

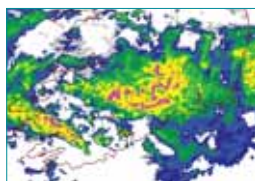
Monthly Weather Bulletin

No. 186

OCTOBER 2001



INSIDE



**Torrential rain in
County Waterford
on 20th-page 2**

Wind & Elements	4
Marine & Pressure	5
Agmet /Lab.....	6
Diary	8
Rainfall	10
Temperature ...	12

**Warmest October
since 1969 in
places**

Sunshine	14
World Weather..	15
Feature	16

Produced by Met Éireann,
Glasnevin Hill, Dublin 9.
Annual subscription £60 (£48)



For more information-
tel: +353-1-8064260
fax: +353-1-8064216
climat.enquiries@met.ie
www.met.ie/climate

Notes on the tables and map
showing location of stations
appear in each January issue



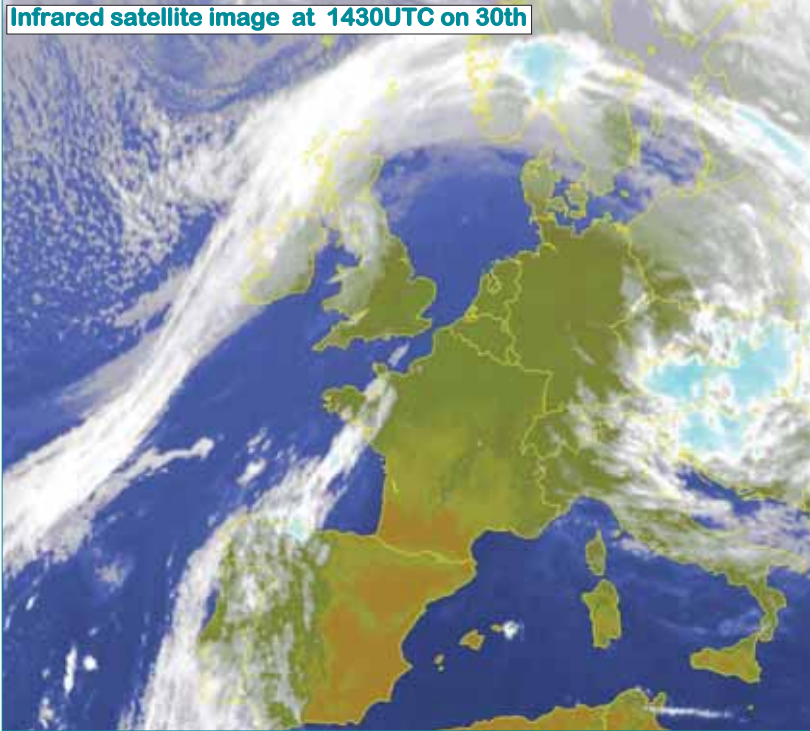
Early morning sunshine at low tide at Bull Island, north of Dublin: October sunshine totals were above normal except in the north.

WARMER, SUNNIER THAN NORMAL EVERYWHERE; WET IN SOUTHEAST

Summary: Mean air temperatures for October were around two degrees higher than normal; values of between 12°C and 13°C generally were close to the normal means for September at many stations. Rosslare's mean temperature of 13.5°C equalled the previous warmest October in its 45-year history, while at a number of other stations it was the warmest October since 1969. Mean minimum values were particularly high, with only 2 to 5 ground frosts during the month at inland stations compared with the normal range for October in these areas of 4 to 7

ground frosts. Rainfall totals were above normal in the south and southeast of the country, but they were near or below normal in the north. Kilkenny's total of 146mm was its highest for October since 1977, but it was the eighth month so far this year that was drier than normal at Malin Head. Heavy rain fell during the periods 4th to 7th, 14th to 20th and 22nd to 23rd. Sunshine totals were above normal everywhere except in the north. It was the sunniest October for between 5 and 8 years at most stations and the sunniest since 1979 at Belmullet.

Infrared satellite image at 1430UTC on 30th



Above:

After some dry, sunny days between the 27th and 29th, a cold front on the 30th brought rain to all areas.

1st to 8th: Deep depressions close to the country brought some heavy rain and strong winds, while temperatures were well above normal. Showers, some thundery, during the first three days of the month

were followed by bands of frontal rain, giving heavy falls in many places between the 4th and 7th. Winds during this period were mostly fresh to strong, between southerly and westerly in direction, with gale gusts at all stations on the 1st and 6th.

9th to 13th: Pressure rose over Ireland to give mostly dry, misty weather with variable sunshine. Both daytime and nighttime temperatures were well above normal, especially on the 11th and 12th. Weak fronts gave some showery rain at times, but amounts were generally small.

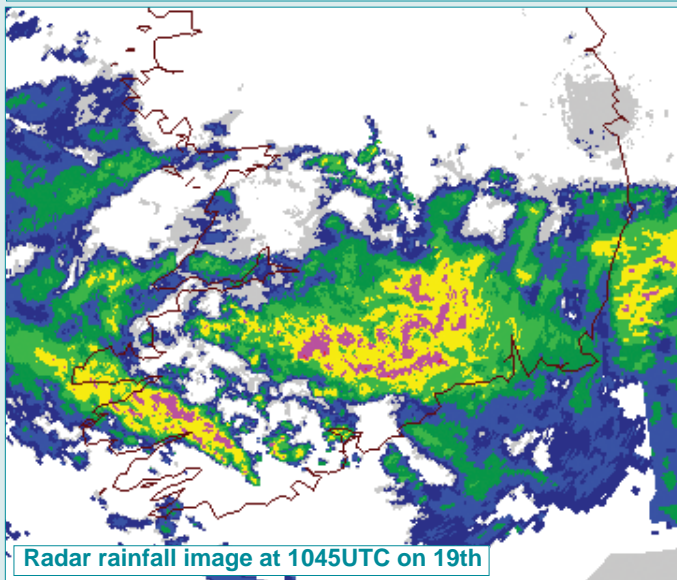
14th to 26th: Apart from a short spell of relatively calm and foggy weather on the 20th and 21st, this period brought a return to wet and sometimes windy weather as frontal systems brought some heavy falls, especially in the south and west. Temperatures remained above normal throughout most of the period.

27th to 31st: Generally dry and sunny,

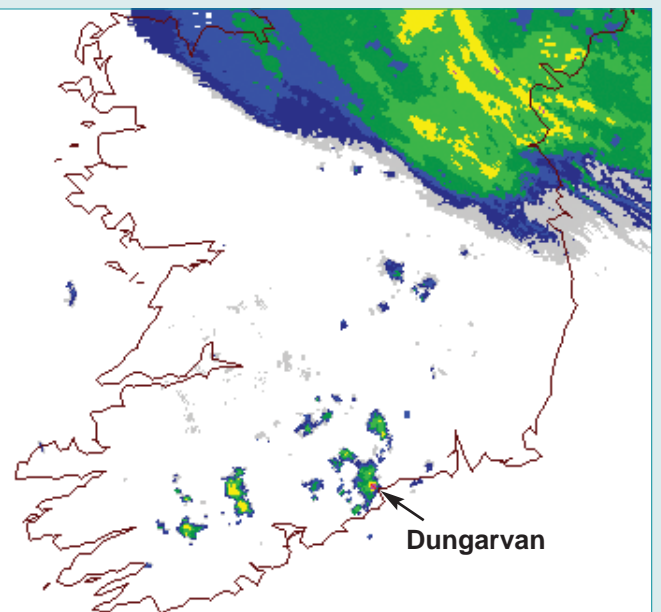
Localised heavy rain in County Waterford on 19th/20th

Frontal systems associated with a depression to the southwest of Ireland brought spells of sometimes heavy rain to all areas on the 19th and 20th (see radar rainfall charts below). At Dungarvan (Carriglea), Co. Waterford, however, frontal rain early on the 20th was followed by a very localised downpour, which gave continuous heavy rain for five or six hours at the station up to midday. In the 24-hour period up to 0900UTC on the 20th, a total of 91.8mm was recorded, with another 32mm measured over the next three hours. This was the highest daily fall in any month since records began in the area in 1963 and contributed to the monthly total there of 271mm- the station's highest October total on record. Not surprisingly, the area in the vicinity of the station was flooded, but other stations within ten miles of Dungarvan measured only one fifth of Carriglea's total.

0.1 0.2 0.6 1.5 3.7 9.2 22 55
mm/hour



Radar rainfall image at 1045UTC on 19th

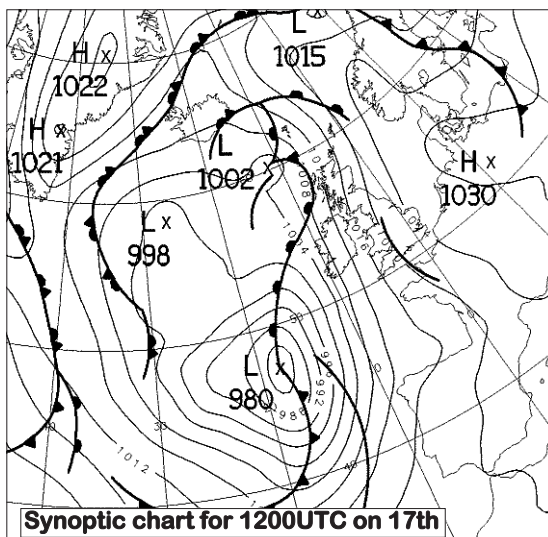
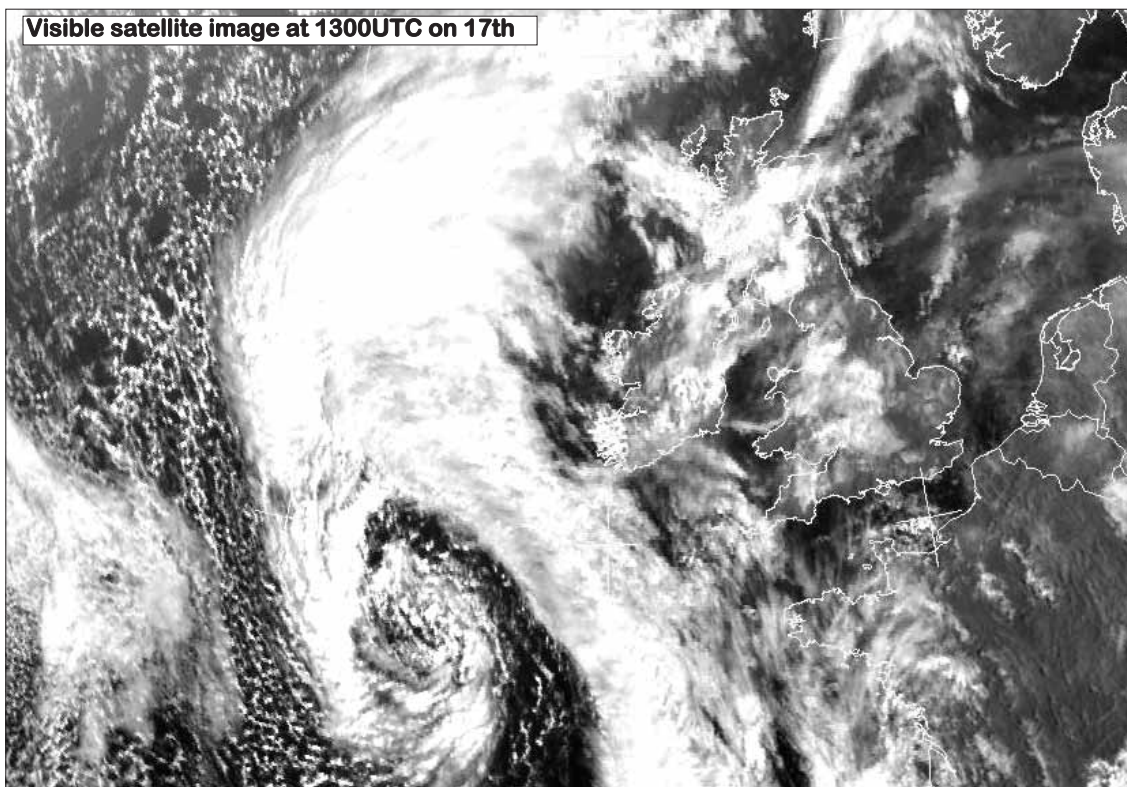


Radar rainfall image at 0830UTC on 20th

Below and right

A very slow-moving depression to the southwest of Ireland between the 17th and 20th brought spells of heavy rain at times, accompanied by strong to gale force south to southeasterly winds.

