

中国学术期刊（光盘版）· 中文科技期刊数据库 · 万方数据库

ISSN 1006-009X  
CN 22-1135/TH

# 气象水文海洋仪器

主办单位：中国仪器仪表学会气象水文海洋仪器分会 长春气象仪器研究所

METEOROLOGICAL, HYDROLOGICAL AND MARINE INSTRUMENTS

1

2013

第30卷  
(总105期)

ISSN 1006-009X



04>

9 771006 009007

万方数据

# Meteorological, Hydrological and Marine Instruments

Vol. 30 No. 1 (Sum. 105)

March 2013

## Contents

### Research and Discussion

Uncertainty evaluation for regression equation of wind speed sensor .....	Wang Min, Wei Genbao, Zhou Changwen ( 1 )
Comparative analysis on measurement methods of RVR value in automatic observation system .....	Li Zhen, Wang Gang ( 6 )
Error analysis between pressure measurement and pressure anti-calculation in L-band radar sounding system .....	Guo Qiyun, Li Wei ( 9 )
Cause analysis on lost ball and false orientation in upper-air sounding .....	Liu Qingfang ( 14 )
Risk degree assessment of navigating ship on heavy sea based on grey relational analysis .....	Zhang Jie ( 17 )
Spatiotemporal distribution of precipitation based on GIS .....	Chen Peng, Cheng Si, Chen Jingli, et al. ( 21 )
Several of network modes for CDMA wireless network in marine data transmission .....	Chen Mashou ( 25 )
Network organization for wireless sensor based on JN5148 .....	Gan Zhiqiang, Yang Zhiyong, Wang Ke ( 28 )
Seasonal and inter-annual variability of wind stress curl over South China Sea .....	Yin Hongnan, Huang Xiaodan, Guo Zhenmian ( 32 )
Diagnostic analysis and numerical simulation on a continuous heavy rainfall in 2009 .....	Lin Mingli, Ouyang Yeneng, Qu Youming, et al ( 36 )
Analysis of precipitation variation based on wavelet transformation in Laiwu .....	Bu Qinglei, Zhang Jianye, He Pengcheng, et al. ( 41 )
Comparative analysis on precipitable water from ground-based GPS and conventional-sounding .....	Hu Heng, Li Wei, Cao Yunchang ( 45 )
Effect of degree-day temperature on climate change in Dongxing .....	Huang Lichao, Chen Guodi ( 49 )
Variation characteristics for agricultural climate resources of Wuhua county in 53 years .....	Wan Bimei, Zhong Meiying, Wei Weiliang ( 53 )
Statistics and trend of precipitation variation in Weichang .....	Wang Shulan ( 57 )
Statistic and analysis on the data of short-time strong precipitation of single weather station in Yichun .....	Su Limin, Ma Zhongyuan, Qian Huanrong, et al. ( 62 )

### Design and Application

Intelligent control for meteorological observation system based on Delphi .....	Zhen Shuyong, Jiang Tao, Meng Xianluo, et al. ( 66 )
Visualization software of meteorological graphs in Huzhou .....	Wu Bin, Li Yanfang, Zhang Xiliang, et al. ( 69 )
Application of improved Kriging on calculation of sea wind field .....	Li Guanlin, Gu Daquan, Li Qian, et al. ( 73 )
Intelligent climate collector based on CAN-BUS .....	Xu Guilin, Wang Qiwan ( 77 )
Application of spread spectrum communication technology in meteorological equipment .....	Liu Xiaolei, Hu Bin, Liu Zhining ( 82 )
Design of digital varistor voltage test system based on ARM9_2440 .....	Li Guoyi, Yang Weimin, Chen Zhiliang, et al. ( 85 )
Automatic rainfall monitoring system of middle and small creeks in Siping area .....	Yu Hongqiang, Peng Jianjun, Chang Yufeng, et al. ( 88 )

### Lightning Protection

Common mistakes of lightning protection project in network system .....	Cui Jinping, Zhang Chunhong ( 91 )
Lightning risk assessment for explosion danger site .....	Wang Fang, Liu Yanhui, Luo Jiajun, et al. ( 94 )
Technical evaluation and analysis on lightning protection design for petrol station .....	Wang Guokun, Bai Hongying ( 98 )
Dynamic test method for detection performance of lightning monitoring system .....	Liu Yuqing, Han Baigang, Li Wei, et al. ( 102 )

### Maintenance and Repair

Replacement methods for each-element sensor in telemetry station .....	Huang Peiguang, Luo Kun, Chen Ling, et al. ( 105 )
Daily maintenance and typical failure analysis on mobile radar .....	Li Yicong, Zeng Yang, Li Zhibo ( 108 )
Troubleshooting and daily maintenance for evaporation sensor of CAWS600-SE automatic weather station .....	Huang Xiaoyun, Zhao Xiaoli, Chen Wenyan, et al. ( 111 )
Error causes of rainfall sensor and its solutions in automatic weather station .....	Wang Xuesong, Chen Yang, Yuan Wenhui ( 114 )

