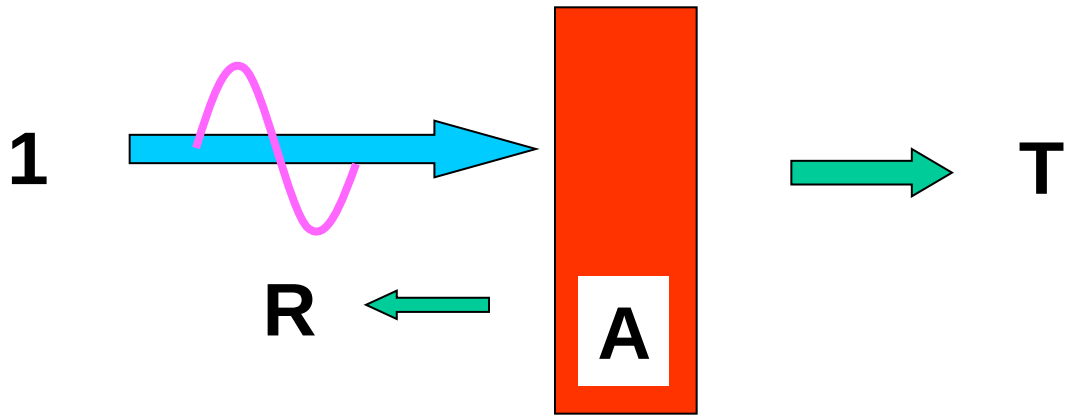
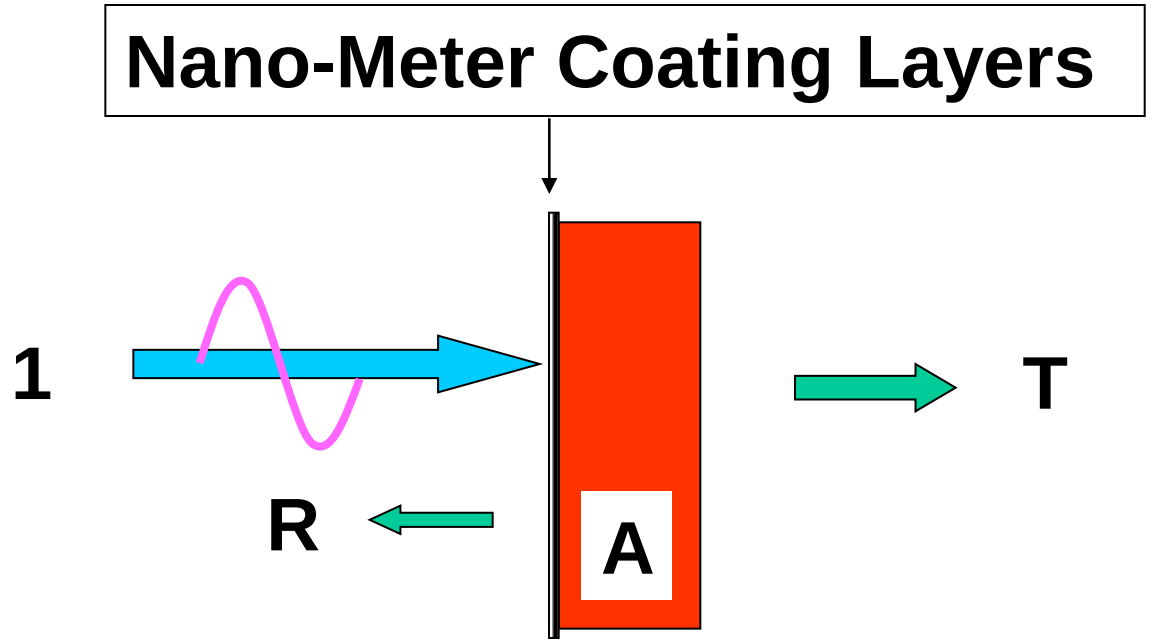
Wave Nature of Deuterium Flux Permeating through Palladium Thin Film with Nanometer Coating Layers --- (I I) Theoretical Model ----

