

ET4-RT2: CHARGES BETWEEN CHARGED PARALLEL PLATES—SPEED

Four identical positive charges are each launched with a speed v_o from a point halfway between the plates of a parallel-plate capacitor. (The plates are very large, and only a small portion near the center is shown at right.)

Charge A is launched toward the negative plate, charge B is launched parallel to the plates, charge C is launched at a 45° angle toward the positive plate, and charge D is launched directly toward the positive plate. Neither charge C nor D touches the positive plate.

Rank the speeds of the charges $A - D$ just before they hit the negative plate.

