



Contribution ID: 17

Type: **not specified**

## Timing Resolution Studies for the MightyPix: A proposal

*Thursday 23 May 2024 14:30 (25 minutes)*

### Abstract for Allpix2

During long shutdown 4 of the LHC, there will be an upgrade to the LHCb tracking systems to allow the experiment to operate at higher luminosities ( $1.5 \times 10^{34} \text{ cm}^{-2} \text{ s}^{-1}$ ). The downstream tracker, known as the Mighty Tracker, is made up of two different detection mediums: scintillating fibres and monolithic CMOS sensors called MightyPix. The MightyPix design is based on knowledge from the ATLASPix1 and the MuPix2. A key specification of the MightyPix is to have a timing resolution  $\sim 3 - 4 \text{ ns}$ . Allpix2 simulations are proposed to determine if this timing resolution is achievable or if additional timestamps are required. This talk will outline the plans for this study.

### Will the talk be given in person or remotely?

In person

**Author:** BUCHANAN, Emma (The University of Edinburgh (GB))

**Presenter:** BUCHANAN, Emma (The University of Edinburgh (GB))

**Session Classification:** Applications and studies

**Track Classification:** Applications & Studies