

Sunny October but temperatures normal

For the first sixteen days southwesterly winds dominated and with fairly high pressure being maintained over the country the rainbelts which crossed Ireland were for the most part weak. While not quite as dry and settled as September, conditions were mild and pleasant with a good deal of sun. Between 17th and 31st conditions were distinctly more unsettled as the atlantic low pressure systems tracked much closer to Ireland and began to dominate the weather. Consequently, the bulk of the months rain fell during this period and it became cooler and windier with gales on the 24th/25th and on the 29th/30th. The month ended with a depression moving eastwards across the country giving many areas their wettest day of the month.

SUNSHINE

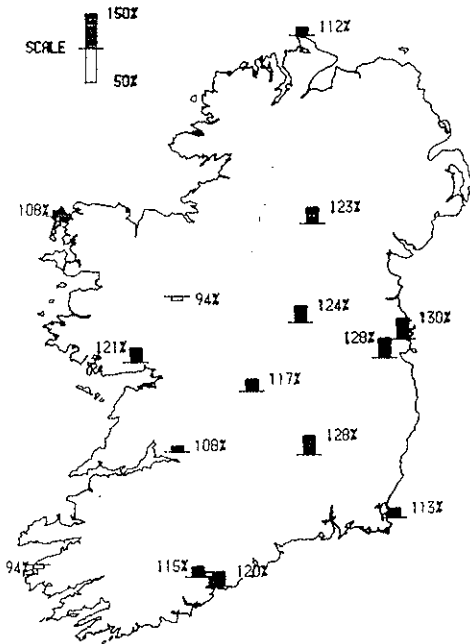
Sunshine totals for the month ranged from 129.5 hours at Dublin Airport to 72.7 hours at Claremorris, representing percentages of normal varying between 130% and 94%. In parts of the midlands, east and southeast it was the sunniest October for 20 to 30 years. Sunniest days were 2nd, 3rd, the period 10th to 16th and the 23rd while the 21st and the 31st were notably dull. On their sunniest day many stations had over 9 hours of sunshine and Mullingar with 10 hours on 3rd had it's sunniest October day in over 40 years of record. In this month's special topic it is explained why the possible daily duration of bright sunshine cannot be specified precisely for the Campbell-Stokes sunshine recorder, which is used by the Meteorological Service. However at Mullingar the possible duration of sunshine lies between 11 and 11.5 hours on October 1st and between 10 and 10.4 hours on October 31st while on the 3rd possible sunshine duration would be 11 to 11.3 hours.

RAINFALL

While rainbelts crossed the country on 1st in the period 7th to 10th and on 13th/14th, the amounts of rain between 1st and 16th were small except at some western and southwestern coastal stations. Indeed between the 7th of September and the 6th of October, Casement Aerodrome (Baldonnel) had a remarkable 30 successive days with no measurable rainfall and a further six such days between 11th and 16th.

In the period 17th to 31st between 81% and 96% of the monthly total fell, the heaviest falls being on 17th, 19th, 20th, 24th, 26th and on the 31st. Indeed Dublin Airport recorded 46% of the monthly

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Sunshine percentage of (1951-1980) normals

October 1986

Distribution of Daily Values

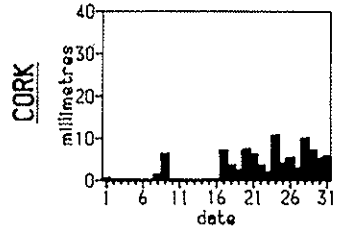


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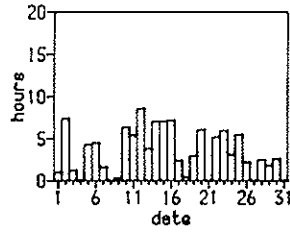
 Mean

