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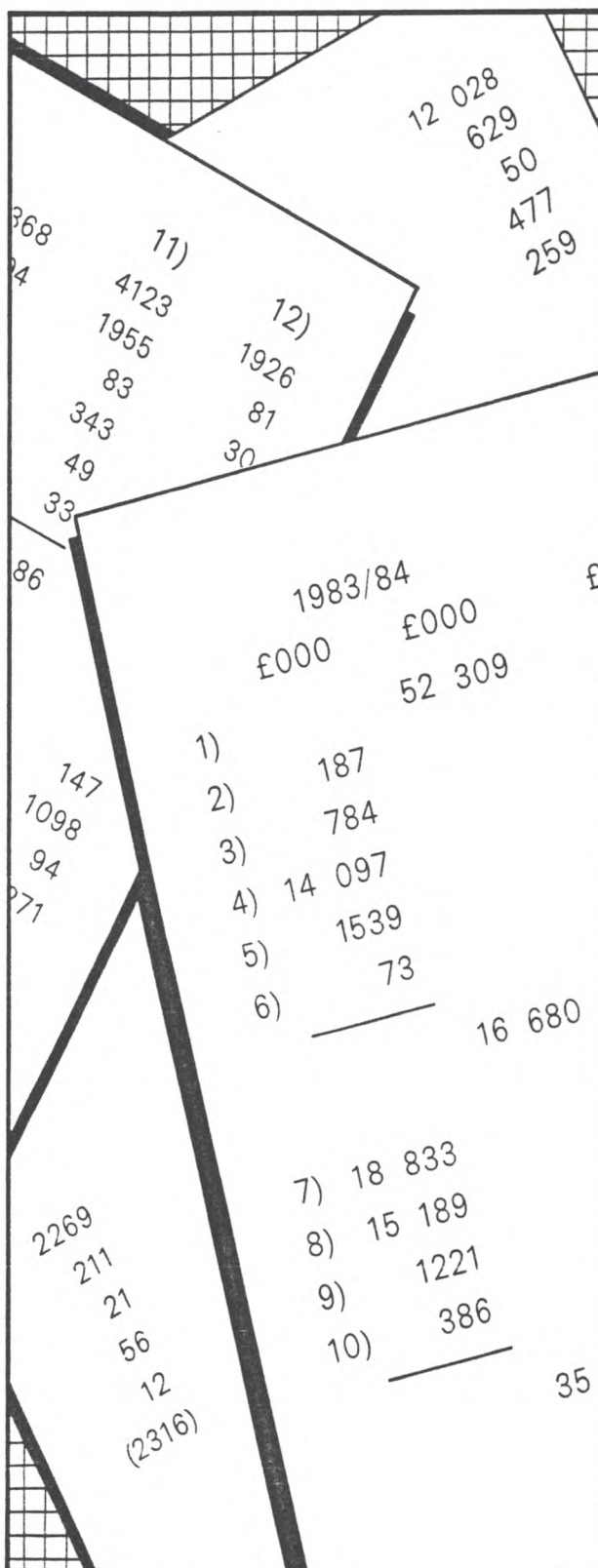
METEOROLOGICAL OFFICE

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Meteorological Office Annual Report 1984

STATISTICS



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The 1984 Annual Report has been produced in a new style. The customary tables have been omitted from it and so to assist in the changeover it has been decided to publish them separately this year, on a trial basis, for use within the Office.

Contents	Page
Number of offices of various types staffed by the Meteorological Office and operating on 31 December 1984	3
Ocean weather ships	3
Merchant ships and sea stations	4
Classification of stations supplying climatological information	5
Heights reached in upper-air ascents	6
Thunderstorm location	6
Meteorological communication traffic	6
Special seasonal forecasts	7
Forecasts for aviation	7
Non-aviation enquiries	8
Flash weather messages	8
Weatherline forecasts	9
Climatological enquiries	9
Data processing	9
Instrument calibration and acceptance testing	10
Library, archives and cartographic section	10
Training	11
Personnel	13
Finance	14

TABLE I – NUMBER OF OFFICES OF VARIOUS TYPES STAFFED BY THE
METEOROLOGICAL OFFICE AND OPERATING ON 31 DECEMBER 1984

	Within UK	Overseas
Principal Forecasting Offices ¹ associated with the RAF . . .	1	—
Main Meteorological Offices ² associated with the RAF . . .	3	2
Area Meteorological Offices ³ associated with the RAF . . .	2	1
Subsidiary offices ⁴ associated with the RAF	29	5
Subsidiary offices associated with the Army	2	1
Subsidiary offices associated with MOD(PE)	3	—
Observing offices ⁵ associated with the RAF	5	—
Observing offices associated with MOD(PE)	3	—
Principal Forecasting Offices associated with civil aviation .	1	—
Main Meteorological Offices associated with civil aviation . .	3	—
Subsidiary offices associated with civil aviation	4	—
Observing offices associated with civil aviation	11	—
Upper-air observing offices ⁶	8	1
Main Meteorological Offices associated with public services ⁷	3	—
Subsidiary offices associated with public services ⁷	8	—
CRDF offices ⁸	4	1
Port Meteorological Offices ⁹	7	—
Offices associated with the Agricultural Development and Advisory Service, MAFF	6	—
Other offices ¹⁰	8	—

