PIXEL RAW2DIGI ON GPUS

PROBLEM(S) <u>NOT</u> SOLVED

➤ **Code integrate in CMSSW_10_0_0**

  ➤ https://github.com/cms-sw/cmssw/compare/master...cms-patatrack:GPU_SiPixel_RawToDigi_100X

➤ **Debugging the code:**

  ➤ We tried to run it multithread but it crashed

  ➤ We are now trying to understand what is happening

NEXT PROBLEMS

➤ **Look at the performance of the GPU implementation**

  ➤ time spent in the host-device and device-host memory copy

  ➤ time spent in the kernels

  ➤ comparison with CPU performance

➤ **Review the code**

➤ **Investigate a more C++ friendly interface to CUDA:**

  ➤ Thin C++-favored wrappers for the CUDA Runtime API

  ➤ https://github.com/eyalroz/cuda-api-wrappers