Visible satellite image at 1300UTC on 17th



Synoptic chart for 1200UTC on 17th

although a cold front on the 30th brought increased cloud and some heavy rain. Daytime temperatures were still close to normal, but temperatures fell sharply on some nights, resulting in the first ground frosts of the season at several stations.

Wind and elements: Mean windspeeds for the month were between 8 and 12 knots (9 and 14m.p.h.) at most stations, but between 15 and 18 knots (17 and 21m.p.h.) at coastal stations in the north and south, close to normal generally. The strongest winds of the month at most stations were recorded on the 1st and in the periods 5th to 6th and 16th to 18th. Malin Head measured the highest gust of the month, 58 knots (67m.p.h.) on the 17th. Thunder was more frequent than normal during the month; Valentia Observatory observed thunder on five days compared with its normal value of one during October. It was most widespread on the 1st and in the periods 6th to 7th and 15th to 16th. Hail was recorded on the 1st, 15th and 18th. Fog was widespread on the 14th, in the period 21st to 22nd and on the 28th.



All the latest official weather information, updated 3 times a day, every day.

Call 1550 123
plus the number for your area:

Munster 850
Leinster 851
Connacht ... 852
Ulster 853
Dublin 854
Sea Area 855

**WEATHERDIALFAX**

Just call this number from any fax 'phone 1570 131 838

For detailed and regular updated forecasts, charts and other products.

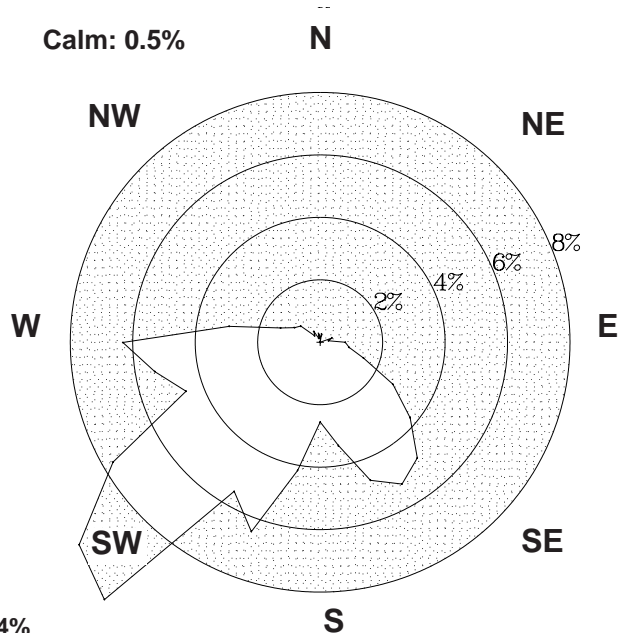
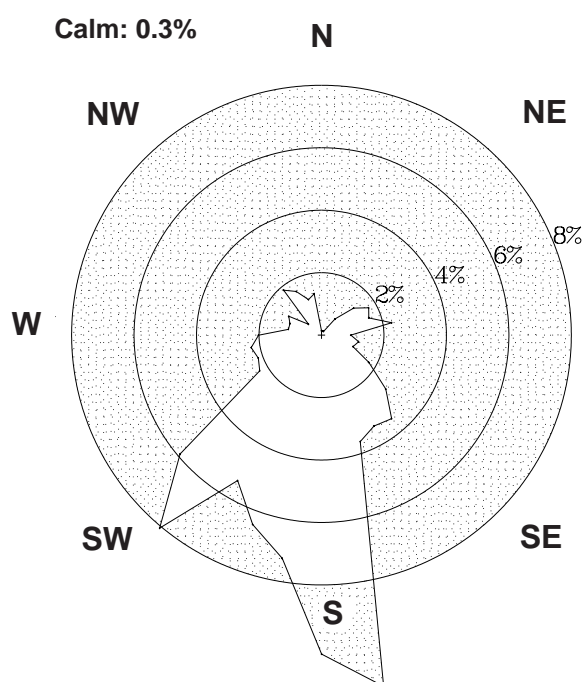
For main product list enter Product Code 0000

Calls cost per minute: 57p voice, 98p fax (incl. VAT) An iTouch service. Tel: (01) 4112021

County / Station	WIND (KNOTS)										ELEMENTS				
	Mean speed	Max. 10-min. mean dir.	Max. 10-min. mean speed	Max. 10-min. mean date/hour	Max. Gust dir.	Max. Gust speed	Max. Gust date/time	Days with gales	Days with gale gusts	Hours with gale gusts	Snow	No. of Days with Snow Lying	Hail	Thunder	Fog
CO. CLARE SHANNON AIRPORT	10.0	130°	29	17/18	170°	45	17/1759	0	7	23	0	0	0	1	4
CO. CORK CORK AIRPORT	10.9	210°	32	25/11	150°	50	18/0649	0	12	70	0	0	1	2	13
CO. DONEGAL MALIN HEAD	18.2	120°	42	17/21	120°	58	17/2035	6	22	248	0	0	0	0	0
CO. DUBLIN CASEMENT AERODROME	12.4	210°	31	1/11	220°	49	1/0958	0	10	67	0	0	0	1	3
		200°	31	25/13											
DUBLIN AIRPORT	11.4	230°	32	1/14	230°	47	1/1209	0	10	42	0	0	0	0	3
CO. KERRY VALENTIA OBSERVATORY	10.4	140°	36	17/19	130°	56	17/1504	1	10	78	0	0	0	5	2
CO. KILKENNY KILKENNY	8.2	180°	28	6/ 9	200°	40	6/1429	0	5	27	n/a	0	n/a	n/a	5
					180°	40	16/1348								
CO. MAYO BELMULLET	12.4	230°	36	1/17	220°	53	1/2036	3	14	147	0	0	2	1	1
CONNAUGHT AIRPORT	10.9	170°	28	6/13	220°	46	1/1343	0	7	47	0	0	0	0	14
CO. MONAGHAN CLONES	9.3	170°	27	6/14	170°	41	6/1333	0	3	14	n/a	0	n/a	n/a	4
CO. OFFALY BIRR	8.2	200°	24	6/14	220°	39	25/1113	0	5	12	n/a	0	n/a	n/a	5
		150°	24	17/20											
CO. WESTMEATH MULLINGAR II	7.9	220°	22	1/14	190°	38	6/1551	0	3	6	n/a	0	n/a	n/a	5
		180°	22	6/16											
CO. WEXFORD ROSSLARE	11.8	010°	27	7/15	210°	56	5/1911	0	14	110	0	0	0	1	5
		200°	27	25/11											

Valentia Observatory

Dublin Airport

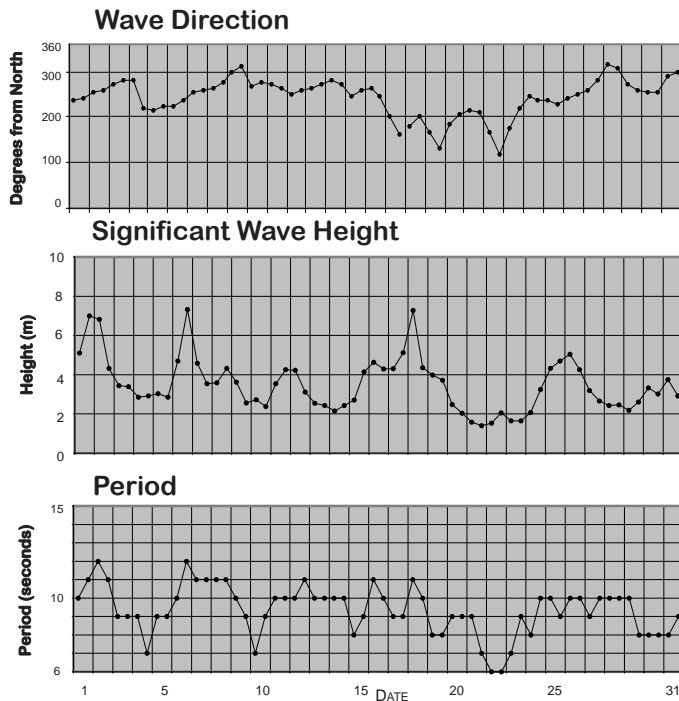


0 1 2 3 4%

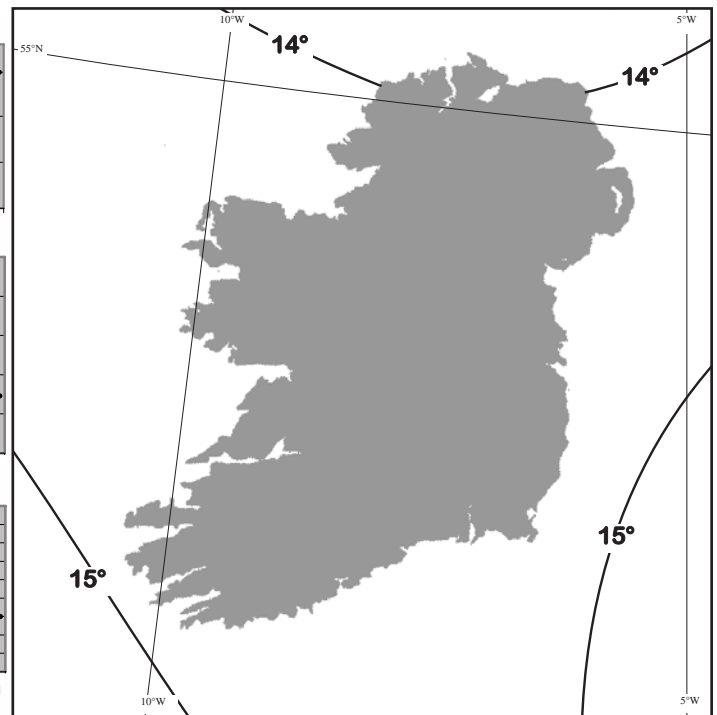
FREQUENCY OF WIND DIRECTION

SEA TEMPERATURES

Sea temperatures normally fall by around two degrees during October, but due to the mildness of this month's weather, they fell by less than a degree during this month. At mid-month they ranged from just under 14°C in the north to almost 15°C near southwest and southeast coasts, up to two degrees higher than normal. Malin Head's mean sea temperature of 13.3°C was almost one degree above normal.



