

干部继续教育系列教材

# 大气科学热门论题 英文文选

陈忠美 涂海燕 徐敬林 编

气象出版社

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## 序 言

现代社会的一大特点是教育观的根本转变,受教育不再只是青少年的事了。青年人要接受教育,中年人要接受教育,甚至老年人也要接受教育,接受教育已成为现代社会里每个人的终身义务。二次世界大战后成人教育在全世界蓬勃发展,成人教育的发展不仅提高了整个社会的文明程度,也使每个人能更好地适应现代社会的高速发展和高节奏的生活。

现代社会被人们称之为信息社会、知识爆炸的社会,“知识”正以前所未有的速度在更新、更替。已经接受过教育、甚至高等教育的人如果不重新回到课堂去学习,就会落伍,就会跟不上时代发展的步伐,也就难以为社会的进步做出更大的贡献,难以在自己的社会贡献中实现自己的价值。继续教育的任务就是要那些已经接受过高等教育的人再次接受教育,重新学习和掌握已经更新和发展了的知识。

国家教委最近公布的《中国教育改革和发展纲要》中指出:成人教育是传统学校教育向终身教育发展的一种新型教育制度,对不断提高全民族素质、促进经济和社会发展具有重要作用。要把大力开展岗位培训和继续教育作为重点,重视从业人员的知识更新。

气象继续教育的功能还有着更为特殊而重要的内涵。它不仅是一般性地充实从业人员的知识,提高他们的基本素质,它还直接关系到气象现代化的进程,关系到气象现代化建设所创造的社会效益和经济效益。

1984年1月国家气象局在北京召开了全国气象工作会议,一致通过了《建国以来气象工作基本经验总结》和《气象现代化建设发展纲要》,气象事业重新走上了健康发展的轨道,气象现代化建设从此大踏步地前进了,取得了举世瞩目的成绩。今年中国气象局

又召开了具有深远意义的全国气象工作会议,总结经验,规划未来,气象事业又将登上一个新的台阶。

面对着这样一个令人兴奋的局面,我们还有着一重忧虑,那就是人才的匮乏。因为任何现代化工程项目的建设不仅仅是一个资金问题,建成后能否充分发挥建设效益的关键性制约因素,是管理水平和技术人员素质的高低。在“气象卫星综合应用业务系统”、“大气监测自动化系统”等六大骨干工程正在加紧建设的今天,“十年树木,百年树人”,管理人员和技术人员的超前培训已经迫在眉睫。

有鉴于此,为适应这种形势,国家气象局 1990 年在成都召开了全国气象教育工作会议,对三所直属高等院校的任务和分工做了调整,明确指出,今后北京气象学院要把成人教育、特别是高层次继续教育作为工作的重点。这是具有重大战略意义的决策,充分体现了国家气象局领导在发展气象现代化的进程中所具有的远见卓识。

经过近三年的努力,北京气象学院已初步建成了继续教育体系,对一批中高层次的管理人员和技术人员进行了短期培训,并且编写出了一部分具有一定水平的教材。我们决定陆续出版,希望最终能形成一个完整的教材体系,对推进继续教育的发展作出一份微薄的贡献。

我院继续教育尚处起步阶段,由于种种条件的制约,当前面临的困难甚多,师资队伍与高层次继续教育不相适应,在这种条件下编写的教材一定很不成熟。其中的缺陷、不足和错误,欢迎读者批评指正。

中国科学院院士  
北京气象学院院长

丑纪范

1995 年 1 月于北京

## 内容简介

本书涉及的内容为大气科学的一些热门论题,如天气预报、气候变化、人工影响天气、气象卫星、全球观测系统、减灾、温室效应、臭氧洞、厄尔尼诺现象、数值天气预报、沙漠化以及环境保护等等。文章内容均取材于 90 年代的国外科技文献、科普文章及科技报导。不仅具有专业性和知识性,且通俗易懂,具有趣味性。

