

## 2012年总目次

### 第30卷 第1期

#### 论文

- 西安世园会园区大气环境质量与气象因子关系分析 ..... 肖舜, 沈瑾, 刘璐, 等(1)  
宁夏起伏地形下太阳总辐射分布式模拟 ..... 王璁, 李梦洁, 单新兰, 等(8)  
云南省汛期极端强降水事件的气候特征 ..... 刘丽, 陶云(15)  
基于分形方法的石羊河流域气候变化研究 ..... 别强, 何磊, 赵传燕(21)  
河北省石家庄地面温度变化特征 ..... 张翠华, 张文煜, 卞韬, 等(27)  
浙江丽水市降水特征多时间尺度周期变化规律的探究 ..... 吴昊旻, 姜燕敏, 强玉华(34)  
近50a新疆塔城地区冷季降水变化特征 ..... 井立红, 魏小亚, 高婧, 等(39)  
银川河东机场低空风切变特征及环流背景分析 ..... 王海霞, 张宏升, 潘江勇, 等(45)  
设施芹菜光合特性对寡照胁迫的响应 ..... 朱静, 杨再强, 柳笛, 等(53)  
宁夏酿酒葡萄产量与气象条件的关系 ..... 苏占胜(59)  
中原地区地温对冬小麦发育期、生长量和产量的影响 ..... 王春玲, 申双和, 王润元, 等(66)  
基于旱灾指数的宁夏小麦产量分析 ..... 段晓凤, 刘静, 张晓煜, 等(71)  
甘肃省近58a春末夏初旱变化特征及其对夏粮的影响 ..... 林婧婧, 申恩青, 刘德祥(77)  
2010年8月河北一次暴雨的综合诊断 ..... 王志超, 于雷, 黄鹤, 等(81)  
2011年3月宁夏一次寒潮天气过程诊断 ..... 陈豫英, 陈楠, 聂金鑫, 等(88)  
河北省寒潮天气形势分析及预报 ..... 赵玉广, 何丽华, 张南, 等(94)  
对甘肃酒泉一次暴雨的数值模拟和诊断分析 ..... 张文军, 李建(100)

#### 综述

- 青藏高原大气低频振荡研究进展 ..... 刘炜, 周顺武, 杨双艳(107)

#### 短论

- 滇黔准静止锋面雾的结构及成因分析 ..... 崔庭, 吴古会, 赵玉金, 等(114)  
辽宁葫芦岛地区近40a降水特征分析 ..... 廖晶晶, 孟振雄, 刘闯, 等(119)

#### 业务技术与应用

- 2009年黑龙江省干旱分析及评估 ..... 王晨轶, 纪仰慧, 金磊, 等(124)  
数据挖掘技术在精细化温度预报中的应用 ..... 段文广, 周晓军, 石永炜(130)

#### 干旱评述

- 2011年全国干旱状况及其影响与成因 ..... 段海霞, 王素萍, 冯建英(136)

#### 短讯

- 2011年度优秀论文评选揭晓 ..... (7)

### 第30卷 第2期

#### 论文

- 基于随机重排去趋势波动分析的全国极端日降水事件综合指标 ..... 侯威, 钱忠华, 杨萍, 等(149)  
基于WRF不同边界层方案的黄土高原丘陵冬季地面气象要素日变化模拟 ..... 张龙, 张镭, 王颖, 等(158)  
兰州附近山谷典型日环流特征对比分析 ..... 王瑾, 张镭, 王腾蛟, 等(169)  
采暖期前后兰州城市气溶胶光学特性变化特征 ..... 张婕, 刘海文, 肖国杰, 等(178)  
浙江乐清市旱情时空分布特征分析 ..... 李怀川, 叶子祥, 余贞寿, 等(182)  
新疆阿勒泰地区夏旱风险评估分析 ..... 潘冬梅, 王建刚(188)  
辽宁葫芦岛地区1~10d雷暴天气预报方法 ..... 秦春明, 尚可政, 王式功, 等(192)  
气候变化对晋西北地区风能资源的影响 ..... 张涛涛, 延军平, 李双双, 等(202)  
华北地区空中水汽含量与降水量的关系 ..... 张秉祥, 韩军彩, 陈静, 等(207)  
宁夏夏季降水集中程度与旱涝关系的研究 ..... 纳丽, 李欣, 朱晓炜(215)  
近30a全国人体舒适度指数变化特征 ..... 朱卫浩, 张书余, 罗斌, 等(220)  
高海拔地区采暖指标变化特征及预测方法 ..... 严德行(227)  
利用ASTER数据估算西藏纳木错地区夏季地表参数 ..... 胡向军(231)  
2008年和2011年年初贵州低温雨凇分析 ..... 王兴菊, 白慧, 陈贞宏(237)  
河北省寒潮的气候特征与冬季增暖 ..... 赵玉广, 于长文, 何丽华, 等(244)  
甘肃临夏地区近43a来的气候特征 ..... 贾小琴, 尹宪志, 任余龙, 等(249)