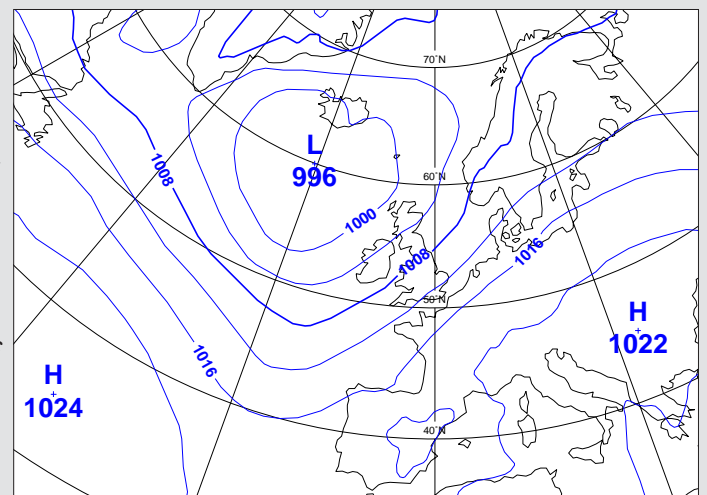
Wave conditions at 52.5°N, 12°W based on WAM model



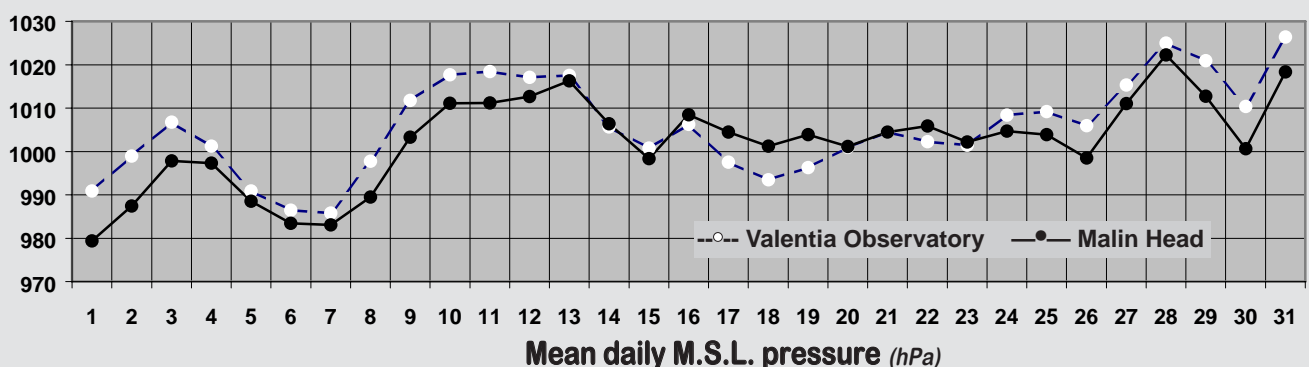
Sea Temperatures (°C) around mid-month

MEAN ATMOSPHERIC PRESSURE

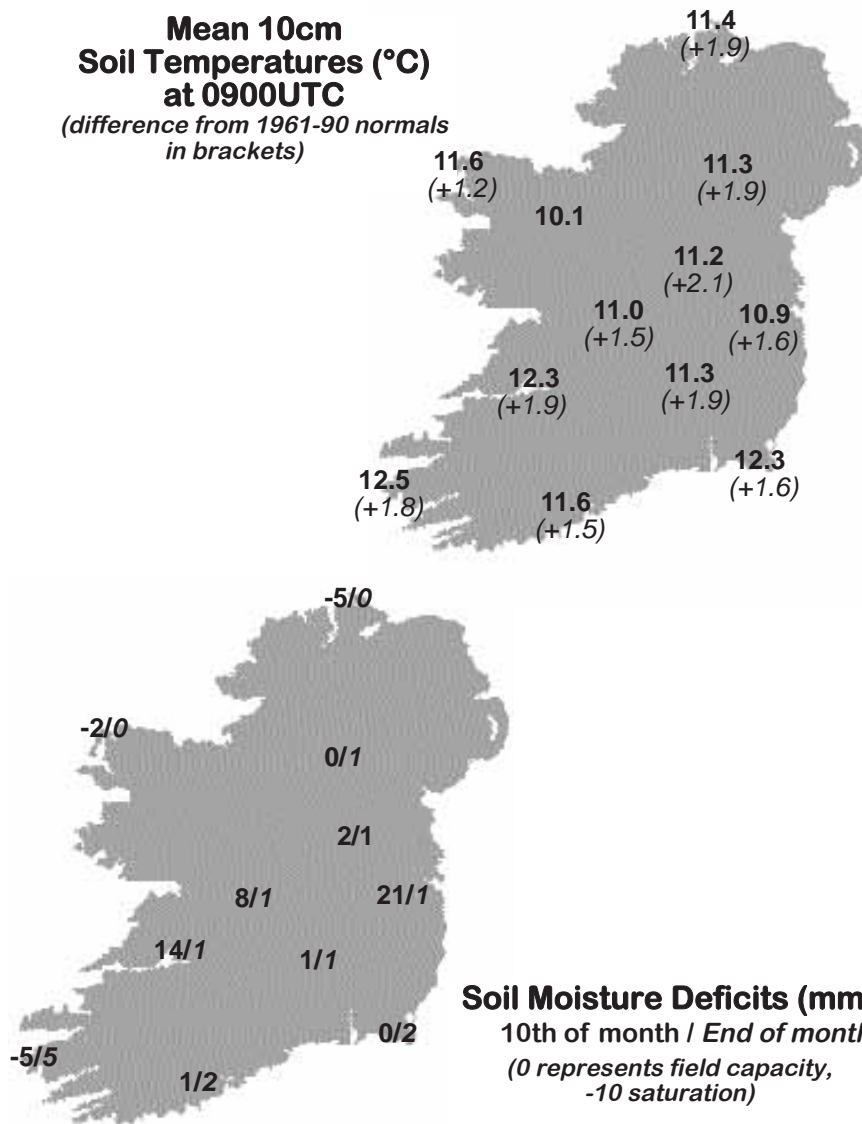
Mean sea level pressure values for the month varied between 1003hPa in the north and northwest and 1007hPa in the southeast, between 7 and 9hPa below normal for October. The month began with low pressure systems over or near the country on both the 1st and 6th/7th; Rosslare measured the lowest pressure of the month, 972.0hPa on the 7th. Pressure was closer to normal during the second half of the month, rising above normal as an anticyclone approached the southwest on the 30th and 31st. The highest pressure value of the month, 1037.6hPa, was recorded at Valentia Observatory on the 31st.



The above map is based on monthly means of 1200 UTC values



Mean 10cm Soil Temperatures (°C) at 0900UTC (difference from 1961-90 normals in brackets)

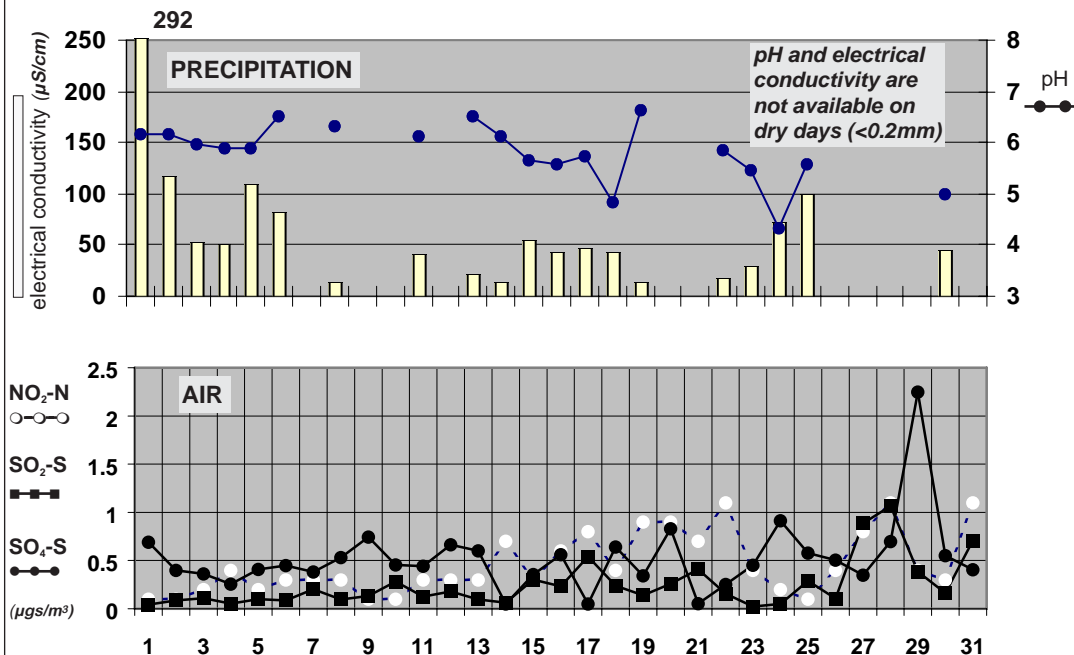


Soil Moisture Deficits (mm) 10th of month / End of month (0 represents field capacity, -10 saturation)

Soil Temperatures at 0900UTC

County/ Station	°C		
	10cm	20cm	30cm
CO. CLARE			
SHANNON AIRPORT	12.3	12.9	13.7
CARRON	12.2		13.1
CO. CORK			
FERMOY (MOORE PARK)	12.2	12.3	13.0
CORK AIRPORT	11.6	12.3	13.8
SHERKIN ISLAND	13.8		14.5
BALLINCURRIG (PEAFIELD)	11.1	11.9	12.4
CO. DONEGAL			
MALIN HEAD	11.4	11.9	13.1
CO. DUBLIN			
DUBLIN AIRPORT	11.1	11.6	12.3
CASEMENT AERODROME	10.9	11.8	12.6
CO. KERRY			
VALENTIA OBSERVATORY	12.5	13.3	14.2
CO. KILKENNY			
KILKENNY	11.3	12.3	13.2
CO. LEITRIM			
BALLINAMORE	11.3	11.9	12.9
CO. LIMERICK			
MOUNT RUSSELL	10.9	11.8	
CO. LOUTH			
ARDEE (BOHARNAMOE)	12.3	12.9	12.8
CO. MAYO			
BELMULLET	11.6	12.2	13.5
STRAIDE	11.8		
CONNAUGHT AIRPORT	10.1	10.8	11.4
CO. MEATH			
WARRENSTOWN	11.0	11.8	12.9
CO. MONAGHAN			
CLONES	11.3	12.0	12.7
CO. OFFALY			
BIRR	11.0	12.0	13.4
CO. TIPPERARY			
FETHARD (PARSONSHILL)	11.5	12.2	
CO. WATERFORD			
DUNGARVAN (CARRIGLEA)		12.6	13.3
CO. WESTMEATH			
MULLINGAR II	11.2	11.9	13.3
CO. WEXFORD			
JOHNSTOWN CASTLE	12.3	12.8	13.1
ROSSLARE	12.3	13.0	14.3
CLONROCHE	12.0	12.6	13.5
JOHN F. KENNEDY PARK	11.9	12.6	14.3

Chemical Analysis of Precipitation and Air Samples at Valentia Observatory



Acid rain occurs when pollutants combine with moisture in the air to form sulphuric or nitric acid. pH is the simplest way of measuring the acidity of precipitation. Usually pH of 7.00 is considered neutral but this is not the case in rainfall samples. Pure water in the atmosphere has an equilibrium pH value of 5.65 at 20°C owing to carbon dioxide in the air dissolving to form carbonic acid. Any value below pH 5.65 is considered acid while any value above is considered alkaline.

Sulphur dioxide and sulphate in air contribute to the formation of sulphuric acid; nitrate in air contributes to the formation of nitric acid.

Conductivity measures the total ion activity in the rainfall, i.e. the higher the conductivity the greater the number of ions present.

