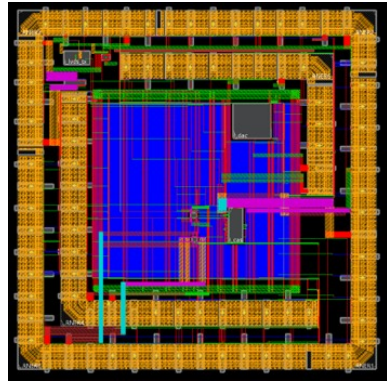
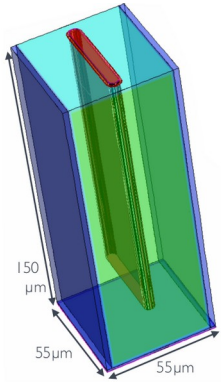
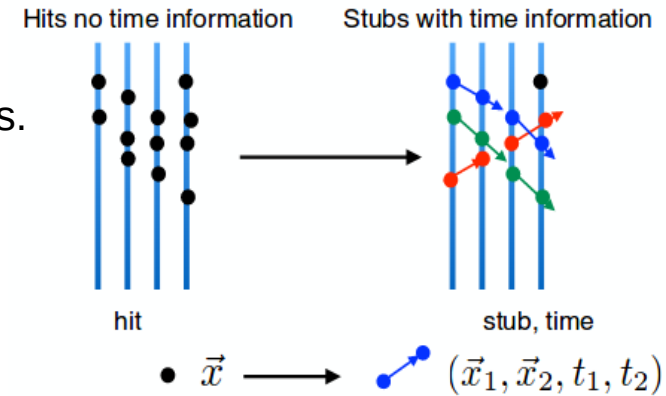


Progress towards a 4D fast tracking pixel detector

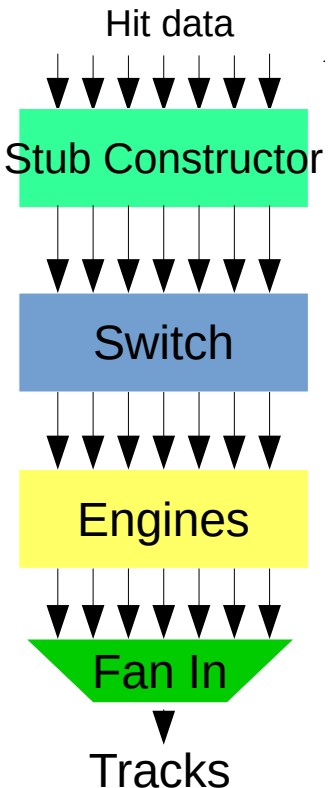


TIMESPOT R&D:

- 3D sensors with ~30 ps res.
- 28 nm ASIC
- Real-time processing and track reconstruction



4D fast tracking device



- Demonstrator implemented in **FPGA**
- **Parallel** and **pipelined** architecture
- **Hit doublets** identification + Track finding : **timing** in the pattern reco.
- **LHCb VELO-like** detector as a case study, in Upgrade II conditions
- **Low latency** : ~ 1us
- **40 MHz** event rate

