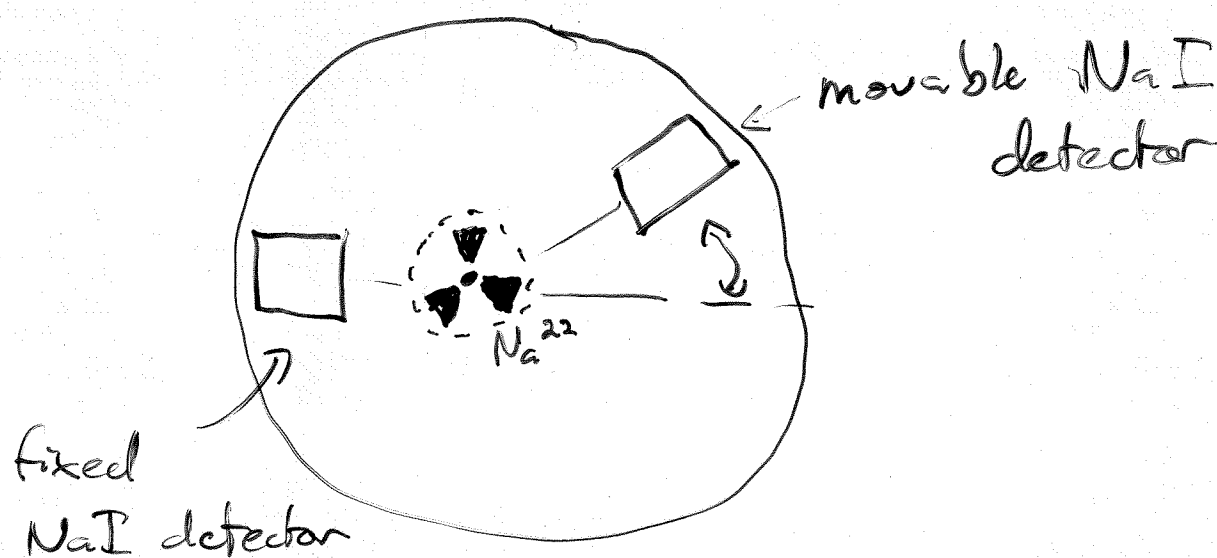


γ - γ correlations in Positron Annihilation

- Ben Monreal
- Christine Aidala

- Na^{22} decays releasing a positron
- The positron collides with an electron in the casing, producing 2 gamma rays.

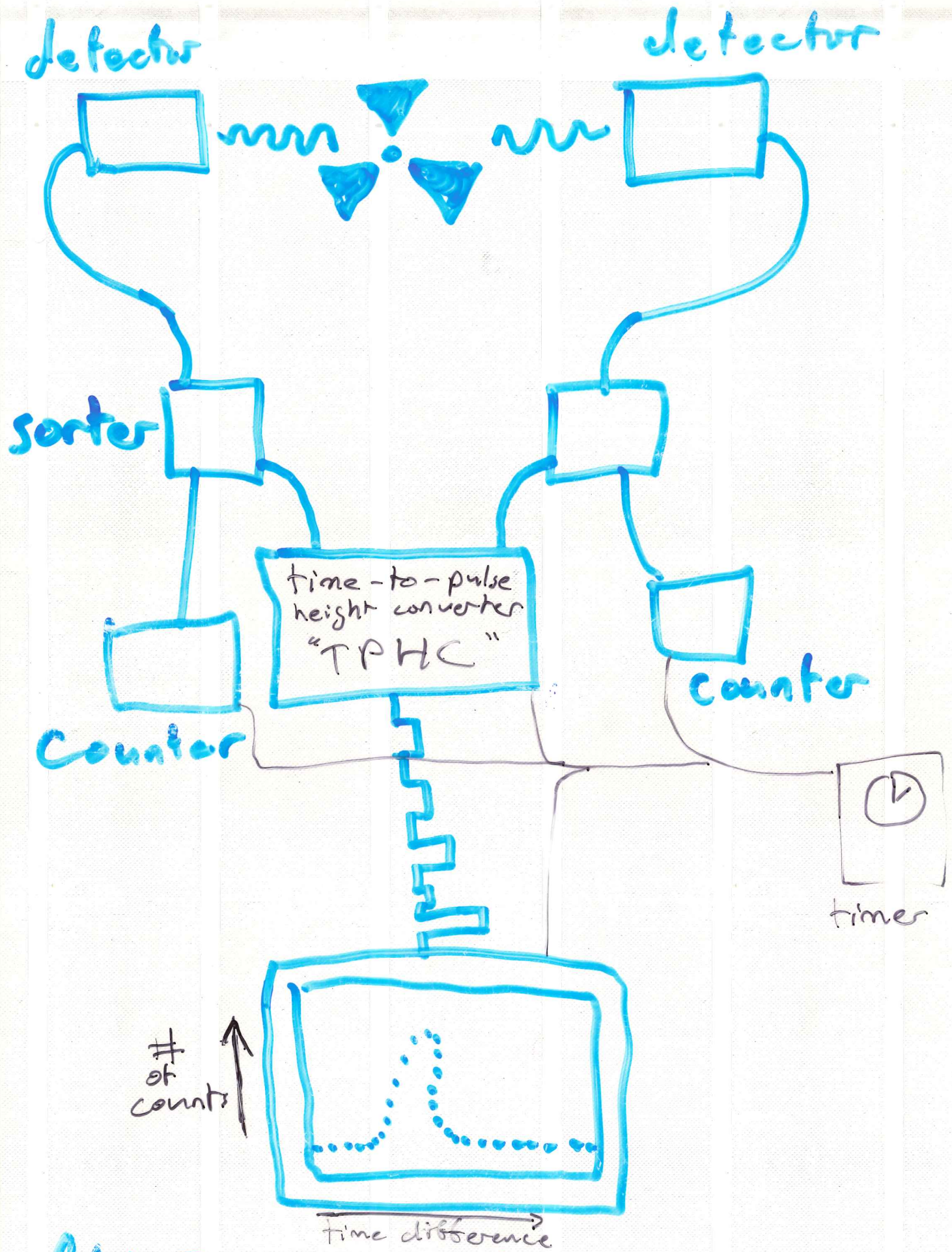


- We want to detect both gamma rays from the same ~~particle~~ annihilation, and investigate the angular correspondence.

Q - How do we know that two gamma rays came from the same decay?

A - Because they occur at the same time!! (within our time resolution)

Q - How do we know that they came at the same time? Huh?



MULTI-CHANNEL ANALYZER

So...

What are we expecting?

- The majority of coincident gamma rays will be emitted 180° apart.
- Why are they 180° apart?
 - conservation of momentum