Notes

1. A Principal Forecasting Office (PFO) meets the needs of aircraft flying over long distances. A PFO operates throughout the 24 hours and provides technical guidance for Main, Area and Subsidiary Meteorological Offices.
2. A Main Meteorological Office operates throughout the 24 hours for the benefit of aviation and public services and normally supervises the work of subsidiary offices.
3. An Area Meteorological Office operates throughout the 24 hours for the benefit of military aviation and normally provides a forecasting and warning service for Defence locations where there is no Meteorological Office presence.
4. A Subsidiary Meteorological Office is open for that part of the day necessary to meet local requirements.
5. At an observing office no forecaster is available.
6. An upper-air observing office may be located with an office of another type if this allows common supporting resources to be used.
7. Public service offices are located in certain large cities.
8. Cathode Ray Direction Finding (CRDF) offices form the network for thunderstorm location.
9. Port Meteorological Offices are maintained at the bigger ports.
10. Other offices, outside Bracknell, include climatological offices in Edinburgh and Belfast and offices collocated with research establishments.

TABLE II – OCEAN WEATHER SHIPS

To meet the United Kingdom's obligations under the WMO Agreement for the Joint Financing of the North Atlantic Ocean Stations (NAOS), the Office operated one ocean weather ship. This was employed to man ocean station 'L' (57°00'N, 20°00'W), one of the four stations of the network, together with the Netherlands' ocean weather ship, each ship spending an average 30 and 26 days respectively on station each voyage. In 1984 the station was manned for a total of 169.9 days by the UK ocean weather ship which was also on passage for 28.3 days. Two ships from France, one from Norway and five from the USSR served at the other three stations.

TABLE III – MERCHANT SHIPS AND SEA STATIONS

A total of about 7690 ships of the merchant navies of the world make and transmit meteorological reports to the appropriate meteorological centres ashore under arrangements co-ordinated by the World Meteorological Organization. Most of them, including British ships, do this on a voluntary basis. Ships which report in full at four specified times daily are known as 'selected ships'; those which report at the same times daily, but in a less complete form, are known as 'supplementary ships'. A number of coasting vessels, lightships, distant-water trawlers, 'auxiliary ships', platforms, rigs and buoys also make and transmit meteorological observations.

On 31 December 1984 the numbers of British ships reporting were:

Selected ships (including 14 rigs)	435
Supplementary ships (including 3 rigs and 1 trawler)	12
Coasting vessels	56
Lightships (including 1 light-tower)	13
Trawlers	—
Auxiliary ships	3
Total	519

The British Voluntary Observing Fleet includes ships of many shipping companies, and the numbers on the various routes are as follows:

UK to Australasia	17
UK to Far East	23
UK to Persian Gulf	9
UK to South Africa	4
UK to West Indies	9
UK to Atlantic coast of North America	37
UK to Pacific coast of North America	4
UK to South America	5
UK to European ports	87
UK to Falkland Islands and Antarctica	3
UK to distant-water fishing grounds	1
World-wide trading	231
Fixed stations	17

During a typical 5-day period in June, the average daily numbers of reports from ships and sea stations received at Bracknell were as follows:

	Reports	
	1983	1984
Direct reception from:		
British ships	169	175
Foreign ships	133	162
Rigs, platforms, buoys	87	92
Total	389	429
Total number of reports received by geographical location:		
Eastern North Atlantic	893	918
Western North Atlantic	541	653
Mediterranean	118	115
North Sea	312	329
Arctic Ocean	98	95
North Pacific	919	1055
All other waters	512	578
Total	3393	3743

TABLE IV – CLASSIFICATION OF STATIONS SUPPLYING CLIMATOLOGICAL INFORMATION

For climatological purposes, data are obtained not only from official sources but also from very many stations which are not part of the Meteorological Office. This table shows the distribution on 31 December 1984 of stations which supply climatological information, classified under the following headings:

- Met O Synoptic – stations manned by professional meteorologists.
- Auxiliary Synoptic – stations manned by non-Meteorological Office staff whose observations are used primarily in weather forecasting.
- Climatological – stations run by individuals or organizations co-operating voluntarily with the Meteorological Office and fulfilling the minimum requirements of reporting extreme temperatures and rainfall.
- Agrometeorological – climatological stations at establishments primarily concerned with agriculture.
- Holiday Resorts – stations participating in a scheme whereby information is sent daily to the Meteorological Office for communication to the press.

