

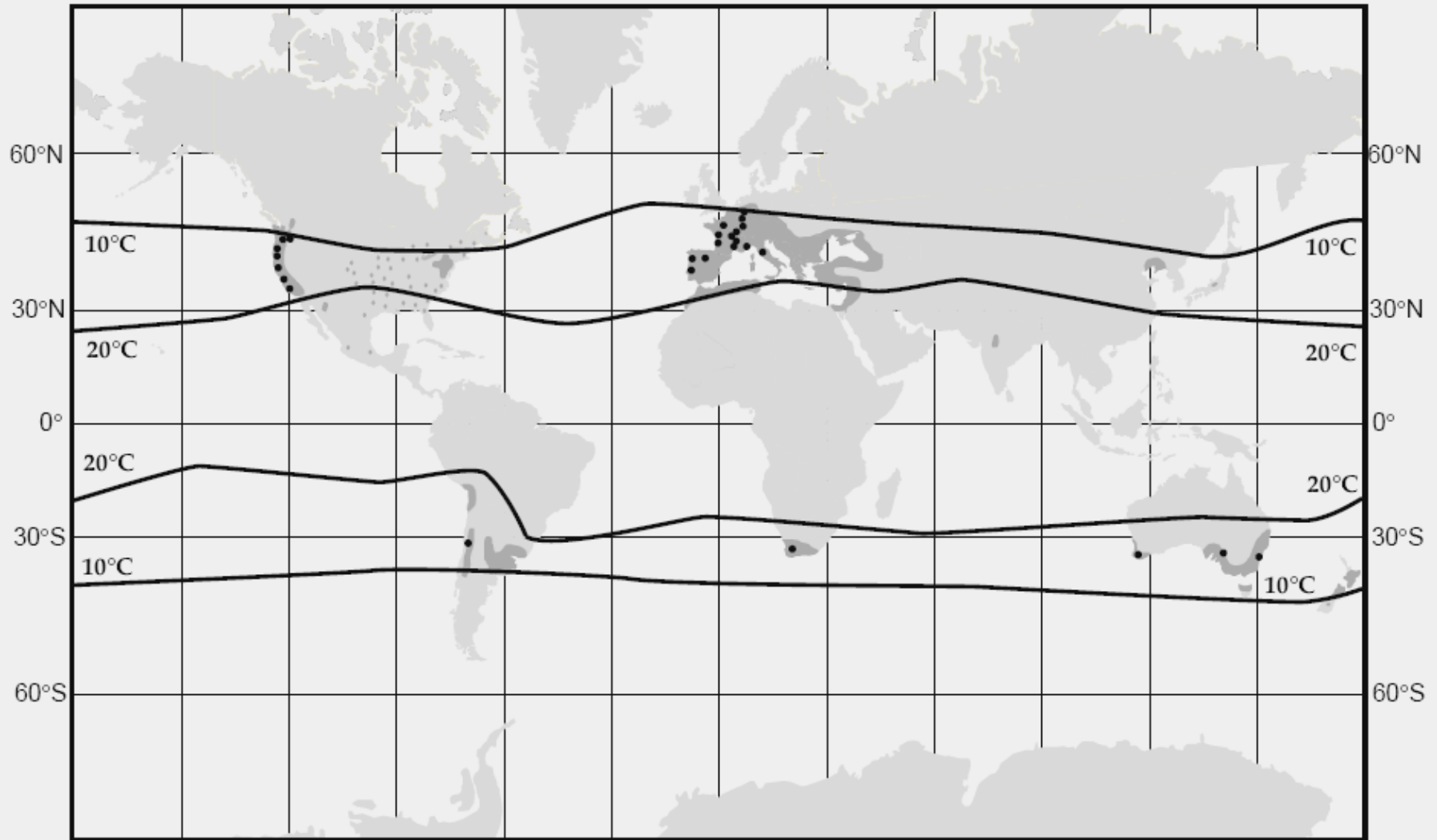
How's the Weather?

Climate in the Wine Islands

L. Brooks, Keystone Vineyards

- Climate and degree day concepts
- Victoria airport temperatures and rainfall in 2006
- Comparison to previous years
- Comparison to other Wine Islands locations and to Okanagan locations
- Uses of Hobo data logger temperatures
- Vineyard and climate map
- Hobo software demo

World Viticulture Zones



■ Viticulture Regions

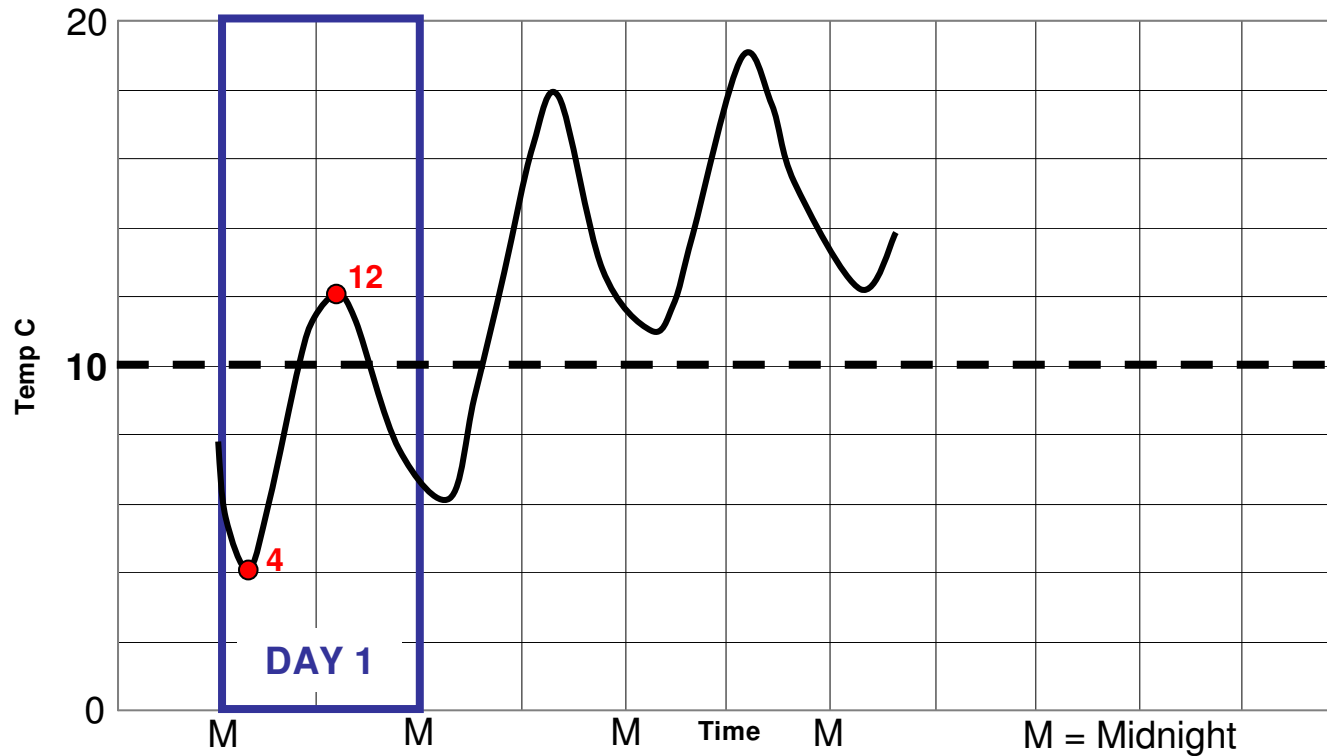
Mean annual isotherms

Degree days measured in Celsius:

Victoria Airport	1035			
Keystone, Saanich Penin.	1108			
Starling Lane, Saanich Penin.	1145			
Hyndman, Saanich Penin.	1307			
Geisenheim, Germany	1050	950		
Epernay, France	1050			
Hawk's Bay, New Zealand	1200	1300		
Roseburg, Oregon	1250			1484
Geneva, Switzerland	1250			
Beaune, France (Burgundy)	1315	1330		
Niagara, Canada	1426	1440		
Yakima, Washington	1426		1429	
Napa, California	1450	1820	1868	1753
Healsburg, Sonoma, California	1755			

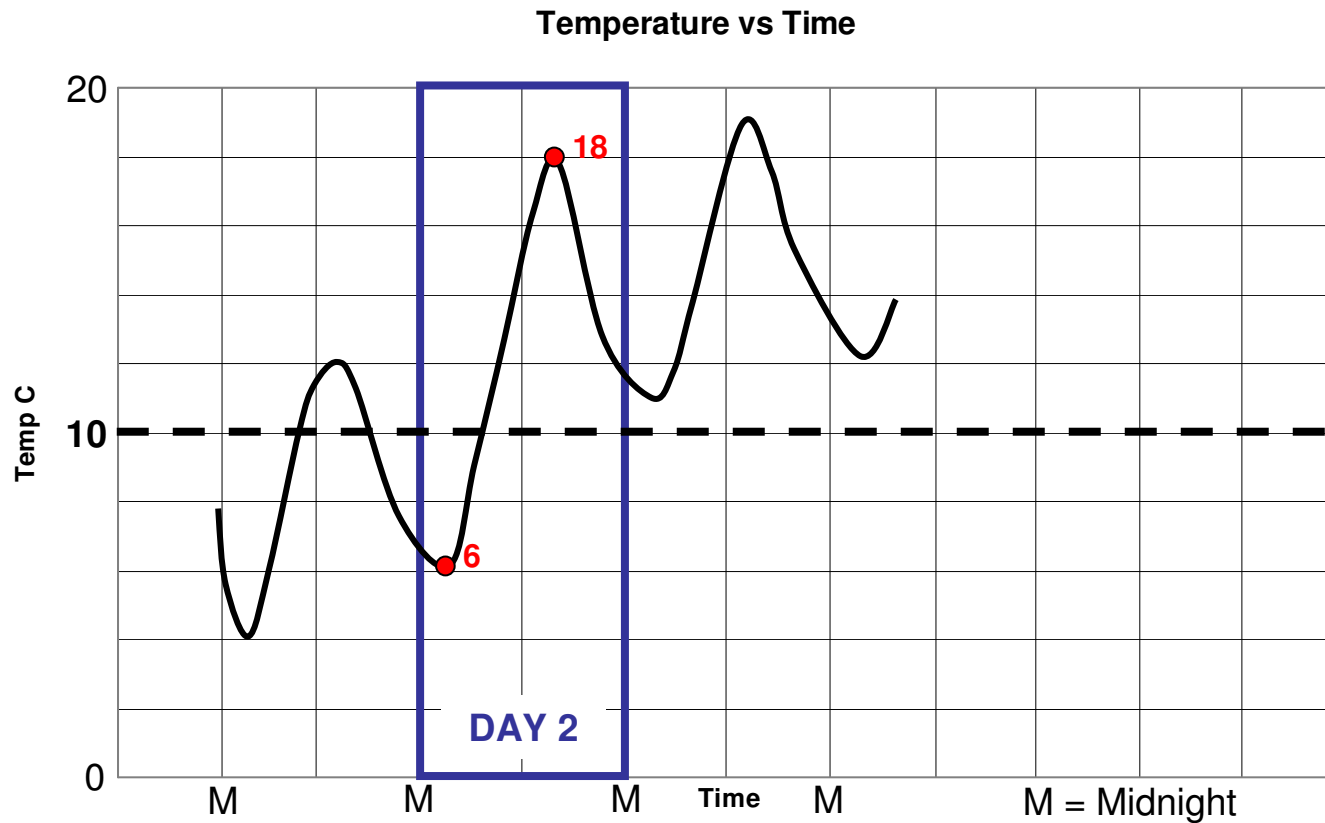
Degree-days are determined by subtracting 10°C from the mean daily temperature (maximum + minimum divided by 2), and calculating the cumulative sum through the growing season