#### 综述

- 关于西太平洋副热带高压研究的回顾与展望 ..... 黄露, 何金海, 卢楚翰(255)

地面实时气象数据质量控制方法研究进展	韩海涛,李仲龙(261)
<b>业务技术与应用</b>	
副热带季风监测诊断业务系统及其应用	梁萍,沈钟平,董广涛,等(266)
灰色模型在环渤海地区降水过程预报中的应用	王志强,汪结华,王式功,等(272)
河北省廊坊市初冬雨雪相变特征及预报指标初探	王清川,寿绍文,许敏,等(276)
GIS技术在宁夏决策气象服务产品中的应用研究	陆晓静,郭善云,王建英,等(283)
SWAN在陇南短历时强降水监测预警预报中的应用	苏军锋,张峰,魏邦宪,等(287)
甘肃临夏州冰雹气候特征及短期预警系统	马旭洁,陈树,任余龙,等(293)
<b>每季干旱评述</b>	
2012年春季全国干旱状况及其影响与成因	王素萍,段海霞,冯建英(298)

## 第30卷 第3期

### 论 文

2011年长江中下游冬春连旱期土壤的湿度变化	王文,段莹(305)
3种干旱指数对贵州省安顺市历史罕见干旱的评估分析	吴哲红,詹沛刚,陈贞宏,等(315)
山东省2010~2011年秋冬连旱特征及成因	石春玲,李峰,孟祥新,等(323)
山西朔州市近55a气象干旱趋势及防御措施	程建业,任晓霞,赵晋,等(327)
宁夏7月严重干旱事件的成因分析	郑广芬,冯建民,马宏永,等(332)
沙尘PM <sub>10</sub> 质量浓度与气温的关系初探	赵建华,Kyle Tietze,Hongjun Zheng,等(339)
新疆阜康地区秋季大气NO <sub>x</sub> 和O <sub>3</sub> 变化特征及影响要素	陈林,王式功,王莉莉(345)
1962~2011年湖南各量级降水的年变化特征	李巧媛(353)
浙江省不同强度降水日数的时空分布特征	吴昊旻,廖必军,蔡寿强(360)
上海霾天气发生的影响因素分析	郑庆锋,史军(367)
安徽九华山山区雾的气候特征与形成机理	汪学军(374)
城市化对湖南长沙气温的影响	郭丽香,章新平,吴华武,等(380)
近46a来湖南省气温的气候变化的若干特点	张剑明,黄晴(387)
甘肃酒泉地区近地层风场特征	王勇,王澄海,陶健红,等(393)
甘南高原气候变化及对水资源的影响	杨帆,赵庆云,张武(404)
近50a来甘肃省极端高温事件变化特征	王有恒,谭丹,赵红岩(410)
河西走廊中部2010年春季异常低温雨雪天气特征及其防御	殷雪莲,郭萍萍,修韶宇(415)
甘肃民勤地区沙尘暴变化趋势及影响因素	赵明瑞,杨晓玲,滕水昌(421)
宁夏山区春季降水对冬小麦生长发育的影响	单新兰,苏占胜,张智,等(426)
鲁西气候变化及其对地表水分盈亏的影响	李又君,吕博,安丽华,等(431)
青岛地区冬季一次久旱转雨天气过程的诊断分析	马艳,于进付,黄容,等(437)
甘肃白银市一次局地暴雨天气过程分析	景怀玺,吉慧敏,王雅茹,等(443)

### 综 述

气温预报方法研究及其应用进展综述	薛志磊,张书余(451)
------------------	--------------

### 业务技术与应用

年降水量数据的正态变换方法对比分析	陈学君,苏仲岳,李仲龙,等(459)
应用24h变量相关系数检验数值预报产品	周甘霖,尚可政,王式功,等(465)
3种数值模式温度预报产品在山东应用的误差分析与订正	肖明静,隋明,范苏丹,等(472)
浅论构建新媒体时代的公共气象影视服务体系	王玉洁,胡文超,雒福佐(478)