The areas and titles of the districts are those used in the *Monthly Weather Report*.

	STATIONS SUPPLYING RETURNS					STATIONS SUPPLYING AUTOGRAPHIC RECORDS			
	<i>Met O Synoptic</i>	<i>Auxiliary Synoptic</i>	<i>Climatological</i>	<i>Agrometeorological</i>	<i>Holiday Resorts</i>	<i>Rainfall*</i>	<i>Sunshine</i>	<i>Rainfall</i>	<i>Wind</i>
Scotland, north	9	9	31	0	0	323	27	16	16
Scotland, east	5	6	42	10	1	440	32	22	15
Scotland, west	6	8	46	2	0	478	26	25	18
England, east and north-east . .	10	4	16	7	4	476	24	14	14
East Anglia	9	0	17	13	3	433	28	23	12
Midland Counties	6	2	29	15	0	690	40	25	18
England, south-east and central southern	19	10	27	21	12	723	53	28	24
England, south-west	10	11	25	5	11	596	39	19	16
England, north-west	6	4	13	1	2	416	21	23	13
Isle of Man	1	1	0	0	1	18	3	1	3
Wales, north	1	5	13	2	2	160	8	5	4
Wales, south	5	6	12	6	1	178	12	15	5
Channel Islands	2	0	1	0	2	17	5	2	2
Northern Ireland	2	13	44	8	0	243	28	49	10
Total	91	79	316	90	39	5191	346	267	170

* Includes stations in earlier columns.

TABLE V – HEIGHTS REACHED IN UPPER-AIR ASCENTS

The following table shows the number of upper-air ascents giving observations of (a) temperature, pressure and humidity and (b) wind, which have reached specified heights, and the height performance of the largest balloons.

		Number of Observations	Percentage of all balloons reaching				Percentage of largest balloons reaching 10 mb
			100 mb (16 000 m approx.)	50 mb (20 000 m approx.)	30 mb (24 000 m approx.)	10 mb (30 000 m approx.)	(30 000 m approx.)
(a) <i>Temperature, pressure and humidity:</i>							
8 stations in the UK . .	5 814	95.10	88.72	72.02	20.55	41.96	
1 station overseas	730	97.53	92.88	81.51	46.30	57.12	
1 Ocean Weather Ship .	687	98.25	93.30	80.64	27.51	—	
(b) <i>Wind:</i>							
8 stations in the UK . .	11 638	98.07	92.08	65.44	10.16	41.93	
1 station overseas	1 460	97.19	94.52	80.14	22.53	55.76	
1 Ocean Weather Ship .	686	96.79	89.36	76.82	22.59	—	

TABLE VI – THUNDERSTORM LOCATION

Number of thunderstorm positions reported by CRDF network in 198421 731

TABLE VII – METEOROLOGICAL COMMUNICATION TRAFFIC

National and international exchanges of meteorological information are effected over land-line, satellite, and radio links. Observational and processed data provided by major analysis and forecast centres and carried in coded messages constitute the greater part of the traffic. Although there are wide variations in message length there are on average about 710 characters per message. Exchanges of pictorial information, principally analyses and forecast charts, are made by facsimile. Analogue transmission methods are still used for radio facsimile and the majority of land-line facsimile broadcasts but digital transmission over multiplexed links has been introduced on some of the main international connections of the Global Telecommunication System.

The following figures are taken from an analysis of the traffic handled by the Meteorological Telecommunication Centre, Bracknell, on a typical day (24 hours) in November 1984. Corresponding totals for 1983 are also shown.

	Number of messages/products in one day			
	In	Out	Total	Total in 1983
Coded messages:				
Land-line teleprinter and data transmission . .	28 873	156 971	185 844	155 240
Radio transmission	86	2 454	2 540	3 628
Facsimile products (pictorial format):				
Land-line transmission	259	1 230	1 489	1 415
Radio transmission	38	133	171	172

Notes

The increase in the total for land-line teleprinter and data transmission messages is mainly due to the introduction of many new numeric model products in GRID or GRIB codes (mainly in connection with the World Area Forecast System). This increase in large bulletins of processed products has resulted in an increase of the average message length from 620 to 710 characters.