### Summary

Data transmission and quality control of automatic weather station in the new situation .....	Xu Lijing, Li Haichuan ( 116 )
Recording methods of weather phenomenon in observation business reform .....	Zhang Cuihua, Cao Chunli, Liao Yinghui ( 121 )
Current situation and development trend of hydrological sensor .....	Liu Xing, Zhou Shudao, Long Yunhua ( 124 )

(英文编辑:王明蕊)

# 气象水文海洋仪器

第30卷 第1期 (总第105期)

2013年3月

## 目 次

### 研究与探讨

风速传感器回归方程的不确定度评定方法研究	王 敏, 魏根宝, 周昌文	( 1 )
自动观测系统 RVR 值测量方式对比浅析	李 震, 王 刚	( 6 )
L 波段雷达探空系统气压测量值与气压反算气压值的误差分析	郭启云, 李 伟	( 9 )
高空探测丢球与假定向成因分析	刘清芳	( 14 )
基于灰色关联分析的舰艇大风浪中航行危险度评价	张 杰	( 17 )
GIS 支持下的雨量时空分布特征分析	陈 鹏, 程 思, 陈景丽, 等	( 21 )
CDMA 无线网络在海洋站数据传输中的几种组网方式	陈马寿	( 25 )
基于 JN5148 组建无线传感器网络的研究与实现	甘志强, 杨志勇, 王 科	( 28 )
南海表面风应力旋度场的季节及年际异常分析	殷宏南, 黄小丹, 郭圳勉	( 32 )
2009 年一次连续性暴雨过程的诊断分析和数值模拟	林明丽, 欧阳也能, 屈佑铭, 等	( 36 )
莱芜市降水变化小波分析研究	卜庆雷, 张建业, 何鹏程, 等	( 41 )
地基 GPS 与常规探空所测可降水量的比对分析	胡 姣, 李 伟, 曹云昌	( 45 )
东兴度日温度对气候变化的响应分析	黄丽超, 陈国弟	( 49 )
五华县 53 a 农业气候资源的变化特征分析	万碧梅, 钟美英, 魏伟良	( 53 )
围场县降水变化统计与趋势分析	王淑兰	( 57 )
宜春单站短时强降水统计和分析	苏俐敏, 马中元, 钱焕荣, 等	( 62 )

### 设计与应用

基于 Delphi 的气象综合观测系统的智能控制	甄树勇, 蒋 涛, 孟宪罗, 等	( 66 )
湖州气象图形可视化软件的设计与实现	吴 彬, 李艳芳, 张喜亮, 等	( 69 )
改进的克里金法在海面风场计算中的应用	李冠林, 顾大权, 李 鸿, 等	( 73 )
基于 CAN-BUS 技术的智能气候采集器	徐桂林, 王启万	( 77 )
扩频通信技术及其在气象装备中的应用	刘晓磊, 胡 斌, 刘志宁	( 82 )
基于 ARM9_2440 的数字化压敏电压测试系统设计	李国毅, 杨伟民, 陈志亮, 等	( 85 )
四平地区中小河流雨量自动监测系统设计	于洪强, 彭建军, 常宇峰, 等	( 88 )

### 防雷技术

网络系统防雷工程的常见问题分析	崔金平, 张春红	( 91 )
爆炸危险场所雷击风险评估方法分析	王 芳, 刘艳辉, 罗佳俊, 等	( 94 )
汽车加油站防雷设计技术评价分析	王国坤, 白洪英	( 98 )
雷电监测系统探测性能动态试验方法研究	刘玉清, 韩百刚, 李 伟, 等	( 102 )

### 维护与维修

遥测站仪器大撤换中的各要素传感器更换方法	黄培光, 罗 鹏, 陈 玲, 等	( 105 )
移动雷达日常维护保养及典型故障案例分析	李毅聪, 曾 杨, 黎志波	( 108 )
CAWS600-SE 自动站蒸发故障排查及日常维护	黄晓云, 赵晓利, 陈文燕, 等	( 111 )
自动气象站雨量传感器误差产生的原因及解决方法	王雪松, 陈 杨, 袁文辉	( 114 )

### 综述

新形势下的自动气象站数据文件传输及其质量控制	许丽景, 李海川	( 116 )
观测业务改革调整中有关天气现象记载方法解析	张翠华, 曹春莉, 廖颖慧	( 121 )
陆地水文传感器的现状与发展趋势	刘 星, 周树道, 龙运华	( 124 )
征稿简则		( 113 )
中国(上海)国际海洋技术与工程设备展览会		( 席1 )
关于“英国(伦敦)国际海洋技术与工程设备展览会		( 席2 )