(a)

Ω_A

$\propto g_{AB}^2 e^{i\phi}$

$P_2(\phi_{AB})$

$g_{AB} e^{i\phi}$

A B

$\tilde{g}$

γ_A^g γ_A^d

γ_B^d γ_B^g

$\propto \tilde{g}$

$P_2(\phi_{AB})$

(b) $\tilde{g}$

$\gamma_A^g = \gamma_B^g$

$\gamma_A^d = \gamma_B^d$

$\phi = -\pi/2$

$\phi_{AB} = \pi$

$\phi_{AB} = \pm\pi/2$

$\phi_{AB} = 0$

Ω_A g_{AB}