10-DAY VALUES FOR SELECTED AGROMETEOROLOGICAL STATIONS		RAINFALL				TEMPERATURE										SUNSHINE		mean wind speed (m/s) 2m a.g.l. P.E. (Penman) (mm)						
Station	period	amount	% of average	rain days	wet days	mean max.	mean min.	mean daily	diff. from average	lowest min.	date	days with air frost	degree days > 4.4°C	degree days > 10.0°C	lowest "grass-min."	date	days with ground frost	mean 10cm at 0900h	mean 30cm at 0900h	total no. of hours	% of average			
Co. Cork Fermoy	1-10	33.1	-	8	6	16.3	9.7	13.0	-	4.8	8	0	86	33	0.8	8	0	12.6	13.4	-	-	2.1	-	
	11-20	60.6	-	8	6	15.7	10.2	13.0	-	7.0	16	0	85	31	3.2	16	0	13.2	13.6	-	-	2.6	-	
	21-end	26.5	-	7	5	14.5	6.3	10.4	-	2.4	27	0	68	20	-0.2	28	1	10.8	12.0	-	-	2.2	-	
	month	120.2	120	23	17	15.5	8.7	12.1	1.6	2.4	27	0	240	83	-0.2	28	1	12.2	13.0	-	-	2.3	-	
Co. Donegal Glenties	1-10	89.9	-	10	8	15.1	10.6	12.9	-	8.3	8	0	84	29	6.1	8	0	-	-	-	-	-	-	
	11-20	18.5	-	7	4	16.2	10.1	13.2	-	6.6	16	0	88	33	3.8	15	0	-	-	-	-	-	-	
	21-end	33.1	-	10	7	13.9	7.6	10.8	-	2.5	22	0	71	18	-1.1	21	3	-	-	-	-	-	-	
	month	141.5	79	27	19	15.0	9.4	12.2	2.2	2.5	22	0	243	80	-1.1	21	3	-	-	-	-	-	-	
Co. Kerry Ardfert	1-10	35.8	-	10	6	15.8	10.9	13.4	-	8.2	8	0	89	34	4.2	8	0	-	-	41.9	-	-	-	
	11-20	50.8	-	8	7	16.1	10.4	13.3	-	7.4	16	0	88	34	5.0	20	0	-	-	39.6	-	-	-	
	21-end	33.6	-	6	5	14.4	7.9	11.2	-	2.3	28	0	75	20	0.1	28	0	-	-	53.9	-	-	-	
	month	120.2	-	24	18	15.4	9.7	12.6	1.6	2.3	28	0	253	89	0.1	28	0	-	-	135.4	-	-	-	
Co. Leitrim Ballinamore	1-10	82.0	-	10	7	15.4	9.8	12.6	-	8.0	7	0	82	27	6.0	7	0	11.9	13.5	26.3	-	-	-	
	11-20	32.4	-	10	8	15.3	10.0	12.7	-	5.5	16	0	82	28	3.6	16	0	12.2	13.4	17.6	-	-	-	
	21-end	40.5	-	10	5	13.6	6.2	9.9	-	0.4	28	0	62	14	-0.4	28	1	9.9	11.9	29.2	-	-	-	
	month	154.9	127	30	20	14.7	8.6	11.7	2.0	0.4	28	0	226	70	-0.4	28	1	11.3	12.9	73.1	97	-	-	
Co. Louth Ardee	1-10	30.7	-	9	5	16.9	10.3	13.6	-	7.4	4	0	92	37	3.4	2	0	12.5	13.3	-	-	-	-	
	11-20	32.6	-	7	6	16.6	11.2	13.9	-	7.6	16	0	95	40	2.6	11	0	13.1	13.6	-	-	-	-	
	21-end	23.4	-	8	6	14.9	7.3	11.1	-	-0.1	28	1	75	22	-2.2	28	1	11.2	11.7	-	-	-	-	
	month	86.7	107	24	17	16.1	9.5	12.8	2.8	-0.1	28	1	262	99	-2.2	28	1	12.2	12.8	-	-	-	-	
Co. Waterford Dungarvan	1-10	60.2	-	9	6	16.9	10.7	13.8	-	4.6	8	0	94	40	4.1	8	0	-	13.9	45.7	-	-	2.5	-
	11-20	159.9	-	9	9	16.2	11.3	13.8	-	7.7	20	0	93	38	5.1	20	0	-	14.1	17.8	-	-	2.5	-
	21-end	50.5	-	7	6	15.5	7.3	11.4	-	2.0	22	0	78	25	1.7	22	0	-	12.1	49.4	-	-	2.0	-
	month	270.6	-	25	21	16.2	9.7	13.0	2.1	2.0	22	0	266	104	1.7	22	0	-	13.3	112.9	131	-	2.4	16
Co. Wexford Johnstown Castle	1-10	70.6	-	8	5	16.5	11.3	13.9	-	8.0	8	0	95	39	6.0	8	0	12.8	13.6	39.4	-	-	1.5	-
	11-20	45.6	-	8	7	16.3	12.2	14.3	-	10.1	16	0	98	42	7.1	20	0	13.5	13.8	19.9	-	-	1.6	-
	21-end	16.9	-	6	5	15.3	9.2	12.3	-	5.8	22	0	87	29	1.7	22	0	10.9	12.0	43.4	-	-	1.4	-
	month	133.1	123	22	17	16.0	10.8	13.4	2.6	5.8	22	0	280	111	1.7	22	0	12.3	13.1	102.7	113	-	1.5	13

MEASURED POTENTIAL EVAPOTRANSPIRATION (P.E.) AND SOIL MOISTURE

SEE BACK PAGE OF JANUARY ISSUE FOR NOTES ON THE DATA

County/ Station	Period	P.E. (mm) Amount	Soil Moisture (mm)		
			Deficit	Accumulated	Surplus
Co. Dublin Kinsealy	1-10	11.7	-	19	39
	11-20	14.4	-	9	10
	21-end	4.4	-	5	4
	month	30.5			
Co. Kerry Valentia Obs.	1-10	5.9	-	0	48
	11-20	17.2	-	0	73
	21-end	11.0	-	0	39
	month	34.1			
Co. Leitrim Ballinamore	1-10		not available		
	11-20	12.3	-	0	20
	21-end		not available		
	month				
Co. Wexford Johnstown Castle	1-10	15.5	-	0	55
	11-20	18.9	-	0	27
	21-end	2.4	-	0	15
	month	36.8			

GLOBAL SOLAR RADIATION (MJ/sq. m.)

P.E. (Penman)

County/ Station	10-day totals			total for month	total for month(mm)
	1-10	11-20	21-end		
Co. Donegal Malin Head	58.30	46.36	41.59	146.25	32
Co. Dublin Dublin Airport	72.48	55.99	61.19	189.66	29
Co. Kerry Valentia Obs.	79.86	58.43	63.63	201.92	27
Co. Kilkenny Kilkenny	70.80	52.22	62.70	185.72	23
Co. Mayo Belmullet	65.83	55.10	60.38	181.31	23
Co. Monaghan Clones	n/a	44.31	50.54	n/a	21
Co. Offaly Birr	71.23	60.25	60.75	192.23	22

Monday 1st: A depression of 972hPa passed to the northwest of the country as Ireland lay in a strong west to southwesterly airflow. Showers fell throughout the day, heaviest in the west with thunderstorms in places. Most areas had long sunny periods also, especially in the east and southeast. Winds were strong to gale force overland, reaching strong gale force in gusts.

Rainfall: 0 to 3mm generally, 14mm at Connaught Airport

Temperature: max. 14°C to 18°C, min. 10°C to 14°C, ground temperatures 8°C to 12°C

Sunshine: 3 to 9 hours, sunniest in east

Tuesday 2nd: A depression over Scotland maintained a strong southwesterly airflow over Ireland. Mild and windy with scattered showers, some heavy, mostly along Atlantic coastal areas. Long sunny periods also. Afternoon temperatures were near or above normal. Southwesterly winds were strong to gale force in northern areas, gradually easing in the evening.

Rainfall: 0 to 3mm generally, 8mm at Clones

Temperature: max. 15°C to 18°C, min. 8°C to 12°C, ground temperatures 9°C to 11°C

Sunshine: 3 to 9 hours, sunniest in southeast

Wednesday 3rd: An unstable westerly airflow persisted over Ireland, while a showery trough crossed the north of the country. Mild overnight with scattered showers and clear spells; showers continued during the daytime, merging to give more continuous spells of rain in the north. Southwest to westerly winds were fresh to strong and gusty at times, strongest in the north.

Rainfall: 0 to 4mm generally, 19mm at Malin Head

Temperature: max. 13°C to 18°C, highest in southeast, min. 9°C to 12°C, ground temperatures 8°C to 11°C generally, 3°C at Kilkenny

Sunshine: 1 to 8 hours, sunniest in southeast

Thursday 4th: A strong southwesterly airflow over Ireland during the period. Frontal troughs approached the southwest during the afternoon. Mainly dry at first, but rain spread slowly northeastwards during the afternoon, heavy in the south and west, but significantly less in other areas. Very mild throughout. Light south to southwesterly winds at first reached gale force in places by evening.

Rainfall: 10 to 18mm in south and southwest, 0 to 7mm elsewhere

Temperature: max. 13°C to 16°C, coolest in north, min. 8°C to 12°C, ground temperatures 3°C to 7°C inland

Sunshine: nil to 2 hours

Friday 5th: A southerly airflow over the country as a complex area of low pressure moved over Ireland, with showery troughs following. Most areas had showers or longer spells of rain or drizzle, heaviest in the south. Strong to gale force winds at first, moderating during the evening. Continuing mild.

Rainfall: 20 to 27mm in south and west, 3 to 12mm elsewhere

Temperature: max. 14°C to 18°C, min. 9°C to 12°C, ground temperatures 4°C to 8°C inland

Sunshine: trace to 3 hours

Saturday 6th: A deep depression to the west moved northwards, maintaining a strong south to southwesterly airflow. Heavy thundery showers in the west and southwest, but these were much lighter and more scattered further east. Showers became less frequent everywhere in the evening as winds eased.

Rainfall: less than 1mm in east and north, 12 to 14mm in west and southwest, 27mm at Connaught Airport

Temperature: max. 14°C to 18°C, min. 9°C to 12°C, ground temperatures 6°C to 8°C inland

Sunshine: 2 to 6 hours

Sunday 7th: A rapidly deepening depression crossed Ireland during the day. Mild with scattered showers overnight, some heavy and thundery, particularly in the south. Around midday a band of very heavy rain moved into the southeast and pushed northwards during the afternoon, giving heaviest falls in the southeast and east. Strong and gusty southerly or cyclonic variable winds.

Rainfall: 1 to 8mm many stations, >20mm in Leinster, 47mm at Rosslare

Temperature: max. 12°C to 16°C, coolest in northwest, min. 8°C to 10°C, ground temperatures 5°C to 7°C inland

Sunshine: nil to 5 hours, sunniest in southwest

Monday 8th: The intense depression moved towards northern England, allowing a west to northwesterly airflow to develop over Ireland. Showers became more frequent during the day, some of which were thundery, with sunny periods between the showers.

Rainfall: nil to 4mm

Temperature: max. 13°C to 17°C, min. 7°C to 11°C, ground temperatures 1°C to 5°C inland

Sunshine: nil at Malin Head, 4 to 9 hours generally

Tuesday 9th: A slackening northwesterly airflow covered Ireland. A weak ridge of high pressure at first was followed by a cold front moving southeastwards later. Isolated showers at first, becoming more widespread, followed by longer spells of rain in the afternoon. Sunny spells in the southeast but relatively dull elsewhere.

Rainfall: trace to 3mm

Temperature: max. 13°C to 17°C, min. 9°C to 12°C, ground temps. 6°C to 11°C

Sunshine: 1 to 3 hours generally, 8 hours at Malin Head

Wednesday 10th: Light rain in the west pushed slowly eastwards, clearing the southeast coast in the early afternoon. Mild throughout with a little afternoon sunshine except in the southeast. South to southwesterly winds veered westerly as the rain cleared and fell light.

Rainfall: trace to 6mm

Temperature: max. 14°C to 18°C, min. 9°C to 13°C, ground temperature down to 3°C at Kilkenny

Sunshine: 1 to 5 hours

Thursday 11th: Light rain spread from the west early, becoming very light and patchy in the eastern half of the country. Mist and drizzle near the south and west coasts, but elsewhere it became sunny and warm for the time of year. Mainly southerly winds throughout, strong on the west and north coasts.

Rainfall: trace to 4mm

Temperature: max. 16°C to 21°C, min. 9°C to 14°C, ground temps. 8°C to 14°C

Sunshine: <1 hour in south and northwest, 6 to 9 hours in midlands and east

Friday 12th: The south to southwesterly airflow over Ireland moderated, as a cold front drifted slowly southeastwards. Rain or drizzle in the west and north for much of the day, occasionally heavy, but elsewhere there were sunny periods, particularly in the east, with above normal temperatures.

Rainfall: less than 2mm generally, 10mm at Connaught Airport

Temperature: max. 14°C to 21°C, coolest in northwest, min. 10°C to 14°C, ground temperatures 6°C to 13°C

Sunshine: nil to 5 hours, sunniest in east

Saturday 13th: High pressure south of Ireland gave a mostly dry, warm day with light southwesterly winds. A weak frontal system near the south coast gave some patchy light rain for a time. Sunny in the north and northwest.