TABLE VIII – SPECIAL SEASONAL FORECASTS

There is a need for forecasts of a special type at certain seasons. These are described in *Met O Leaflet* No. 1. The numbers receiving such specialized services are as follows:

	Year	Number of customers	Year	Number of customers
Consultancy services to farmers and growers	1983	233	1984	375
Weekend temperature forecasts (a winter service primarily for industrialists)	1983/84	77	1984/85	77
Winter road danger warnings (primarily for local authorities)	1983/84	319	1984/85	316
Consultancy or forecast services (concerning road conditions)	1983/84	130	1984/85	134

TABLE IX – FORECASTS FOR AVIATION

Forecasting for aviation constitutes the primary function of many meteorological offices. The following figures indicate the number of forecasts issued for aviation and the numbers of meteorological briefings that took place during 1983 and 1984. These do not include the numerical forecasts for civil aviation issued direct to Washington, Paris, Frankfurt, British Airways, Scandinavian Airline System, SITA, the CAA APOLLO computer unit and Eurocontrol Maastricht. Warnings and routine general forecasts are not included.

	1983	1984
Number of meteorological briefings for aviation in the UK	325 683	303 641
aviation at overseas stations	44 095	51 237
Number of aviation forecasts issued for aviation in the UK	1 878 027	2 021 749
aviation at overseas stations	212 735	275 340

TABLE X – NON-AVIATION ENQUIRIES

Non-aviation enquiries are handled by ten Weather Centres, in London, Manchester, Glasgow, Southampton, Newcastle, Nottingham, Bristol, Cardiff, Leeds and Norwich and the forecast unit at Sella Ness. The function of these offices is to meet the needs of the general public for forecasts for special purposes. Many other forecast offices, established primarily to meet the needs of aviation, also answer requests for forecasts and other weather information from the general public, Press, public corporations, commercial firms, etc. These enquiries, most of which refer to current or future weather, are listed below according to the purpose of the enquiry.

	1983	1984
Total number of non-aviation enquiries	1 655 146	1 642 230
Percentage relating to:		
agriculture	13.1	10.0
building	3.9	3.2
commerce, industry	7.3	5.8
holidays	14.9	11.6
marine matters	12.0	15.7
Press	16.4	18.1
public utilities	10.7	10.7
road transport	4.1	4.3
other known purposes	8.0	10.2
unknown purposes	9.7	10.4

TABLE XI – FLASH WEATHER MESSAGES

FLASH messages are passed to the BBC and to most independent broadcasting companies for inclusion in their programs at a convenient break. They are, effectively, warnings of the actual occurrence of weather conditions which might cause considerable inconvenience to a large number of people. The following table shows the kind of weather and areas for which FLASH messages are broadcast and the number issued in 1984.

	Dense fog	Moderate or heavy snow	Heavy rain	Glazed frost and icy roads	Severe inland gales	Blizzard	Strong winds
Edinburgh and south-east							
Scotland	—	—	1	—	—	2	—
Glasgow and south-west							
Scotland	—	—	—	—	1	1	—
Belfast and Northern							
Ireland	—	1	—	—	4	—	—
Industrial north-east							
England	—	—	1	—	2	—	—
Industrial Lancashire and							
Merseyside	—	—	—	—	4	—	—
Industrial Midlands	—	—	—	—	1	—	—
Bristol and Bath	—	—	—	1	—	—	—
South Wales	—	—	—	—	1	—	—
London and south-east							
England	—	—	1	1	2	—	—
Plymouth and south-west							
England	—	—	—	1	4	—	—
Yorkshire	—	—	—	—	—	—	—
Southampton and							
Portsmouth	—	—	—	—	—	—	—
Warnings covering more							
than one area or blizzards							
outside industrial areas	—	—	—	—	12	4	1
Total	0	1	3	3	31	7	1

TABLE XII – 'WEATHERLINE' FORECASTS

This table will be found at the end of this leaflet. The figures were not available at the time of assembly.

TABLE XIII – CLIMATOLOGICAL ENQUIRIES

Met O 3, Met O 8, Edinburgh and Belfast receive a number of enquiries relating to past weather, to climatology and to the application of meteorological data to agriculture. The following figures give the total number of enquiries and the percentages of this number in various categories. It should be noted that the list below shows revised enquiry classes introduced into the Office with effect from 1 August 1984. Enquiries under the old classes have been consolidated into the new enquiry classes. Some new classes were introduced from 1 August.

	1983	1984
Total number of climatological enquiries	53 387*	54 600
Percentages:		
Agricultural		32.2
Building and construction		8.8
Commerce, industrial and manufacturing		8.7
** Design and planning		0.6
Drainage, flooding and water supplies		6.1
Educational		6.3
** Energy		0.6
Holiday, sports, hobbies and leisure		1.3
Legal, insurance and loss adjustment		11.2
** Marine matters		0.1
Medical and health		0.4
Press, information centres and media items		3.5
Research matters		3.5
** Telecommunications		0.0+
Transport		0.5
Ventilation and heating		1.6
** Videotex		0.0+
Miscellaneous – purpose known		8.6
Miscellaneous – purpose unknown		5.9

* This total now includes 9673 routine enquiries omitted in error from the total given in the Annual Report for 1983.
** These enquiry classes did not exist as separate categories prior to August 1984.