### 每季干旱评述

2012年夏季全国干旱状况及其影响与成因	段海霞,王素萍,冯建英(482)
----------------------	------------------

## 第30卷 第4期

### 综 述

干旱减灾问题的回顾与思考	徐国昌(489)
我国气象干旱研究进展评述	王劲松,李耀辉,王润元,等(497)
气候变化与西北地区粮食和食品安全	张强,陈丽华,王润元,等(509)
10~30d延伸期天气预报研究进展综述	马浩,毛燕军,雷媛,等(514)
基于冠气温差的作物水分胁迫指数经验模型研究进展	赵福年,王瑞君,张虹,等(522)

### 论 文

基于主动卫星遥感研究西北地区云层垂直结构特征及其对人工增雨的影响	丁晓东,黄建平,李积明,等(529)
阻塞高压与低温持续性降水之间的关系	李艳,马敏劲,王式功,等(539)

影响陕西夏季旱涝的北半球前期大气环流特征	赵 强,严华生,张谨文(546)
河北省2次冷涡结构特征的分析	敬 颖,闵锦忠,李宗涛,等(555)
长江上游流域面雨量时空分布特征	于大峰,陈良华,孙士型,等(563)
气候变暖对长三角地区四季长度的影响	姜燕敏,梁 艳,沙欣欣(570)
中天山北坡山区近30a气候变化特征	万 瑜,曹 兴,崔玉玲,等(575)
河北省太阳紫外辐射时空分布特征	侯晓玮,廖颖慧,曹春莉,等(583)
甘肃和广东2008~2011年闪电特征对比	刘维成,陶健红,邵爱梅(588)
基于DEM的乌鲁木齐地区气温时空变化分析	谭秀兰,张山清,李翔娟,等(593)
新疆吐鲁番60a气温变化基本特征	张慧琴,杨艳玲,余 华(600)
新疆阿勒泰地区大到暴雪天气气候特征	郭 城,李博渊,杨 森,等(604)
宁夏50a冰雹气候特征	杨 侃,桑建人,李艳春,等(609)
2010年盛夏南疆西部一次区域性暴雨天气特征	黄 艳,刘 涛,张云惠(615)
基于氮处理的不同生育期冬小麦光能利用率和光化学植被指数的关系	郑腾飞,郭建茂,于 鑫,等(623)
<b>业务与技术应用</b>	
一种利用温度廓线与风廓线提取大气重力波参数的方法简介	邓少格,杨 闻,钟 中,等(630)
利用微波仪器测量新一代天气雷达发射功率及改善因子	梁 华,刘永强,谢万军,等(635)
高寒地区啤特果种植气候区划与产量预测模型	贾小琴,马旭洁,尹宪志,等(639)
滇西北高原一次局地暴雨的雷达产品分析	吴红秀,和卫东,焦泽红,等(645)
基于GIS的甘肃省陇南市暴雨灾害风险区划	苏军锋,肖志强,魏邦宪,等(650)
宁夏决策气象服务现状浅析及业务发展建议	苏占胜,胡文东,陆晓静,等(656)
<b>每季干旱评述</b>	
2012年秋季全国干旱状况及其影响与成因	王素萍,段海霞,冯建英(660)
《干旱气象》2012年总目次	(667)