Rainfall: less than 1mm

Temperature: max. 13°C to 19°C, warmest in east, min. 8°C to 13°C, ground temperatures 4°C to 7°C inland

Sunshine: 1 to 5 hours generally, 8 hours at Belmullet

Sunday 14th: An occlusion over the eastern half of the country gave a cloudy, misty day everywhere with outbreaks of rain at times, heaviest over south Leinster. Light southerly winds at first freshened by evening.

Rainfall: 1 to 4mm generally, 15mm at Kilkenny

Temperature: max. 14°C to 16°C, min. 10°C to 13°C, ground temperatures 6°C to 8°C inland

Sunshine: nil or trace

Monday 15th: Frontal systems moved eastwards over Ireland early in the day. Mild overnight with widespread rain and drizzle, some heavy. A cold front brought a spell of heavy rain during the morning. Clearer weather with showers in the afternoon, some heavy and thundery in the west. Light to moderate southeasterly winds veered southwesterly and strengthened.

Rainfall: 2 to 6mm generally, 18mm in southwest and west

Temperature: max. 13°C to 15°C, min. 5°C to 11°C, ground temperatures 0°C to 4°C inland

Sunshine: 2 to 7 hours

Tuesday 16th: A strong southerly airflow over Ireland as frontal troughs approached the west during the afternoon and early evening. Showers or longer spells of rain during the day, with thunder in the west during the morning. Generally dull with temperatures around normal. Winds south to southeasterly, fresh to strong with gale gusts in many areas.

Rainfall: less than 1mm in southeast and east, 16mm in south and southwest

Temperature: max. 13°C to 16°C, min. 6°C to 13°C, ground temps. over 3°C

Sunshine: nil to 4 hours

Wednesday 17th: A strong southerly airflow over the country. A frontal trough approached the southwest coast during the evening. Showers or spells of rain in many areas, some heavy or thundery. Remaining very mild. Strong south to southeasterly winds throughout with some severe gusts.

Rainfall: less than 2mm in north and northwest, 3 to 14mm elsewhere

Temperature: max. 15°C to 19°C, min. 11°C to 13°C, ground temperatures over 9°C

Sunshine: 1 to 4 hours

Thursday 18th: Rain cleared northwards early, followed by some locally heavy and thundery showers. Mild throughout. Southeasterly winds were generally light, but stronger in the southwest.

Rainfall: trace to 4mm generally, up to 23 mm at Valentia Observatory

Temperature: max. 14°C to 17°C, min. 9°C to 14°C, ground temperatures over 7°C

Sunshine: 4 to 7 hours generally, 2 hours at Kilkenny

Friday 19th: A large depression to the southeast of Ireland maintained a south to southeasterly airflow over Ireland as a frontal trough approached the southwest. Dry at first, but rain, heavy at times, spread to all but northern areas during the day. Generally dull but mild. South to southeasterly winds were light to moderate initially but strengthened to gale force during the day.

Rainfall: nil to 3mm northern areas, 8 to 15mm in midlands, south and southwest

Temperature: max. 13°C to 17°C, min. 8°C to 13°C, ground temperatures 3°C to 7°C inland

Sunshine: nil to 2 hours

Saturday 20th: A slack airflow covered Ireland as a depression of 998hPa in the north Irish Sea tracked northwestwards. Cloudy and dry at first with fog in places, becoming more widespread in midland areas during the morning. Rain, heavy at times, in northern areas and along the east coast, with scattered showers elsewhere. Mild with several hours sunshine in most places.

Rainfall: trace to 5mm

Temperature: max. 12°C to 17°C, min. 4°C to 11°C, mildest in southeast, ground temperatures down to 0°C at Mullingar

Sunshine: 1 hour at Malin Head, 4 to 8 hours elsewhere

Sunday 21st: A weak ridge of high pressure covered Ireland with low pressure over Britain. Frontal troughs approached from the southwest. Mostly dry but with widespread dense fog in many areas during the day; much clearer in the southwest and northwest. Little or no wind.

Rainfall: less than 1mm

Temperature: max. 11°C to 17°C, min. 2°C to 7°C, ground temperatures down to -2°C at Mullingar

Sunshine: 6 to 9 hours near south and west coasts, nil to 3 hours many places

Monday 22nd: Widespread mist and fog overnight and during the morning, with ground frost in places. Patchy light rain in midland and eastern areas, becoming heavy over parts of the south and southeast later. Winds generally light and variable in direction, becoming light to moderate southeasterly.

Rainfall: 1 to 4mm generally, 13 to 15mm in south and southeast

Temperature: max. 11°C to 16°C, min. 0°C to 11°C, mildest in north, ground temperatures down to -2°C at Birr

Sunshine: nil to 3 hours

Tuesday 23rd: Widespread rain or heavy showers overnight, with thunder in parts of the south. Showers became more scattered by midday, but further heavy rain or showers spread into the southwest later. Mild with some sunshine between the showers. Light east to southeasterly winds veered southwesterly.

Rainfall: 2 to 6mm generally, 12 to 14mm in southwest and southeast

Temperature: max. 12°C to 16°C, min. 10°C to 12°C, ground temperatures over 6°C

Sunshine: nil to 5 hours

Wednesday 24th: A showery trough crossed Ireland during the day as a frontal system approached from the southwest. Mild overnight with showers or longer spells of rain, some heavy and thundery in the northwest. Showers became more isolated during the day, giving sunny spells in many areas with temperatures near normal. A band of mostly light rain moved into the southwest in the evening. Light to moderate, mainly southerly winds.

Rainfall: nil to 4mm generally, 11mm at Valentia Observatory

Temperature: max. 14°C to 17°C, min. 8°C to 12°C, ground temperatures 2° to 6°C inland

Sunshine: 3 to 8 hours, sunniest in Clones

Thursday 25th: A cold front crossed the country in a very strong southerly airflow as a depression of 984hPa to the northwest moved away northwards. A rainbelt crossed during the morning, followed by showers. Mild. Very windy for a time with south to southwesterly winds near gale force in western areas.

Rainfall: 3 or 10mm in most places

Temperature: max. 14°C to 17°C, min 8°C to 13°C, mildest in southeast, ground temperatures over 5°C

Sunshine: nil to 5 hours, dullest in southeast

Friday 26th: A depression to the northwest kept Ireland in an unstable south to southwesterly flow. Showers, isolated at first, became more widespread during the day and some were heavy with thunder in places; they became confined to Atlantic coasts by evening. Sunny spells in most places with afternoon temperatures close to normal. Moderate to fresh and gusty southerly winds became southwesterly in the afternoon and slackened.

Rainfall: 2 to 8mm

Temperature: max. 11°C to 15°C, min 6°C to 10°C, ground temperatures down to 0°C at Kilkenny

Sunshine: 1 to 6 hours

Saturday 27th: A depression to the northwest of Scotland filled while a ridge of high pressure to the west intensified. Mild along Atlantic coasts overnight with scattered showers but cool and dry elsewhere with a few mist or fog patches and a slight touch of ground frost inland. Showers continued near Atlantic coasts during the day, but many places were dry and sunny with temperatures near normal, becoming cool after dark inland. Light to moderate west to southwesterly winds.

Rainfall: less than 3mm

Temperature: max. 13°C to 15°C, min. 3°C to 10°C, mildest in north, ground temperatures 0° to -2°C inland

Sunshine: 4 to 8 hours

Sunday 28th: A large anticyclone persisted over Ireland through the period. Fog overnight became dense in many inland areas and persisted well into the day. Slight to sharp frost in many inland areas also. A mild sunny day in most areas, with fog returning after dark and some slight frost in inland areas. Light variable or southerly winds.

Rainfall: nil or trace

Temperature: max. 13°C to 16°C, warmest in east, min. 0°C to 9°C, ground temperatures 0° to -3°C inland

Sunshine: 8 or 9 hours in many places, only 1 hour at both Malin Head and Shannon Airport

Monday 29th: An anticyclone to the south of Ireland drifted slowly eastwards, maintaining a south to southwesterly airflow over the country. Some mist or fog in inland areas overnight. Mainly cloudy and dry during the day with a few sunny spells in places. Daytime temperatures up to or above normal, but much cooler at night with a little ground frost in some inland places. Light to moderate southwesterly winds, stronger in the northern areas with gale gusts.

Rainfall: less than 1mm

Temperature: max. 14°C to 17°C, min. 3°C to 12°C, mildest in north and northwest, ground temperatures down to -2°C at Kilkenny

Sunshine: trace to 5 hours

Tuesday 30th: Pressure fell over Ireland as frontal systems moved eastwards. Bands of showery rain crossed the country, heaviest in the west and southwest. Very mild at first, becoming cooler behind the front. Some sunny spells in the east. Light to moderate southwesterly winds, strengthening and veering westerly, later northwesterly in northern and western areas.

Rainfall: 2 to 6mm generally, 12mm in southwest and northwest

Temperature: max. 12°C to 17°C, min. 6°C to 9°C, ground temperatures 3° to 8°C

Sunshine: nil at many stations, 3 to 5 hours in east and southeast

Wednesday 31st: A windy start to the day with strong to gale force northwesterly winds in the north. Pressure rose steadily through the day and winds slowly decreased, becoming light and variable over most of the country after dark. Showers during the night and early morning died out by afternoon. Several hours sunshine in most places, but cooler than previous days.

Rainfall: nil to 2mm

Temperature: max. 10°C to 14°C, min. 4°C to 9°C, mildest in northwest, ground temperatures 0° to -2°C inland

Sunshine: 5 to 9 hours, sunniest in southeast

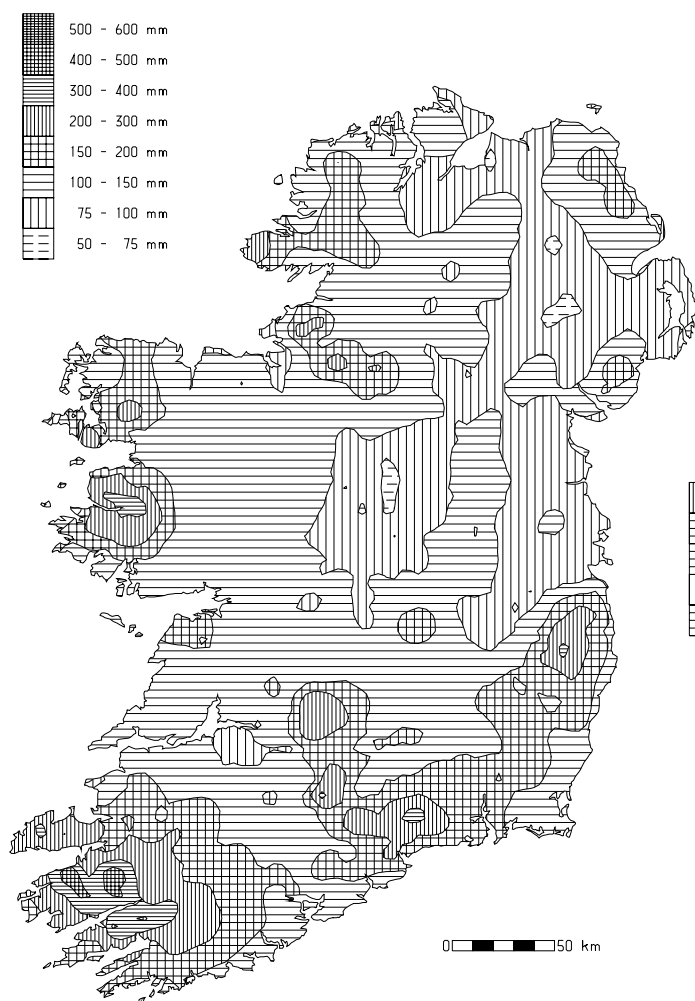
Drier than normal in northern half, wet in south and southeast

Rainfall totals for the month were very variable over the country, ranging from 80mm at Dublin (Phoenix Park) to 271mm at Dungarvan (Carriglea), Co. Waterford, which was the highest total for any month at the station since January 1988 (see page 2). Percentage of normal values were between 73% at Malin Head and 173% at Waterford (Tycor).

