

应用气象学报

第4卷 总目次

第1期

论 著

- 高层冷涡的不同结构对台风运动的影响 费亮 李小凡(1)
- 中尺度系统的模拟 Doppler 图像 陶祖钰 曾立新(8)
- T42 后处理用谱方法进行水平插值的试验方案 张建春 王诗文 皇甫雪官(16)
- 夏季青藏高原地面热源对黄河上游流量及径流的影响 孙国武 刘晓东 陈葆德(22)
- 中尺度非均一边界层气候的数值研究: (I) 夏季的数值试验
..... 陈江 陈万隆 陈宇能等(30)
- 太阳辐射变化对我国中东部和西非夏季风雨量的影响 徐群 王冰梅(38)
- 大气臭氧垂直分布变化的模拟研究 刘煜 周秀骥 李维亮(45)
- 四川水稻定向引种诊断系统及其气候生态模型 冯达权 彭国照(52)
- 一个诊断非平坦地形上边界层风的数值模式 赵鸣 马继军(58)
- 1983年梅雨期前后亚洲季风区水汽输送的分析 费建芳 乔全明 高太平(65)
- 土壤水分对氮肥肥效影响的试验 李象山 张廷珠 王方云等(78)
- 天体引潮力与东亚夏季阻塞高压活动 张素琴 任振球(79)
- 东亚降水系统的维数分析及其可预报性 缪锦海 章景德 刘志远等(86)

专题评述

- 氮氧化物(NO_x)在对流层中的收支与循环的研究 罗超 周秀骥(92)

短 论

- 风和地形对林火蔓延速度的作用 毛贤敏(100)
- 用短期大风资料推算极值风速的一种方法 张秀芝 陈乾金(105)
- 预报爆发性气旋的一个综合判据 林明智 李修芳 余鹤书(112)
- 数值天气预报并行计算模式的设计与可行性讨论 金之雁 颜宏 丁小良(117)
- 气候变暖与天津粮食生产的关系 梁平德 吴凤珍(122)

研究简报

- 晚稻不同播植期气候条件与产量的关系 涂悦贤 刘锦奎(127)

第2期

论 著

- 下垫面特征对一次短期天气过程影响的数值试验(I) 杜华武 颜宏(129)
- 用太阳及天光光度计进行大气臭氧探测 薛庆渝 郭松 钮建国(138)
- 多普勒速度模糊的切向消除技术 陶祖钰 石坚(145)
- 古田水库人工降雨效果的综合评价 曾光平 吴明林 林长城等(154)

物理初值化在台风数值天气预报中的应用试验	阎敬华	薛纪善(162)
在无观测资料区或无常规观测资料区内构造初估场的方法	陈明月	廖洞贤(169)
大气对植被指数的影响	赵高祥	汪宏七(177)
闪电先导静电场波形理论分析	张义军	言穆弘 刘欣生(185)
30—50天振荡动能特性及其与平均气流正压不稳定能的转换	徐建军	朱刚(192)
多步预测的降水时序模型	曹鸿兴	魏凤英 刘生长(198)
TRP模型及其在航空气象中的应用	田俊杰	潘春生 赵颂华(205)
红外窗区大气透过率的测量	张广顺	张玉香 吴承权等(212)
热带西太平洋海气交换系数订正	曲维政	李江波 李若钝(218)
评 述		
全球气候变暖的检测及成因分析	王绍武	(226)
国外海气耦合模式及其季、年际预报的研究现状	汤 绪	(237)
短 论		
大气甲烷浓度的差分吸收测量	孔琴心	王庚辰 刘广仁等(244)
辐射增温效应对水稻叶片温度及光合速率的影响	李临颖	吴元中 段项锁(250)
书刊评介		
评《高空气候学》	王炳忠	(256)
消 息		
中日季风合作第一次工作组会议在京召开	赵 卫	(184)
《应用气象学报》收取版面费的若干规定		(217)
天气动力研究所天气预报工作站简介	朱福康	齐树芬(249)
国际耦合海气响应实验海上强化考察圆满完成	姚华栋	李 翼(255)

第 3 期

1991年江淮暴雨研究论文

中国暴雨中尺度系统发生与发展的诊断分析和数值模拟(I)诊断分析	程麟生	Ying-Hwa Kuo	彭新东	李小莉(257)
中国暴雨中尺度系统发生与发展的诊断分析和数值模拟(II)数值模拟	程麟生	Ying-Hwa Kuo	彭新东	(269)
梅雨锋上中尺度对流云团的分析	李玉兰	陶诗言	杜长萱	(278)
1991年梅雨锋云系的中尺度分析	项续康	马 岚	王大昌	(286)
1991年6月江淮持续暴雨的云系特征分析	叶惠明	张凤英	冉茂农等	(293)
1991年江淮梅雨期OLR场的特征	蒋尚城	杨喜峰	韦 革	杨文斌(301)
1991年汛期旱涝类型的气候振动	张先恭	魏凤英		(310)
初夏亚洲季风区环流低频振荡与长江下游持续暴雨	杨秋明			(320)
1991年夏暴雨期间Walker环流和Hadley环流的特征	张光智			(327)
1991年江淮暴雨的定量预报检验	董立清			(333)
论 著				
分析初值对暴雨数值预报影响的试验	朱宗申	郑国安		(341)
1990年京津冀三次暴雨的分析	刘延英	许晨海	吴宝俊	(349)