## Vol. 30 No. 1

### Articles

Relationship Between Atmospheric Environmental Quality and Meteorological Factors in Spring and Summer During the Period of 2011 International Horticultural Exposition in Xi'an	XIAO Shun, SHEN Jin, LIU Lu, et al (1)
Simulation of the Total Solar Radiation Distribution over Rugged Terrains in Ningxia	WANG Cong, LI Mengjie, SHAN Xinlan, et al (8)
Climatic Characteristics of Extreme Heavy Precipitation Events in Flood Season in Yunnan Province	LIU Li, TAO Yun (15)
Application of Fractal Theory in Climate Change in Shiyanghe Watershed	BIE Qiang, HE Lei, ZHAO Chuanyan (21)
Characteristics of Ground Temperature Change in Shijiazhuang of Hebei Province	ZHANG Cuihua, ZHANG Wenyu, BIAN Tao, et al (27)
Multi-time-scale Characteristic of Precipitation Cycle Evolution in the Past 58 Years in Lishui of Zhejiang Province	WU Haomin, JIANG Yanmin, QIANG Yuhua, et al (34)
Analysis of Cold Season Precipitation Character in Tacheng in Recent 50 Years	JING Lihong, WEI Xiaoya, GAO Jing, et al (39)
Analysis of Low-lever Wind Shear in Yinchuan Hedong Airport and Its Circulation Situation	WANG Haixia, ZHANG Hongsheng, PAN Jiangyong, et al (45)
Response of the Photosynthetic Characteristics of Celery to Sparse Sunlight in Greenhouse	ZHU Jing, YANG Zaiqiang, LIU Di, et al (53)
Relationship Between Wine Grapes Yield and Weather Conditions in Ningxia	SU Zhansheng (59)
Impacts of Soil Temperature on Developmental Stage and Yield of Winter Wheat in Zhengzhou of Henan Province	WANG Chunling, SHEN Shuanghe, WANG Runyuan, et al (66)
Analysis of Wheat Yield Based on Drought Index in Ningxia	DUAN Xiaofeng, LIU Jing, ZHANG Xiaoyu, et al (71)
Climatic Characteristics of Drought Events Occurred in Late Spring and Early Summer in Gansu Province and Its Influence on Agriculture in the Past 58 Years	LIN Jingjing, SHEN Enqing, LIU Dexiang (77)
Comprehensive Diagnostic Analysis of Hebei "8.18" Rainstorm Event	WANG Zhichao, YU Lei, HUANG He, et al (81)
Diagnosis of a Cold Wave Weather Event in March 2011 in Ningxia	CHEN Yuying, CHEN Nan, NIE Jingxin, et al (88)
Analysis and Prediction of Synoptic Situation for Cold Wave Weather Occurred in Hebei Province	ZHAO Yuguang, HE Lihua, ZHANG Nan, et al (94)
Numerical Simulation and Diagnostic Analysis of a Heavy Rain Occurred in Jiuquan of Gansu Province	ZHANG Wen jun, LI Jian (100)

### Review

Progress in Research on Low Frequency Oscillation over the Tibetan Plateau	LIU Wei, ZHOU Shunwu, YANG Shuangyan (107)
--	--

**Letters**

- Analysis on Structure and Formation Reason of a Frontal Fogs Occurred in Yunnan and Guizhou ..... CUI Ting, WU Guhui, ZHAO Yujin, et al(114)  
 Characteristics of Precipitation Change in Past 40 Years in Huludao of Liaoning Province ..... LIAO Jingjing, MENG Zhenxiong, LIU Chuang, et al(119)

**Technology and Applications**

- Analysis of Drought Events in 2009 and Its Effect on Agriculture in Heilongjiang Province ..... WANG Chenyi, JI Yanghui, JIN Lei, et al(124)  
 Application of Data Mining Technique on Refined Temperature Forecast ..... DUAN Wenguang, ZHOU Xiaojun, SHI Yongwei(130)  
**Review of Annual Drought**  
 Drought Events and Its Influence in 2011 in China ..... DUAN Haixia, WANG Suping, FENG Jianying(136)