Temperature vs Time



$$DD = (T_{\max} + T_{\min})/2 - 10 = (12 + 4)/2 - 10 = -2 \text{ (set to } 0)$$

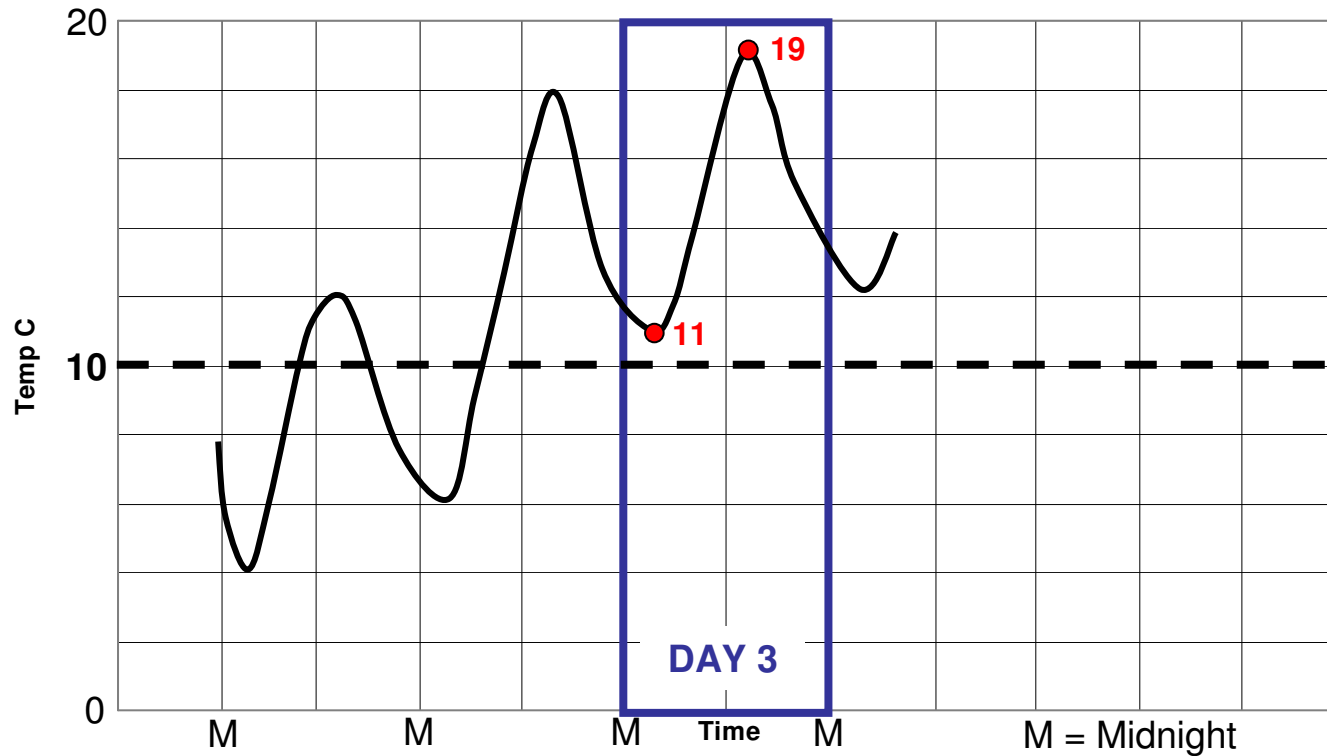
$$GDD = (T_{\max} + (\text{larger of } 10, T_{\min}))/2 - 10 = (12+10)/2 - 10 = 1$$



$$DD = (T_{\max} + T_{\min})/2 - 10 = (18 + 6)/2 - 10 = \mathbf{2}$$

$$GDD = (T_{\max} + (\text{larger of } 10, T_{\min}))/2 - 10 = (18+10)/2 - 10 = \mathbf{4}$$

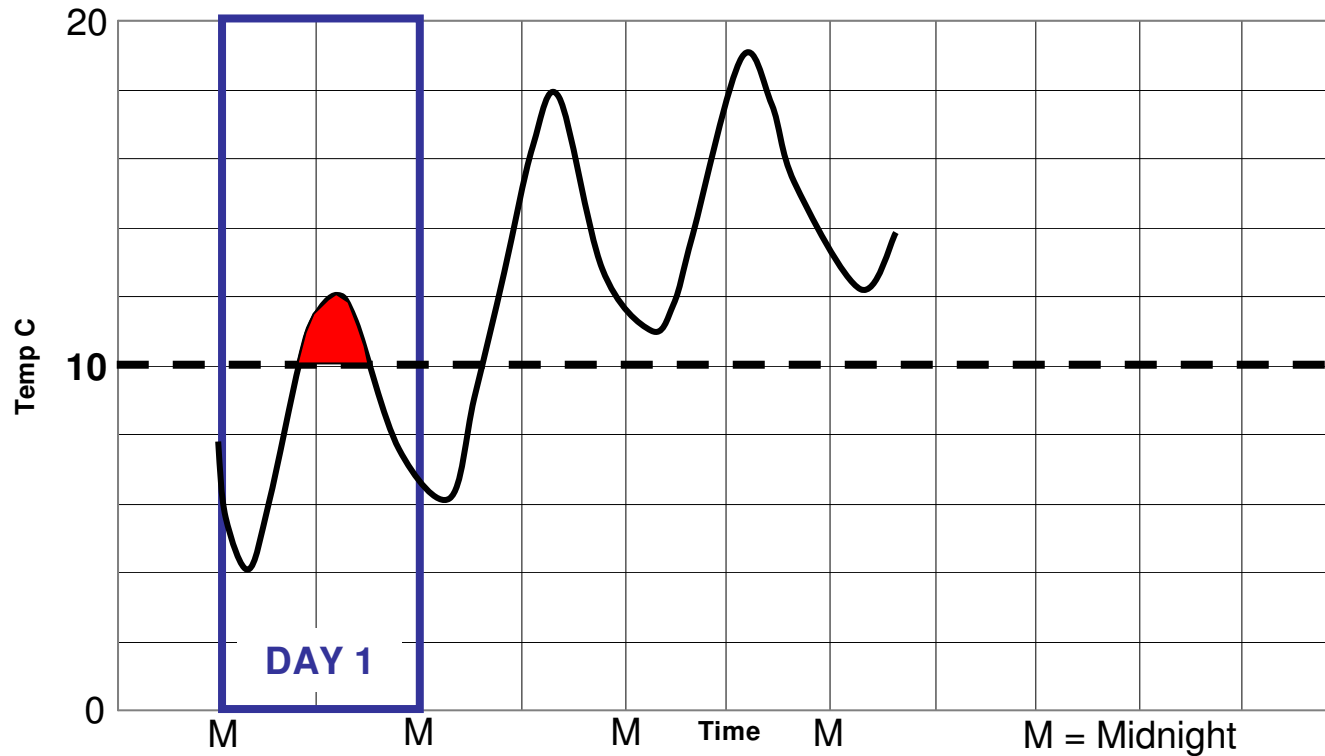
Temperature vs Time



$$DD = (T_{\max} + T_{\min})/2 - 10 = (19 + 11)/2 - 10 = 5$$

$$GDD = (T_{\max} + (\text{larger of } 10, T_{\min}))/2 - 10 = (19+11)/2 - 10 = 5$$

Temperature vs Time



$$DD = (T_{\max} + T_{\min})/2 - 10 = (12 + 4)/2 - 10 = -2 \text{ (set to 0)}$$

$$GDD = (T_{\max} + (\text{larger of } 10, T_{\min}))/2 - 10 = (12+10)/2 - 10 = 1$$

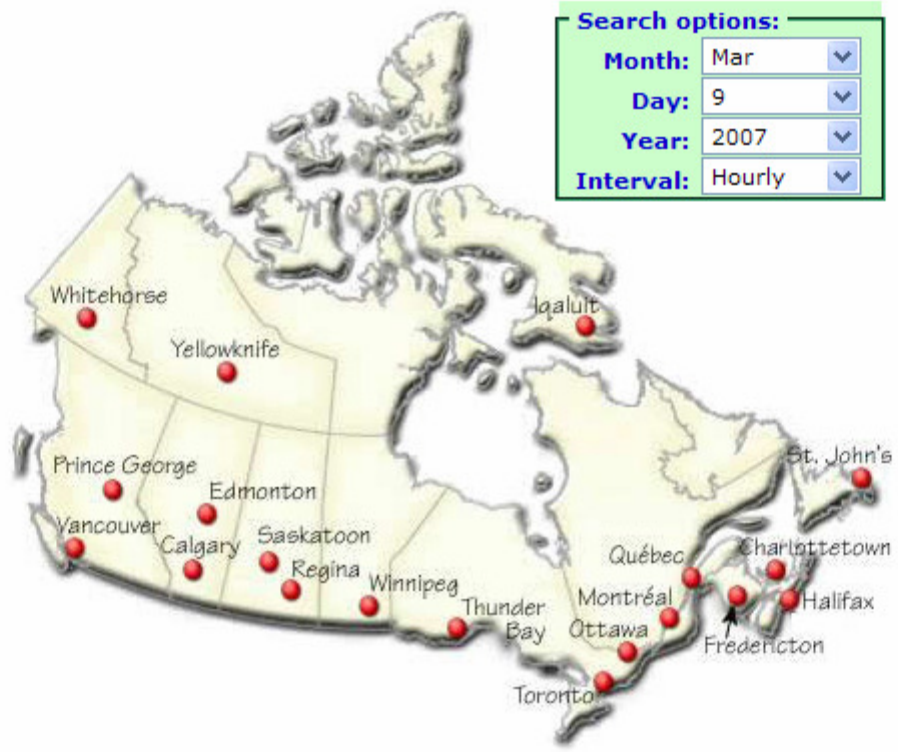
GDD = area under curve, above the 10C threshold

- Main
- Products & Services
- Water Data
- Contacts
- Links
- Climate Data Online
- Climate Normals & Averages
- Climate Data CD-ROM

To display climate data directly from the database, first specify a date, [data interval](#), and then select a city on the map. For more locations, select a province or territory or click on customized search.

Province:

Search options:
Month:
Day:
Year:
Interval:





Search by Proximity:

25 kilometres away from:

a city,

a National Park,

location coordinates:

latitude: ° ' North

longitude: ° ' West

for years from: to

or a specific date:

Display results per page.

[\[Format for print\]](#)



[Important Notices](#)

Created : 2002-06-21
Modified : 2005-04-06
Reviewed : 2005-04-06
Url of this page :
http://www.climate.weatheroffice.ec.gc.ca/advanceSearch/searchHistoricData_e.html

Main

**Products &
Services
Water Data
Contacts
Links**

**Climate Data
Online
Climate Normals
& Averages
Climate Data
CD-ROM**

Station Results

77 locations match your customized search. Confirm the [Data Interval](#) and Date for one of the locations listed and click GO to display the data.

Station	Prov	Data Interval	Day	Month	Year	
ALBERT HEAD	BC	Daily	30	Apr	1995	Go
BAMBERTON OCEAN CEMENT	BC	Daily	30	Nov	1980	Go
BEAVER LAKE	BC	Daily	30	Jun	1952	Go
BECHER BAY	BC	Daily	30	Apr	1966	Go
BRENTWOOD BAY 2	BC	Daily	31	May	1997	Go
BRENTWOOD CLARKE ROAD	BC	Daily	31	Mar	1980	Go
BRENTWOOD W SAANICH RD	BC	Daily	30	Jun	1970	Go
CENTRAL SAANICH ISL VIEW	BC	Daily	6	Mar	2007	Go
CENTRAL SAANICH TANNER	BC	Daily	31	Jul	1968	Go
CENTRAL SAANICH VEYANESS	BC	Daily	31	Jan	1994	Go
COLWOOD HATLEY DR	BC	Daily	31	Jan	2001	Go
CORDOVA BAY	BC	Daily	31	Mar	1970	Go
CORDOVA BAY CLAREMOUNT	BC	Daily	31	May	1995	Go
CORDOVA BAY SOUTH	BC	Daily	31	May	1995	Go
COWICHAN	BC	Daily	31	Aug	1925	Go
DISCOVERY ISLAND	BC	Hourly	8	Mar	2007	Go
EAST SOOKE ANDERSON COVE	BC	Daily	31	Mar	1980	Go
ELK LAKE	BC	Daily	31	Aug	1978	Go
ELK LAKE 2	BC	Daily	31	Jan	1986	Go
ESQUIMALT	BC	Daily	31	Oct	1950	Go

Water Data
 Contacts
 Links

Climate Data
 Online
 Climate Normals
 & Averages
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VICTORIA UNIVERSITY CS BRITISH COLUMBIA

Latitude: 48° 27' N Longitude: 123° 18' W Elevation: 60.10 m
Climate ID: 1018598 WMO ID: 71783 TC ID: WYJ

[Previous Month](#)

