FPGA Acceleration of Kalman Filter

Sioni Summers (Imperial College)

Lukas Arnold (ETH Zurich)

Shahzad Muzaffar (Fermilab)

Done and to be done

Device

Compiling Kalman filter kernels…

```
aoc device/kalman_kernels.cl -o bin/kalman_kernels.aocx --board p385a_sch_ax115
```

Verifiying Kalman filter kernels for more complex kernels

```
Using AOCX: kalman_kernels.aocx
Segmentation fault
```

TO DO:
- If synthesis successful → analyse
- Debug kernels

Host

Made a standalone test to isolate the previous problem
→ Fixed the problem

TO DO:
- Apply fix the CMSSW