本书每课均配有多种形式的练习,如问答题、多项选择、正误判断、完形填空及补充阅读等。并附有课文的参考译文和练习答案,以便于读者自学。

本书译文经相应专业的气象专家审定,可作为气象类院校本科生的泛读教材和气象函授英语的辅助读物,还可作为气象部门科技工作者晋升技术职称英语考试的参考书,。此书还可供环境保护、地震、海洋、水文及地质的科技工作者阅读。本书也是干部继续教育系列教材之一。

# CONTENTS

## 目 录

1. Weather Forecast 天气预报 .....	( 1 )
2. The Powerful Influence of Weather on Men 天气对人的 强烈影响 .....	( 10 )
3. Ocean Forecast 海洋预报 .....	( 16 )
4. Intentional Weather Modification——Cloud Seeding 人工 影响天气——云的催化 .....	( 28 )
5. Hail: The White Plague 冰雹:白色的瘟疫 .....	( 40 )
6. Climate Change 气候变化 .....	( 51 )
7. Greenhouse Effect 温室效应 .....	( 61 )
8. El Niño 厄尔尼诺现象 .....	( 69 )
9. The Study of Tree Rings 树木年轮的研究 .....	( 76 )
10. Coral Reefs and Carbon Dioxide 珊瑚礁与二氧化碳 .....	( 82 )
11. A New Hypothesis on Climatic Change 气候变化新说 .....	( 90 )
12. Health and Climate 气候与健康 .....	( 99 )
13. Nature , Man and Environment 自然、人类与环境 .....	( 108 )
14. Nature Hazards in the UK 英国的自然灾害 .....	( 116 )
15. Volcanic Activity and Climate 火山活动与气候 .....	( 126 )
16. Desertification 沙漠化 .....	( 137 )
17. The Ozone Hole 臭氧洞 .....	( 147 )
18. The Potential Impact of Global Warming on Agriculture 全球变暖对农业可能产生的影响 .....	( 154 )

19. Damages from Acid Deposition and Low-level Ozone 酸性沉积物与低空臭氧所造成的危害 .....	(163)
20. WMO and International Decade for Natural Disaster Reduction 世界气象组织与国际减灾十年 .....	(171)
21. The Global Observing System 全球观测系统 .....	(179)
22. Meteorological Satellites 气象卫星 .....	(191)
23. Doppler Radar 多普勒雷达 .....	(200)
24. Numerical Weather Prediction(NWP)数值天气预报 .....	(210)
25. Life on Mars; Does It Exist? 火星上存在生命吗? .....	(219)
26. Can Earthquakes Be Prevented? 地震可以预防吗? .....	(227)



## 1. Weather Forecast

In the United States weather forecasts can be found every day in newspapers, and also heard several times every day on the radio and television. On radio and television the forecasts are usually quite detailed, especially on television where maps and satellite pictures are used as well as a verbal explanation. Here a weatherman is giving the forecast on the TV evening news.

Now the weather forecast. It is still raining in Chicago, and it looks that the rain is going to continue through the weekend. It'll be cloudy tomorrow with scattered showers, and the outlook for Sunday more rain and colder. The predicted high for tomorrow is 45 °F<sup>①</sup>, but the thermometer is expected to dip to the freezing point tomorrow night, with a temperature of 32°F. I am afraid colder weather is on its way!<sup>②</sup> Let's take a look now at the weather across the country.

Showers expected tomorrow down the West Coast as far south as San Francisco. Fair weather in the low seventies<sup>③</sup> predicted for the Los Angeles area, fair in San Diego. There's a cold front from Canada moving down through the western states. 38°F in Denver, Colorado, with thirty-mile-an-hour winds, and it's expected to be cold and windy right through the weekend. Dallas is experiencing unseasonably<sup>④</sup> cold weather——48°F.

It's raining as far east as Detroit and Toronto, and that rain is going to continue through tomorrow, when it may turn to snow. Currently 43°F in Detroit, 41°F in Toronto. And temperatures dropping.<sup>⑤</sup> It's snowing heavily in Montreal, ladies and gentlemen.

It's the first storm of the season, and we expect that snow activity to move down from Canada into the eastern states sometime<sup>®</sup> tomorrow, probably reaching the New York area sometime tomorrow night.