February 2007

Daily Data Report for March 2007											
Day	Max Temp °C 	Min Temp °C 	Mean Temp °C 	Heat Deg Days C 	Cool Deg Days C 	Total Rain mm	Total Snow cm	Total Precip mm 	Snow on Grnd cm	Dir of Max Gust 10's Deg	Spd of Max Gust km/h
01 †	6.7	-4.1	1.3	16.7	0.0	M	M	0.0			<31
02 †	6.2	2.0	4.1	13.9	0.0	M	M	4.6			<31
03 †	9.6E	2.0E	5.8E	12.2E	0.0E	M	M	6.4E		M	M
04 †	10.5	6.8	8.7	9.3	0.0	M	M	0.0			<31
05 †	13.3	6.8	10.1	7.9	0.0	M	M	0.8			<31
06 †	13.6	6.9	10.3	7.7	0.0	M	M	0.2			<31
07 †	13.9	5.7	9.8	8.2	0.0	M	M	3.0		24	39
08											
09											
Sum				75.9*	0.0*	M	M	15.0*			
Avg	10.5*	3.7*	7.1*								
Xtrm	13.9*	-4.1*								24*	39*

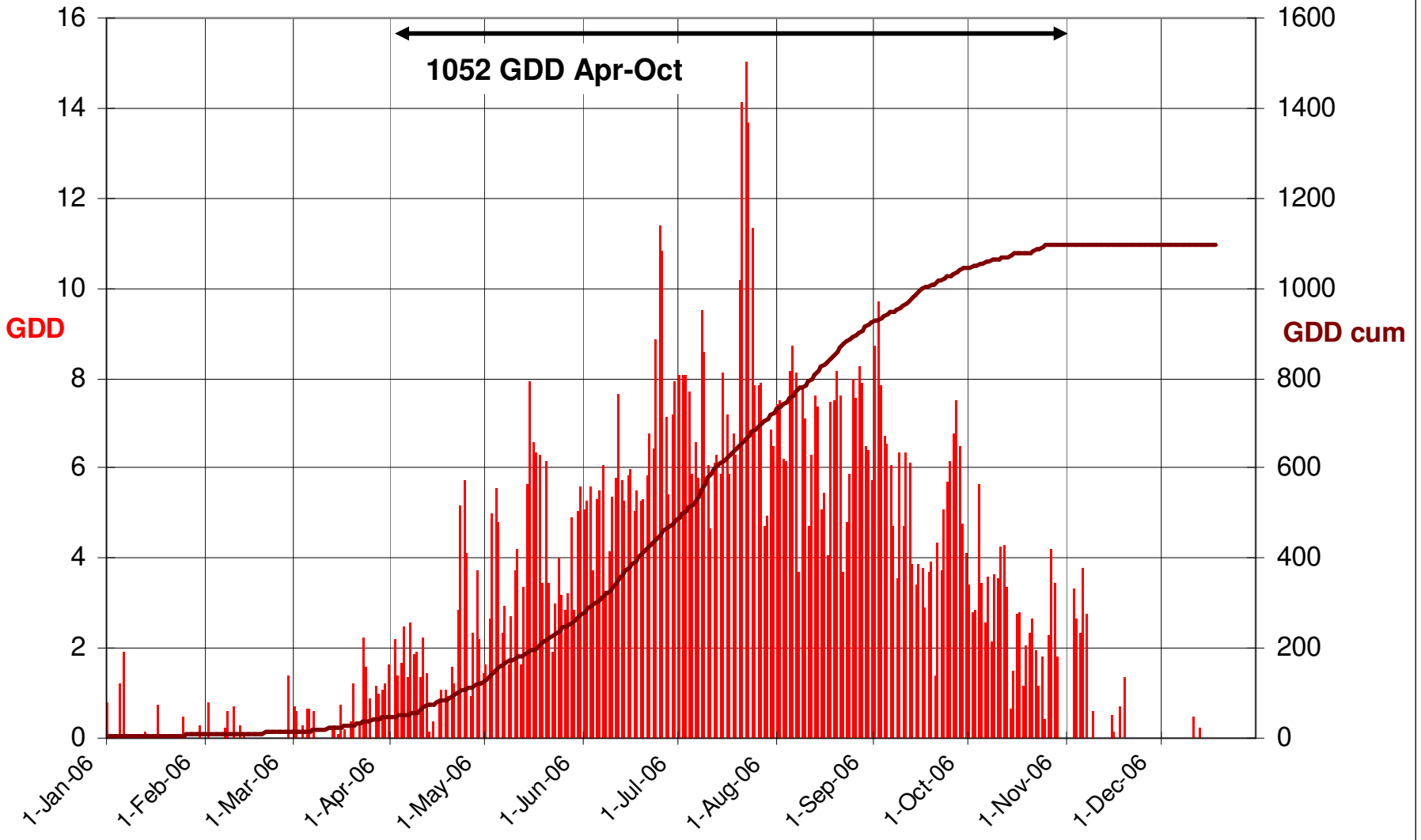
[Previous Month](#)

March 2007

Legend
[empty] = No data available
M = Missing
E = Estimated
A = Accumulated
C = Precipitation occurred, amount uncertain

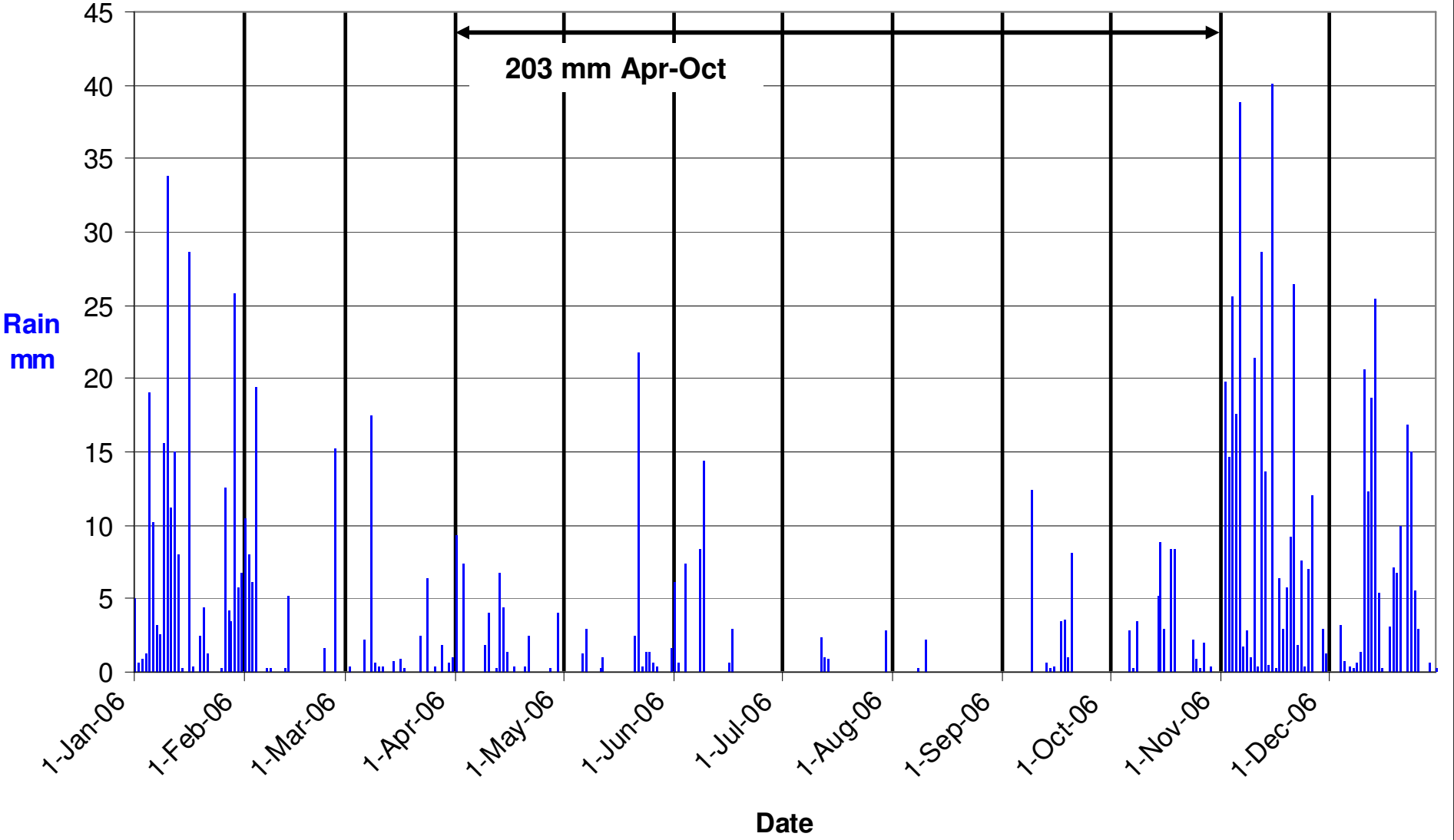
Navigation Options
Canada Map
British Columbia Map
Customized Search
Nearby Stations with Data
Customizable Chart
Bulk Data (2007) [CSV] [XML]