**Vol. 30 No. 2****Articles**

- A Composite Index of Daily Extreme Precipitation in China Based on Stochastic Resort Detrended Fluctuation Analysis ..... HOU Wei, QIAN Zhonghua, YANG Ping, et al(149)  
 Simulation of Daily Variations About Surface Meteorological Factor in Loess Plateau Hilly Region in Winter Based on Different PBL Schemes of WRF ..... ZHANG Long, ZHANG Lei, WANG Ying, et al(158)  
 Comparative Analysis of Mountain – valley Wind Circulation Characteristics over Semi – arid Areas Nearby Lanzhou ..... WANG Jin, ZHANG Lei, WANG Tengjiao, et al(169)  
 Variation Characteristics of Aerosol Optical Properties During and After the Heating Period over Lanzhou City ..... ZHANG Jie, LIU Haiwen, XIAO Guojie, et al(178)  
 Temporal and Spatial Distribution of Drought in Yueqing of Zhejiang Province ..... LI Huachuan, YE Zixiang, YU Zhenshou, et al(182)  
 Risk Assessment of Summer Drought in Altay Area of Xinjiang ..... PAN Dongmei, WANG Jiangong(188)  
 Study on Thunderstorm Forecast in 10 Days in Huludao of Liaoning Province ..... QIN Chunming, SHANG Kezheng, WANG Shigong, et al(192)  
 Influence of Climate Change on Wind Energy Resources in Agriculture and Stock – raising Interlaced Region of Northern China ..... ZHANG Taotao, YAN Junping, LI Shuangshuang, et al(202)  
 Analysis of Correlation Between Water Vapor Content and Precipitation over North China ..... ZHANG Bingxiang, HAN Juncai, CHEN Jing, et al(207)  
 Relationship Between Summer Precipitation Concentration Degree and Drought/Flood in Ningxia ..... NA Li, LI Xin, ZHU Xiaowei(215)  
 Variation Characteristics of Comfort Index of Human Body in China in Recent 30 Years ..... ZHU Weihao, ZHANG Shuyu, LUO Bin(220)  
 Variation Characteristics and Prediction Method of Heating Index in Gangcha County of Qinghai Province ..... YAN Dexing(227)  
 Land Surface Variables Estimated from ASTER Remote Sensing Data over the Namco Area of Tibet ..... HU Xiangjun(231)  
 Comparison Analysis of the Low – temperature Freezing Weather Occurred in Guizhou Province in 2008 and 2011 ..... WANG Xingju, BAI Hui, CHEN Zhenhong(237)  
 Climatic Characteristics of Cold Wave Weather and Warming Winter in Hebei Province During 1962 – 2008 ..... ZHAO Yuguang, YU Changwen, HE Lihua, et al(244)  
 Climate Change of Linxia of Gansu Province in Recent 43 Years ..... JIA Xiaoqing, YIN Xianzhi, REN Yulong, et al(249)  
**Reviews**  
 Review and Outlook of Researches About Western Pacific Subtropical High ..... HUANG Lu, HE Jinhai, LU Chuhuan(255)  
 Review of Quality Control Methods of Surface Real Time Meteorological Data ..... HAN Haitao, LI Zhonglong(261)  
**Technology and Applications**  
 Subtropical Monsoon Monitoring and Diagnosis Operational System and Its Application ..... LIANG Ping, SHENG Zhongping, DONG Guangtao, et al(266)  
 Application of Grey Model for Precipitation Forecast Around Bohai Sea ..... WANG Zhiqiang, WANG Jiehua, WANG Shigong, et al(272)  
 Analysis on Phase Transformation Characteristic of Rainfall and Its Prediction Index in Langfang of Hebei Province in Early Winter ..... WANG Qingchuan, SHOU Shaowen, XU Min, et al(276)  
 Application of the Decision – making Meteorological Service Product Based on ARCGIS 9.2 in Ningxia ..... LU Xiaojing, GUO Shanyun, WANG Jianying, et al(283)  
 Application of SWAN in Monitoring, Warning and Forecasting of Short Duration Heavy Precipitation in Longnan of Gansu Province ..... SU Junfeng, ZHANG Feng, WEI Bangxian, et al(287)  
 Analysis of Climatic Characteristic of Hail and Its Short – term Prediction System in Linxia of Gansu Province ..... MA Xujie, CHEN Shu, REN Yulong, et al(293)

**Review of Seasonal Drought**

Drought Events and Its Influence in Spring of 2012 in China ..... WANG Suping, DUAN Haixia, FENG Jianying(298)