 Min

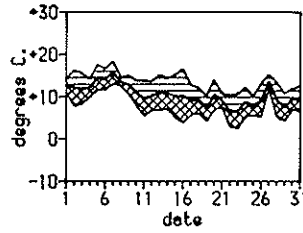
Rainfall



Sunshine



Temperature



October 1986

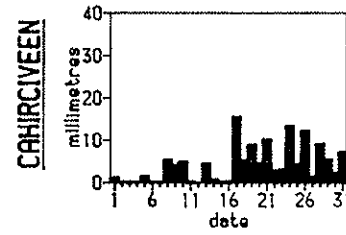


 Max

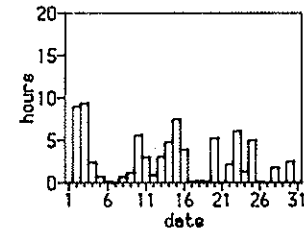
 Mean

 Min

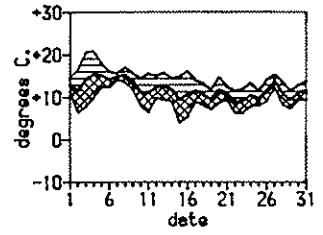
Rainfall



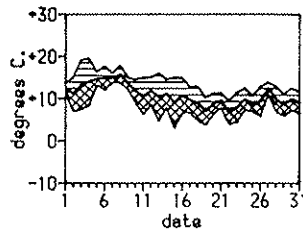
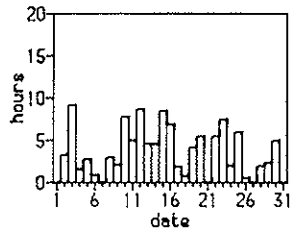
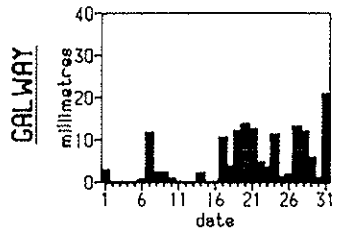
Sunshine



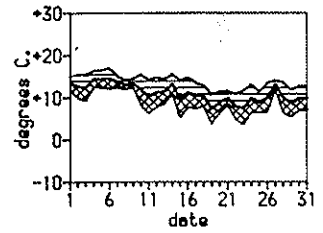
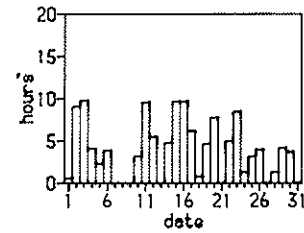
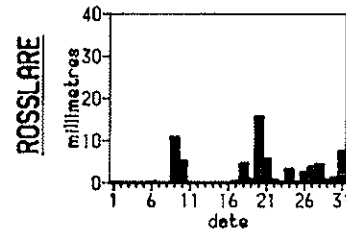
Temperature



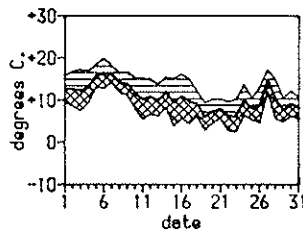
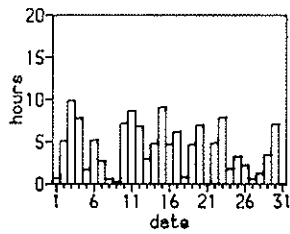
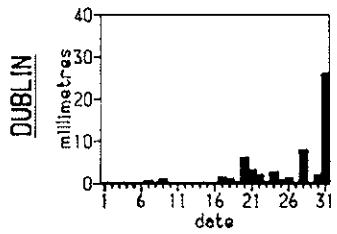
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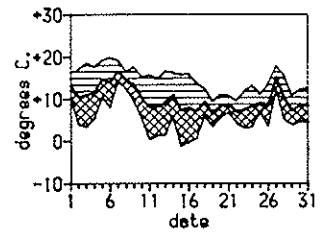
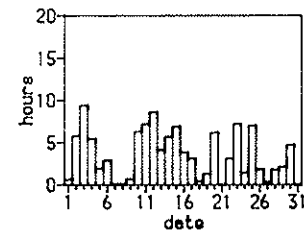
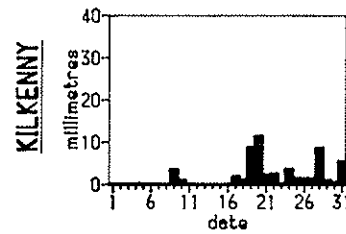
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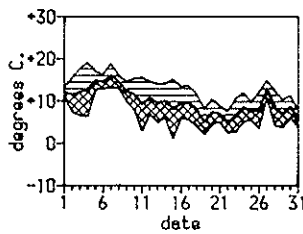
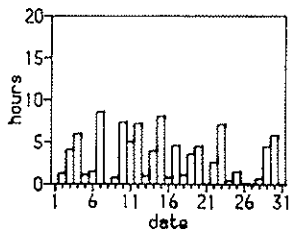
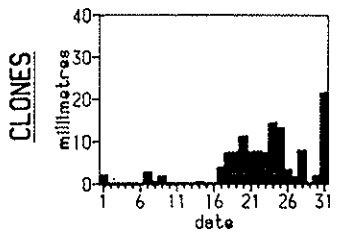
GALWAY