Victoria Airport GDD 2006

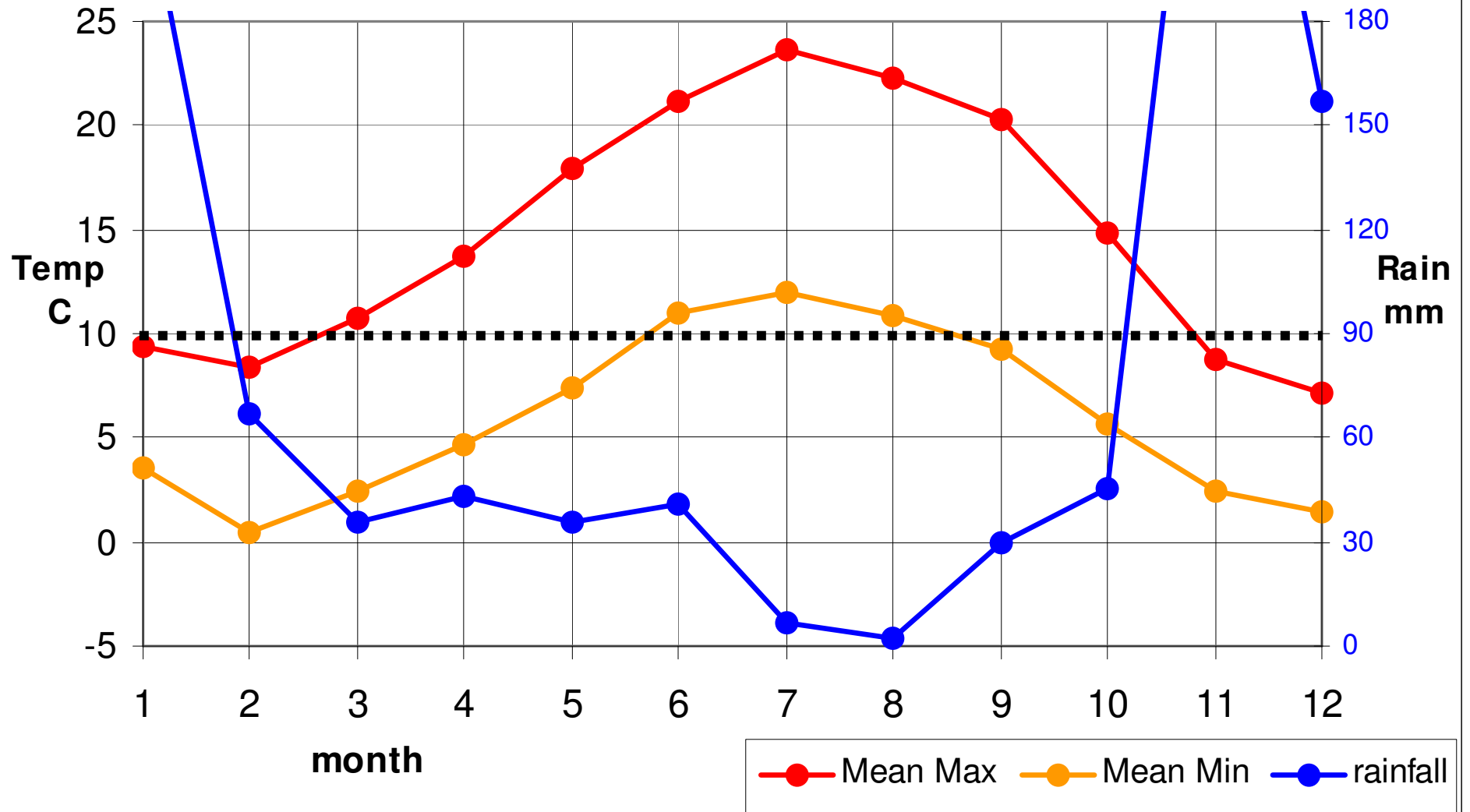


DD daily = 911

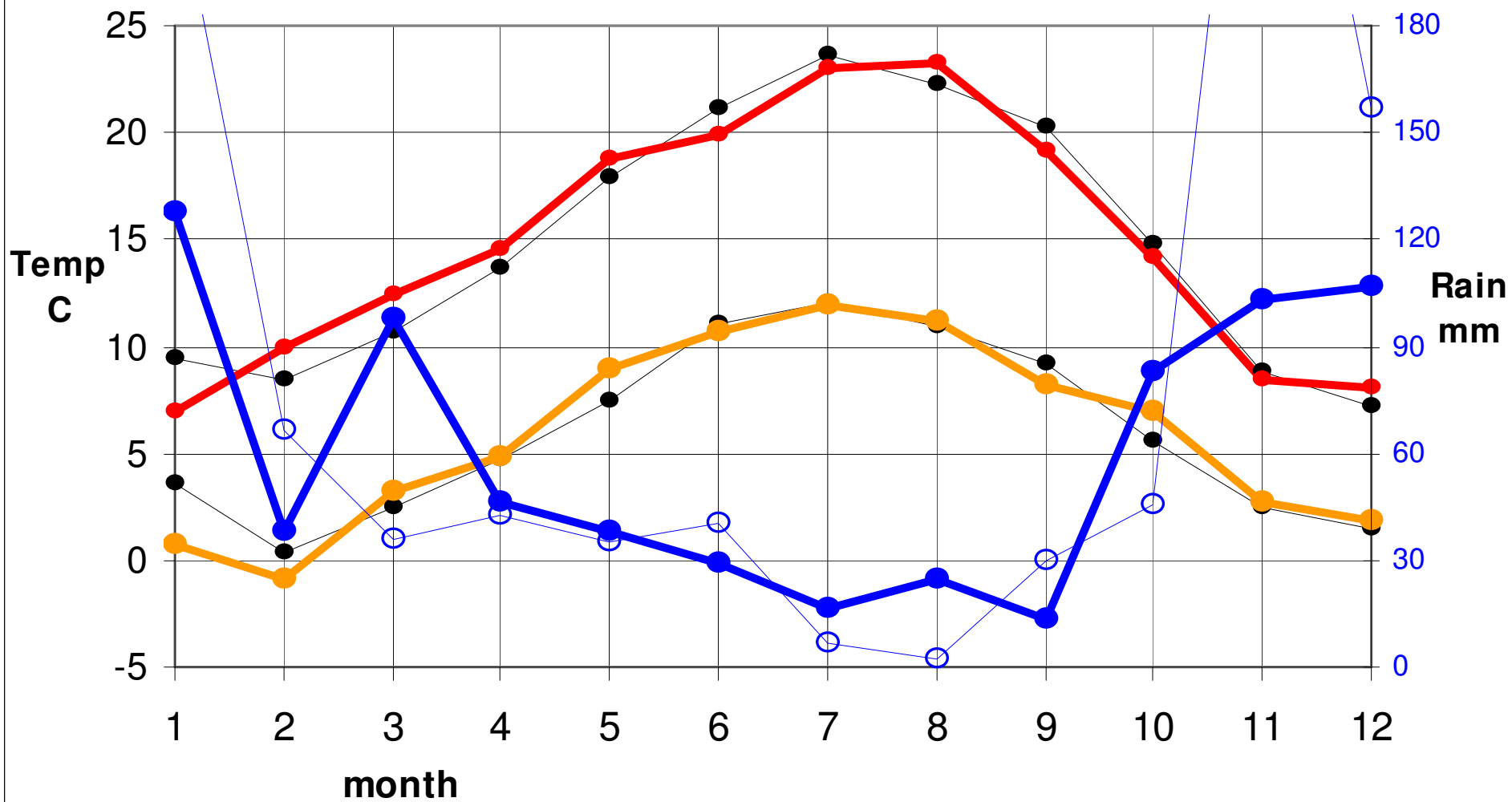
Victoria Airport Rainfall 2006



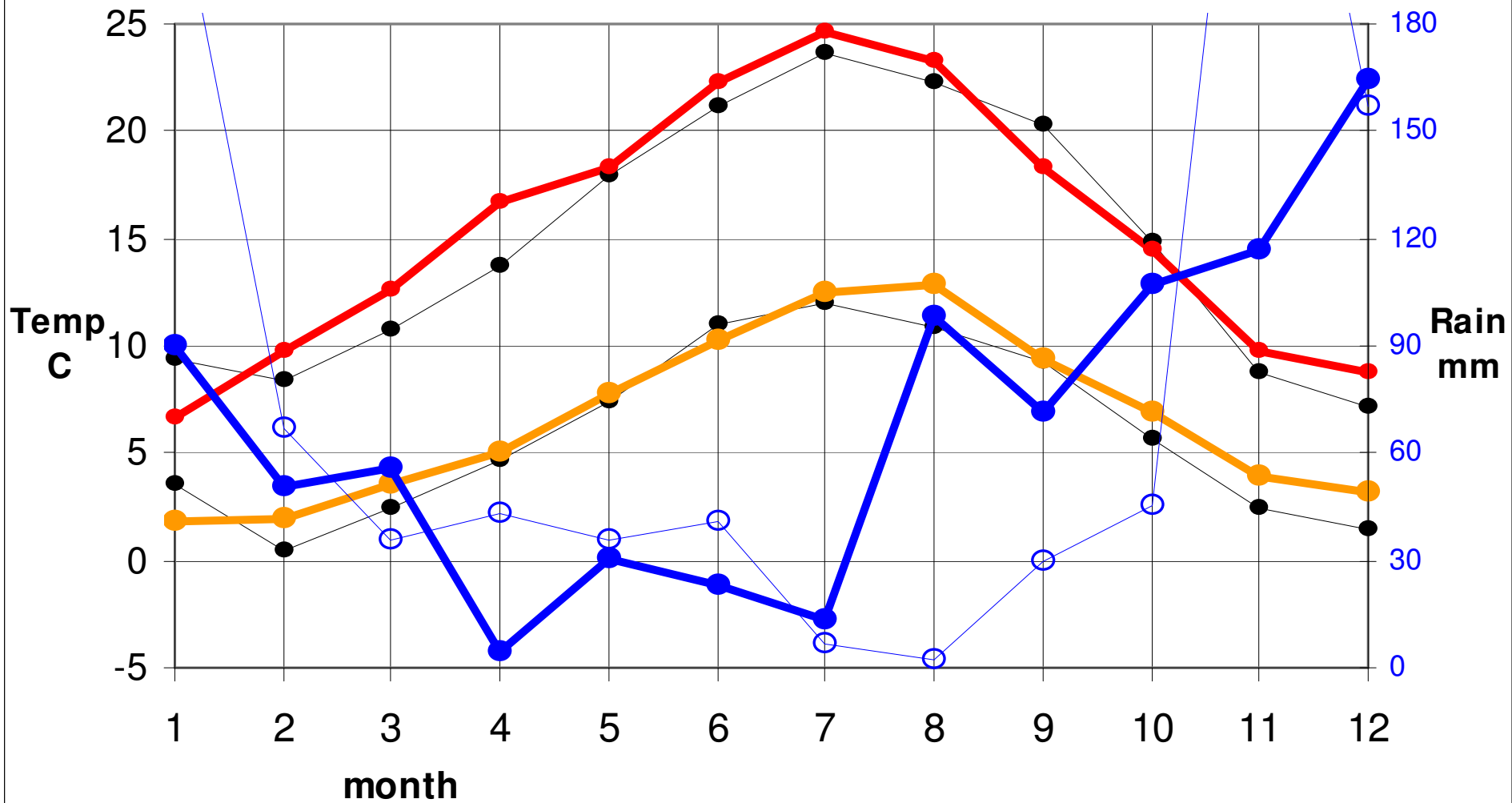
Victoria Airport 2006 GDD 1035



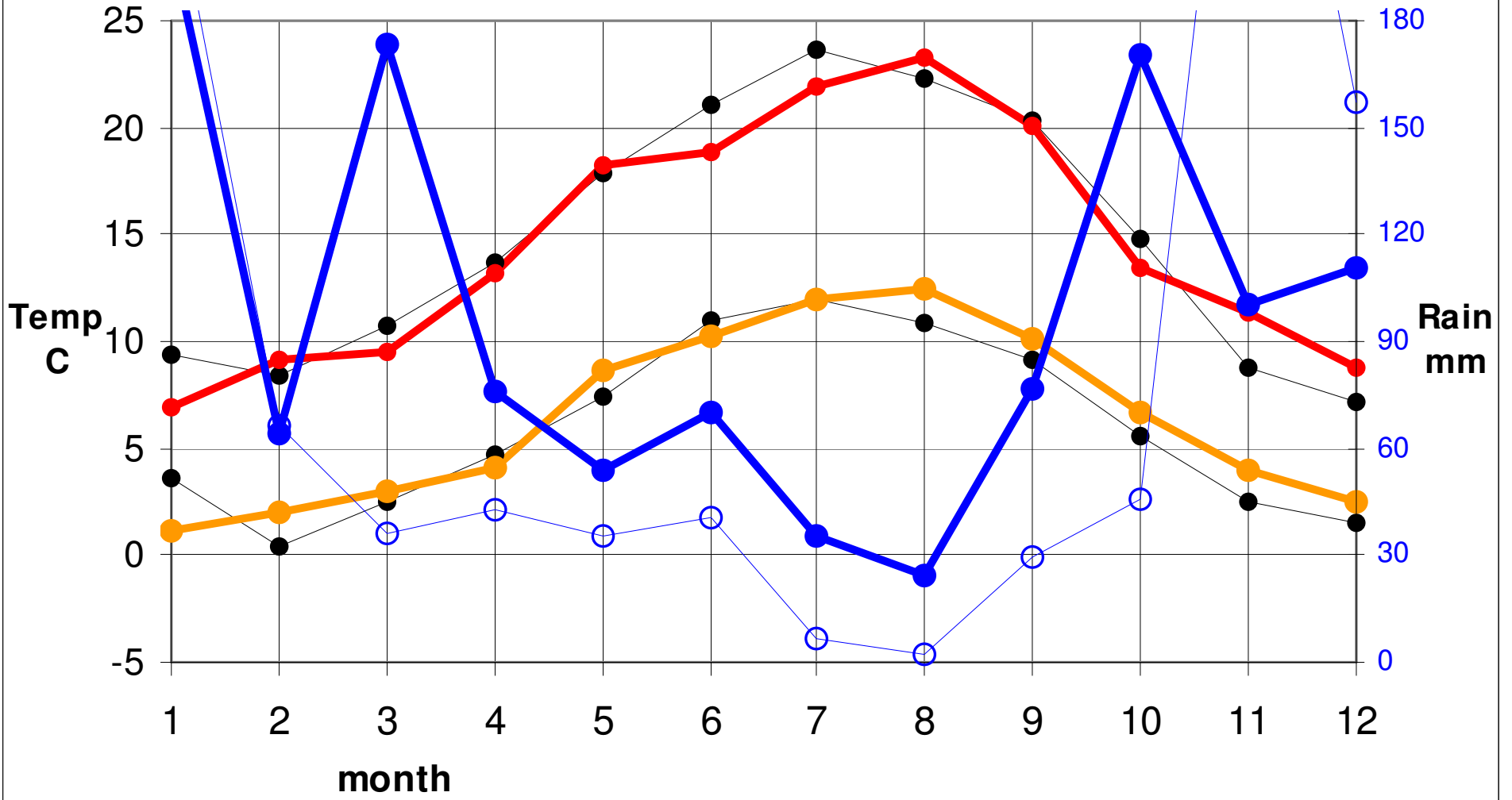
Vic Airport 2006 (1035) and Vic Airport 2005 (1022)



Vic Airport 2006 (1035) and Vic Airport 2004 (1126)