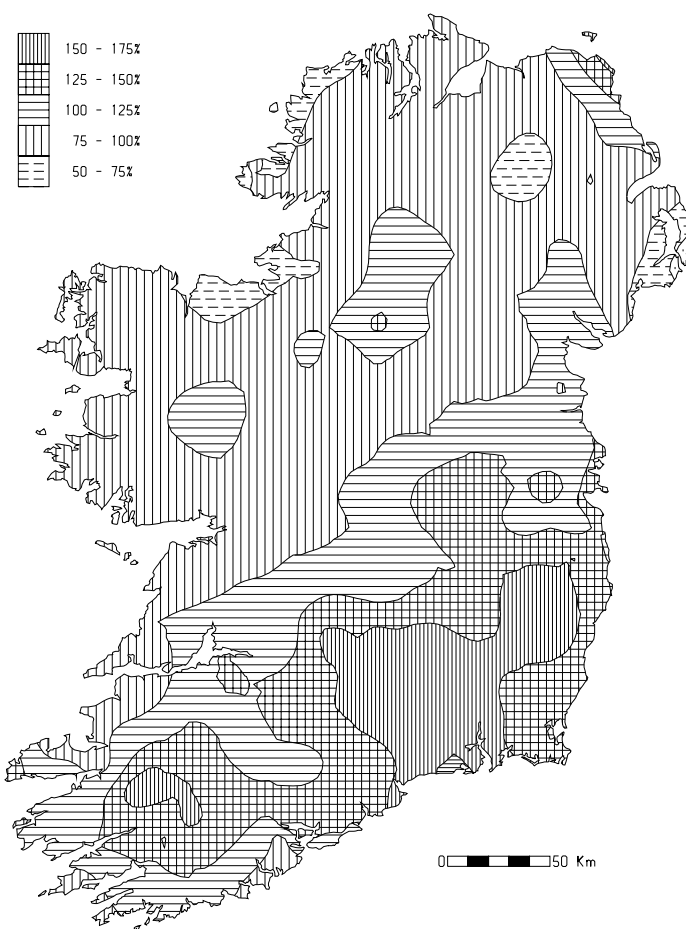
Rain was distributed fairly evenly during the month; the only spell of mostly dry weather over the country was between the 27th and 29th. The exceptionally heavy rain which fell in parts of County Waterford on the 19th/20th is described on page 2, but there were also significant falls on other days. Over 25mm of rain was measured in most parts of the east and southeast on the 7th, with Johnstown Castle, Co. Wexford, measuring 52.2mm, its highest daily fall for October since 1977. The number of wetdays during the month (*days with 1.0mm or more of rainfall*) was close to normal generally, with between 12 and 18 wetdays in many midland and eastern areas, but over 20 wetdays measured in parts of the western half of the country.

<i>County/ Station</i>	Total Amount (mm)	% of 1961-90 average	Most in a day / date		Number of Raindays (≥0.2mm)	Wetdays (≥1mm)
CO. CLARE						
SHANNON AIRPORT	116.2	125	15.1	5	19	15
CARRON	141.1	84	16.5	5	25	22
CO. CORK						
FERMOY (MOORE PARK)	120.2	120	19.6	19	23	17
CORK AIRPORT	127.2	101	27.0	4	24	19
SHERKIN ISLAND	130.2	111	27.0	4	25	21
BALLINCURRIG (PEAFIELD)	164.7		31.5	4	25	22
CO. DONEGAL						
MALIN HEAD	93.5	78	17.8	3	24	21
BALLYSHANNON (CATHLEEN'S FALL)	110.1	93	19.5	30	27	22
GLENTIES	141.5	79	19.1	1	27	19
CO. DUBLIN						
DUBLIN (PHOENIX PARK)	80.0	114	26.7	7	19	13
DUBLIN AIRPORT	90.3		33.3	7	22	12
CASEMENT AERODROME	81.6	118	24.7	7	20	16
DUBLIN (MERRION SQUARE)	87.8	135	35.6	7	20	14
CO. GALWAY						
GALWAY (UNIV. COLL.)	122.8	95	19.2	4	25	19
MAAM VALLEY	263.2		23.7	14	29	27
CONNEMARA NATIONAL PARK	166.4	93	21.6	6	26	23
BALLYGAR	106.4	99	21.0	5	25	19
CO. KERRY						
VALENTIA OBSERVATORY	195.5	124	26.0	17	25	23
ARDFERT (LISCAHANE)	120.2		14.3	14	24	18
CO. KILKENNY						
KILKENNY	145.8	169	26.2	22	24	17
CO. LEITRIM						
BALLINAMORE	154.9	127	37.4	1	30	20
CO. LIMERICK						
MOUNT RUSSELL	161.3		23.8	19	27	16
CO. LOUTH						
ARDEE (BOHARNAMOE)	86.7	107	15.0	7	24	17
CO. MAYO						
BELMULLET	121.9	91	16.7	14	22	17
STRAIDE	115.9	86	12.3	5 6	23	23
CONNAUGHT AIRPORT	149.3		26.6	6	29	20
CO. MEATH						
WARRENTOWN	100.5	120	20.7	7	20	18
CO. MONAGHAN						
CLONES	90.8	93	9.8	5	25	22
CO. OFFALY						
BIRR	89.6	106	9.1	4 25	25	17
DERRYGREENAGH	126.3	147	18.7	7	26	18
CO. SLIGO						
ARDTARMON	83.0		23.3	5	22	16
CO. TIPPERARY						
FETHARD (PARSONSHILL)	122.4		24.1	7	25	14
CO. WATERFORD						
WATERFORD (TYCOR)	181.5	173	27.2	7	22	19
DUNGARVAN (CARRIGLEA)	270.6		91.8	19	25	21
CO. WESTMEATH						
MULLINGAR II	96.2	102	16.1	19	25	20
CO. WEXFORD						
JOHNSTOWN CASTLE	133.1	123	52.2	7	22	17
ROSSLARE	126.3	133	44.4	7	21	16
CLONROCHE	168.4	142	38.6	7	24	21
JOHN F. KENNEDY PARK	187.9	171	48.7	7	21	21

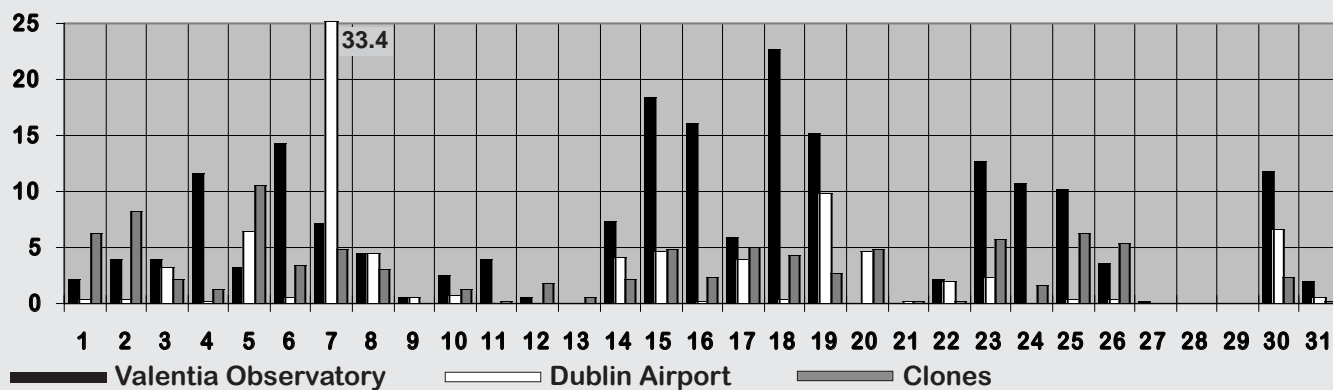
Total rainfall (mm)



Percentage of normal rainfall



Daily 0-24h rainfall values (mm)

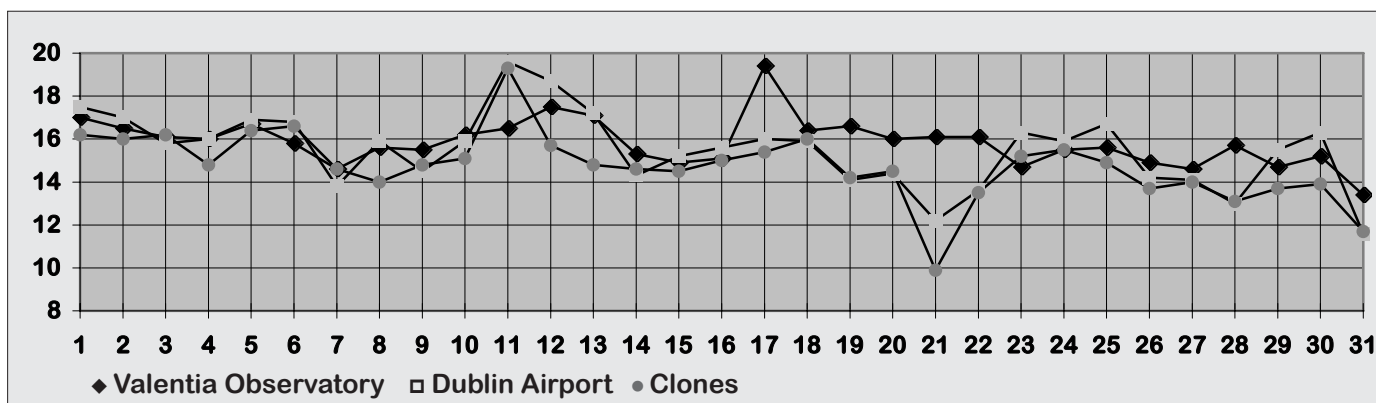


Warmest October since 1969 in places

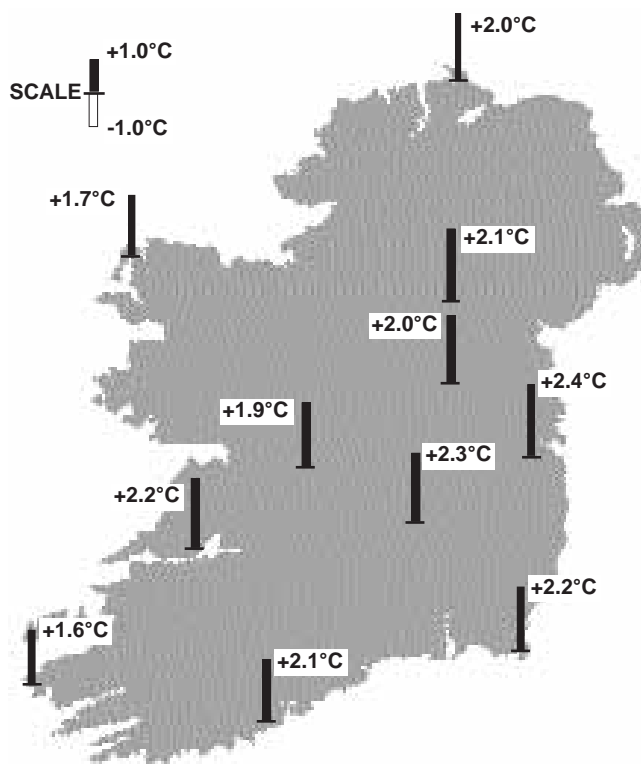
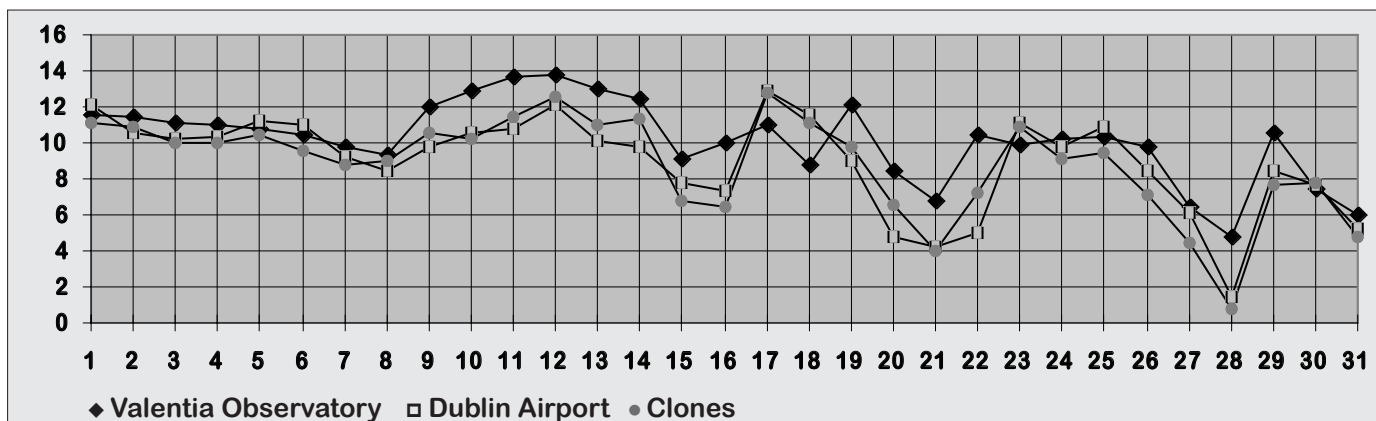
Mean air temperatures were well above normal everywhere, by around two degrees at most stations. They ranged from 10.7°C at Connaught Airport to 13.7°C at Rosslare; this latter value equalled the previous highest October mean temperature in the stations's 45-year record, set in 1995. At all stations it was the warmest October for at least 6 years and at Malin Head, Belmullet and Cork Airport it was the warmest since 1969.