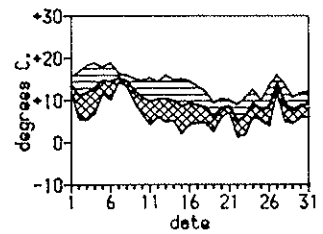
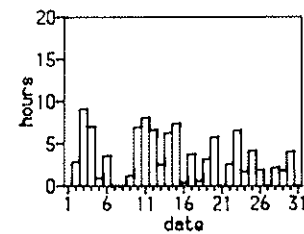
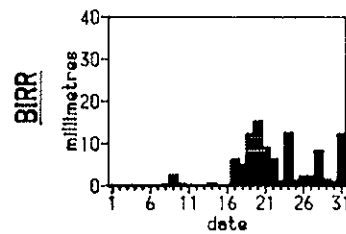
ROSSLARE



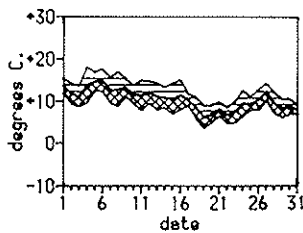
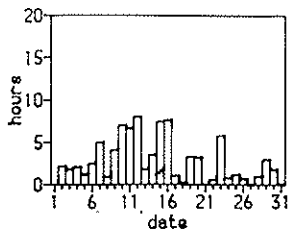
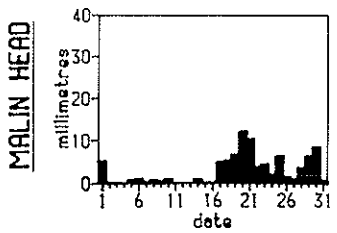
DUBLIN



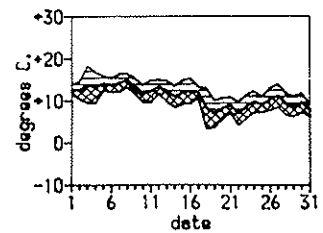
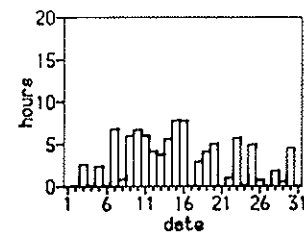
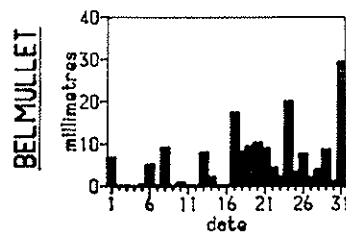
KILKENNY