Good weather across the south. Clear skies in Miami, and they're going to enjoy a sunny 78°F in that town this weekend, so if you're thinking about a vacation, now is the time to do it.

Back to Chicago. Once again, continuing rain tonight through Sunday. Current temperature 38°F. And that winds up<sup>®</sup> our weather report for this evening.

## WORD LIST

detailed /'di:teild/ a. 详细的; 明细的

verbal /'və:bl/ a. 口头的

scatter /'skætə/ vt. 使分散; 散播

fair /feə/ a. (天空或天气)美好的;

晴朗的

dip /dip/ vi. 略微下降

scattered shower 零星阵雨

outlook /'aut,luk/ n. 前景

unseasonably /ʌn'si:znəbli/ ad. 不合

季节地

currently /'kʌrəntli/ ad. 现在

wind up 结束

## NOTES

① The predicted high for tomorrow is 45° F. 此处 high 的意思是:“最高温度”。

② I'm afraid colder weather is on it's way! on it's way:即将到来

③ the low seventies; 温度为 70—75°F

④ unseasonably: 不合季节地,反常地

⑤ And temperatures dropping. 口语中常有省略现象,若将省略的部分补上的话,句子则为: And the temperatures are dropping.

本课课文中还有多处省略句,如:

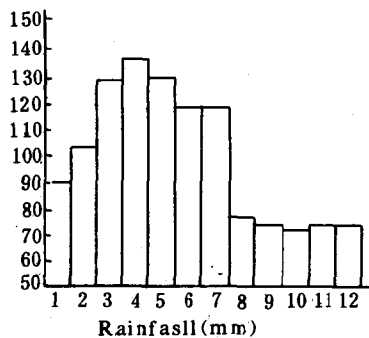
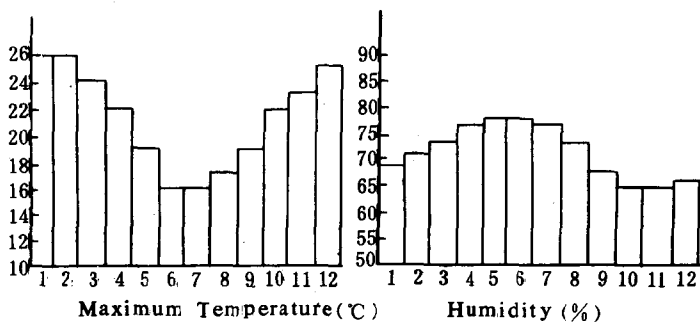
- ... for Sunday (there will be) more rain and colder.
  - Showers (are) expected tomorrow down the West Coast as far south as San Francisco.
  - Fair weather in the low seventies (is ) predicted for the Los Angeles area, (and it is ) fair in San Diego.
- ⑥ 注意 sometime 与 sometimes 的区别:
- sometime; at some uncertain or unstated time 在某个时候
- sometimes; now and then; occasionally 有时, 间或
- ⑦ wind up; cause to be finished 结束。例如:
- Let's wind up this job today. 咱们今天的工作到此结束。
- He wound up his speech with a poem. 他以一首诗歌结束了他的发言。

## EXERCISES

### I. Answer the following questions according to the text:

1. How many times a day can weather forecasts be heard on radio and television in the U. S. ?
2. Is there only a verbal explanation used to describe the state of weather on T. V. ?
3. What is the maximum and minimum temperature in Chicago?
4. Will there be sunshine or showers in San Francisco tomorrow?
5. What is the weather like in Dallas, Texas?
6. Why is Miami very warm?
7. Is it windy in Denver, Colorado?
8. What is the weather like in Toronto and Montreal, Canada?
9. What will be tomorrow evening's weather in New England?
10. In which city of the United States is this weather forecast made?

### II. Here are three weather charts, showing temperature, humidity and rainfall in Auckland, New Zealand. Answer the questions according to the diagrams.



1. What is the maximum and minimum temperature in Auckland?
2. When are the summer days in Auckland?
3. When is Auckland's winter?
4. When is it most humid?
5. When does it rain least?
6. When is Auckland wetter, in November or in December?
7. Do temperatures go up or down from July to December?
8. Which month is best for vacationers to go to Auckland? Why?