For much of the month both maximum and minimum temperatures were comparable with summer values; only during the last 10 days were they close to or below normal. The highest temperature of the month, 21.2°C, was measured at Dublin (Merrion Square), on the 11th; Mullingar's maximum temperature of 19.8°C on the same day was its highest such value for October since 1986. Air frost was recorded at only a couple of locations during the month, while the number of ground frosts was between 1 and 3 at most inland stations, compared with the normal range for October in these areas of between 4 and 7. The lowest air

Daily 0-24h maximum temperatures (°C)



Daily 0-24h minimum temperatures (°C)



Mean Temperature
(difference from 1961-90 normals)

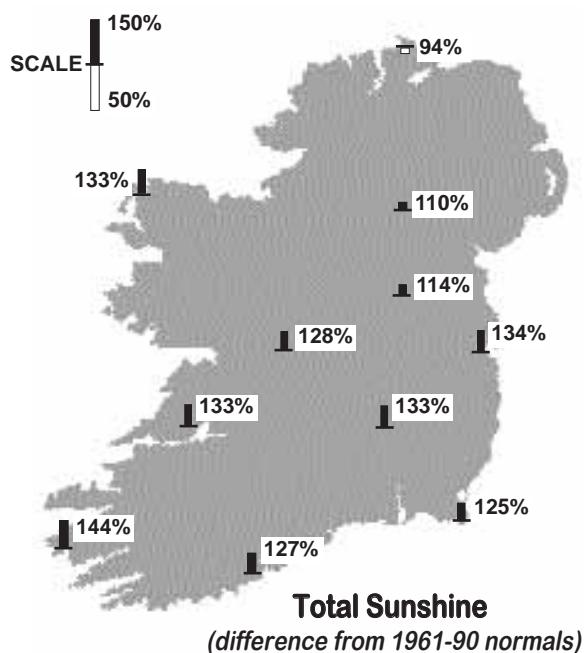
temperature, -0.2°C, was recorded at Straide, Co. Mayo, on the 28th, while the lowest grass minimum temperature, -3.9°C, was measured at Clonroche, Co. Wexford, on the 22nd.

County/ Station	°C											
	Mean max.	Mean min.	Mean/ deviation from 1961-90 average		Highest max./date		Lowest min./date		Lowest grass min./date		Days with air frost ground frost	
CO. CLARE												
SHANNON AIRPORT	16.1	10.4	13.3	2.2	20.7	11	3.8	28	-0.7	28	0	2
CARRON	14.7	8.9	11.8	2.0	20.0	11	3.0	31	-1.4	28	0	2
CO. CORK												
FERMOY (MOORE PARK)	15.5	8.7	12.1	1.6	18.2	11	2.4	27	-0.2	28	0	1
CORK AIRPORT	15.0	9.9	12.5	2.1	17.7	10	6.3	31	2.9	27	0	0
SHERKIN ISLAND	15.4	11.6	13.5	1.8	16.8	1	7.2	21	4.8	27	0	0
BALLINCURRIG (PEAFIELD)	15.1	8.8	12.0		17.0	3	3.2	27	1.7	27	0	0
CO. DONEGAL												
MALIN HEAD	14.6	10.5	12.6	2.0	18.1	11	6.0	21	5.0	21	0	0
BALLYSHANNON(CATHLEEN'S FALL)	14.7	9.1	11.9	1.5	18.2	11	2.6	22			0	
GLENTIES	15.0	9.4	12.2	2.2	17.9	11	2.5	22	-1.1	21	0	3
CO. DUBLIN												
DUBLIN (PHOENIX PARK)	16.3	9.4	12.9	2.5	20.8	11	1.8	28	-3.3	28	0	6
DUBLIN AIRPORT	15.5	9.5	12.5		19.6	11	1.5	28	-1.8	28	0	1
CASEMENT AERODROME	15.8	9.5	12.7	2.4	19.3	11	1.4	28	-1.6	28	0	1
DUBLIN (MERRION SQUARE)	16.1	11.1	13.6	2.1	21.2	11	5.6	28			0	
CO. GALWAY												
GALWAY (UNIV.COLL.)	15.3	9.6	12.5	1.5	19.3	11	2.9	28	-1.5	28	0	2
MAAM VALLEY	14.9	9.9	12.4		17.1	17	4.4	28	0.7	28	0	0
CONNEMARA NATIONAL PARK	14.8	9.5	12.2	1.6	17.9	17	4.7	28			0	
BALLYGAR	15.1	8.9	12.0		19.9	11	0.5	28	-0.9	28	0	1
CO. KERRY												
VALENTIA OBSERVATORY	15.9	10.4	13.2	1.6	19.4	17	4.8	28	0.6	28	0	0
ARDFERT (LISCAHANE)	15.4	9.7	12.6	1.6	19.1	11	2.3	28	0.1	28	0	0
CO. KILKENNY												
KILKENNY	16.0	8.9	12.5	2.3	20.5	11	1.9	28	-1.7	29	0	3
CO. LEITRIM												
BALLINAMORE	14.7	8.6	11.7	2.0	19.5	11	0.4	28	-0.4	28	0	1
CO. LIMERICK												
MOUNT RUSSELL	15.0	9.5	12.3		18.6	13	4.5	28	0.3	28	0	0
CO. LOUTH												
ARDEE (BOHARNAMOE)	16.1	9.5	12.8	2.8	20.4	11	-0.1	28	-2.2	28	1	1
CO. MAYO												
BELMULLET	15.1	10.0	12.6	1.7	18.2	17	3.7	28	0.2	28	0	0
STRAIDE	14.8	8.8	11.8		18.5	11	-0.2	28	-3.6	28	1	1
CONNAUGHT AIRPORT	13.0	8.3	10.7		15.5	11	3.1	22	-0.6	28	0	1
CO. MEATH												
WARRENTOWN	15.4	9.2	12.3	2.3	20.0	11	0.9	28	-1.0	28	0	1
CO. MONAGHAN												
CLONES	14.8	9.2	12.0	2.1	19.3	11	0.8	28	-1.7	28	0	1
CO. OFFALY												
BIRR	15.6	8.8	12.2	1.9	19.4	11	0.4	22	-1.8	22	0	1
DERRYGREENAGH	15.2	8.3	11.8	2.1	20.1	11	0.2	28	-3.5	28	0	2
CO. SLIGO												
ARDTARMON	15.2	9.9	12.6		18.6	11	4.4	22	1.8	28	0	0
CO. TIPPERARY												
FETHARD (PARSONSHILL)	15.1	8.0	11.6		18.4	11	2.9	31	-1.6	31	0	3
CO. WATERFORD												
WATERFORD (TYCOR)	16.2	9.9	13.1	2.3	18.3	3	3.2	22			0	
DUNGARVAN (CARRIGLEA)	16.2	9.7	13.0	2.1	19.4	10	2.0	22	1.7	22	0	0
CO. WESTMEATH												
MULLINGAR II	15.1	8.4	11.8	2.0	19.8	11	0.1	28	-2.9	28	0	2
CO. WEXFORD												
JOHNSTOWN CASTLE	16.0	10.8	13.4	2.6	18.0	13	5.8	22	1.7	22	0	0
ROSSLARE	15.7	11.6	13.7	2.2	17.5	1	6.9	31	3.9	21	0	0
CLONROCHE	15.5	9.5	12.5	2.4	19.6	9	2.5	22	-3.9	22	0	5
JOHN F. KENNEDY PARK	15.4	9.5	12.5	1.9	17.2	8	3.0	22	-1.2	22	0	2

Sunny in most places, especially west and south

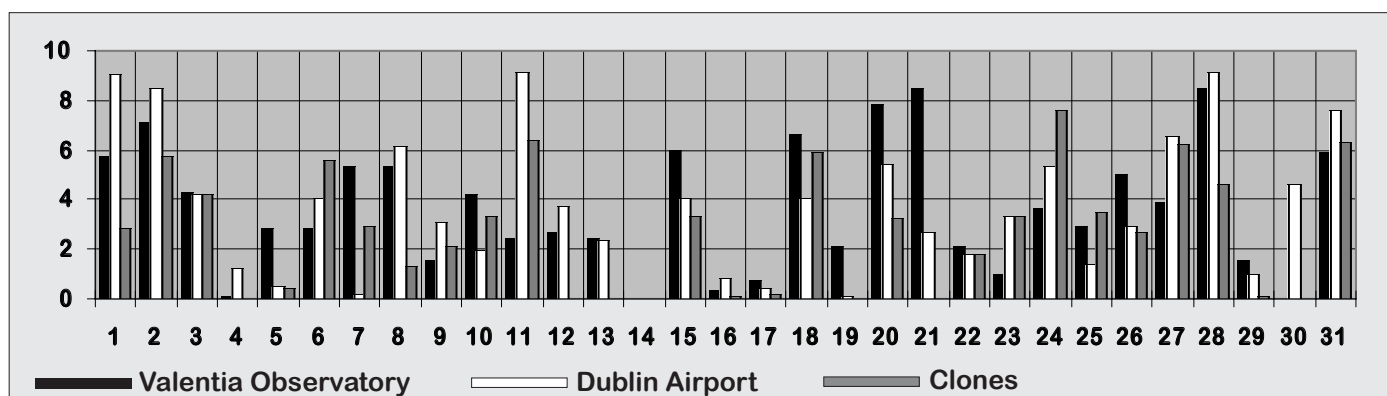
Sunshine totals were above normal except in some northern counties; they ranged from 71 hours at Malin Head, to almost twice that amount, 135 hours at Ardfert (Liscahane), Co. Kerry. Belmullet's total of 109 hours was the highest for October at the station since 1979. Percentage of normal values were between 94% at Malin Head and 144% at Valentia Observatory.

The month began and ended with some sunny weather, in the periods 1st to 2nd and 27th to 31st. The highest daily sunshine of the month, 9.5 hours, was measured at Dungarvan (Carriglea), Co. Waterford, on the 2nd. Global solar radiation totals for the month show a similar distribution to sunshine totals; they ranged from 95% of normal at Malin Head to 118% at Belmullet.