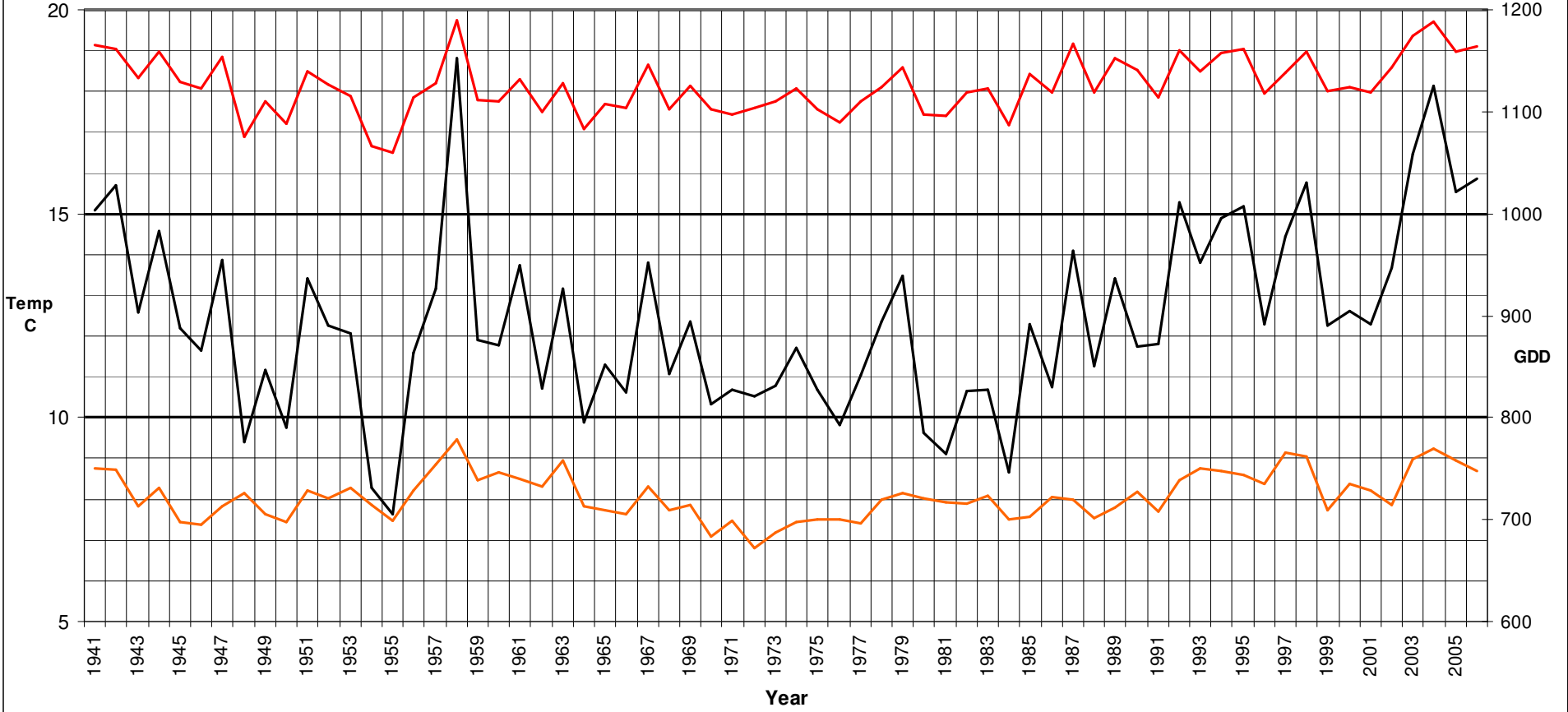
Vic Airport 2006 (1035) and Vic Airport 1997 (978)

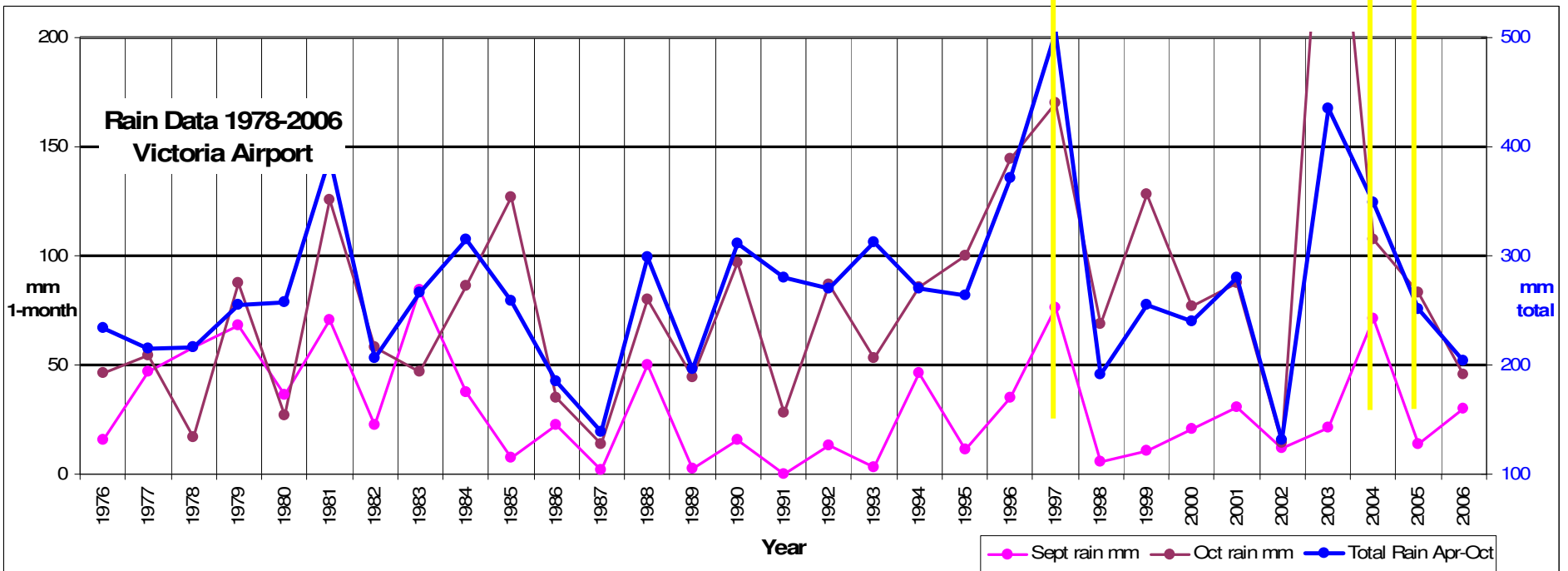
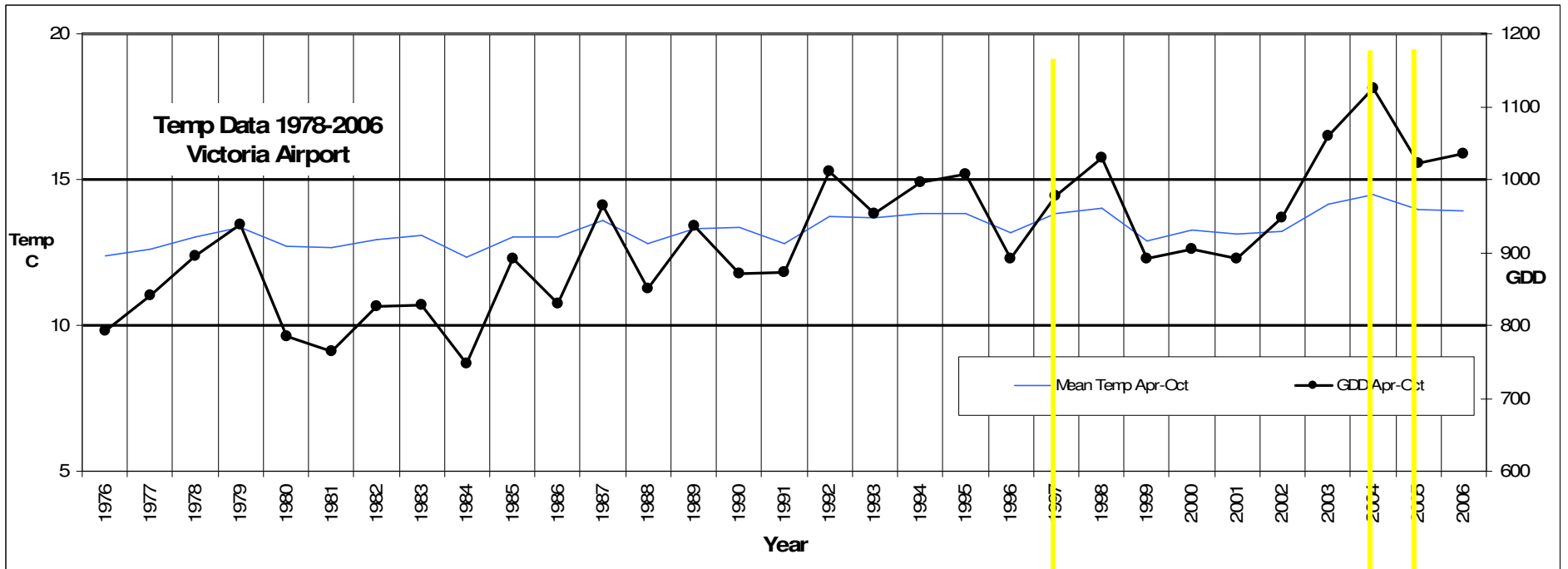


