

Can this somehow be measured anyway?

$$\hbar \frac{dk}{dt} = -e\mathcal{E}.$$

Typical size of δk

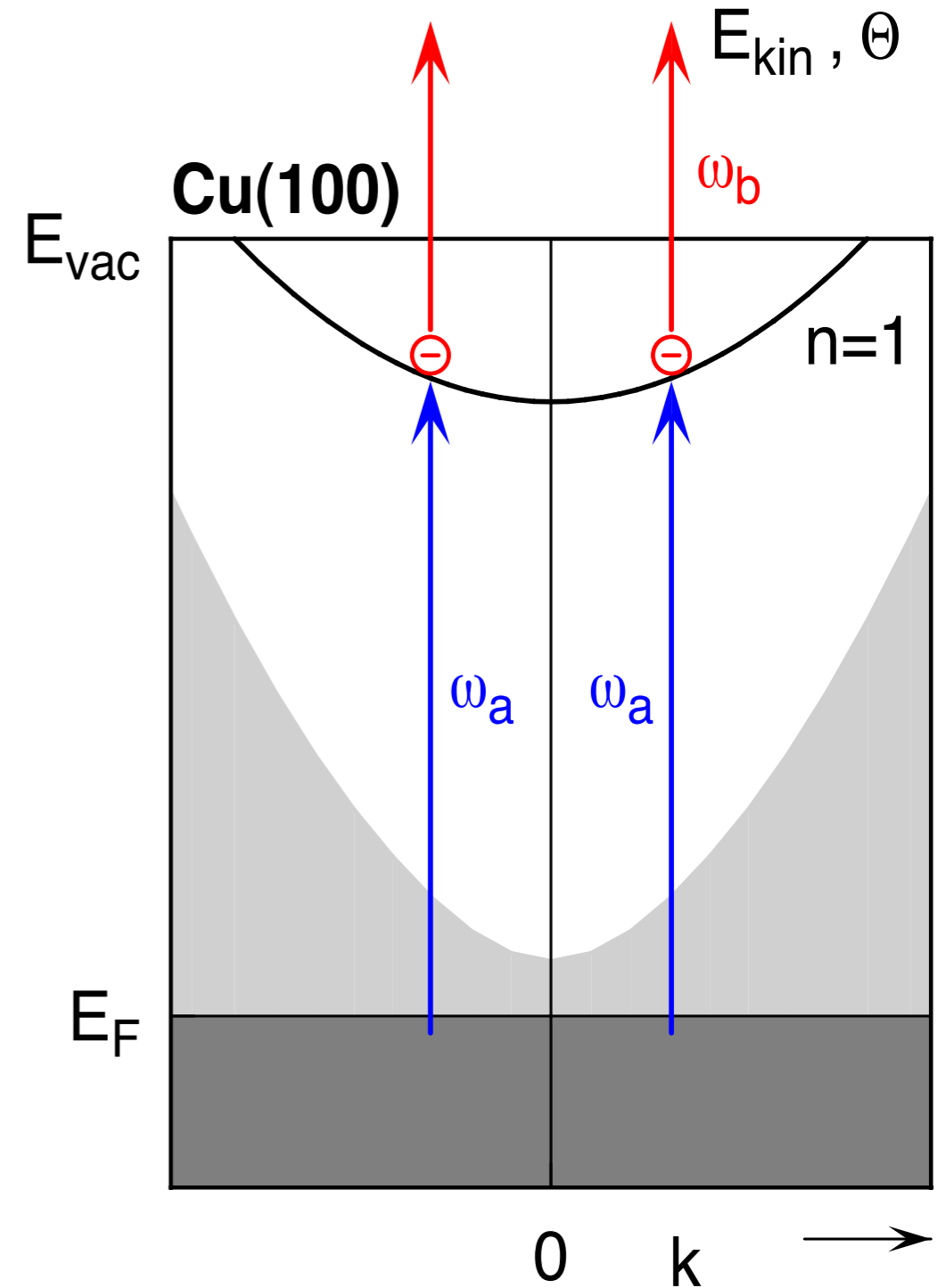
$$\mathcal{E} = 10^4 \text{V m}^{-1}$$