青藏高原对形成江南“倒春寒”过程的影响的数值试验	郑庆林 宋青丽 蒋 平 王根富(356)
用增强显示云图确定热带气旋强度的方法	李修芳 范蕙君 燕芳杰 胡治波(362)
北京地区一次尘暴气溶胶的化学组成及其来源	温玉璞 杨东贞 杨绍晋等(370)
1823年(清道光三年)我国特大水灾及影响	张家诚(379)
消 息	
国家气象中心新业务系统运行通过验收	徐夏因(369)
第五次中美季风学术讨论会在杭州召开	陈隆勋(319)
全国第一次资料同化分析研讨会在无锡召开	朱宗申(332)

第 4 期

论 著

下垫面特征对一次短期天气过程影响的数值试验(I)	杜华武 颜 宏(385)
环境风场对地形对流云发展的影响	谷国军 王昂生 许焕斌(394)
黄河中下游旱涝年的低频波振荡特征	何素兰 宋连春 黄荣辉(402)
强对流降水前大气层结因子的分析	钟晓平(408)
推算 NOAA AVHRR 1、2 通道衰减率的一种方法	吴艾笙 钟 强(415)
1991年江淮特大暴雨的平均云图特征	许健民 季良达 王 峰等(421)
北太平洋爆发性气旋的气候特征	齐桂英(426)
冬季高度场主分量与正压能量转换的关系	王国民 徐建军(434)
解冻速率对作物霜冻害的影响	何维勋 冯玉香 夏满强(440)
水稻生长模拟模式的研究	李春强 王馥棠(446)
Lyapunov 指数预报模式	林振山 南 方(453)

专题评述

火山喷发对气候影响信号的检测	李晓东 王绍武 黄建平(458)
模拟人类活动影响气候变化的新进展	赵宗慈(468)

短 论

用非色散红外气体分析仪进行大气 CO ₂ 本底浓度的测量	温玉璞 徐晓斌 邵志清等(476)
北半球冬季冷涌及其反馈过程对我国南方降水的影响	张元箴 吴 洪 张兴旺(481)
我国最冷日期及其日均温分布特征的气候分析	陈绍青 陈 谋 冯宗炎(487)
大气的垂直结构与遥相关型	杨成彬 王梅华 彭 茹(492)
压能场在暴雨分析中的应用	陈忠明(498)
非直角双曲线光合模型的积分及参数灵敏度分析	吴元中 段项锁 李临颖(504)

研究简报

预报指标自动归纳系统的应用	李开乐(509)
气象导航技术的研究和应用	余鹤书 刘有奇(511)

QUARTERLY JOURNAL OF APPLIED METEOROLOGY

Vol. 4 CONTENTS

No. 1

ARTICLES

- The Influence of Structure of Upper-Tropospheric Cold Vortex on Typhoon Motion Fei Liang Li Xiaofan (1)
- Simulation Doppler Images of Mesoscale System Tao Zuyu Zeng Lixin (8)
- A Scheme of Spectral Horizontal Interpolation in T42 Post-Processing Procedure Zhang Jianchun Wang Shiwen Huangfu Xueguan (16)
- The Influence of the Surface Heat Source over the Qinghai-Xizang Plateau of Summer on the Flow and Run-Off in the Upper Reaches of Yellow River Sun Guowu Liu Xiaodong Chen Baode (22)
- A Numerical Study on Mesoscale Inhomogeneous Boundary-Layer Climate; Part (I) The Summer Numerical Experiment Chen Jiang Chen Wanlong Chen Yi-leng et al. (30)
- Influence of the Change in Solar Radiation on Summer Monsoon Rainfall in Mid-Eastern China and West Africa Xu Qun Wang Bingmei (38)
- Simulation for the Vertical Distribution of Ozone Liu Yu Zhou Xiuji Li Weiliang (45)
- A Study on the Diagnosis System for Orientationally-Introduced Rice Varieties and Its Ecoclimatic Pattern Feng Daquian Peng Guozhao (52)
- A Numerical Model for Diagnosing Boundary Layer Wind over Real Terrain Zhao Ming Ma Jijun (58)
- A Study of Vapour Transportation over Asian Monsoon Region in Mei-Yu Season of 1983 Fei Jianfang Qiao Quanming Gao Taiping (65)
- A Test of the Effect of Soil Moisture on Efficiency of Nitrogen Fertilizer Li Xiangshan Zhang Tingzhu Wang Fangyun et al. (73)
- The Relationship between Celestial Tide-Generating Forces and Activities of Blocking High over the Eastern Asia in Summer Zhang Suqin Ren Zhenqiu (79)
- Dimensional Analysis and Its Predictability of East Asian Precipitation System Miao Jinhai Zhang Jingde Liu Zhiyuan et al. (86)