CLONES



BIRR

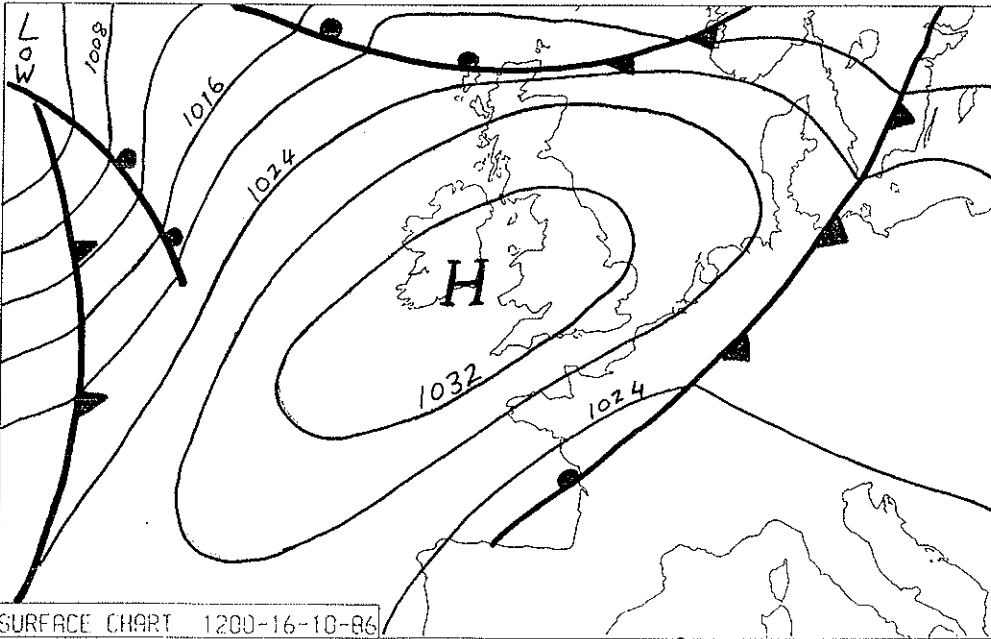
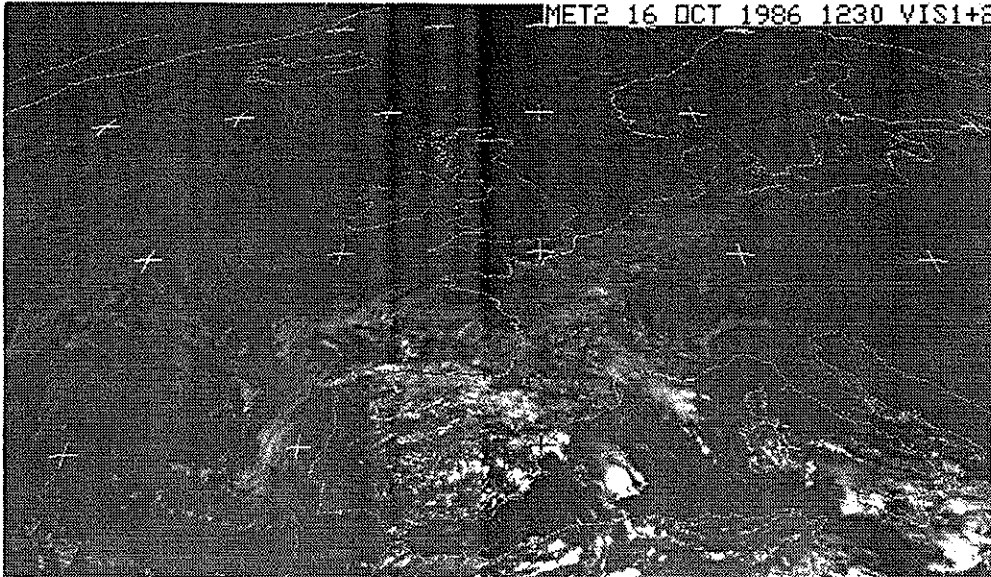


