

中央氣象局波潮耦合暴潮模式模擬案例分析

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摘 要

近年來本局持續發展波潮耦合預報技術，已完成波潮耦合暴潮雛型模式建置，耦合的模式分別為本局暴潮模式與WWM波浪模式，其優點為均使用非結構式三角網格，能夠完整模擬臺灣複雜的海岸線。本文即是利用該雛型模式進行2017年尼莎颱風暴潮模擬，首先利用本局之潮位站進行天文潮校驗，方均根誤差小於0.6公尺，接著分別比較分析波潮耦合的有無、2維及3維暴潮與觀測之差異，最後探討與評估模式精進方案與預報系統上線作業化流程設計。

A cast study of storm surge simulation based on wave-surge coupled model

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Abstract

Development of wave-surge coupling has been in progress in CWB in recent years and a prototype of wave-surge coupled model has established and tested. Both CWB surge mode and wind wave model (WWM) are well-coupled with unstructured grid which is suitable for application to coastal and nearshore around Taiwan. The verification of this model during Typhoon NESAT 2017 is reviewed. This model shows great simulation of astronomical tide with root mean square of less than 0.6 m. The comparisons between observation and model simulation with or without wave effect, 2D and 3D configuration are studied. Finally, the refinement of this model and operational schedule of wave-surge coupled model are also discussed in this study.