

# Coincidence measurements of gamma rays from positron-electron annihilation using NaI detectors

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- The purpose of this research is to understand  $\beta^+$  decay in the nucleus.
- The top figure shows positron-electron annihilation. I measured these two gamma rays.  $e^+ + e^- \rightarrow 2\gamma$
- The bottom figure shows arrangement of two NaI detector and a  $^{22}\text{Na}$  source.
- The decay of  $^{22}\text{Na}$  is as follows:  
$$^{22}\text{Na} \rightarrow ^{22}\text{Ne} + e^+ + \nu_e$$
- I measured with Opening angle  $\theta$  at  $90^\circ$  ,  $120^\circ$  ,  $150^\circ$  ,  $160^\circ$  ,  $170^\circ$  ,  $175^\circ$  and  $180^\circ$  .
- Please come to my poster. I will explain the details.

