

This study presents the first high-resolution dataset of low-level atmospheric turbulence parameters in China by combining radar wind profiler and radiosonde observations. It reveals vertical attenuation patterns (e.g., linear decrease of turbulent dissipation rate, ε , with altitude) and seasonal variations (stronger turbulence in spring/summer), providing critical data support for model parameterization. The research design is robust, data sources are reliable, and the methodology demonstrates innovation. The findings hold significant value for understanding boundary layer turbulence dynamics and aviation safety applications. The manuscript is suitable for publication after minor revisions.

Specific Suggestions and Clarifications Required:

1. Ensure all abbreviations (e.g., Turbulence dissipation rate (ε)) are defined only once at their first mention. Avoid redundant definitions in the Abstract, Introduction, or other sections. Check consistency for other terms.
2. Line 123, revise "see Chen et al., 2022b" to "Chen et al., 2022b" (remove "see").
3. Equation 1, define the variable h (height/altitude). Ensure consistency in height representation: Equation 4 uses z for altitude, while other equations (e.g., Equation 1) should use the same notation.
4. Equation 2, define T (temperature) and P (pressure) explicitly.
5. Symbol Consistency in Equations 4 and 6: Equation 4 uses ϕ (phi), while Equation 6 uses ψ (psi). Clarify their definitions and ensure consistency in notation.
6. Equation 6, define ϕ (phi) in the context of the equation.
7. Equation 8, specify the value of kinematic viscosity (ν) and cite relevant references for its calculation.
8. Clarify how N^2 is calculated at times other than 00 and 12 UTC, given its reliance on twice-daily radiosonde data. Explicitly state the temporal resolution of N^2 in the methodology.