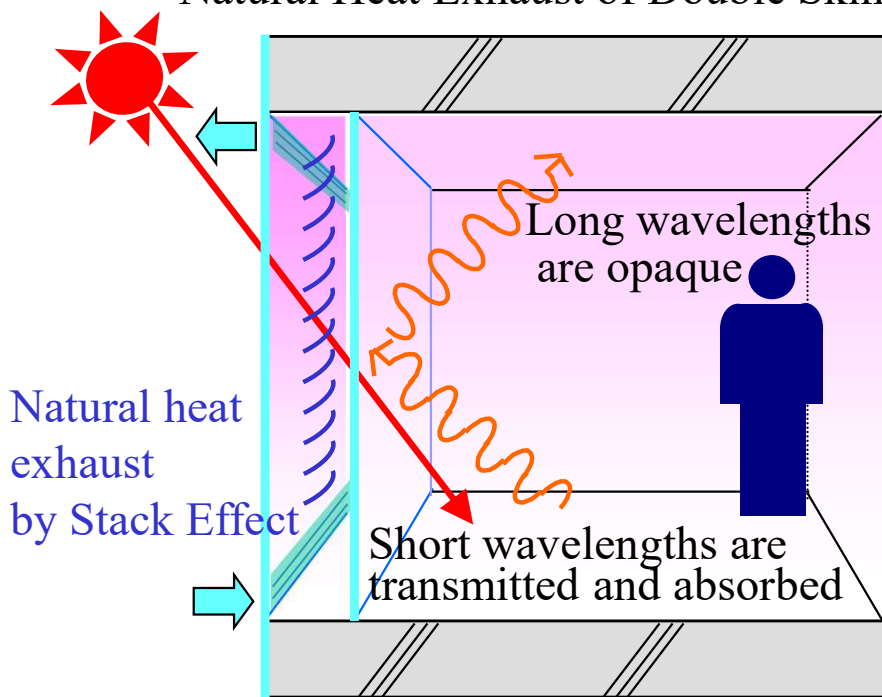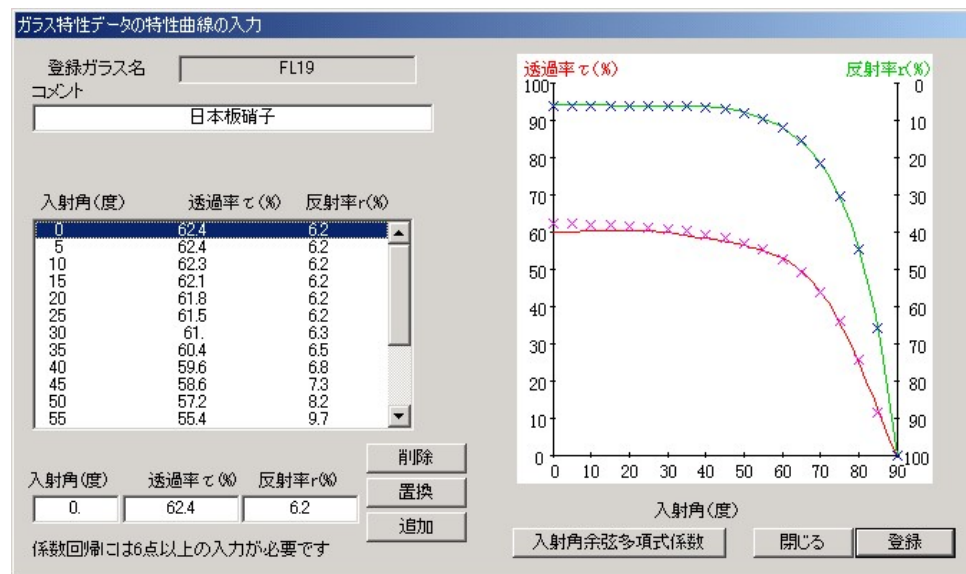# Green House Effect , Transmittance and Reflectance Model of Glazing

Green House Effect and
Natural Heat Exhaust of Double Skin

Long wavelengths
are opaque

Natural heat
exhaust
by Stack Effect

Short wavelengths are
transmitted and absorbed

Transmittance:τ , Reflectance:r, and

Absorptance:a

are depending on the incidence angle:θ,
Regression coefficients of the fifth-order
power series of the cosine of $COS(\theta)$,
Saved in a library and used.

$$\tau(\theta) = \sum_{j=0}^{5} t_j^{j-1} \cdot \cos^j(\theta), \; \rho(\theta) = \sum_{j=0}^{5} r_j^{j-1} \cdot \cos^j(\theta)$$

$$a(\theta) = 1 - \tau(\theta) - \rho(\theta)$$

Transmittance and reflectance of glass
depending on the incidence angle θ

Blinds are depending on the profile angle