

- 海大学学报, 1988,16(3). (LIN Bingzhang. Application of the step-duration orographic intensification factors method to estimation of PMP for mountainous regions [J]. Journal of Hohai University, 1988,16(3). (in Chinese))
- [5] World Meteorological Organization (WMO). Manual on estimation of probable maximum precipitation [R]. Geneva: Operational Hydrology, Rep 1 (WMO No.1045)WMO, 2009.
- [6] 林炳章, 邵月红, 闫桂霞, 等. 水文气象促进工程水文计算核心课题研究的发展 [A]. 中国水文科技新发展—2012 中国水文学术讨论会论文集 [C]. 2012. (LIN Bingzhang, SHAO Yuehong, YAN Guixia, et al. The development of the key researches in engineering hydrology boosted by hydrometeorology [A]. New Development in Chinese Hydrology—2012 Chinese Hydrology Symposium[C]. 2012. (in Chinese))
- [7] Hong, C.C., Hsu, H.H., Lee, M.Y., Kuo, J.L. Role of sub-monthly disturbance and 40–50 day ISO on the extreme rainfall event associated with Typhoon Morakot (2009) in southern Taiwan [J]. Geophysical Research Letters, 2010,37.
- [8] 郭林, 郑秀云, 苏志重. 0908 号台风“莫拉克”超强降水原因分析[A]. S1 灾害天气研究与预报[C]. 2012. (GUO Lin, ZHENG Xiuyun, SU Zhizhong. The mechanism of the severe rainstorm 0908 typhoon Morakot [A]. S1 Catastrophic Weather Research and Forecast [C]. 2012. (in Chinese))

Study on Transposition of Taiwan Morakot Storm over Hong Kong

ZHANG Yehui, CHEN Hong, LAN Ping

(Nanjing University of Information Science and Technology, Nanjing 210044, China)

Abstract: In this paper, the step-duration-orographic-intensification-factor (SDOIF) method is adopted to study the transposition of Taiwan Morakot storm over Hong Kong based on 66 stations of Taiwan with historical hourly data, storm observations during the period of Morakot storm invasion of Taiwan (2009.8.8–10) at 251 ground stations over Taiwan, 65 Hong Kong stations with historical data length more than 18-year and 3 stations from Guangdong (Xili, Shiyan and Shenzhen stations). By using the SDOIF method, the maximum 24h rainfall of Morakot can be separated into the convergence component and the orographic component; a generalized convergence isohyetal pattern for the Taiwan Island based on the Morakot convergence components can be derived; transpose this generalized convergence isohyetal pattern onto the corresponding SDOIF of Hong Kong; then the embryonic PMP distribution can be obtained. It is found that the orographic intensified the maximum 24h rainfall of Morakot by 45%; the maximum (1230.2 mm) of the derived embryonic PMP distribution over Hong Kong located the same area as the storm center based on historical observations.

Key words: storm separation; step-duration-orographic-intensification-factor; convergence rainfall; transposition; probable maximum precipitation

《水文》杂志征订启事

《水文》杂志是由水利部主管,水利部水文局(水利信息中心)主办,国内外公开发行的我国水文水资源专业的学术性科技期刊,系我国地球物理学类和水利工程类全国中文核心期刊、中国科技核心期刊、中国科学引文数据库来源期刊、《中国学术期刊(光盘版)》全文收录期刊、中国期刊网和“万方数据——数字化期刊群”入网期刊。

刊登内容:水文水资源基础理论研究,水文站网规划设计,水文测验技术,水文资料处理与服务,水文水资源分析计算,水文情报预报,水资源调查评价,水环境、水生态监测与水质预测,新技术在水文水资源方面的应用,测验仪器设备的研制,国内外水文水资源科技进展综述、评述以及有关信息和动态等。

出版发行:《水文》杂志为双月刊,每逢双月 25 日出版,国内由北京

报刊发行局总发行,全国各地邮局均可办理订阅手续,邮发代号:2-430,每册定价 20 元,全年共 120 元;国外由中国国际图书贸易总公司(地址:北京 399 信箱,邮政编码:100044)发行,代号:BM511。

通讯地址:北京市白广路二条 2 号,100053,电话:(010)63203599;传真:(010)63204559;E-mail:j.hyd@mwr.gov.cn

投稿网址:<http://sw.allmaga.net/ch/index.aspx>;咨询电话:(010)63203676

*注:鉴于目前网络投稿系统与原信箱投稿方式仍在并行阶段,为了避免遗漏和延误编审稿件,所以 2014 年全年来稿必须同时向上述两个网址投稿方可登记在册,否则视为投稿未成功。2015 年将仅接收网上投稿系统稿件。