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丹娜絲颱風(2025)異常資料品質分析

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摘 要

本研究針對丹娜絲颱風期間自動測站觀測資料進行系統性資料檢核與品質控管。資料異常偵測流程包含時間序列與空間分布比對、鄰站觀測值與模式估算參考，以及場址效應檢討。經由多重比對與交叉驗證，有效辨識受損儀器所致之極端值，並排除不合理觀測紀錄。研究顯示，導入多源資料檢核與場址條件分析，有助提升資料品質效能。建議未來品質管機制應強化資料檢核邏輯並結合場勘與模式輔助，以確保氣象觀測資料之正確性與一致性。

關鍵字：丹娜絲颱風、資料檢核、場址效應

Quality Control Analysis of Abnormal Meteorological Observations During Typhoon Danas(2025)

Abstract

This study conducts a systematic data validation and quality control process for automatic weather station observations during Typhoon Danas. The outlier detection procedure includes temporal and spatial consistency checks, reference to nearby station observations and model-based estimates, as well as evaluations of siting effects. Through multi-source comparisons and cross-validation, extreme values caused by instrument malfunction were effectively identified and excluded. The results indicate that integrating multi-source validation and siting condition analysis can significantly enhance data quality control performance. It is recommended that future quality control frameworks strengthen validation logic and incorporate field inspections and model-assisted verification to ensure the accuracy and consistency of meteorological observations.

Key words : Typhoon Danas, Data Validation, Site Effects