MALIN HEAD

BELMULLET

Last day of Summer - Winter at 20° West

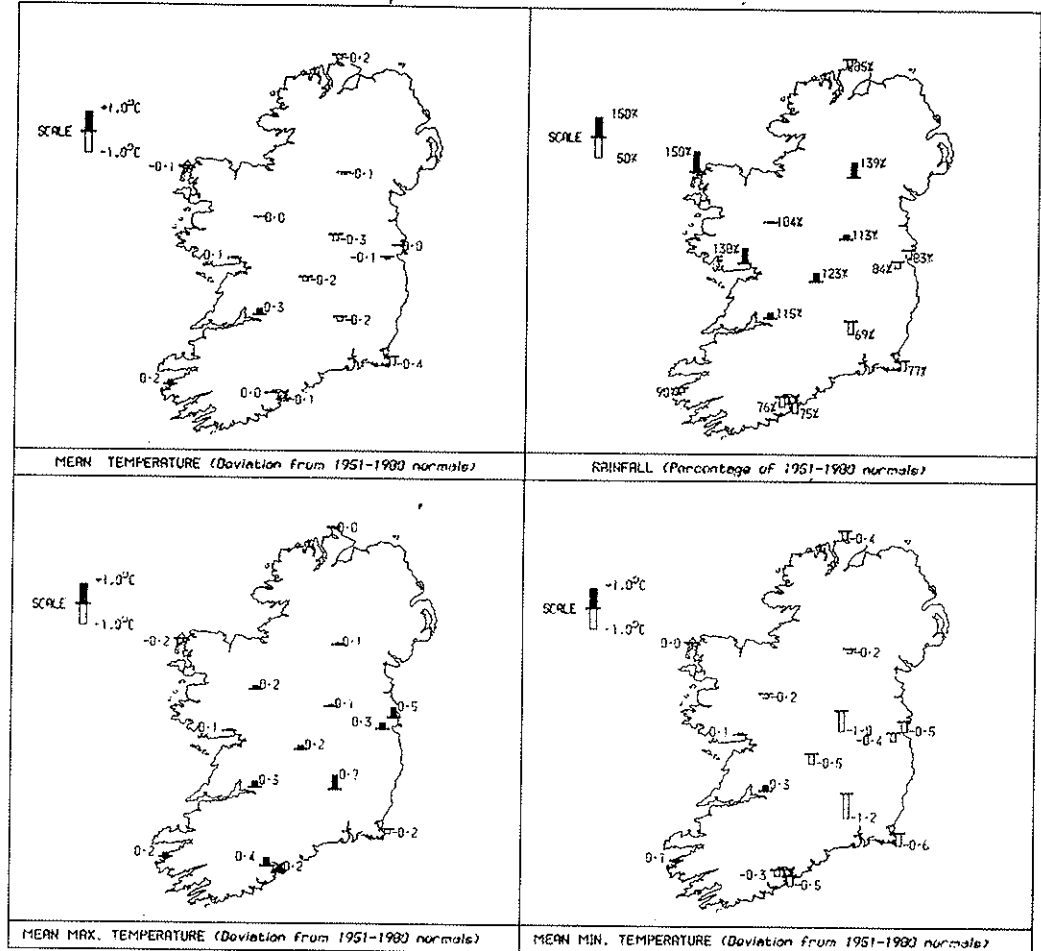
MET2 16 OCT 1986 1230 VIS1+2



SURFACE CHART 1200-16-10-86

The satellite picture shows clear skies over Ireland on the 16th. The extensive band of cloud to the west is associated with a depression which moved eastwards, displaced the anticyclone and marked the beginning of the subsequent unsettled conditions.

October 1986 Totals, Means and Extremes



Station	Rainfall			Air Temperature						Sunshine		Wind		Number of days with							
	Total	Most in a Day		Means of		Extreme Temperature				Total	Most in a Day	Max Gales Gust	Rain	Snow	Frost	Hail	Thunder	Fog	Squalls		
		Amount	Date(s)	Max	Min	Highest	Date(s)	Lowest	Date(s)		Amount									Date(s)	
Bulmohill	169.3	29.5	31	13.4	8.6	11.0	18.3	3	3.3	18	91.7	7.8	15	62	22	-	-	6	-	-	18
Birr	98.4	15.2	20	14.8	6.4	10.2	19.0	6	1.3	22	101.4	9.1	3	53	19	-	-	1	-	1	7
Cahirleevean	127.3	15.5	17	14.7	9.0	11.9	20.9	4	4.0	15	77.0	9.4	3	65	22	-	-	-	1	-	15
Cesament	57.0	14.0	31	14.1	6.3	10.2	19.6	4	1.0	15	124.7	9.5	3	59	15	-	-	-	-	1	12
Claremorris	119.6	26.7	31	13.6	6.4	10.0	19.5	4	0.6	15	72.7	8.0	10	60	22	-	-	3	-	2	10
Clonsilla	122.1	21.5	31	13.3	6.5	9.9	19.1	4	1.0	15	93.4	8.5	7	54	20	-	-	1	-	2	4
Cork Airport	90.8	10.7	24	13.7	7.3	10.5	18.4	7	2.5	23	106.7	6.6	12	59	20	-	-	-	-	18	12
Dublin Airport	56.5	26.1	31	14.2	7.2	10.7	20.0	6	2.5	23	129.5	9.9	3	54	16	-	-	1	-	6	7
Galway	150.9	20.9	31	14.0	7.0	10.9	19.6	4	3.0	15	112.4	9.2	3	65	22	-	-	5	-	2	10
Kilbunny	57.6	11.5	20	14.8	5.3	10.1	19.9	6	-1.1	15	109.9	9.4	3	53	17	-	2	1	-	9	7
Malin Head	89.2	12.4	20	13.2	8.2	10.7	18.2	4	3.5	19	84.4	8.0	12	68	23	-	-	7	-	-	19
Mullingar	101.6	20.7	31	13.4	5.5	9.5	20.1	4	0.8	15	106.8	10.0	3	55	20	-	-	1	-	5	5
Rocha's Point	66.4	9.9	28	14.1	8.6	11.4	18.2	5	4.4	22	113.2	9.4	16	62	17	-	-	1	-	10	12
Rosslare	69.0	15.8	20	13.8	6.4	11.1	17.0	6	3.5	23	123.0	9.8	3	52	16	-	-	2	-	8	10
Shannon Airport	96.4	15.3	19	14.6	8.3	11.5	19.0	6	4.0	22	91.9	9.6	3	70	21	-	-	3	1	3	9