TABLE XIV – DATA PROCESSING

	1983	1984
Computer installations:		
Number of tasks run on the 3081 computer	455 000	580 000
Number of tasks run on the 370/158 computer	145 000	115 000
Number of tasks run on the Cyber 205 computer	101 000	100 000
Number of tasks run on the terminal system	147 000	230 000
Processor-controlled keying systems:		
Number of characters keyed	46 000 000	42 000 000
Punched-card installation:		
Number of computer cards punched	155 000	62 000

TABLE XV – INSTRUMENT CALIBRATION AND ACCEPTANCE TESTING

	Tests	Calibrations
General meteorological instruments:		
Wind measuring	63	512
Pressure measuring	313	1 079
Humidity measuring	25	23
Precipitation measuring	217	169
Radiation measuring	—	167
Sunshine recording	19	—
Temperature measuring	776	3 418
Balloons*	14 820	—
Miscellaneous	5 754	254
Electrical/electronic instruments:		
Instruments and systems	1 384	316
Components	386	—
Radiosonde instruments:		
Components accepted	104 023	—
Humidity elements skinned and seasoned	5 700	—
Pressure elements	—	9 900
Reference elements	—	6 300
Temperature elements	—	150
Balloons*	28 289	—
Radar reflectors*	13 365	—
Parachutes*	31 698	—
String unwinders*	2 495	—
Recovered sonde transmitters	2 138	—

* Sample tested only

TABLE XVI – LIBRARY, ARCHIVES AND CARTOGRAPHIC SECTION

Library

Items received:

Daily Weather Reports	7 460
Books, journals, etc.	7 358
Films, slides and photographs	1 554
Entries in MOLARS bibliographic database	10 678
Loans:	
Daily Weather Reports	4 144
Books, journals, etc.	16 572
Films, slides and photographs (251 occasions)	8 073
Number of exchange agreements with other institutions	288
Pages translated by MOD linguistic services	210

Archives

Documents received from Headquarters Branches:

Charts for permanent retention	26 000
Charts for limited retention	30 000
Ships' log-books	790
Rainfall cards (stations)	4 400
Climatological data (stations)	500
Documents received from outstations:	
Daily Registers	1 800
Autographic records (station-months)	8 810
Loans	203
Photocopies	1 000

Cartographic Section

Number of diagrams, maps and charts completed	4 147
Number of reprographic jobs	577

TABLE XVII – TRAINING

The following figures give details of courses completed during 1984 at the Meteorological Office training establishments at Shinfield Park and Beaufort Park.

	Number of courses	Length in weeks	Met O staff	Others	Total
Scientific Officers Part II (1983)	1	24	11	2	13
Scientific Officers Part I (1984)	1	15	7	0	7
Applied Meteorology Part II (1983)					
(Forecasters)	1	8	20	10	30
Applied Meteorology (Prep)	1	3	22	5	27
Applied Meteorology Part I	1	10	29	5	34
Applied Meteorology Part II					
(Support Scientists)	1	1	25	0	25
Applied Meteorology Part II					
(Forecasters)	1	9	2	6	8
Initial Forecasting (Prep)	1	2	11	4	15
Initial Forecasting	1	15	19	7	26
Advanced Forecasting	3	7	10	11	21
Extension Course	3	4	31	2	33
Senior Meteorologists	1	3	14	2	16
Meteorological Statistics	1	4	2	0	2
Initial Programmers	3	4	24	0	24
COSMOS Programmers	2	2	23	0	23
Basic Assistants	2	4	15	0	15
Initial Assistants	7	4	72	0	72
Advanced Assistants	4	4	34	0	34
Extension Assistants	2	4	25	0	25
Initial Supervisors	3	3	28	2	30
Auxiliary Observers	4	1	0	57	57
Co-operating Observers	4	1	0	49	49
Air Traffic Control Observers	4	1	0	47	47
Introduction to Meteorology for					
Non-Met Staff	2	1	23	0	23
ASO to R(M)T Conversion (1983)	1	18	7	0	7
ASO to R(M)T Conversion (1984)	1	14	3	0	3
Mufax Course	1	2	12	7	19
Mk V Wind System	1	1	9	0	9
Facsimile Transmitter K150	1	1	8	3	11
Digital Anemograph Logging					
Equipment (DALE)	1	2	8	0	8
CDC Cyber Course	1	1	5	7	12
Met Office Data Logging Equipment					
(MODLE)	1	1	7	0	7
Totals			506	226	732