### III. Fill in the blanks:

Because the United States is so large, it has many \_\_\_\_\_ types of cli-

mate. The southern part of the West Coast has what is called Californian climate. It is warm and sunny most of the \_\_\_\_\_. The Northern Pacific \_\_\_\_\_ has a marine climate, with mild winters and relatively cool summers. The central plains have a continental \_\_\_\_\_. Summers are hot and winters are very \_\_\_\_\_.

The southeast is subtropical. South Florida is warm and humid all year \_\_\_\_\_. On the East Coast, the climate is generally but not \_\_\_\_\_ continental. New England and New York area are noted for their \_\_\_\_\_ winters and hot summers.

Alaska has a cool marine climate, but its central portion has a cold, continental \_\_\_\_\_. Hawaii is \_\_\_\_\_ and humid all year round. The land near the Rocky Mountains has a highland climate. It is cool because of its high \_\_\_\_\_. And there is some rain and snow.

#### IV.

1. Translate the following local weather forecast from English into Chinese.

It will be cloudy Monday through Tuesday with scattered afternoon showers. Highs will be in the mid-thirties with a low Monday night in the upper twenties. In the northern mountain area, winds will be northwesterly 8-10 metres per second. Wednesday will turn clear. The maximum temperature will be 35°C and minimum 24°C. Thanks for listening.

2. Translate the following weather report into English.

听众朋友们,您好! 现在播送天气预报。今天夜间多云转阴,最低温度为7°C。明天白天,阴有小雨,最高温度为12°C。谢谢您的收听。

V. This is a composite weather map. With the help of the symbols on the map talk about this synoptic chart in your own words.

Ⓗ high pressure 高压

station model 填图格式

Ⓕ fog 雾

shower 阵雨

Ⓓ thunderstorm 雷暴

regional temperature prediction

Ⓖ rain 雨

区域温度预报

Ⓕ low pressure 低压

Ⓗ snow 雪

Ⓙ freezing rain 冻雨

○ clear 晴

◐ partly cloudy 少云

● cloudy 多云

Ⓖ tropical storm 热带风暴

Ⓖ hurricane 飓风

—•—•—•—•— warm front 暖锋

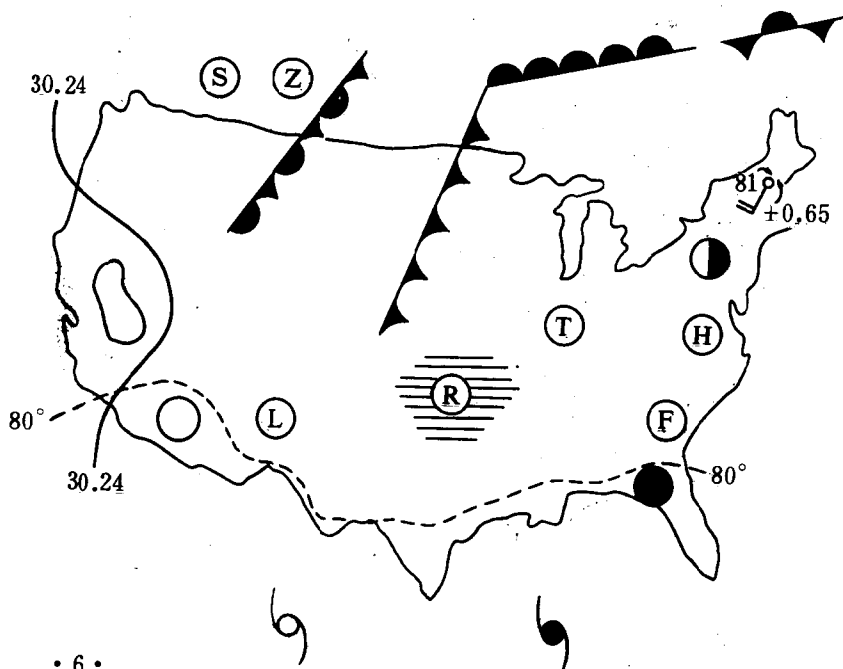
—▲—▲—▲— cold front 冷锋

—▲—▲—▲— ooccluded front 锢囚锋

—▲—▲—▲— stationary front 静止锋

○ isobars 等压线

# A U.S. Synoptic Chart



## SUPPLEMENTARY READING

This is Radio Station KSRF in Santa Monica, California. It's time for the noon weather and surf report, brought to you today by the English Coffee Shop on Montana at Seventh Street in Santa Monica—open 24 hours a day with the best food in Santa Monica.

