EVENT VIEWER

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CM43
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Why/Personal Goals

- Easy track debugging
  - Do track fits make sense with respect to TOFs?
  - Does detector alignment make sense?
  - Have detector co-ordinates been successfully translated into global co-ordinates?
- Easily identify tracks that go through the whole experiment
- "By eye" particle identification
  - No hit in TOF0, but hits in TOF1, TKU, TKD, TOF2 .. Probably a muon!
- "By eye" estimate of scattering between detectors/detector planes
- Keeping it simple – decoupling the track hits from complicated detector geometries
  - Means you can see the track without the associated 'gumph' blocking your view
- No need to download geometries or mess with the reconstructed ROOT file

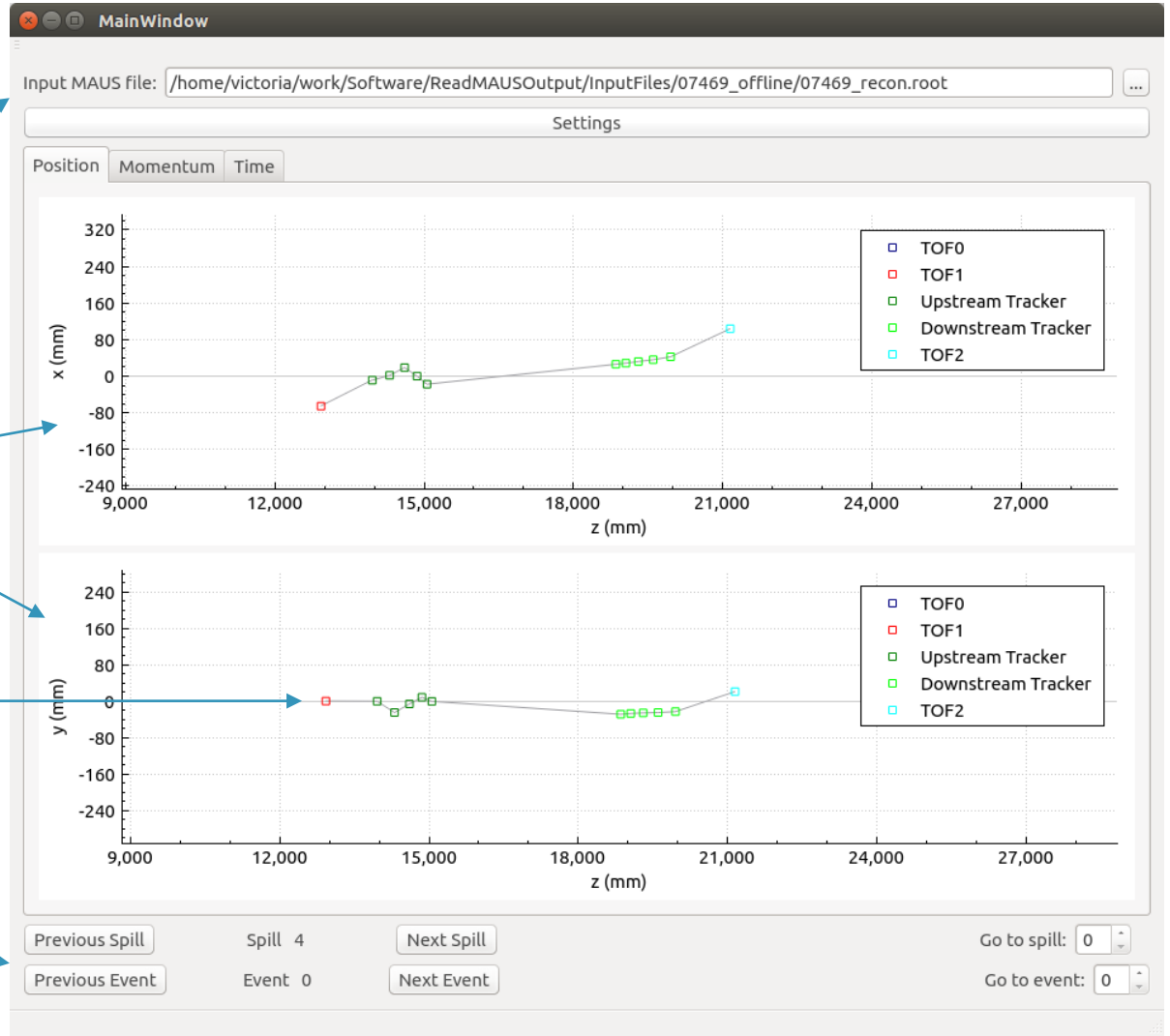
Displaying Position

Input ROOT file (e.g. maus_output.root)