REVIEW

- The Study of the Cycle of Nitrogen Oxides in the Troposphere Luo Chao Zhou Xiuji (92)

SHORT CONTRIBUTIONS

- The Influence of Wind and Relief on the Speed of the Forest Fire Spreading Mao Xianmin (100)
- A Method of Calculating the Extreme Wind Speed with the Short-Term Observations Maximum Wind Zhang Xiuzhi Chen Qianjin (105)

- A Compositive Criterion for Forecasting Explosive Cyclogenesis in the Western North Pacific
 Lin Mingzhi Li Xufang Yu Heshu (112)
- Design of Parallel Computing Schemes for Numerical Prediction and Their Feasibility
 Jin Zhiyan Yan Houg Ding Xiaoliang (117)
- The Relationship between Climatic Warming and the Production of Grain in Tianjin
 Liang Pingde Wu Fengzhen (122)

No. 2

ARTICLES

- A Numerical Experiment of the Influence of Underlying Surface on a Short-Range Synoptic
 Process (I) Du Huawu Yan Hong (137)
- Ozone Measurement with the Solar and Skylight Spectrophotometer
 Xue Qingyu Guo Song Niu Jianguo (144)
- A Technique of Tangential Remove for Doppler Velocity Ambiguity
 Tao Zuyu Shi Jian (153)
- A Comprehensive Evaluation of the Effect of Artificial Precipitation in Gutian Reservoir Area
 Zhen Guangping Wu Minglin Lin Changcheng et al. (161)
- The Application of Physical Initialization to the Numerical Prediction for Typhoons
 Yan Jinghua Xue Jishan (168)
- Construction of the Preliminary Fields of Meteorological Elements within a Region without
 Data or Conventional Data Chen Mingyue Liao Dongxian (176)
- The Influences of Atmosphere Regimes on Vegetation Indexes
 Zhao Gaoxiang Wang Hongqi (184)
- A Theoretical Analysis of Electrostatic Field Change Waveshape Caused Lightning Leader
 Zhang Yijun Yan Muhong Liu Xingsheng (191)
- The Special Property of Kinetic Energy of 30--50 Day Oscillation and Its Relationship to the
 Barotropic Instability of Basic Flow Xu Jianjun Zhu Gang (197)
- Multi-Step Prediction Model of Time Series for Precipitation
 Cao Hongxing Wei Fengying Liu Shengchang (204)
- The Transnormalized Regression Probability (TRP) Model and Its Application in Aeronautical
 Meteorological Service Tian Junjie Pan Chunsheng Zhao Songhua (211)
- The Atmospheric Transmissivity Measurement in Infrared Window Region
 Zhang Guangshun Zhang Yuxiang Wu Chengquan et al. (217)
- Correction of the Exchange Coefficient on Air-Sea Interface in the Tropical West Pacific
 Qu Weizheng Li Jiangbo Li Ruodun (225)

REVIEWS

- The Detection of Global Climate Warming and Its Causes Wang Shaowu (236)
- A Review of the Development of Air-Sea Coupled Model and the Experiment on Seasonal and
 Interannual Prediction Tang Xu (243)

SHORT CONTRIBUTIONS

- Differential Absorption Measurements of Atmospheric Methane Concentration
 Kong Qinxin Wang Gengchen Liu Guangren et al. (249)
- The Heating Effects of Irradiance on Rice Leaf Temperature and Its Influence on the Photosyn-
 thetic Rate Li Linying Wu Yuanzhong Duan Xiangsuo (255)

