

## Stern-Gerlach Permutations

Consider the following variations on Experiment 4.3 from Styer's book (p. 24). (This experiment is also sketched on the board.)

1. Suppose that analyzer B is not horizontal, but is tilted to the right of vertical by  $60^\circ$ . What is the probability that an atom emerges from the + exit of detector C?
2. Suppose that analyzer B is not horizontal, but is tilted to the left of vertical by  $10^\circ$ . And, suppose that analyzer C is tilted to the right of horizontal by  $80^\circ$ . What is the probability that an atom emerges from the + exit of detector C?
3. Suppose that analyzer A is tilted  $20^\circ$  to the right of vertical? What is the probability that an atom emerges from the + exit of detector C?