Plot display area

Colour-coded detector hits

Spill/event navigation



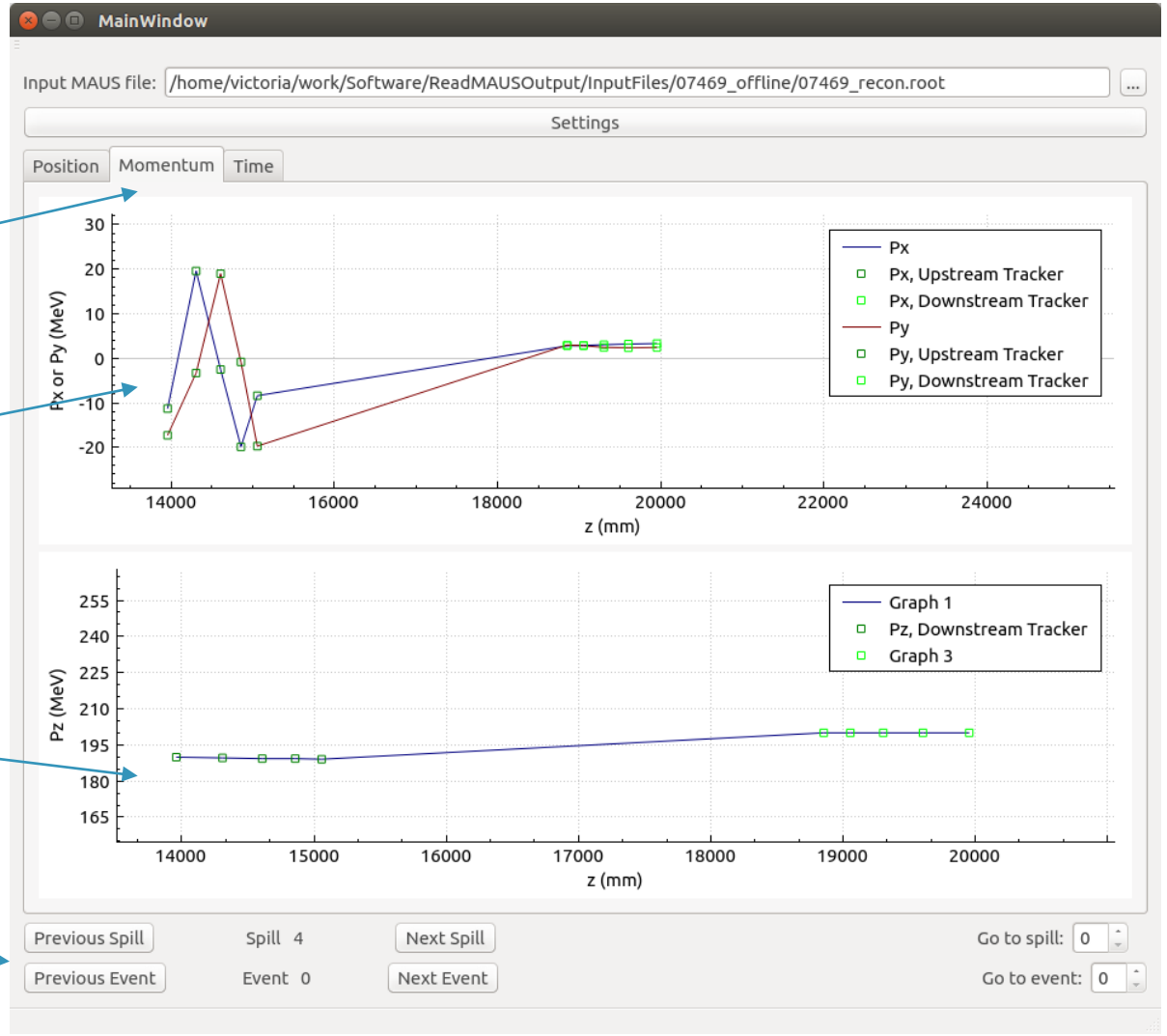
Displaying Momentum

Momentum tab displays reconstructed momentum at the **trackers only**

Px, Py on same plot
(so sinusoidal variations clear)

Pz on separate plot
(could tie in with TOF-based momentum)

Same event



What might be nice…?

- ‘Beam’s eye’ view?
- Very simple, shaded shapes to indicate where (e.g.) the absorber is in the global co-ordinate system
- Very simple, shaded shapes to indicate limiting apertures

- Personally, I think it’s important to keep the event display as clean and simple as possible
  - Complicated detector visualizations are useful, but better when you know **what** you’re looking at

- Work being continued by Mihailo Savić

Next: Demo/Fun Times!