$$\tau = 10^{-14} \text{s}$$

$$\delta k = e\mathcal{E}\tau/\hbar \approx 10^6 \text{m}^{-1}$$

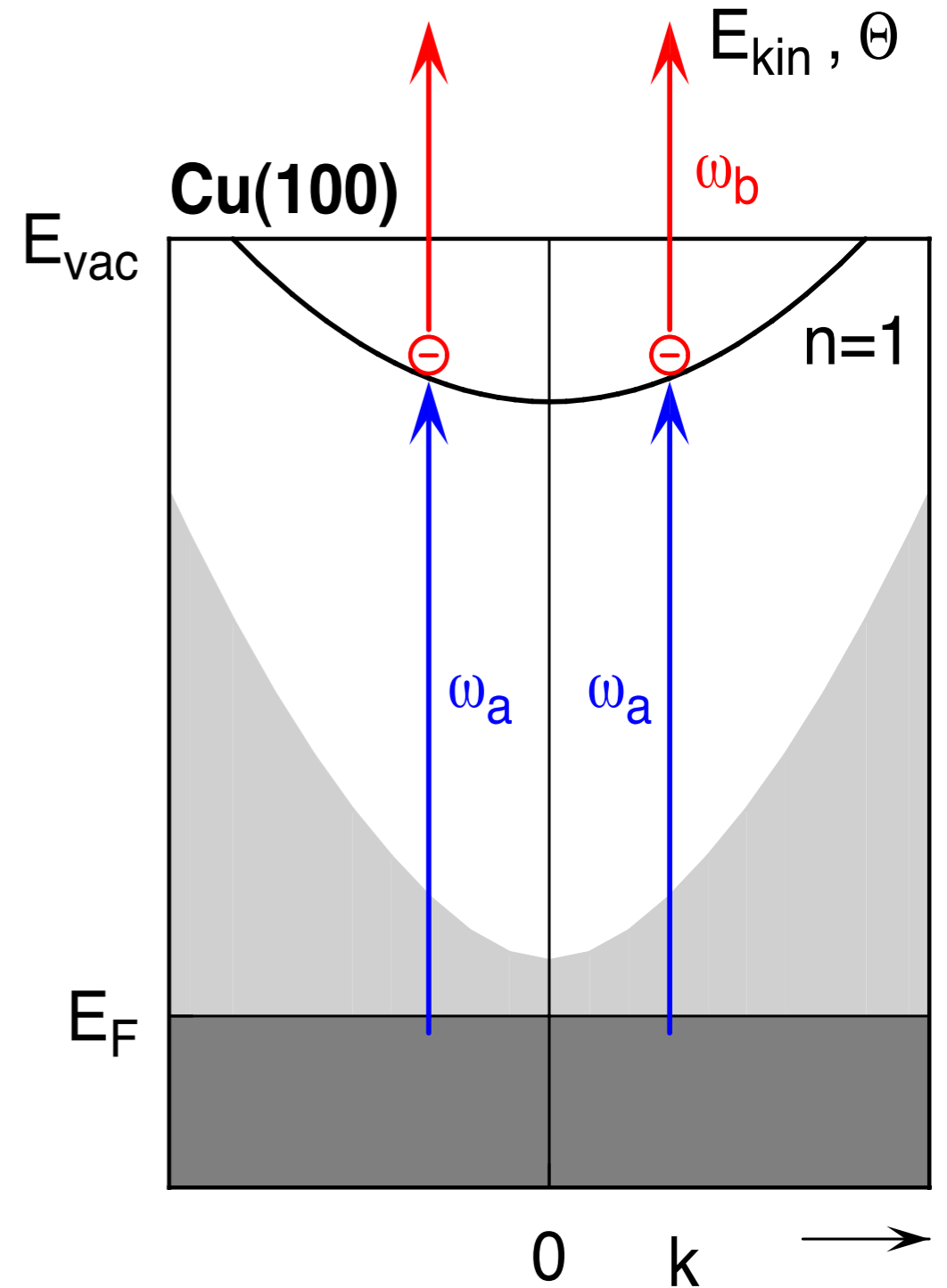
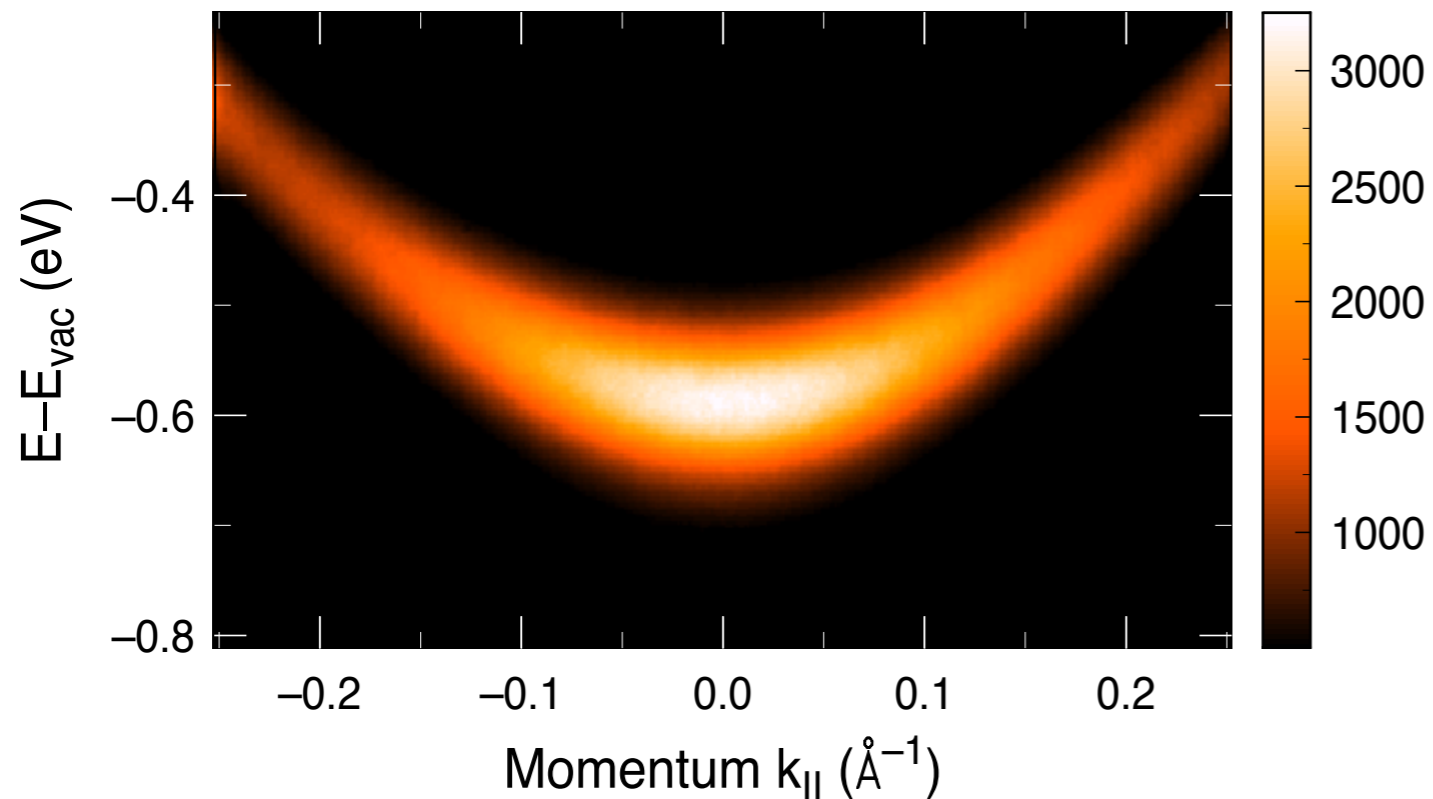
$$1/a \approx 10^{10} \text{m}^{-1}$$

- put electrons into a state *above* the Fermi energy (they live longer).
- look at these electrons with photoemission.
- generate a current and see what happens.

