

【 整个器件的 AO 过程 】

$$\begin{bmatrix} a_0^{(\text{Out})} \\ a_1^{(\text{Out})} \end{bmatrix} = \mathbf{T}^T \begin{pmatrix} \cos \zeta & -i \sin \zeta e^{-i\Omega t} \\ -i \sin \zeta e^{i\Omega t} & \cos \zeta \end{pmatrix} \mathbf{T} \begin{bmatrix} a_0^{(\text{in})} \\ a_1^{(\text{in})} \end{bmatrix}$$

$$\mathbf{T} = \begin{pmatrix} t_{00} & t_{01} \\ t_{10} & t_{11} \end{pmatrix}$$

振幅透过率矩阵

$$\mathbf{a}^{(\text{in})} = \begin{bmatrix} a_0^{(\text{in})} \\ a_1^{(\text{in})} \end{bmatrix} = \begin{bmatrix} 1 \\ 0 \end{bmatrix}$$

$$\mathbf{a}^{(\text{in})} = \begin{bmatrix} a_0^{(\text{in})} \\ a_1^{(\text{in})} \end{bmatrix} = \begin{bmatrix} 0 \\ 1 \end{bmatrix}$$

Path	ω	$\omega + \Omega$	$\omega - \Omega$
TE ₀ →TE ₀	$t_{00}^2 + t_{10}^2$	$t_{00}t_{10}$	$t_{10}t_{00}$
	-27.0	-46.6	-46.8
TE ₀ →TE ₁	$t_{01}t_{00} + t_{11}t_{01}$	$t_{01}t_{10}$	$t_{11}t_{00}$
	-41.0	-47.1	-28.9
TE ₁ →TE ₀	$t_{10}t_{11} + t_{00}t_{01}$	$t_{00}t_{11}$	$t_{10}t_{01}$
	-39.6	-24.8	-45.7
TE ₁ →TE ₁	$t_{11}^2 + t_{01}^2$	$t_{01}t_{11}$	$t_{11}t_{01}$
	-26.3	-36.2	-38.2

$$\mathbf{a}^{(\text{Out})} = \begin{bmatrix} (t_{00}^2 + t_{10}^2) \cos \zeta & -it_{00}t_{10}e^{-i\Omega t} \sin \zeta & -it_{10}t_{00}e^{i\Omega t} \sin \zeta \\ (t_{01}t_{00} + t_{11}t_{10}) \cos \zeta & -it_{01}t_{10}e^{-i\Omega t} \sin \zeta & -it_{11}t_{00}e^{i\Omega t} \sin \zeta \end{bmatrix}$$

$$\mathbf{a}^{(\text{Out})} = \begin{bmatrix} (t_{10}t_{11} + t_{00}t_{01}) \cos \zeta & -it_{00}t_{11}e^{-i\Omega t} \sin \zeta & -it_{10}t_{01}e^{i\Omega t} \sin \zeta \\ (t_{11}^2 + t_{01}^2) \cos \zeta & -it_{01}t_{11}e^{-i\Omega t} \sin \zeta & -it_{11}t_{01}e^{i\Omega t} \sin \zeta \end{bmatrix}$$

$$\begin{bmatrix} 1 \\ 0 \end{bmatrix} \quad \begin{bmatrix} 0 \\ 1 \end{bmatrix}$$