No. 3

SPECIAL ARTICLES ON THE JIANG-HUAI HEAVY RAIN IN 1991

- Diagnosis and Numerical Simulation for the Genesis and Development of Meso-scale Systems
 with Heavy Rainfall Part I :Diagnostic Analysis & Part II ;Numerical Simulation:
 Cheng Linsheng Ying-Hwa Kuo Peng Xindong et al. (257)
- An Analysis of the Meso-Convective Cloud Clusters in Mei-yu Front
 Li Yulan Tao Shiyan Du Changxuan (278)
- The Mesoscale Analysis of the Mei-yu Front Cloud System in 1991
 Xiang Xukang Ma Lan Wang Dachang (286)
- The Characteristics of the Cloud System for Jiang-Huai Severe Rainfall in June of 1991
 Ye Huiming Zhang Fengying Ran Maonong et al. (293)
- The Characteristics of OLR for 1991 Mei-yu
 Jiang Shangcheng Yang Xifeng Wei Ge et al. (301)
- Climate Oscillation of the Summer Rainfall Anomaly Pattern for the Flood Season of 1991 ...
 Zhang Xiangong Wei Fengying (310)
- The Relationship between Low Frequency Oscillation over Asia Monsoon Region and Conti-
 nuous Heavy Rain in the Lower Reaches of Yangtze River Valley Yang Qiuming (320)
- Some Features of Walker and Hadley Circulations during the Period of Torrential Rain in 1991
 Zhang Guangzhi (327)
- Verification of Quantitative Forecasts for Storm Rainfall during the Period of Changjiang-Huai-
 he Mei-yu in 1991 Dong Liqing (333)

ARTICLES

- Experiments of Initial Values Effect on Numerical Weather Forecast for Heavy Rain
 Zhu Zongshen Zheng Guoan (341)
- An Analysis of Three Cases of Heavy Rains in Jing-Jin-Ji Area of China in 1990.....
 Liu Yanying Xu Chenhai Wu Baojun (349)
- Numerical Study of Influence of the Qinghai-Xizang Plateau on the Late Spring Cold Spell
 Event South of the Changjiang River
 Zheng Qinlin Song Qingli Jiang Ping et al. (356)
- The Technique for Determining Tropical Cyclone Intensity with Enhanced Satellite Cloud
 Imagery Li Xiufang Fan Huijun Yan Fangjie et al. (362)
- Chemical Composition and Origin of a Duststorm over Beijing
 Wen Yupu Yang Dongzhen Yang Shaojin et al. (370)
- A Preliminary Investigation of the Floods in 1823 and Their Socioeconomic Impacts in China
 Zhang Jiacheng (379)

No. 4

ARTICLES

- A Numerical Experiment of the Influence of Underlying Surface on a Short-Range Synoptic Process (I) Du Huawu Yan Hong (385)
- Effects of Ambient Wind on the Development of Orographic-Convective Cloud Gu Guojun Wang Angsheng Xu Huanbin (394)
- The Low Frequency Oscillation Characteristics of Typical Drought/Flood in the Low and Middle Reaches of Huanghe River He Sulan Song Lianchun Huang Ronghui (402)
- An Analysis of Atmospheric Stratification Factors before Severe Convective Precipitation Zhong Xiaoping (408)
- A Method for Determining the Sensor Degradation Rates of NOAA AVHRR Channels 1 and 2 Wu Aisheng Zhong Qiang (415)
- Mean Cloud Image Features of Severe Storm Rainfall of the Changjiang-Huaihe Rivers in 1991 Xu Jianmin Ji Liangda Wang Feng et al. (421)
- Climatic Characteristics of Explosive Cyclone over the North Pacific Ocean Qi Guiying (426)
- The Relationship between Principal Components of Geopotential Height and Barotropic Energy Conversion in Winter Wang Guomin Xu Jianjun (434)
- Effects of Thawing Rate on Frost Injury of Crops He Weixun Feng Yuxiang Xia Manqiang (440)
- A Study on the Simulation Model of Rice Growth Li Chunqiang Wang Futang (446)
- Lyapunov Exponent Model for Forecast Lin Zhenshan Nan Fang (453)

REVIEWS

- Signal Detection of Volcanic Impact on Climate Li Xiaodong Wang Shaowu Huang Jianping (458)
- Advances on the Simulation of Human Activity Effects Upon Climate Change Zhao Zongci (468)

SHORT CONTRIBUTIONS

- Measurement of the Atmospheric CO₂ Concentration with the Nondispersive Infrared Gases Analyzer Wen Yupu Xu Xiaobing Shao Zhiqing et al. (476)
- Influence of Cold Surges and Its Feedback in Northern Winter on Precipitation in the South of China Zhang Yuanzhen Wu Hong Zhang Xingwang (481)
- The Climatic Characteristics of the Coldest Date and Their Average Temperatures in China Chen Shaoqing Chen Mou Feng Zhongyan (487)
- The Vertical Structure of Atmosphere and Its Teleconnection Yang Chengbin Wang Meihua Peng Ru (492)
- Application of Pressure-Energy Field to Heavy Rain Analysis Chen Zhongming (498)
- Integration of Non-Rectangular Hyperbolic Photosynthetic Model and Sensitive Analysis Wu Yuanzhong Duan Xiangsuo Li Linying (504)

NOTE

- Application of Automatic Inductive System for Forecasting Criterion Li Kaile (509)