

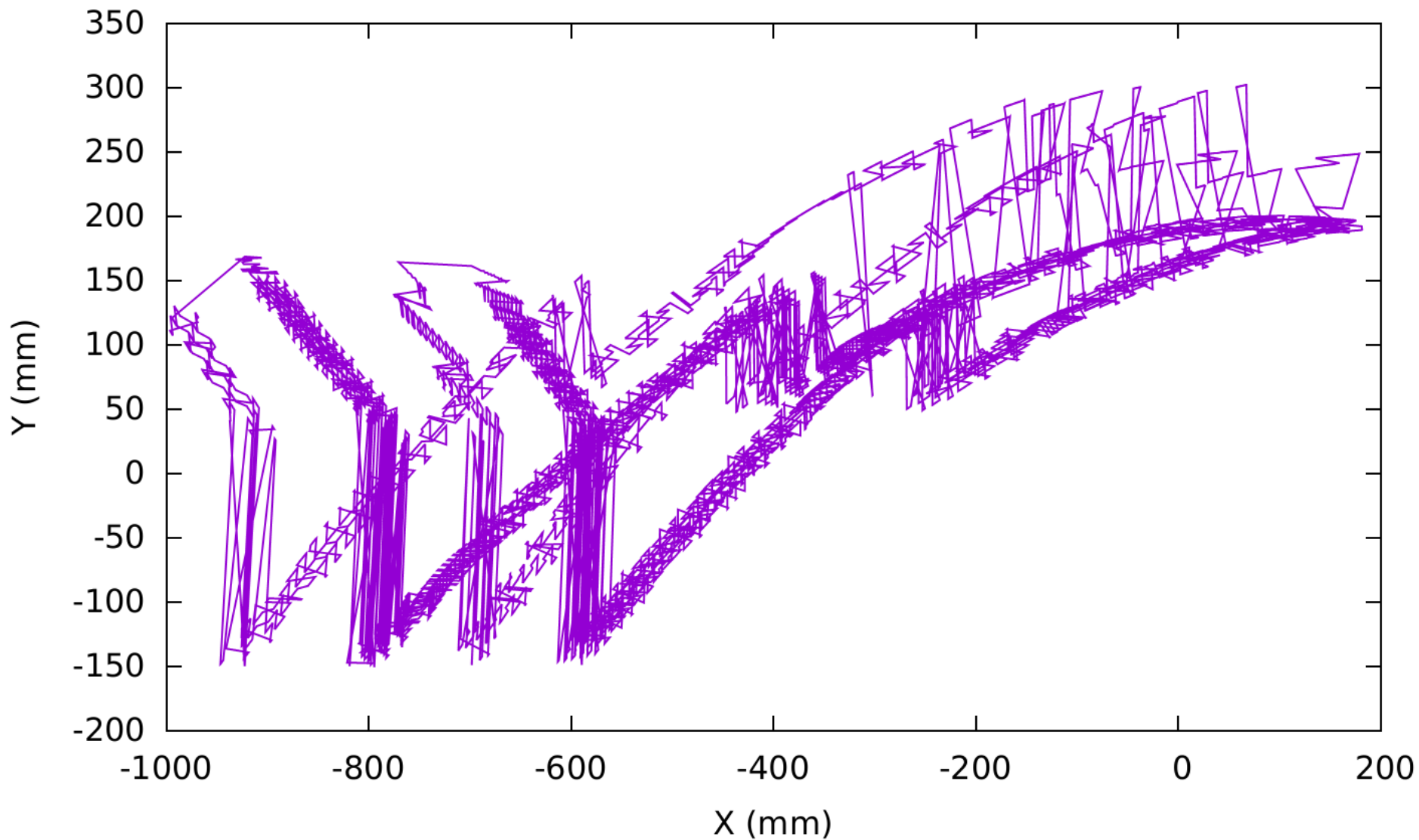
Progress on the DIRC reconstruction

01/29/16

Goal

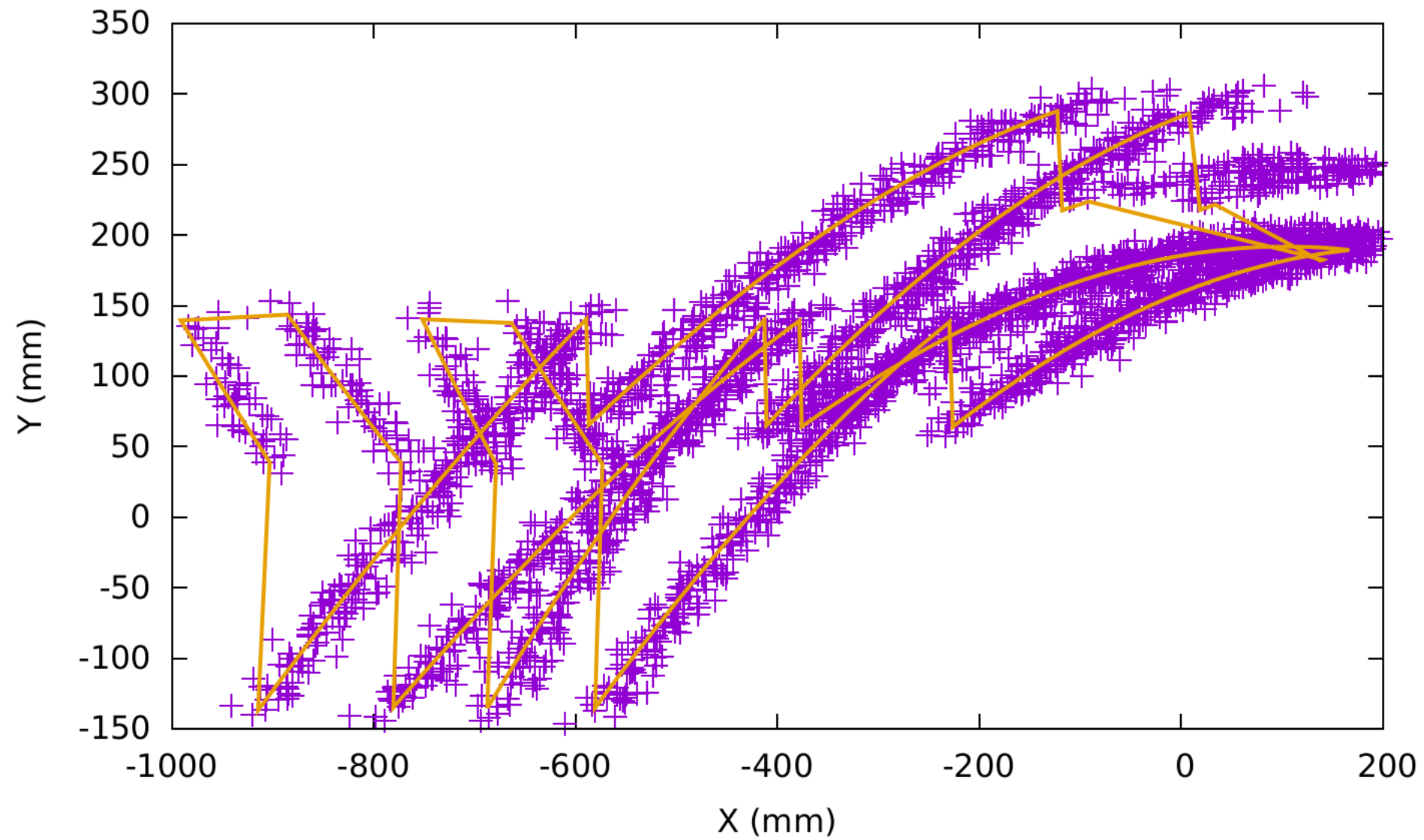
- Draw a line through the pattern
- Spread this line
- Naively connecting xy point in phi order fails, even if only one set of “last wall” is considered
 - Kaleidoscope effect kills us