**Vol. 30 No. 3****Articles**

- Study on the Soil Moisture Change During Continuous Drought in Winter of 2010 and Spring of 2011 in the Middle and Lower Reaches of Yangtze River ..... WANG Wen, DUAN Ying(305)  
 Assessment of the Rare Drought Event Occurred in Anshun of Guizhou Province by Three Drought Indexes ..... WU Zhehong, ZHAN Peigang, CHEN Zhenhong, et al(315)  
 Characteristics and Causes of Continuous Drought from Autumn 2010 to Winter 2011 in Shandong Province ..... SHI Chunling, LI Feng, MENG Xiangxin, et al(323)  
 Meteorological Drought Trend and Defensive Measures in Recent 55 Years in Shuozhou of Shanxi Province ..... CHENG Jianye, REN Xiaoxia, ZHAO Jin, et al(327)  
 Analysis of Causes for Severe Drought Event in July in Ningxia ..... ZHENG Guangfen, FENG Jianmin, MA Hongyong, et al(332)  
 Some Empirical Relationships Discovered Between Air Temperatures and PM<sub>10</sub> Concentration ..... ZHAO Jianhua, Kyle Tietze, ZHENG Hongjun, et al(339)  
 Variation Characteristics and Influencing Factors of NO<sub>x</sub> and Ozone in Autumn in Fukang Region of Xinjiang ..... CHEN Lin, WANG Shigong, WANG Lili(345)  
 Characteristics of Annual Variation of Different Level Precipitation from 1962 to 2011 in Hu'nan Province ..... LI Qiaoyuan(353)  
 Temporal and Spatial Distribution Characteristics of Different Level Rainfall Days in Zhejiang Province ..... WU Haomin, LIAO Bijun, CAI Shouqiang(360)  
 Study on the Influencing Factors of Haze Weathers in Shanghai ..... ZHENG Qingfeng, SHI Jun(367)  
 Climatic Characteristics and Formation Mechanism of Fog in Jiuhua Mountain ..... WANG Xuejun(374)  
 The Influence of Urbanization on Temperature in Changsha of Hu'nan Province ..... GUO Lixiang, ZHANG Xinpeng, GUAN Huade, et al(380)  
 Climate Features of Annual Temperature in Hu'nan Province in Recent 46 Years ..... ZHANG Jianming, HUANG Qing(387)  
 Characteristics of Wind Field Near Ground Layer in Jiuquan of Gansu Province ..... WANG Yong, WANG Chenghai, TAO Jianhong, et al(393)  
 Climate Change and Its Influence on Water Resources in Gannan Plateau ..... YANG Fan, ZHAO Qingyun, ZHANG Wu(404)  
 Characteristics of Extreme High Temperature in Gansu in Recent 50 Years ..... WANG Youheng, TAN Dan, ZHAO Hongyan(410)  
 Characteristics of Exceptional Rain-snow Events and Causes analysis in Spring of 2011 in the Middle of Hexi Corridor ..... YIN Xuelian, GUO Pingping, XIU Shaoyu(415)  
 Changing Trend of Sandstorm and Its Influencing Factors in Recent 57 Years in Minqin of Gansu Province ..... ZHAO Mingrui, YANG Xiaoling, TENG Shuichang(421)  
 Impact of Spring Precipitation on the Growing Period and Production of Winter Wheat in Ningxia Southern Mountain Region ..... SHAN Xinlan, SU Zhansheng, ZHANG Zhi, et al(426)  
 Climate Change and Its Effect on Gain or Loss of Surface Water in Western Shandong ..... LI Youjun, LU Bo, AN Lihua, et al(431)  
 Diagnostic Analysis of the Weather Process from Drought to Rain in Qingdao in Winter of 2010 ..... MA Yan, YU Jinfu, HUANG Rong, et al(437)  
 Analysis of a Local Rainstorm Process Occurred on May 28, 2011 in Baiying of Gansu Province ..... JING Huaixi, JI huimin, WANG Yaru, et al(443)

**Review**

Advance in Research and Application About Temperature Forecast Method ..... XUE Zhilei, ZHANG Shuyu(451)

**Technology and Applications**

- Comparative Analysis of the Normal Transformation Methods about Annual Precipitation ..... CHEN Xuejun, SU Zhongyue, LI Zhonglong, et al(459)  
 Evaluation of Numerical Predicting Products by Using 24 Hours Variable Correlation Coefficient ..... ZHOU Ganlin, SHANG Kezheng, WANG Shigong, et al(465)  
 Error Analysis About Temperature Forecast Products of Three Models Applied in Shandong Province ..... XIAO Mingjing, SUI Ming, FAN Sudan, et al(472)  
 Constructing Public Weather Television Services System in New Media Era ..... WANG Yujie, HU Wenchao, LUO Fuzuo(478)  
**Review of Seasonal Drought**  
 Drought Events and Its Influence in Summer of 2012 in China ..... DUAN Haixia, WANG Suping, FENG Jianying(482)

## Vol. 30 No. 4

**Reviews**

- Review and Thinking About Drought Disaster Reduction Problems ..... XU Guochang(489)  
 Preliminary Analysis on the Demand and Review of Progress in the Field of Meteorological Drought Research ..... WANG Jinsong, LI Yaohui, WANG Runyuan, et al(497)  
 Climate Change and Food, Food Safety in Northwest China ..... ZHANG Qiang, CHEN Lihua, WANG Runyuan, et al(509)  
 Advances in the Study on 10 – 30 Days Extended – Range Weather Forecast ..... MA Hao, MAO Yanjun, LEI Yuan, et al(514)  
 Advances in Crop Water Stress Index Empirical Model Research Based on Canopy and Atmosphere Temperature Difference ..... ZHAO Funian, WANG Ruijun, ZHANG Hong, et al(522)

