

$$I_1 = I$$

$$I_2 = I - 2$$

$$\hbar\omega_{I_1} = \frac{1}{2} (E_{I_1} - E_{I_2})$$

$$\hbar\omega_{I_1}^{(exp)} = \frac{1}{2} (E_{I_1}^{exp} - E_{I_2}^{exp}) = \frac{1}{2} \Delta_{12}^{exp}$$

$$\hbar\omega_{I_1}^{(th)} = \frac{1}{2} (E_{I_1}^{th} - E_{I_2}^{th}) = \frac{1}{2} \Delta_{12}^{exp} + \frac{1}{2} (\delta_{I_1} - \delta_{I_2})$$

$$\Rightarrow \hbar\omega_{I_1}^{(th)} = \hbar\omega_{I_1}^{(exp)} + \frac{1}{2} (\delta_{I_1} - \delta_{I_2})$$

$$\left\{ \begin{array}{l} E_{I_1}^{th} = E_{I_1}^{exp} + \delta_{I_1} \\ E_{I_2}^{th} = E_{I_2}^{exp} + \delta_{I_2} \end{array} \right. , \quad \delta_{I_1} \neq \delta_{I_2}$$

The average δ_I for each band			
TSD1	TSD2	TSD3	TSD4
-0.000598406	0.000181717	0.00629519	0.0294064