Training in the United Kingdom during 1984 under the Voluntary Co-operation Programme of the World Meteorological Organization

Institute	Training	Duration	Country
University of Reading	MSc Meteorology	2 years	Burma
University of Reading	MSc Meteorology	2 years	Costa Rica
University of Reading	MSc Meteorology	2 years	Ghana
Reading College of Technology and Meteorological Office	Basic Electronics/ Instruments	21 months	Zambia (2)
Reading College of Technology and Meteorological Office	Basic Electronics/ Instruments	21 months	Kenya (2)
Reading College of Technology and Meteorological Office	Basic Electronics/ Instruments	21 months	Tanzania
Reading College of Technology and Meteorological Office	Basic Electronics/ Instruments	21 months	Botswana
Meteorological Office	IFC + OJT	9 months	Sri Lanka
Meteorological Office	IFC + OJT	10 months	Dominican Republic
Meteorological Office	AMC + OJT	9 months	Kenya
Meteorological Office	AMC + OJT	9 months	Mauritius
Meteorological Office	Visiting Instructor	2 years	China

IFC = Initial Forecasting Course
OJT = On-the-Job Training
AMC = Applied Meteorology Course

External training – academic year 1983/84

	Number of students
Full time:	
First Degree	4
Part time:	
Higher Degree	2
First Degree	1
Block release HNC	30
Other HNC/HTEC	17
ONC/TEC/SCOTEC	9
A-level/HSCE	37
O-level/SCE	2
Miscellaneous	6
Day release (under 18 years)	1
Further education:	
Open University	24
Science and mathematics	2
Others	3
Field study courses	4

PERSONNEL

Staff numbers

At the end of the year 1984 the total number of posts, of all grades, was 2714, a decrease of 42 over the year. The actual strength at the end of the year was:

Deputy Secretary	1
Under Secretary	1
Science Group	
Chief Scientific Officer	2
Deputy Chief Scientific Officer	6
Senior Principal Scientific Officer	30
Principal Scientific Officer	103
Senior Scientific Officer	291
Higher Scientific Officer	465
Scientific Officer	464
Assistant Scientific Officer	710
Administrative Group	
Assistant Secretary	1
Principal	1
Senior Executive Officer	3
Higher Executive Officer	8
Executive Officer	18
Clerical Officer	43
Clerical Assistant	62
Professional and Engineering Group (including Marine Superintendent staff)	
Superintending Engineer	1
Principal Professional and Technology Officer	3
Professional and Technology Officer Grade I	6
Professional and Technology Officer Grade II	16
Professional and Technology Officer Grade III	4
Professional and Technology Officer Grade IV	4
Telecommunications Staff	
Telecommunications Technical Officer Grade A	1
Telecommunications Technical Officer Grade I	9
Telecommunications Technical Officer Grade II	26
Telecommunications Technical Officer Grade III	60
Radio (Meteorological) Technician	40
Signals grades	45
Teleprinter grades	57
Typing and miscellaneous non-industrial grades	125
Security Officers	11
Ocean Weather Service	2
Industrial employees	43
Locally entered staff and employees overseas	52

International co-operation

The following staff were released by the Office during 1984 for service with international and other organizations:

Mr P. R. Cockrell	PSO	Exploration Consultants Ltd
Mr J. Austin	SSO	National Aeronautics and Space Administration
Dr J. C. King	SSO	British Antarctic Survey
Mr G. C. Bridge	SSO	European Space Agency
Mr J. H. Convery	HSO	European Space Agency
Mr A. L. Dexter	HSO	International Aeradio Ltd
Mr J. E. Venables	HSO	British Aerospace
Mr G. D. Frost	TTO I	World Meteorological Organization
Mr M. A. Lane	TTO II	Pan Am World Services Inc.
Mr B. J. Mott	TTO III	Vanuatu Government

Staff returning from international and other secondment appointments were:

Mr D. B. Shaw	PSO	European Centre for Medium Range Weather Forecasts
Mr P. F. Emery	SSO	Vanuatu Government
Mr L. P. Stevens	HSO (T/SSO)	Overseas Administrative Development
Dr N. Butchart	HSO	University of Washington
Mr J. S. Campbell	HSO	European Space Agency
Mr P. F. Lavington	HSO	International Aeradio Ltd
Mr K. Sadler	HSO	International Aeradio Ltd
Mr P. L. Stewart	HSO	International Aeradio Ltd
Mr C. Lakeland	ASO	International Aeradio Ltd

FINANCE

On a fully cost-accounted basis, the total cost of the Office in 1983/84 was £63M, compared with £55.7M in 1982/83. The net cost after earnings from services was £44M compared with £38.3M in 1982/83. This increase was due to the United Kingdom's participation in the European EUMETSAT which is to replace the METEOSAT series of geostationary meteorological satellites. In all other areas the cost of the Office decreased in real terms.