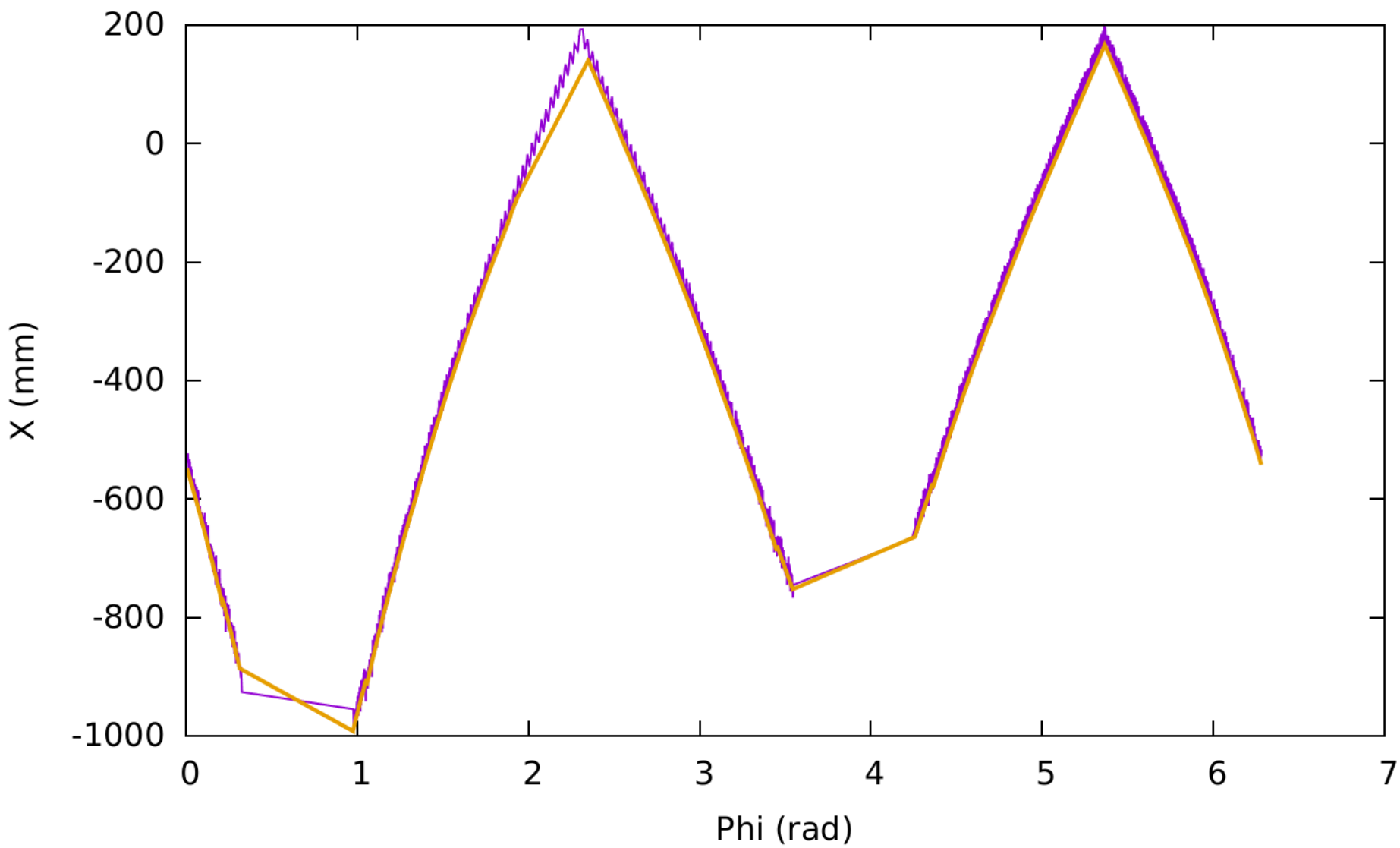
XY in Phi Order

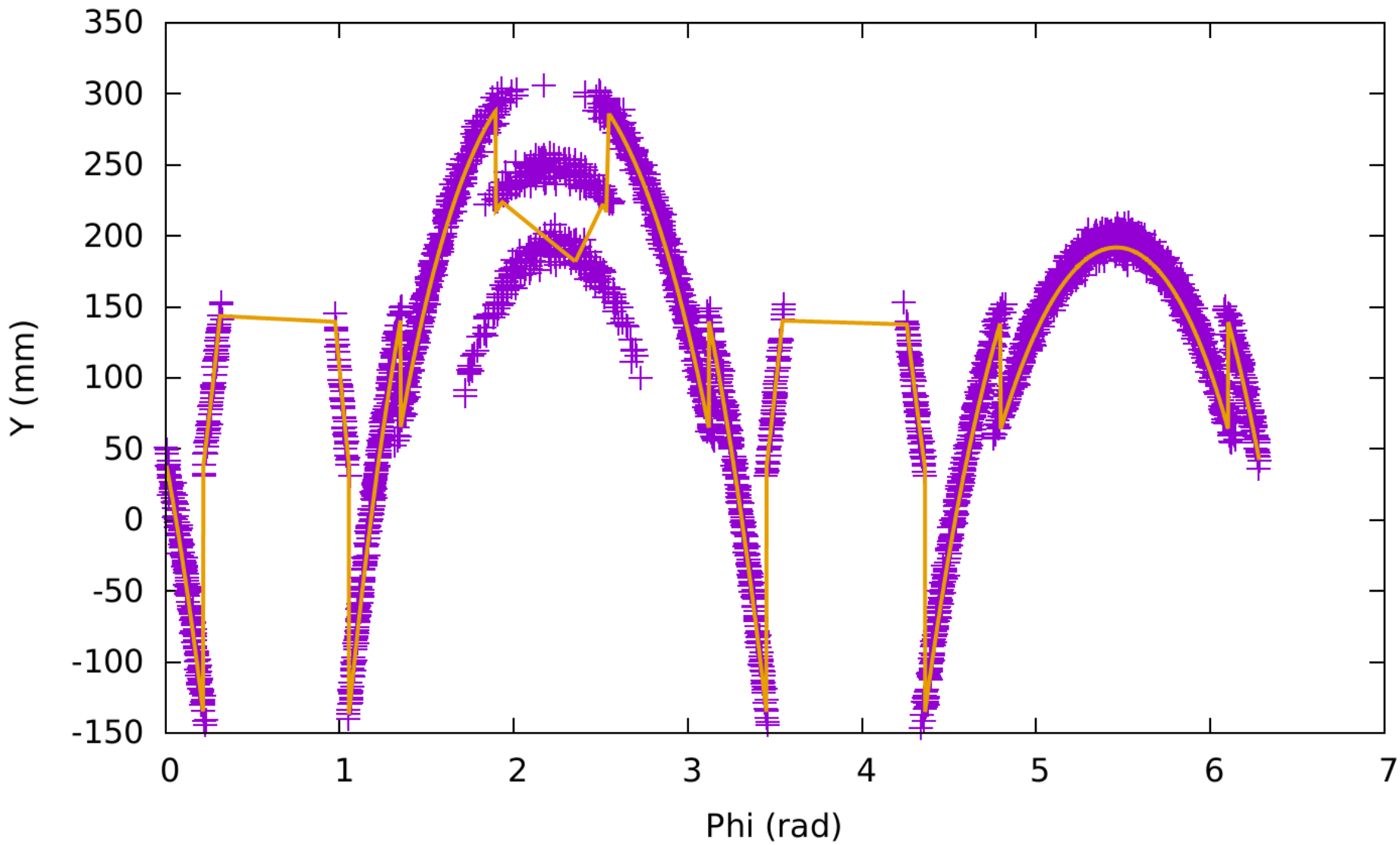


Corrections

- Separate photons based on last wall bounced
- Consider very thin bar/wedge (but same depth)
- Move all photons at end of bar to one point (furthest from wedge right now)
- Remove 6mrad slant – compensate with 3mrad change in wedge.







Conclusions

- Requires a factor of 50-100 fewer photons to be simulated
 - Would put us on the order of \sim <few ms per particle
- Still missing part of the center
- Have not yet used this to reconstruct, still being tested