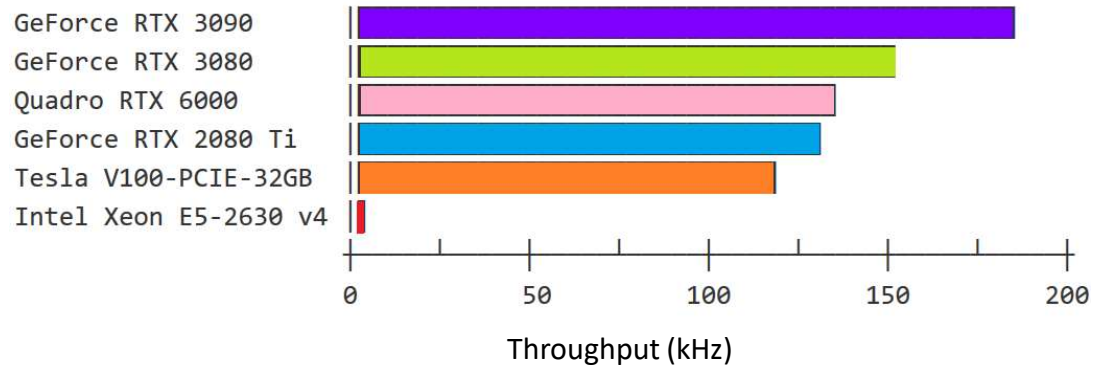
## LHCb-IFIC group

- 1- Fast particle reconstruction and selection in high event multiplicity environments, in particular at the LHCb experiment for Run3 (2022) and beyond (HL-LHC).
- 2- Probing new computing architectures (GPUs and FPGAs) in the trigger system. Aiming now to include fast ML techniques to perform the tasks (ex: clusterization, vertex finding, ghost tracks removal, etc...).

### 3- Results:



### First High Level Trigger (HLT1) on GPUs:



[[Comput Softw Big Sci 4, 7 \(2020\)](#)]

- 4- Desirable/proposals:
  - 2<sup>nd</sup> COMCHA school (ML, CUDA, OpenCL, Specific tools)
  - Artemisa tutorial (recorded video ?)
  - Specific course on FPGAs programming
  - Course/seminars on the development of fast selection algorithms including ML