NOTES: Rainfall in millimetres, Temperatures in Degrees Celsius, Sunshine in Hours and Wind in knots. Gale = Gust of > 33.5 knots. * = days with 0.2mm or more

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RECORDING SUNSHINE

total on the 31st. Totals for the month ranged from 150% at Belmullet to 69% of normal at Kilkenny reflecting the marked west-east gradient in amounts.

NORMAL TEMPERATURES

Between 1st and 16th daytime temperatures were above normal with particularly high values between 3rd and 7th when many areas had air temperatures of between 19°C and 20°C and Valentia Observatory (Cahirciveen) recorded 20.9°C on 4th. From 1st to 9th night-time temperatures were high but, thereafter they fell gradually and Kilkenny recorded air frost on 15th and 16th. After 17th maximum air temperatures were above normal only on 27th but with more wind and cloud at night minimum temperatures were about normal.

For the month mean air temperatures ranged from 0.4°C below normal at Rosslare to 0.3°C above at Shannon Airport. Mean maximum air temperatures were normal or a little below in the south but elsewhere ranged from normal to 0.5°C above normal generally with Kilkenny 0.7°C above normal. Mean minimum air temperatures were below normal except in western and southwestern coastal areas and were some 1°C below normal at Kilkenny and Mullingar.

WIND

Until 18th only some western and northern coastal stations had experienced so much as a gale gust. Then the frequency and force of the wind rose sharply, culminating in a storm on the 24th/25th when winds gusted between 45 and 60 knots (1 knot = 1.15 miles per hour) with gusts of 60 to 70 knots for a time at some western and southwestern stations. Again on the night of 29th/30th there were gusts of 40 to 60 knots generally with gusts of 60 to 68 knots at Belmullet and Malin Head.

FOG

The east and south suffered more from fog patches than the west and north, especially in the period 1st to 16th. Fog wasn't prominent during the month and did not usually persist for long except near the south coast.

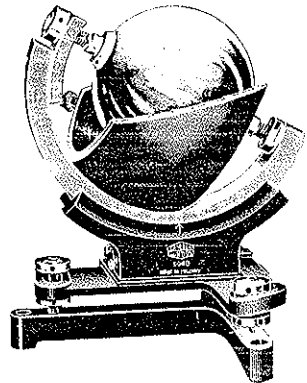
HAIL AND THUNDER

In the first seventeen days hail was reported only on 10th. From 18th onwards it occurred on quite a number of days. Most notable of these was the 22nd when thunder was also reported from Shannon Airport and from the Dublin area. On the 28th a trough passed eastwards across the country during the afternoon. This triggered some squally showers and a waterspout was recorded near the Kish lighthouse in Dublin Bay while thunder was recorded at Valentia Observatory during the evening.

The Campbell-Stokes sunshine recorder is used to measure sunshine duration in Ireland. The instrument consists of a glass sphere which focuses the sun's rays on a chemically-treated card. Scorch marks burned on the card provide a measure of the duration of sunshine. The term bright sunshine is used to describe the records since the sunshine must be of a certain minimum intensity before a trace is burned on the card. Though it has its shortcomings such as 'overburns' and failing to record sunshine just after sunrise and just before sunset the Campbell-Stokes recorder gives us satisfactory values of sunshine duration.

Modern electronic sunshine recording instruments register sunshine when the irradiance in the solar beam equals or exceeds a certain threshold value. The World Meteorological Organisation has a threshold value of 120 watts per metre squared which is broadly the irradiation needed to discolour the card of the Campbell-Stokes sunshine recorder. The pyrheliometer-type instrument is now the reference but because it is expensive and requires expert attention it will only slowly displace the relatively simple and robust Campbell-Stokes recorder.

SUNSHINE RECORDER Campbell-Stokes Model



FOR LATEST FORECAST RING

- Dublin area : 1199
- Leinster and Cavan/Monaghan : (01) 425555
- North Munster/South Connaught : (061) 62677
- South Munster : (021) 964600
- North Connaught/Donegal : (01) 424411