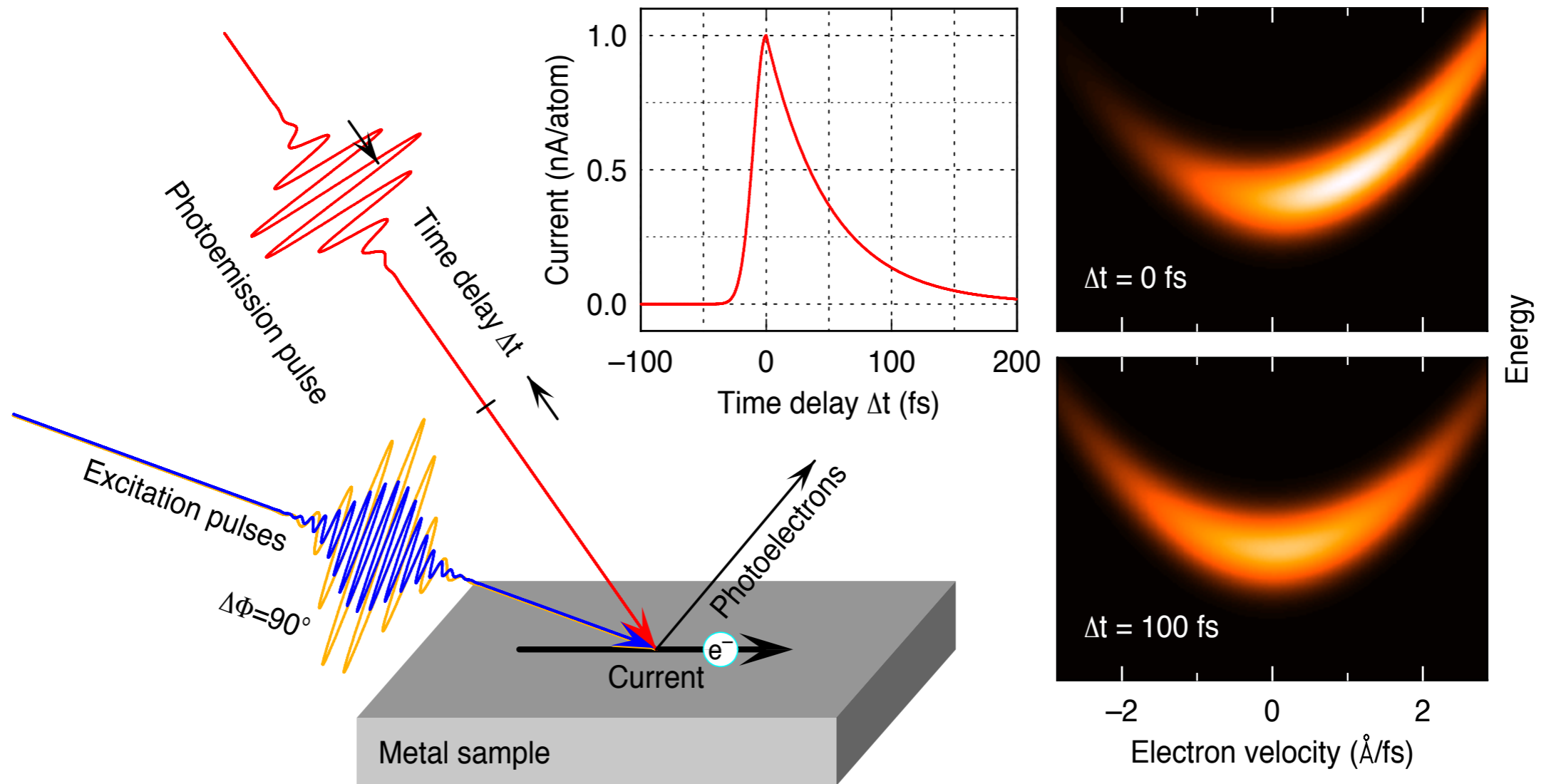


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