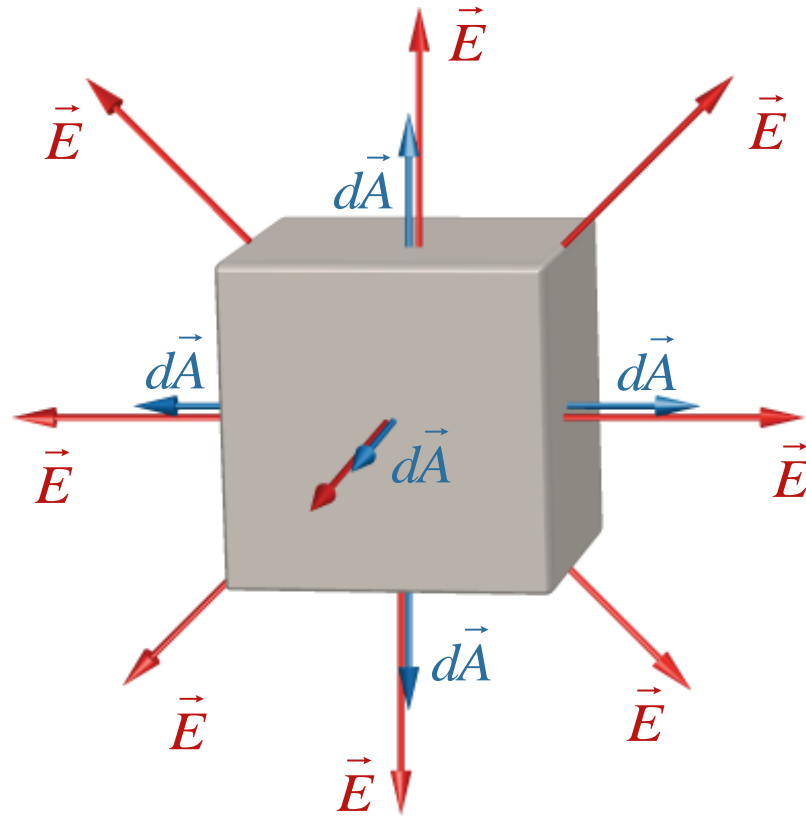


Direction Matters:



For a closed surface,
 $d\vec{A}$ points outward

$$\Phi_S = \int_S \vec{E} \cdot d\vec{A} > 0$$