The increase in the proportion of costs attributed to Defence is primarily due to the cessation of public services previously undertaken by meteorological staff at RAF stations and other Defence offices. Since these services were performed in the margins of staff time that had to be available for operational purposes, all that time is now booked to Defence.

The Office's voted expenditure is borne on the Defence Budget to which all receipts from repayment services are credited. Details are shown in the Annual Statement of Defence Estimates. However, for costing purposes, a fully cost-accounted Memorandum Operating and Trading Account is also maintained and the details shown in the tables are drawn from this. The figures include non-voted costs which are not shown in the Defence Votes in Parliamentary Estimates such as pensions, notional insurance, interest on capital and depreciation. By the same token the cost of major items of equipment, which appear in Defence Votes for the year of acquisition, is excluded from the tables, being covered by annual interest and depreciation changes in the usual commercial accounting manner.

The tables include figures for the previous year 1982/83, for comparison, shown on the same basis as the current year figures. Charges for repayment services were increased by 8% on 1 January 1984.

STATEMENT OF THE COST OF METEOROLOGICAL SERVICES FOR THE YEAR ENDED
31 MARCH 1984

	1983/84		1982/83	
	£000	£000	£000	£000
Total meteorological services (cost accounted)		63 021		55 684
Receipts				
Training and secondments	230		274	
Exchequer Depts	859		817	
Non-Exchequer bodies	15 641		14 566	
Industry and Commerce	2 159		1 680	
General public	40		83	
		18 929		17 420
Net expenditure				
Defence	28 419		19 887	
Civil (General Public Services)	13 063		17 048	
International	1 410		921	
Exchequer Depts (Home Defence and Emergency Services)	1 200		408	
		44 092		38 264

METEOROLOGICAL OFFICE RECEIPTS 1983/84 (CASH RECOVERABLE)

	1983/84	1982/83
	£000	£000
Services to:		
Ministry of Agriculture, Fisheries and Food	728	656
Other Exchequer Depts (Department of Environment etc.)	131	137
Civil Aviation Authority	14 264	13 304
Natural Environment Research Council	—	1
Other Non-Exchequer Depts	29	79
EEC	117	222
Public Authorities etc.	209	202
Meteorological Office College (training of meteorologists)	187	209
Secondments to outside bodies	43	65
Comprehensive forecasting for the offshore oil industry	1 314	1 077
Forecasting and climatological services tailored to meet users' special needs:		
Ship Routeing Service	81	106
Gas Boards	185	152
Central Electricity Generating Board	170	174
British Rail	26	23
Independent Broadcasting Authority	293	127
British Broadcasting Corporation	275	105
Press	70	54
Other customers' special services	568	494
Automatic Telephone Weather Services (British Telecom)	239	233
	18 929	17 420

STATEMENT OF OPERATING EXPENSES FOR THE METEOROLOGICAL OFFICE FOR THE YEAR ENDED 31 MARCH 1984

(1) Expenditure	(2) Defence services £000	(3) Exchequer departments non-repayment £000	(4) Public services £000	(5) Inter- national £000	(6) CAA £000	(7) 1983/84 Total £000	(8) 1982/83 Total £000
Customer activity costs							
Direct labour	3 439	180	2 543	388	2 421	8 971	8 093
Other direct costs	125	1	132	153	117	528	423
Indirect costs							
Labour	3 734	85	1 804	78	1 806	7 507	8 188
Others	1 459	40	938	1 370	379	4 186	4 117
North Atlantic Ocean Stations (NAOS) receipts				(1 162)		(1 162)	(1 192)
Depreciation	159	3	67	106	63	398	331
General Meteorological Office costs							
Research	4 377	135	1 723	124	1 690	8 049	8 182
Observations						14 041	9 382
Telecommunications	7 778	505	6 531		4 932	5 193	4 903
Computing						512	1 341
General services							
Central Forecasting Office						2 346	1 342
Technical support						3 877	2 648
Maintenance						1 216	1 680
Training	6 617	230	3 578	225	2 430	1 540	1 137
Administration and personnel						3 188	2 479
Others						913	1 071
Total Meteorological Office management costs	27 688	1 179		1 282	13 838	61 303	54 125
Full cost items							
Share of MOD HQ costs						508	466
Insurance						74	69
Interest on capital	731	21	412	128	426		
Fixed						917	830
Working						219	194
Total Meteorological Office full costs	28 419	1 200	17 728	1 410	14 264	63 021	55 684