At 12 o'clock the sun is out after a cloudy morning. The wind is from the west at three miles an hour and the temperature is 72 degrees. This weather report has been brought to you by the English Coffee Shop in Santa Monica, open 24 hours a day.

Next, the surf report. The water temperature at Santa Monica Beach is 68 degrees, with good, two to three foot surf. If you're driving to the beach this afternoon, park at the north end of the beach. The south end, Santa Monica Beach parking lot is already full. Good surfing! This weather and surf report has been brought to you by the English Coffee Shop on Montana at Seventh Street in Santa Monica—open 24 hours a day with the best food in Santa Monica.

## KEY TO THE EXERCISES

- I. 1. Several times a day.
2. No. Maps and satellite pictures are also used.
3. High 45°F, low 32°F. ; 4. Showers. ; 5. Fine.
6. Clear skies, sunny, 78°F.
7. Yes. The wind speed is 30 miles an hour.
8. Toronto; Rain, maybe snow; Montreal; Snowing heavily.
9. It will snow. ; 10. Chicago.
- II. 1. Max: 26°F, min: 16°F. ; 2. January and February. ; 3. June and July.
4. May and June. ; 5. October. ; 6. The same. ; 7. Going up.
8. December. Because of the warm weather and little rain.

III. different, year, Coast, climate, cold/round, always, cold/one, warm, altitude.

IV. 1. 星期一至星期二多云,午后有零星小雨. 最高温度将为 35°C 左右,星期一夜晚降至 25—29°C 之间. 北部山区将有西北风,风速为 8—10 米/秒. 星期三将转晴,最高温度为 35°C,最低温度为 24°C. 谢谢您的收听.

2. Good evening! Now the weather forecast. Tonight it will start cloudy, becoming overcast later. The low will be seven. During the daytime tomorrow, it will be overcast with light rain. The high will be twelve. Thank you.

## 参考译文:

### 1. 天气预报

美国的报纸天天都登载天气预报,收音机和电视机每天也播送好几次,而且常常讲得很具体.尤其是电视天气预报,不仅有口头解释,而且还播出天气图和卫星云图.下面是一位天气预报员正在晚间电视新闻中播放天气预报.

现在播送天气预报.本地芝加哥还在下雨.看来这雨还得下,直到周末还将全天有雨.明天多云,有零星阵雨,星期天雨量将增多,气温更低.预计明天最高气温为 45°F,但明天夜间估计气温将降至冰点,温度为 32°F.看来冷空气即将到来!现在来看看全国各地的天气状况.

预计明天西海岸一带向南直至旧金山都将有降雨.洛杉矶地区晴,温度 70—75°F.圣地亚哥晴.从加拿大有一条冷锋南下经过西部各州.科罗拉多州的丹佛气温为 38°F,风速每小时 30 英里,预计周末温度低并且有风.达拉斯天气呈季节性的反常,特别寒冷,气温为 48°F.

东到底特律和多伦多都在下雨,明天仍将有雨,也可能转为雪.现在底特律 43°F,多伦多 41°F,气温还在下降.女士们、先生们,蒙特利尔正在下大雪,这是本季度第一场暴雪.估计明天雪区将从加拿大南移到东部各州,明天夜间可能到达纽约.

南部各地天气很好.迈阿密晴,本周末人们可以在那里享受到气温为



78°F的晴朗天气。因此,如果你想度假的话,现在正是时候。

现在再报一遍芝加哥的天气预报。今晚到星期日都有雨。现在的气温是38°F,今夜的天气预报就到这里了。