Temp Data 1941-2006

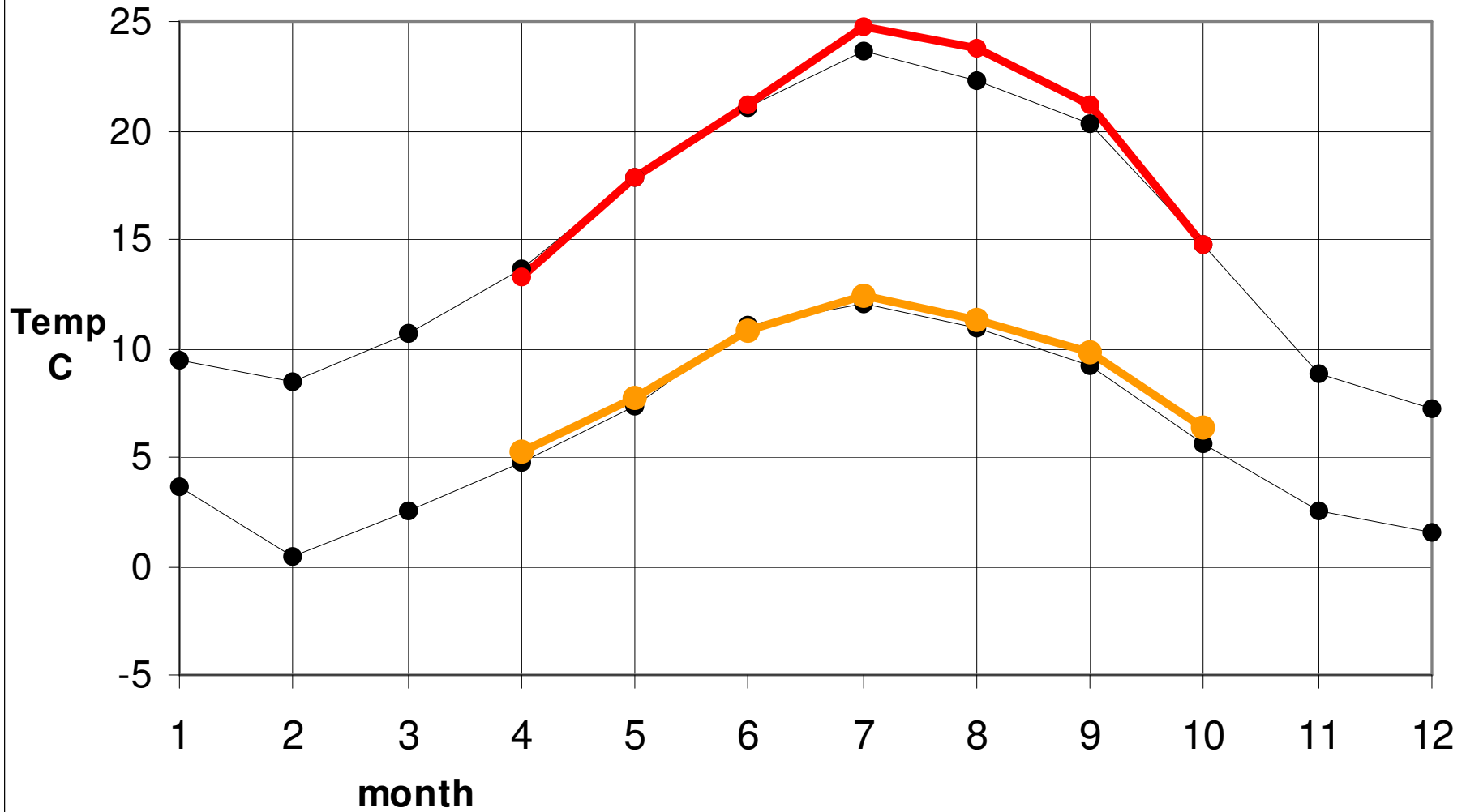
Victoria Airport

— Mean Max Apr-Oct — Mean Min Apr-Oct
— GDD Apr-Oct

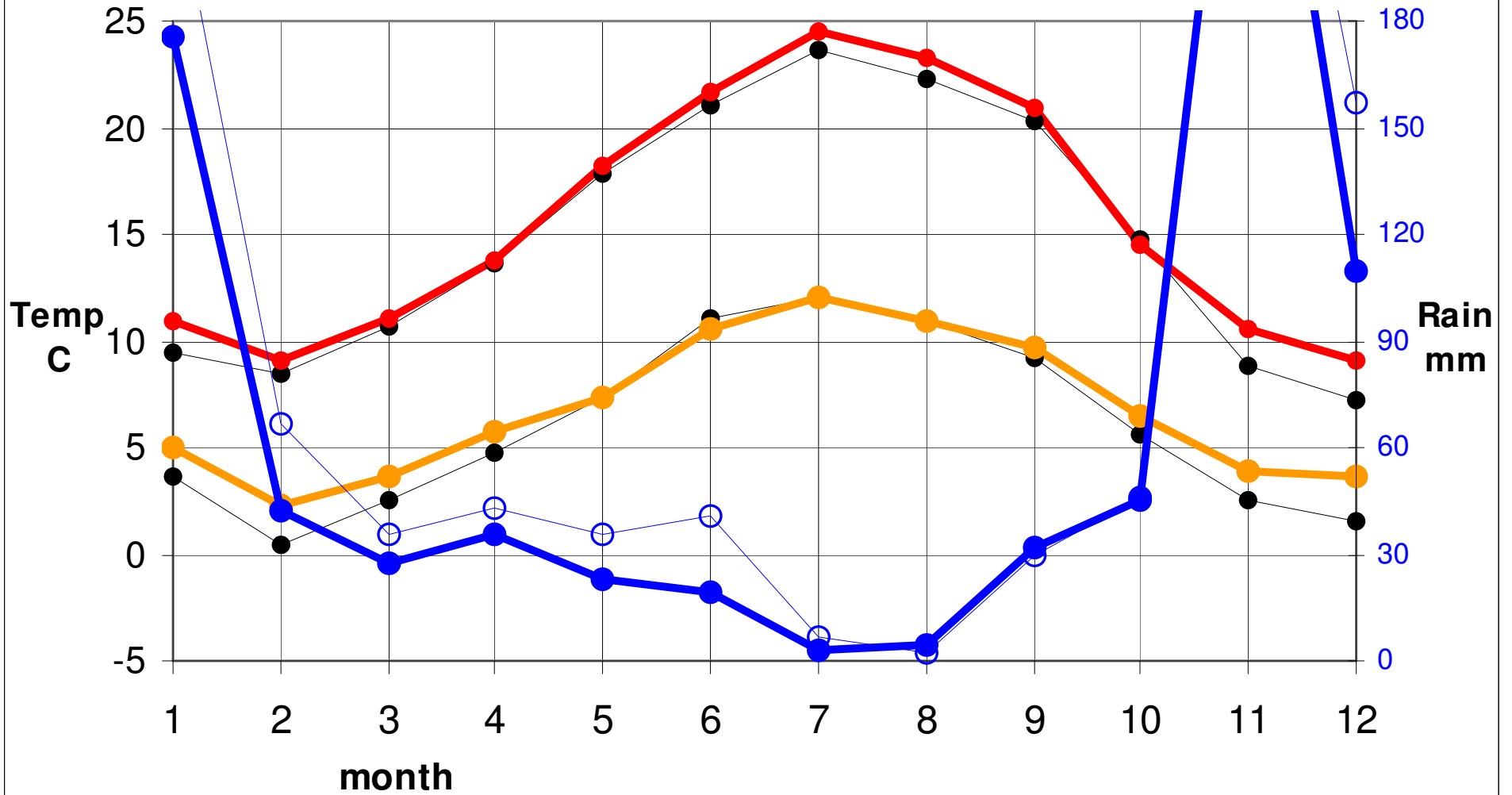




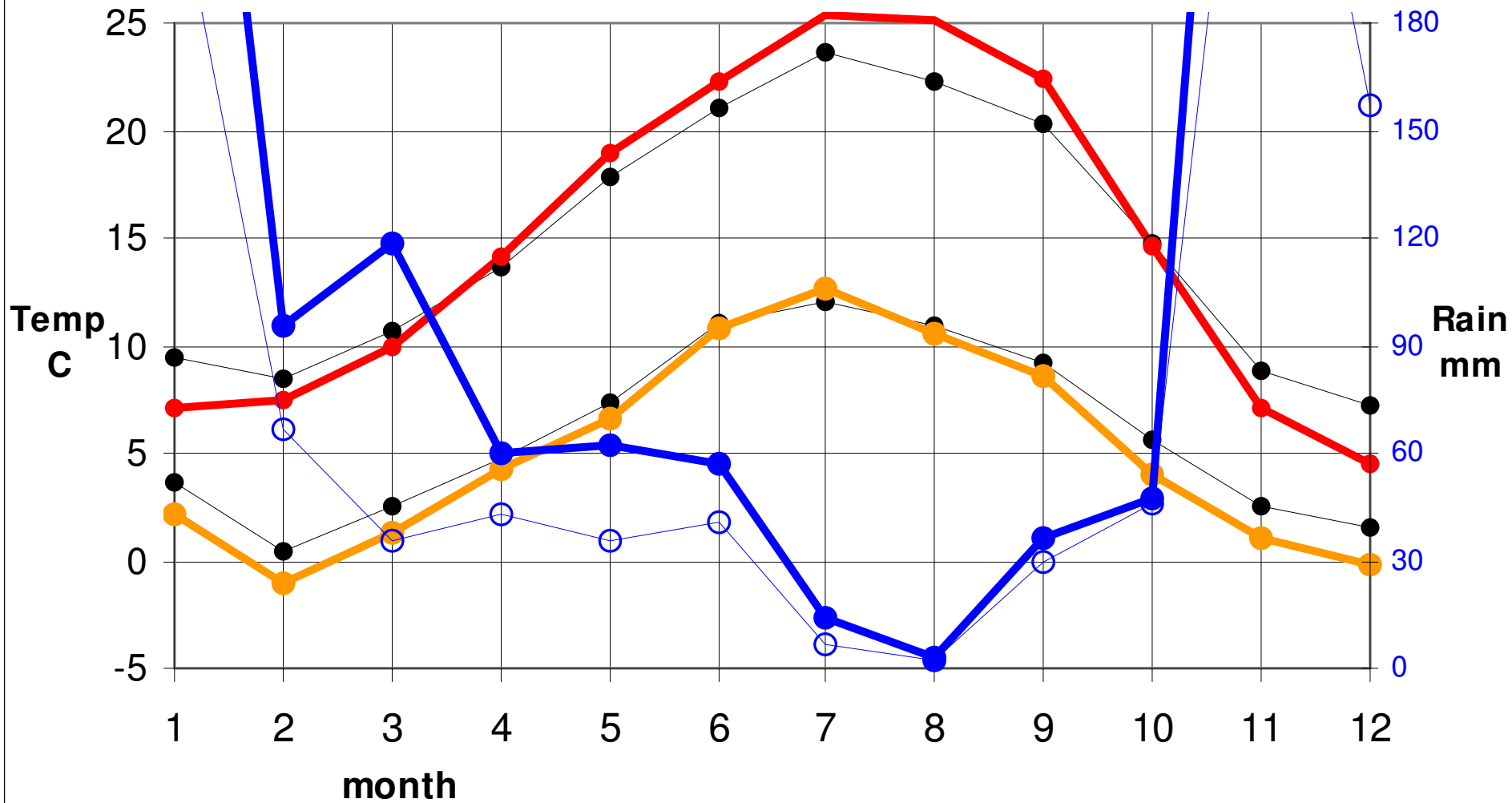
Vic Airport 2006 (1035) and **Keystone Vineyard 2006 (1092)**



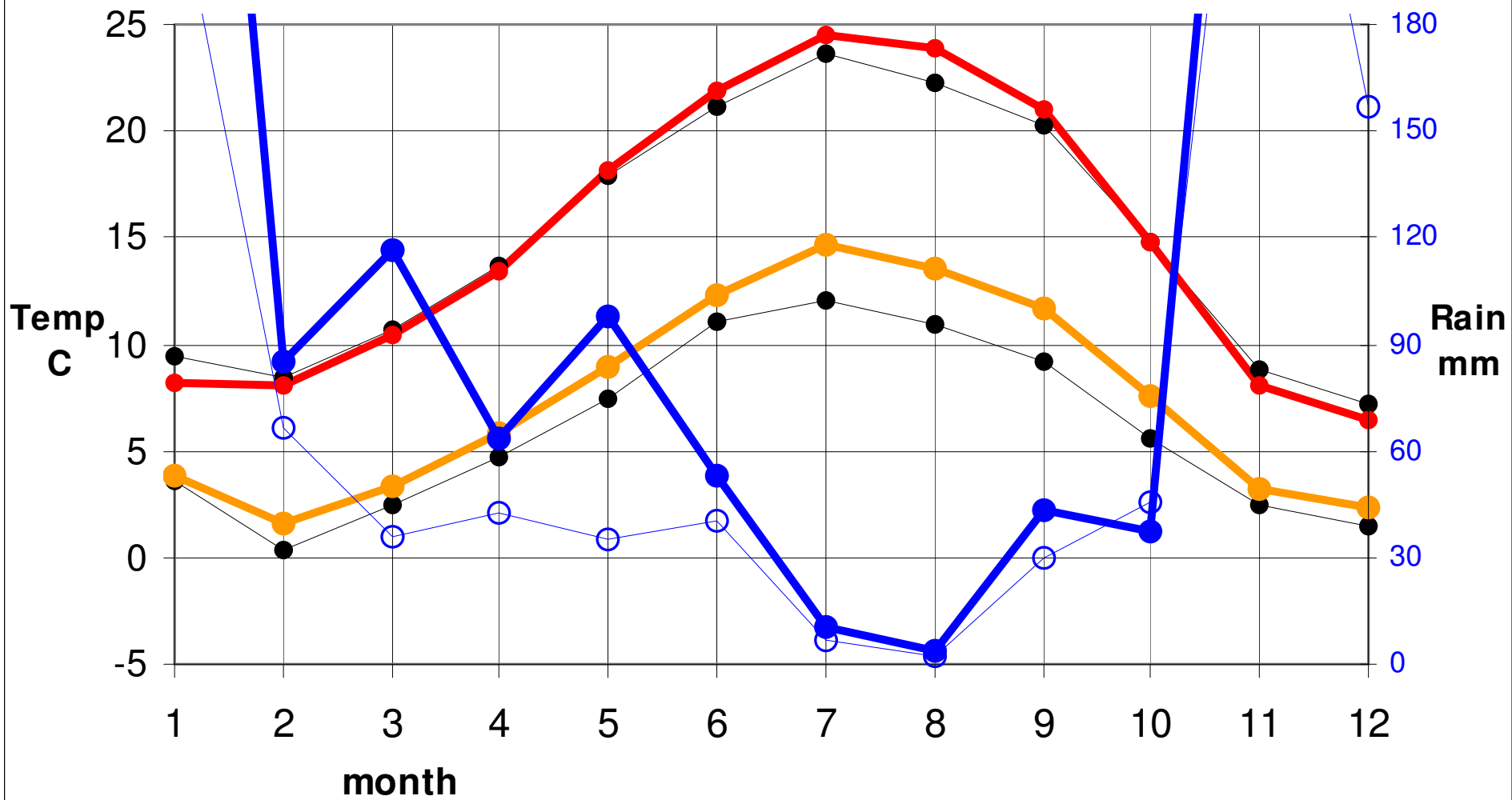
Vic Airport 2006 (1035) and **UVIC 2006 (1080)**



