

*Intermediate
exchange*

$$k_{\text{ex}} \approx |\Delta\nu|$$

$$k_{\text{ex}} = k_A + k_B$$

$$10^2 / \text{sec}$$

$$10^3 / \text{sec}$$

$$10^4 / \text{sec}$$

*Fast
exchange*

$$k_{\text{ex}} \gg |\Delta\nu|$$

$$10^5 / \text{sec}$$

$P_A = 75\%$ $V_A \longleftrightarrow V_B$ $P_B = 25\%$
 $\Delta\nu = 100 \text{ Hz}$