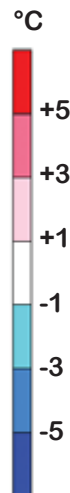
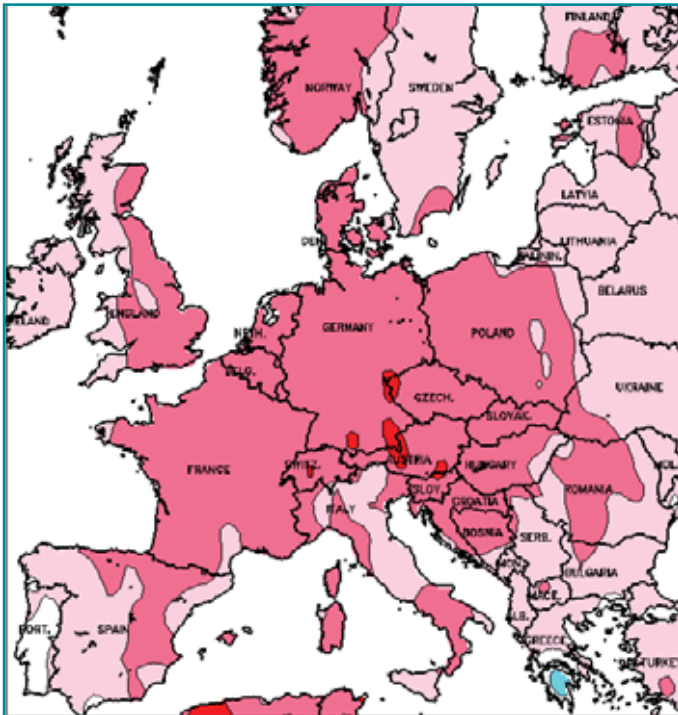
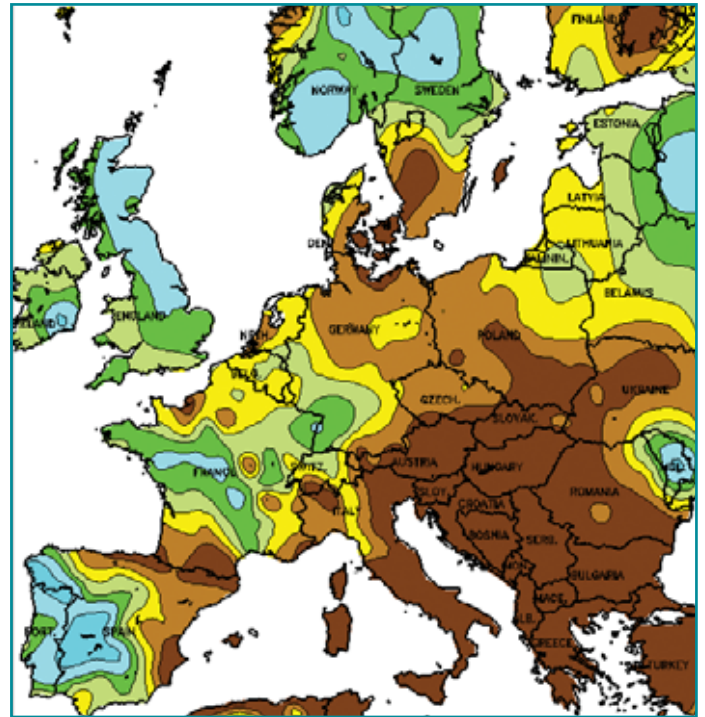
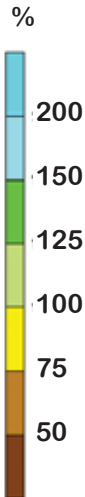


County/ Station	Daily mean (hours/day)	% of average	% of possible	Most in a day/date	
CO. CLARE					
SHANNON AIRPORT	3.53	133	33	8.3	2
CO. CORK					
CORK AIRPORT	3.59	127	34	8.5	2
SHERKIN ISLAND	3.91	122	37	8.5	2
BALLINCURRIG (PEAFIELD)	3.46		24	9.1	28
CO. DONEGAL					
MALIN HEAD	2.29	94	22	6.5	27
BALLYSHANNON (CATHLEEN'S FALL)	2.59	108	24	6.7	2
CO. DUBLIN					
DUBLIN AIRPORT	3.70	118	35	9.1	11 28
CASEMENT AERODROME	4.14	134	39	9.1	11
CO. GALWAY					
GALWAY (UNIV. COLL.)	3.06	112	29	8.3	31
CO. KERRY					
VALENTIA OBSERVATORY	3.65	144	34	8.5	21 28
ARDFERT (LISCAHANE)	4.37		33	9.0	21
CO. KILKENNY					
KILKENNY	3.59	133	34	9.0	2 11
CO. LEITRIM					
BALLINAMORE	2.36	97	22	7.3	31
CO. MAYO					
BELMULLET	3.50	133	33	9.1	21
STRAIDE	2.67			7.3	31
CONNAUGHT AIRPORT	2.51		24	7.5	31
CO. MONAGHAN					
CLONES	2.69	110	25	7.6	24
CO. OFFALY					
BIRR	3.42	128	32	8.3	11
CO. WATERFORD					
DUNGARVAN (CARRIGLEA)	3.64	131	33	9.5	2
CO. WESTMEATH					
MULLINGAR II	3.12	114	29	8.4	28 31
CO. WEXFORD					
JOHNSTOWN CASTLE	3.31	113	31	8.9	21
ROSSLARE	4.09	125	38	9.3	8
CLONROCHE	3.46	120	32	8.9	21
JOHN F. KENNEDY PARK	3.68	137	34	9.0	2

Daily sunshine values (hours)

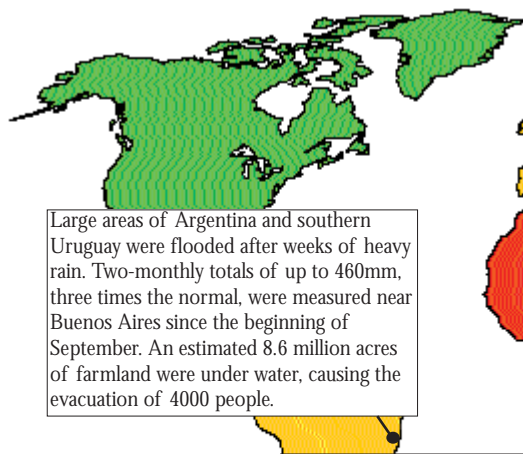


OCTOBER RAINFALL (Percentage of 1961-1990 normal)

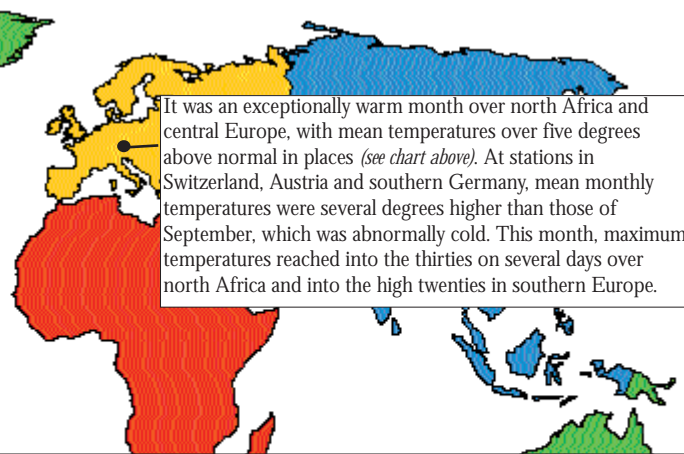


OCTOBER MEAN TEMPERATURES (difference from 1961-1990 normal)

Data supplied by NOAA
Climate Prediction Centre,
US Department of Commerce



Large areas of Argentina and southern Uruguay were flooded after weeks of heavy rain. Two-monthly totals of up to 460mm, three times the normal, were measured near Buenos Aires since the beginning of September. An estimated 8.6 million acres of farmland were under water, causing the evacuation of 4000 people.



It was an exceptionally warm month over north Africa and central Europe, with mean temperatures over five degrees above normal in places (see chart above). At stations in Switzerland, Austria and southern Germany, mean monthly temperatures were several degrees higher than those of September, which was abnormally cold. This month, maximum temperatures reached into the thirties on several days over north Africa and into the high twenties in southern Europe.

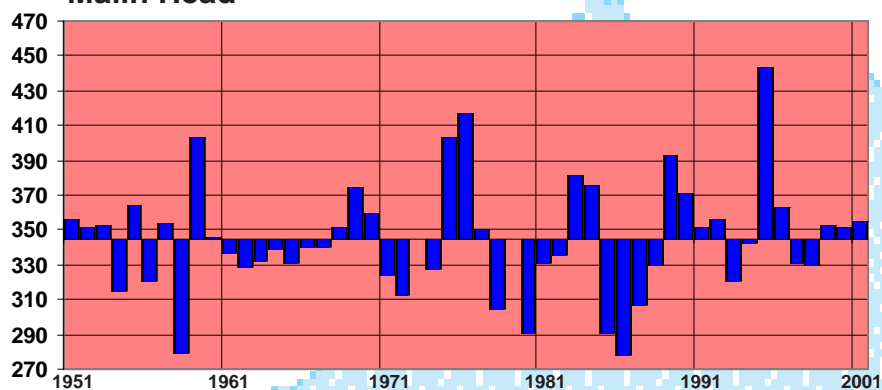
Global weather highlights of the month

The seasonal ozone depletion over Antarctica during September and October was not quite as strong this year as in 2000, which was the highest of any year since measurements began. Ozone loss expressed in millions of tons (MT) of depletion is measured from satellites and ground stations. This year's maximum loss was 53MT during mid-September compared with 57MT last year, but values of over 50MT were also recorded this month. The circular shape of the ozone hole over Antarctica this season meant that populated areas of South America were less at risk from low ozone values compared with previous years.

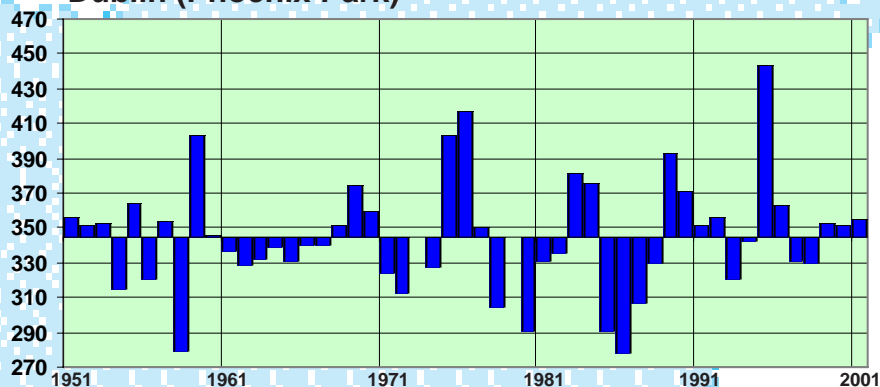
POULTER INDECES FOR 2001 AGAIN NEAR NORMAL

For the third successive year, Poulter indices at long-term stations were close to normal. This index is a method of quantifying summer weather (June to August), using a formula based on mean temperature, rainfall and sunshine for each station. Shown below are the indices since 1951 at four stations, relative to their averages for the same period.

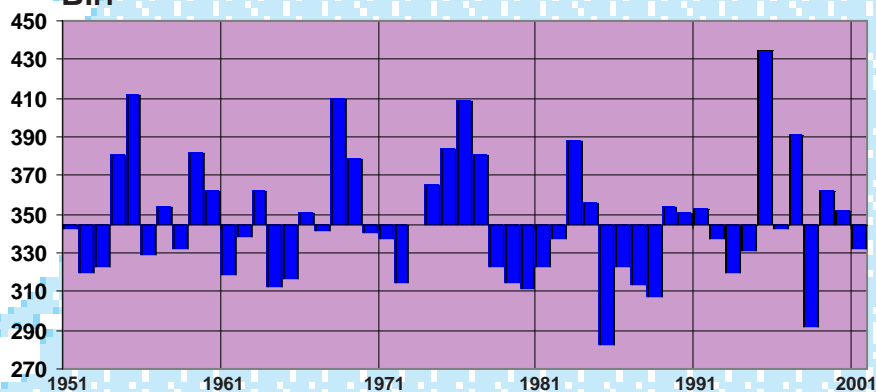
Malin Head



Dublin (Phoenix Park)



Birr



Valentia Observatory