TABLE XII – 'WEATHERLINE' FORECASTS

Information Service Centre	Forecast area	Number of calls	
		1983	1984
Aberdeen	Aberdeen, Grampian and Great Glen*	91987	140979
Bangor, N.I.	Northern Ireland	21449	39529
Bedford	Herts, Beds and Inland Essex	284058	277923
Belfast	Northern Ireland	480380	527587
Birmingham	Birmingham and Warwickshire	1020425	1027124
Bishops Stortford	Herts, Beds and Inland Essex	140334	123099
Blackburn	North-west England	330902	316805
Blackpool	North-west England	190068	196239
Bournemouth	Dorset and Hants Coast and Isle of Wight	585592	559779
Bradford	West Yorkshire	184146	185873
Brighton	Sussex and South Kent Coast	773986	695649
Bristol	Somerset and Avon	759813	643601
Cambridge	Herts, Beds and Inland Essex†	204752	285351
Cardiff	Glamorgan Gwent and South Dyfed Coast*	649719	614228
Carlise	Lake District	—	13243
Canterbury	North Kent and Essex Coasts+	377696	414515
Chelmsford	North Kent and Essex Coasts	172812	141142
Cheltenham	South-west Midlands	152544	142180
Chester	Anglesey and North Wales Coast	148965	143853
Colchester	North Kent and Essex Coasts	265293	254547
Colwyn Bay	Anglesey and North Wales Coast	129093	136413
Coventry	Birmingham and Warwickshire	190061	231822
Crewe	Staffordshire and Shropshire	—	1846
Derby	East Midlands	189535	190607
Doncaster	South Yorkshire and Peak District	75277	66573
Dundee	Dundee, Tayside, North Fife and Central Region*	142802	148727
Edinburgh	Edinburgh, South Fife and the Borders*	335122	377123
Exeter	Devon and Cornwall	446572	353558
Glasgow	Glasgow, Argyll and Clyde Valley*	748384	840223
Gloucester	South-west Midlands	238938	250058
Grimsby	Lincolnshire and Humberside	93449	113947
Guildford	London	188079	204276
Hastings	Sussex and South Kent Coast	190315	192182
Hereford	South-west Midlands	114124	105920
High Wycombe	Oxon, Bucks and Berks	234141	213093
Huddersfield	West Yorkshire	119858	141742
Ipswich	East Anglia	293893	273959
Kendal	Lake District	—	18306
Leeds	West Yorkshire	500596	524269
Leicester	East Midlands	349524	348867
Lincoln	Lincolnshire and Humberside	249316	277454
Liverpool	North-west England	323081	339749
Liverpool	Anglesey and North Wales Coast	48378	75112
London	London	3440119	3308689
London	North Kent and Essex Coasts	241962	206022
London	Sussex and South Kent Coast	344189	342436
London	Oxon, Bucks, and Berks	197269	178181
London	Herts, Beds and Inland Essex	190612	171037
London	North Downs and Weald	15111	33476
Lowestoft	East Anglia	58735	63214
Luton	Herts, Beds and Inland Essex	301217	296134
Manchester	North-west England	808195	845490
Manchester	Anglesey and North Wales Coast	71667	90310
Mansfield	East Midlands	2197	11821
Medway	North Kent and Essex Coast	238555	246318
Middlesbrough	North-east England	260436	253892
Milton Keynes	Herts, Beds and Inland Essex	66136	63653

Information Service Centre	Forecast area	Number of calls	
		1983	1984
Newcastle	North-east England	583454	607607
Newport, Gwent	Glamorgan, Gwent and South Dyfed Coast*	134170	127820
Northampton	East Midlands	117890	120224
Norwich	East Anglia	440742	439557
Nottingham	East Midlands	585457	627641
Oxford	Oxon, Bucks and Berks	453685	360805
Peterborough	East Anglia	121962	121761
Plymouth	Devon and Cornwall	714364	791821
Portsmouth	Dorset and Hants Coast and Isle of Wight	500473	434474
Reading	Oxon, Bucks and Berks	500716	537054
Sheffield	South Yorkshire and Peak District	556990	486700
Shrewsbury	Staffordshire and Shropshire	—	23985
Southampton	Dorset and Hants Coast and Isle of Wight	757320	715114
Southend	North Kent and Essex Coasts	275256	216545
Southport	North-west England	60321	67504
Stafford	Staffordshire and Shropshire	—	6461
Stoke on Trent	Staffordshire and Shropshire	—	4019
Swansea	Glamorgan, Gwent and South Dyfed Coast	3522	24488
Swindon	Avon and Somerset	59217	58495
Torquay	Devon and Cornwall	166210	170468
Tunbridge Wells	London	130480	115202
TOTAL		24434088	24337490

* Area extended during 1984

† Includes forecasts for East Anglia

+ Includes forecasts for Sussex and South Kent Coast