Correlation (Flux & Heat)

$$1 - R = A + T$$



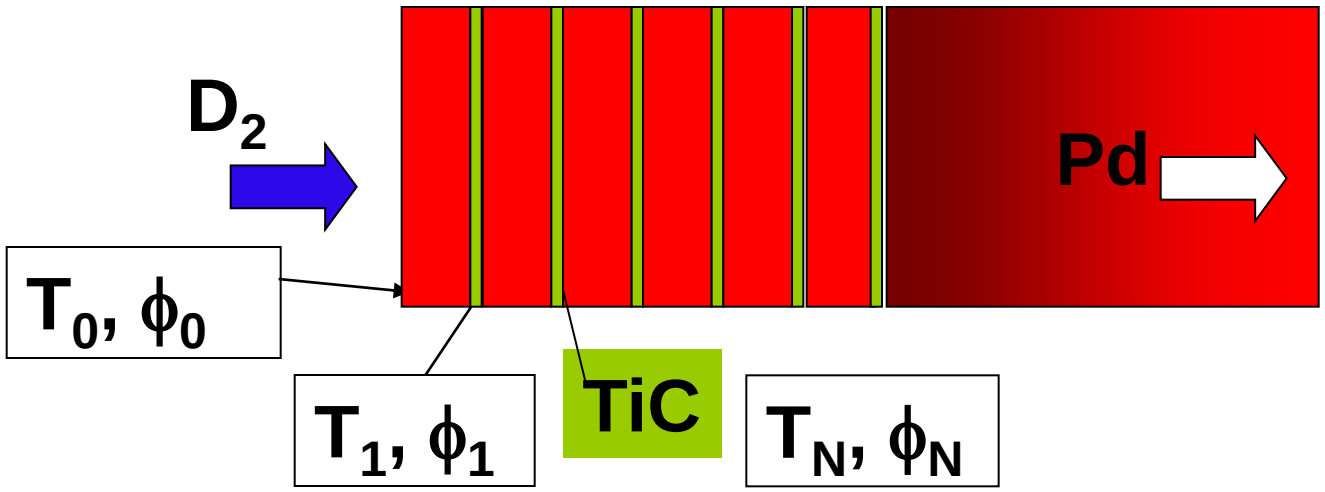
$$\left(\frac{A}{T}\right)$$



Wave Model Identity

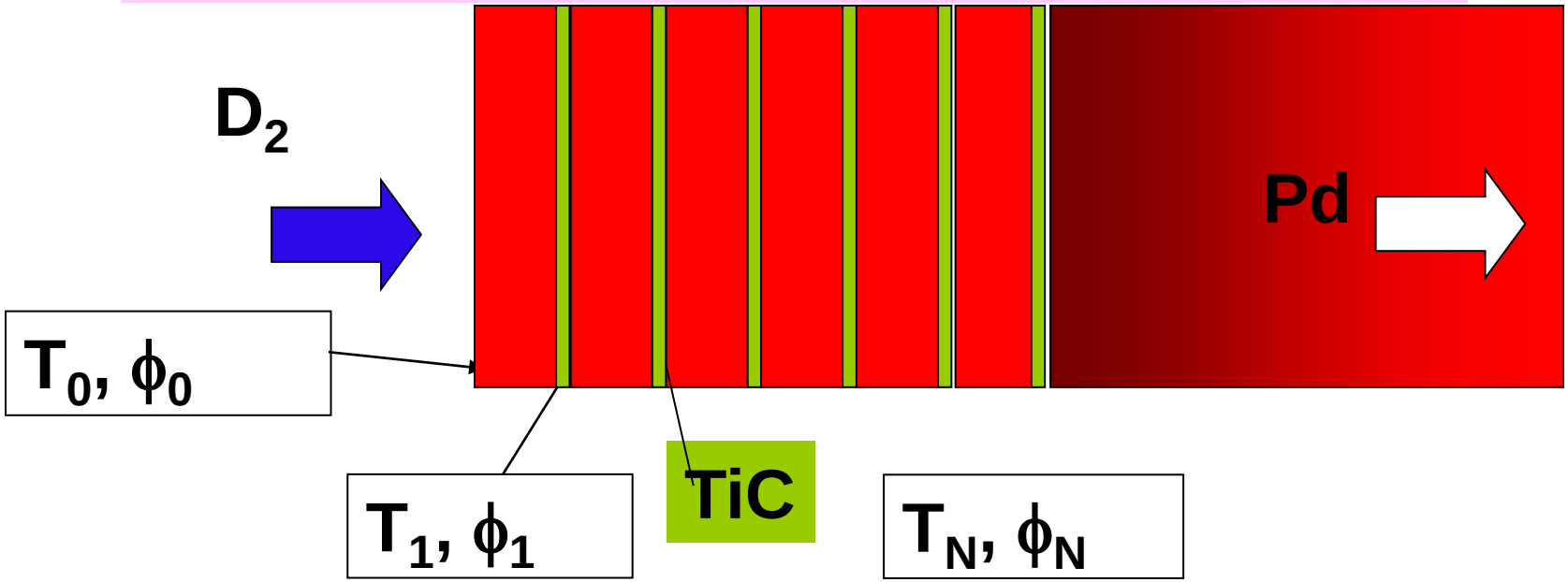
$$\frac{A_{0N}}{T_{0N}} = \frac{A_0}{T_0} + \frac{A_N}{T_N} + \frac{A_0}{T_0} * \frac{A_N}{T_N}$$