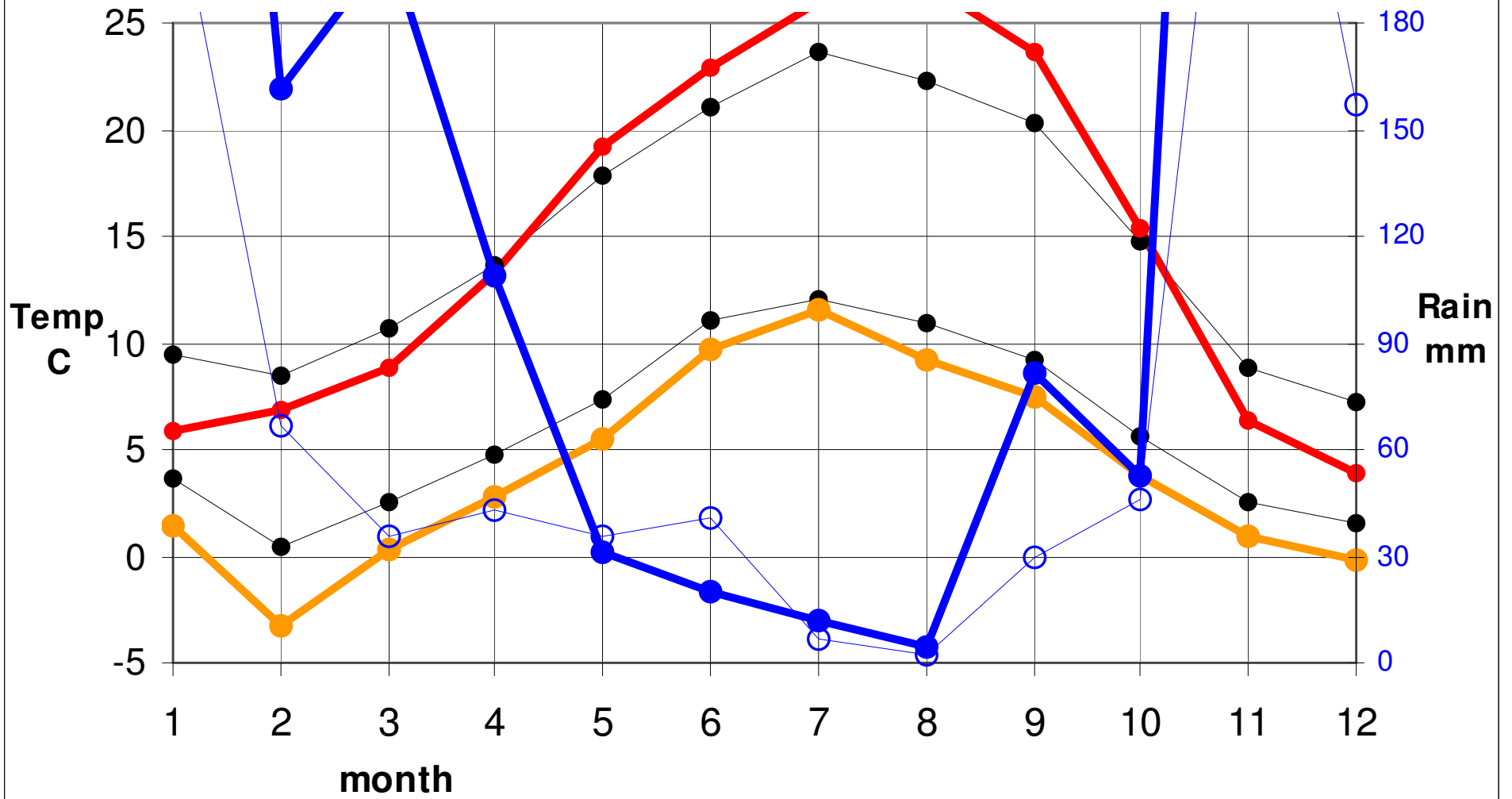
Vic Airport 2006 (1035) and **Duncan Glenora 2006 (1177)**



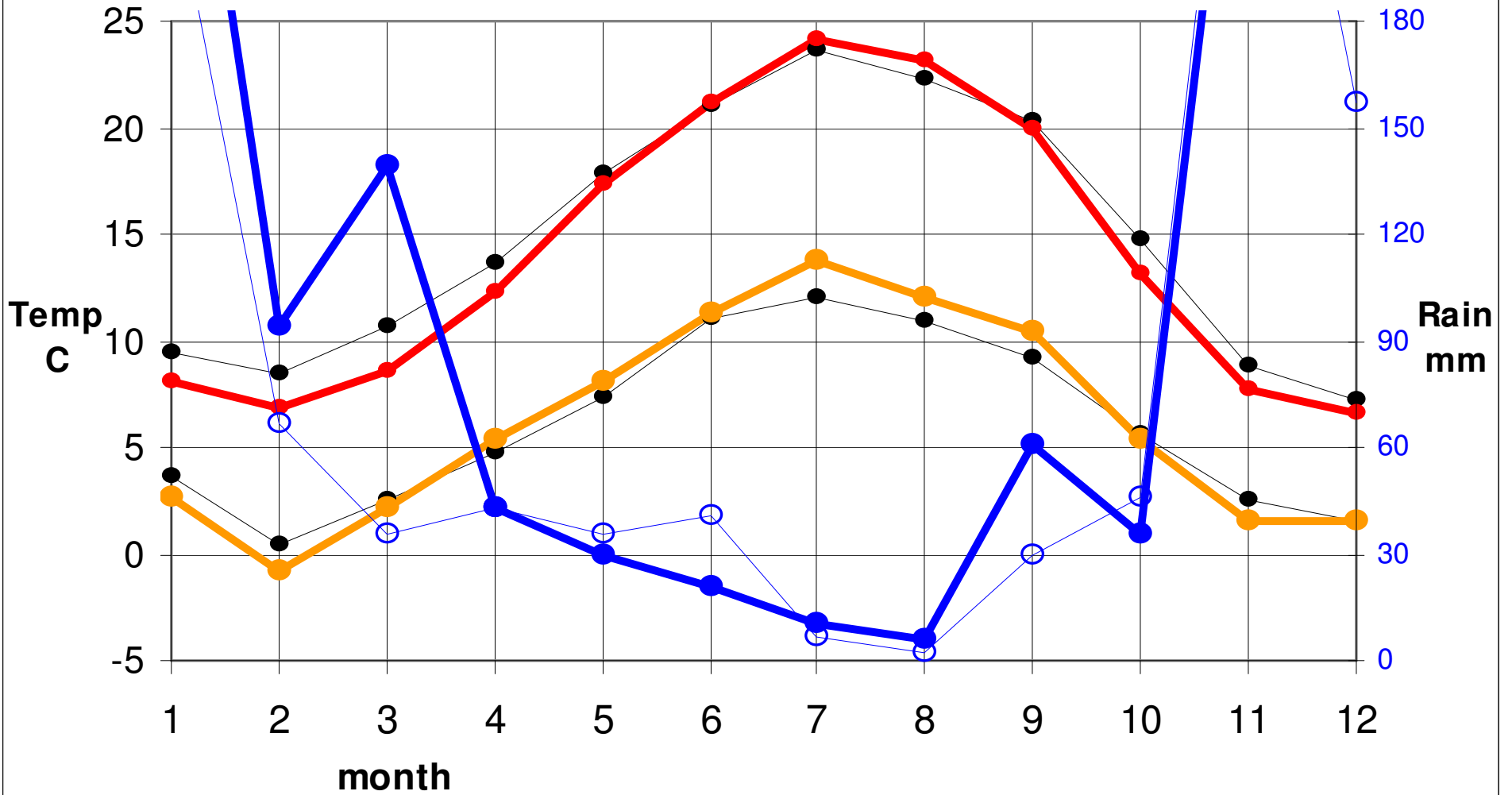
Vic Airport 2006 (1035) and Chemainus 2006 (1224)



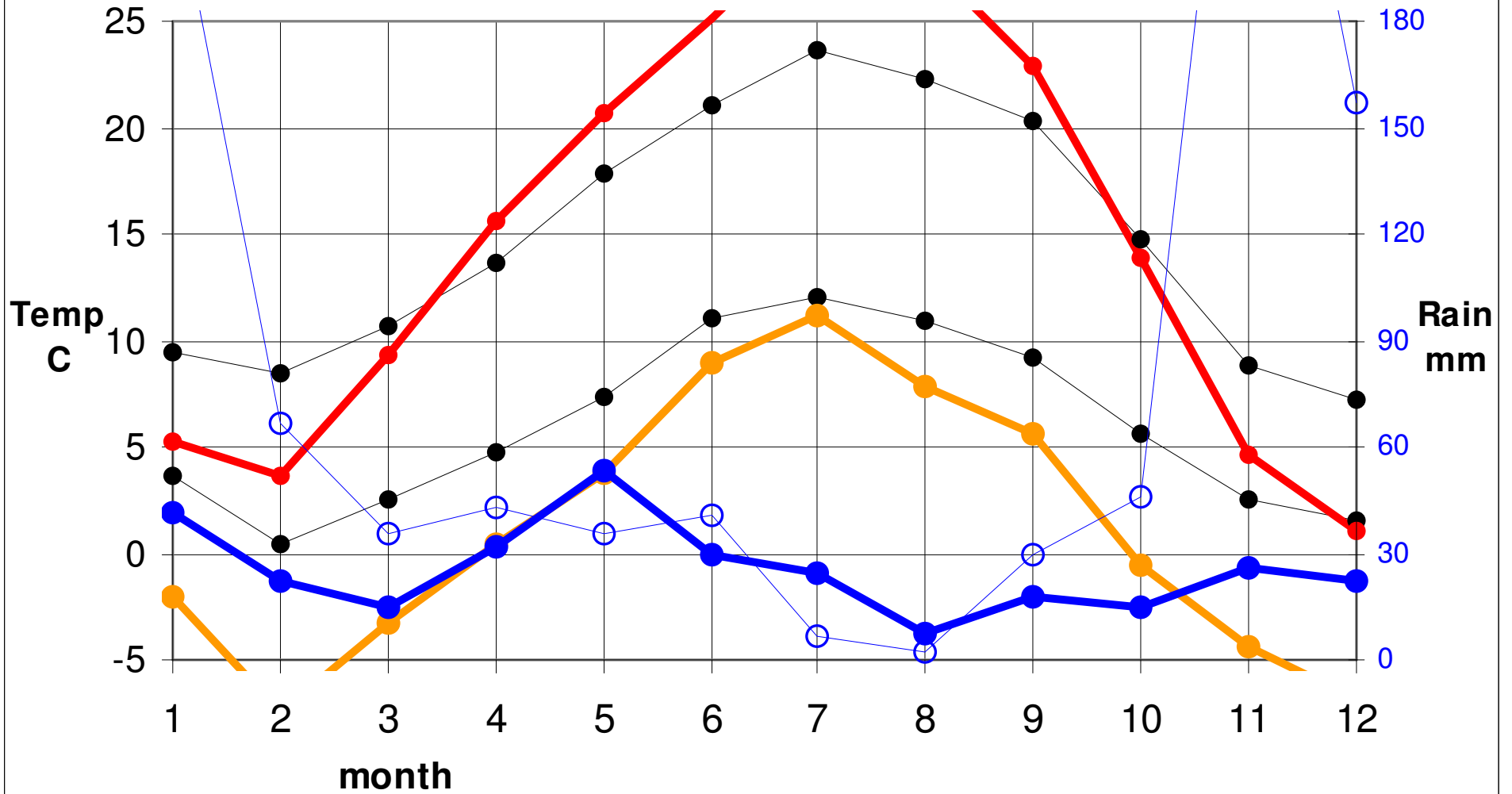
Vic Airport 2006 (1035) and P.Alberni AUT 2006 (1204)



