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気象衛星観測による強風帯の発生と進展

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The structure of the thermal boundary layer is studied, which can be generated by the optoacoustic effect. Suppose that the boundary layer thickness δp is sufficiently small compared with the acoustic wavelength λ of the radiated acoustic wave. It is also assumed that the wall temperature is sinusoidally during a half period, and that the relative temperature change ΔT/T is of the order of unity. Then, the temperature field to the lowest order approximation can be expressed by replacing the space coordinate by a strained one in the solution obtained previously for ΔT/T ∼ O(δp/λ). This gives rise to a stronger flow at the outer edge of the boundary layer.