Multiple Nano-Meter Coating Layer

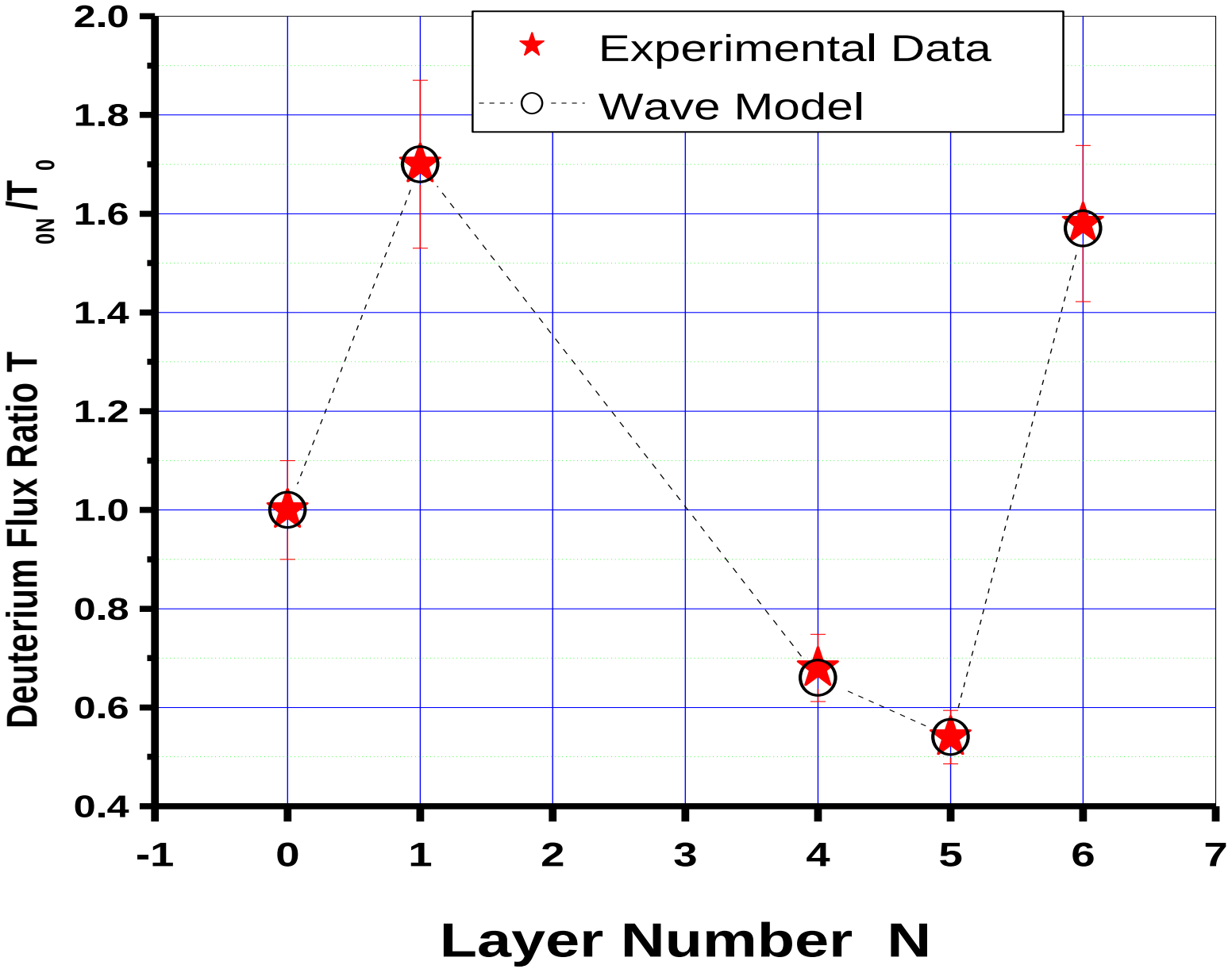


$$T_{0N} = \frac{T_0 * T_N}{T_0 * T_N + (\sqrt{1-T_0} - \sqrt{1-T_N})^2 + 4\sqrt{(1-T_0)(1-T_N)}\left(Cos\left[\frac{\phi_0 + \phi_N}{2}\right]\right)^2}$$

High Deuterium Flux with High Loading



- High Flux with Coating Layer Build-up High Loading Surface (Iwamura super lattice)
- Super Wave may affect Phase ϕ_0 & ϕ_1 → High Flux (T_{0N})
- High Flux (T0N) Introduces More Absorption (A0N) in Surface Layers (Correlation btn Flux & Heat)


Experimental Data
Wave Model
Deuterium Flux Ratio T0N/T0
Layer Number N
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
-1
0
1
2
3
4
5
6
7