**Articles**

- Study on Cloud Vertical Structure Feature over Northwest China Based on Active Satellite Remote Sensing and Its Influence on Precipitation Enhancement ..... DING Xiaodong, HUANG Jianping, LI Jiming, et al(529)  
 Analysis of Relationship Between Blocking Highs and Consecutive Precipitation During the Durative Low Temperature, Snowfall and Freezing Period in China ..... LI Yan, MA Minjing, WANG Shigong, et al(539)  
 Preceding Atmospheric Circulation Characteristics over Northern Hemisphere Influencing on Droughts and Floods in Summer of Shaanxi ..... ZHAO Qiang, YAN Huasheng, ZHANG Jinwen(546)  
 Analysis on Structure Characteristic of Two Cold Vortex Processes ..... JING Ying, MIN Jinzhong, LI Zongtao, et al(555)  
 Temporal and Spatial Feature of Area Rainfall in the Upper Reaches of the Yangtze River ..... YU Dafeng, CHEN Lianghua, SUN Shixing, et al(563)  
 Impact of Global Warming on Length of Four Seasons in the Yangtze River Delta ..... JIANG Yanmin, LIANG Yan, SHA Xinxin(570)  
 Analysis of Climate Change Tendency in Northern Piedmont of Middle Tianshan Mountain over Recent 30 Years ..... WAN Yu, CAO Xing, CUI Yuling, et al(575)  
 Characteristics of the Spatial and Temporal Distribution of Solar Ultraviolet Radiation in Hebei ..... HOU Xiaowei, LIAO Yinghui, CAO Chunli, et al(583)  
 Comparative Analysis on Characteristics of Lightning over Gansu and Guangdong Areas ..... LIU Weicheng, TAO Jianhong, SHAO Aimei(588)  
 Spatial – temporal Variation of Seasonal and Annual Temperature During 1961 – 2010 in Urumqi Area Based on DEM ..... TAN Xiulan, ZHANG Shanqing, LI Xiangjuan, et al(593)  
 Temperature Changes Characteristic of Turpan in Recent 60 Years ..... ZHANG Huiqin, YANG Yanling, YU Hua(600)  
 Analysis of Climate Characteristic of Heavy Snowstorm in Altay Region of Xinjiang ..... GUO Cheng, LI Boyuan, YANG Sen, et al(604)  
 Analysis of Climatic and Extreme Features of Hail in Ningxia in Recent 50 Years ..... YANG Kan, SANG Jianren, LI Yanchun, et al(609)  
 Features of a Regional Rainstorm in Midsummer of 2010 in Western Xinjiang ..... HUANG Yan, LIU Tao, ZHANG Yunhui(615)  
 Impact on Relation Between LUE and PRI of Winter Wheat in Different Growth Stages Under Various Different Nitrogen Levels ..... ZHENG Tengfei, GUO Jianmao, YU Xin, et al(623)

**Technology and Applications**

- Brief Introduction of a Method to Extract Atmospheric Gravity Wave Parameters Using Temperature and Wind Profile ..... DENG Shaoge, YANG Wen, ZHONG Zhong, et al(630)  
 Measure of Transmit Power and Improving Factors of the New Generation Weather Radar Using Microwave Instruments ..... LIANG Hua, LIU Yongqiang, XIE Wanjun, et al(635)  
 Climate Planting District and Yield Prediction Model of Pitiegou in Linxia of Gansu Province ..... JIA Xiaoqin, MA Xujie, YIN Xianzhi, et al(639)  
 Analysis of the Doppler Radar Product of a Local Heavy Rain in Northwest Yunnan Plateau ..... WU Hongxiu, HE Weidong, JIAO Zehong, et al(645)  
 The Risk Zoning of Rainstorm Based on GIS in Longnan of Gansu Province ..... SU Junfeng, XIAO Zhiqiang, WEI Bangxian, et al(650)  
 Analysis of Current Situation and Development Proposals of Decision – making Meteorological Services in Ningxia ..... SU Zhansheng, HU Wendong, LU Xiaojing, et al(656)

**Review of Seasonal Drought**

- Drought Events and Its Influence in Autumn of 2012 in China ..... WANG Suping, DUAN Haixia, FENG Jianying (660)