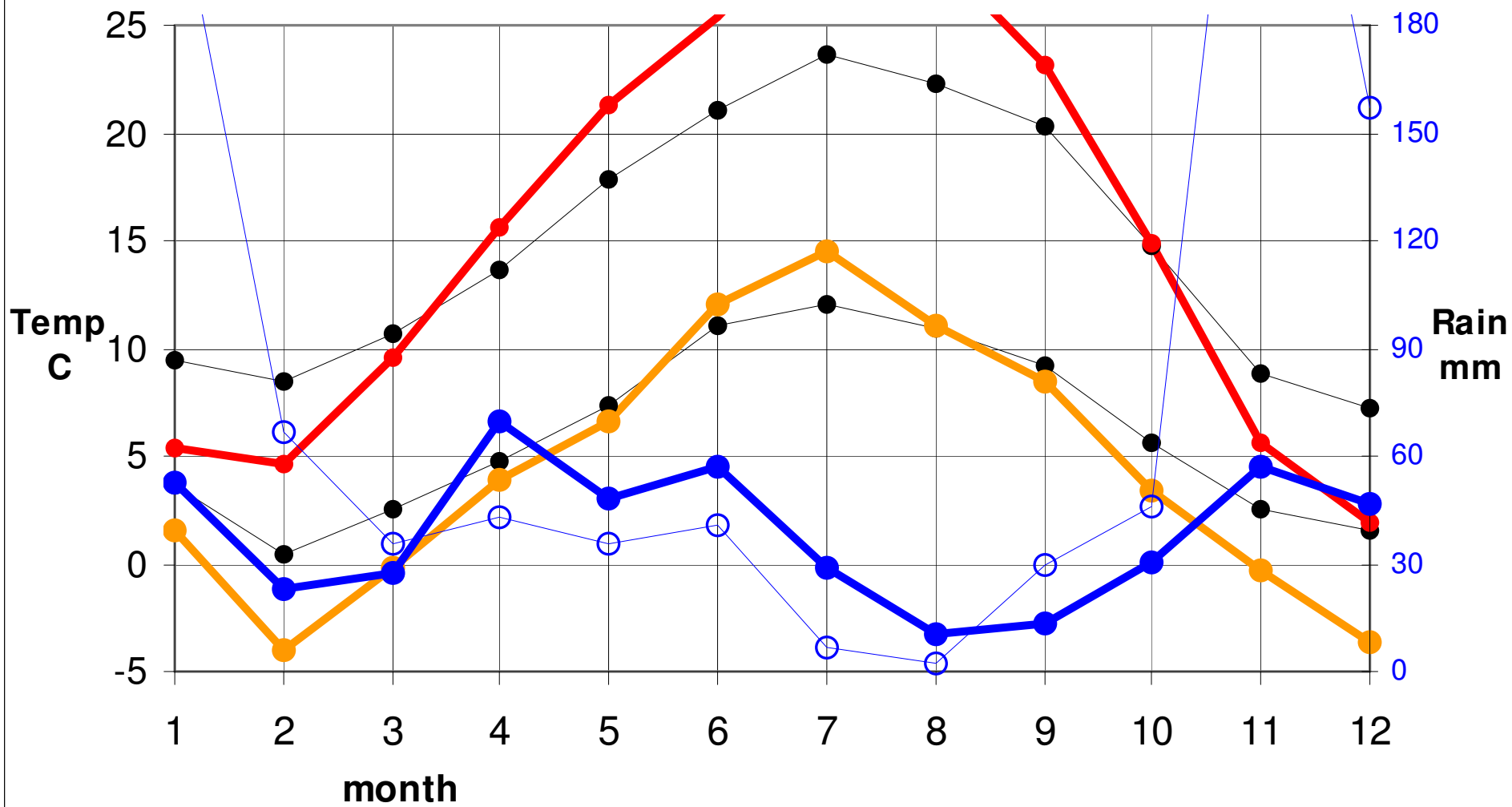
Vic Airport 2006 (1035) and **Comox-A 2006 (1054)**



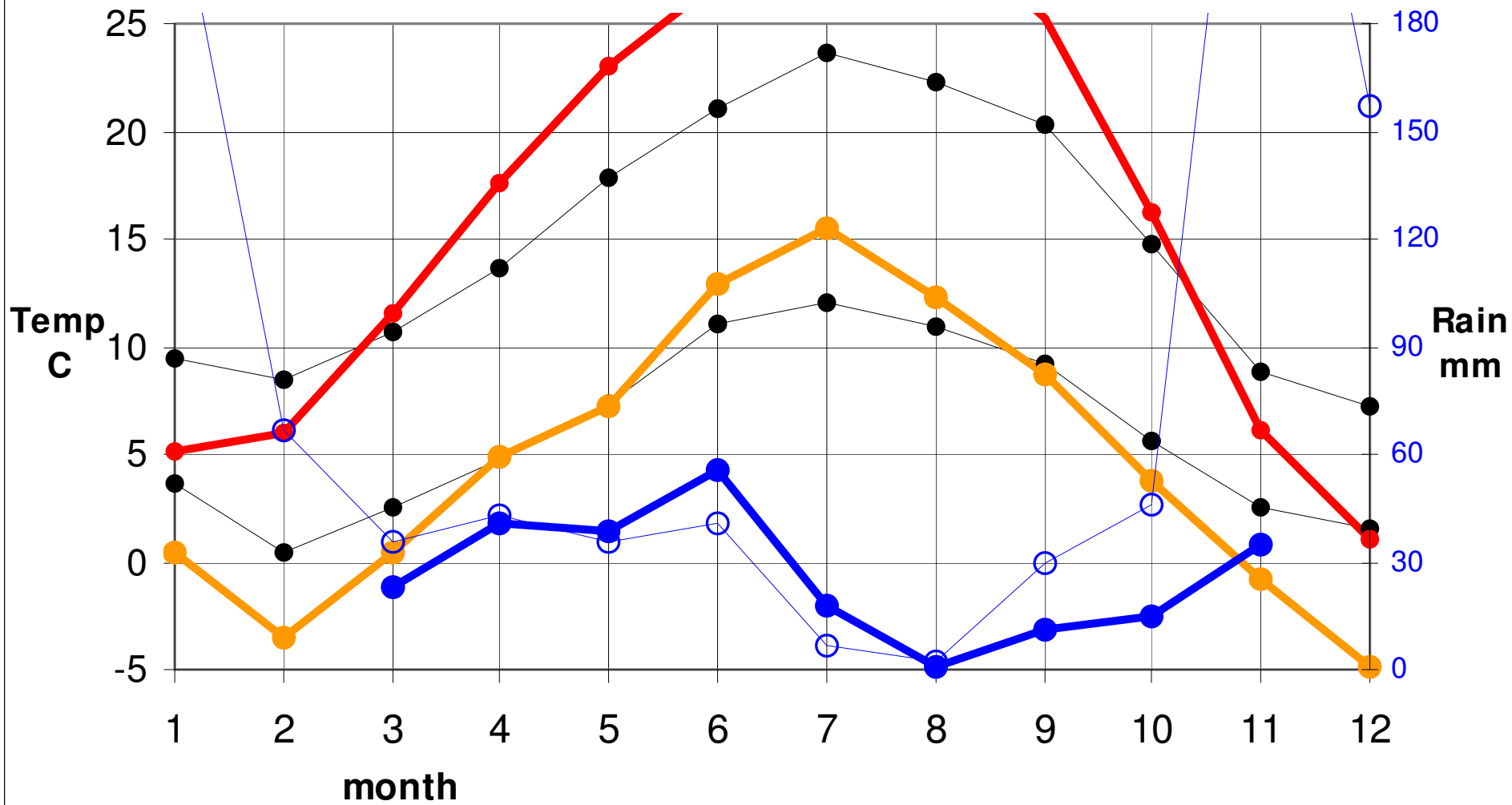
Vic Airport 2006 (1035) and Kelowna AWOS 2006 (1338)



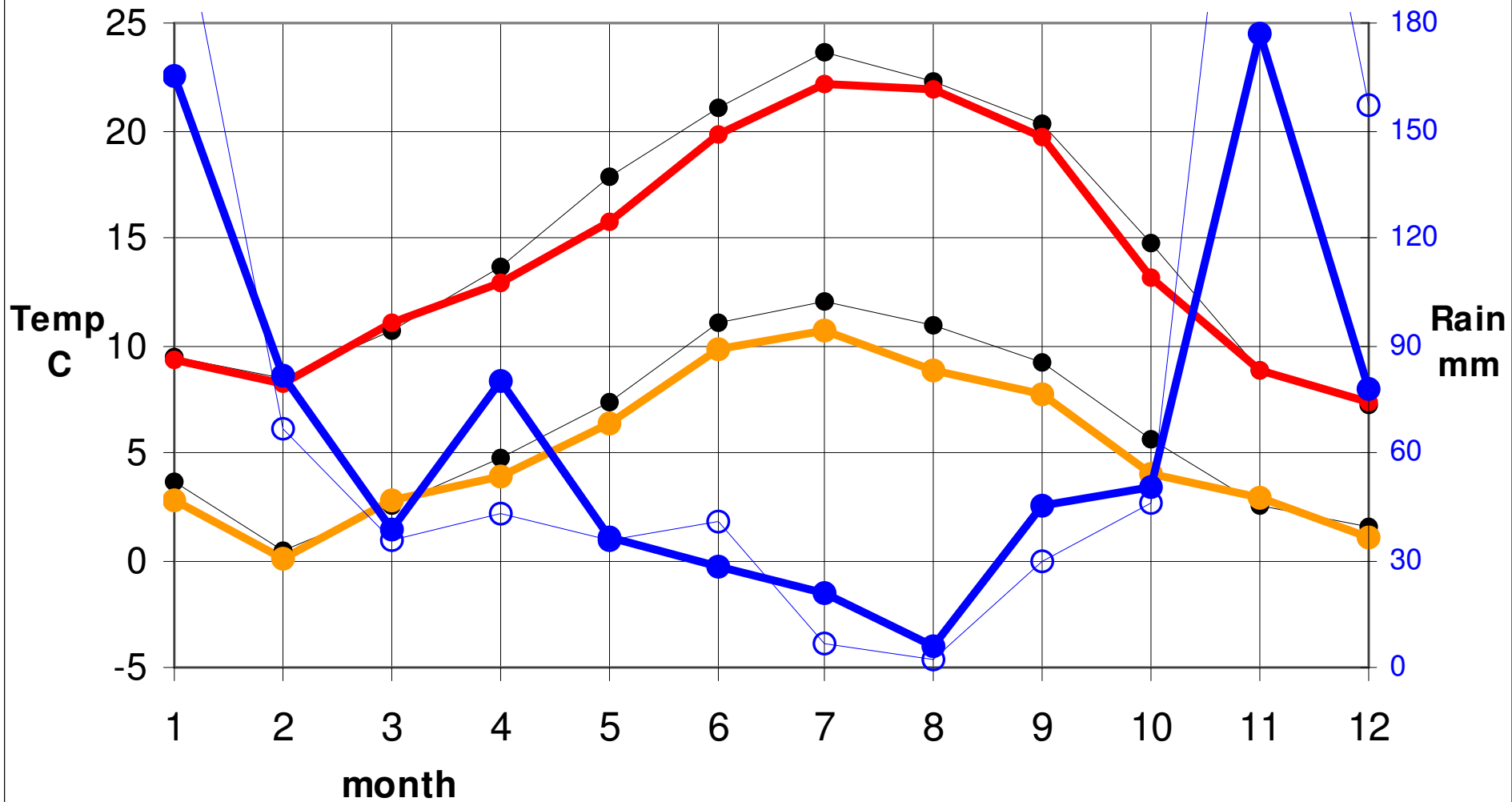
Vic Airport 2006 (1035) and **Penticton A 2006 (1482)**



Vic Airport 2006 (1035) and **Osoyoos CS 2006 (1708)**

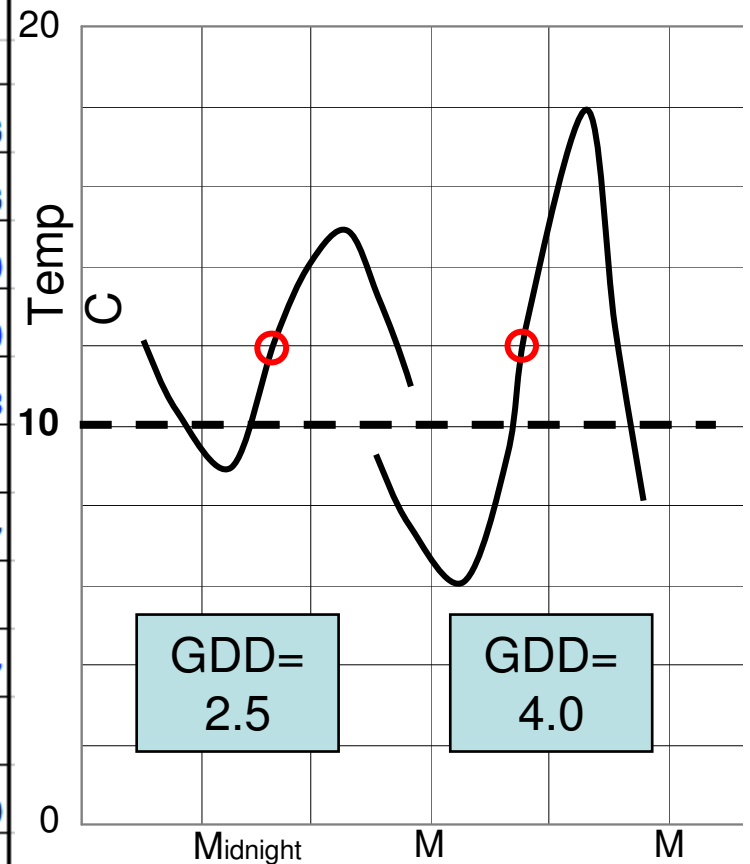


Vic Airport 2006 (1035) and Mt Vernon WA 2006 (857)



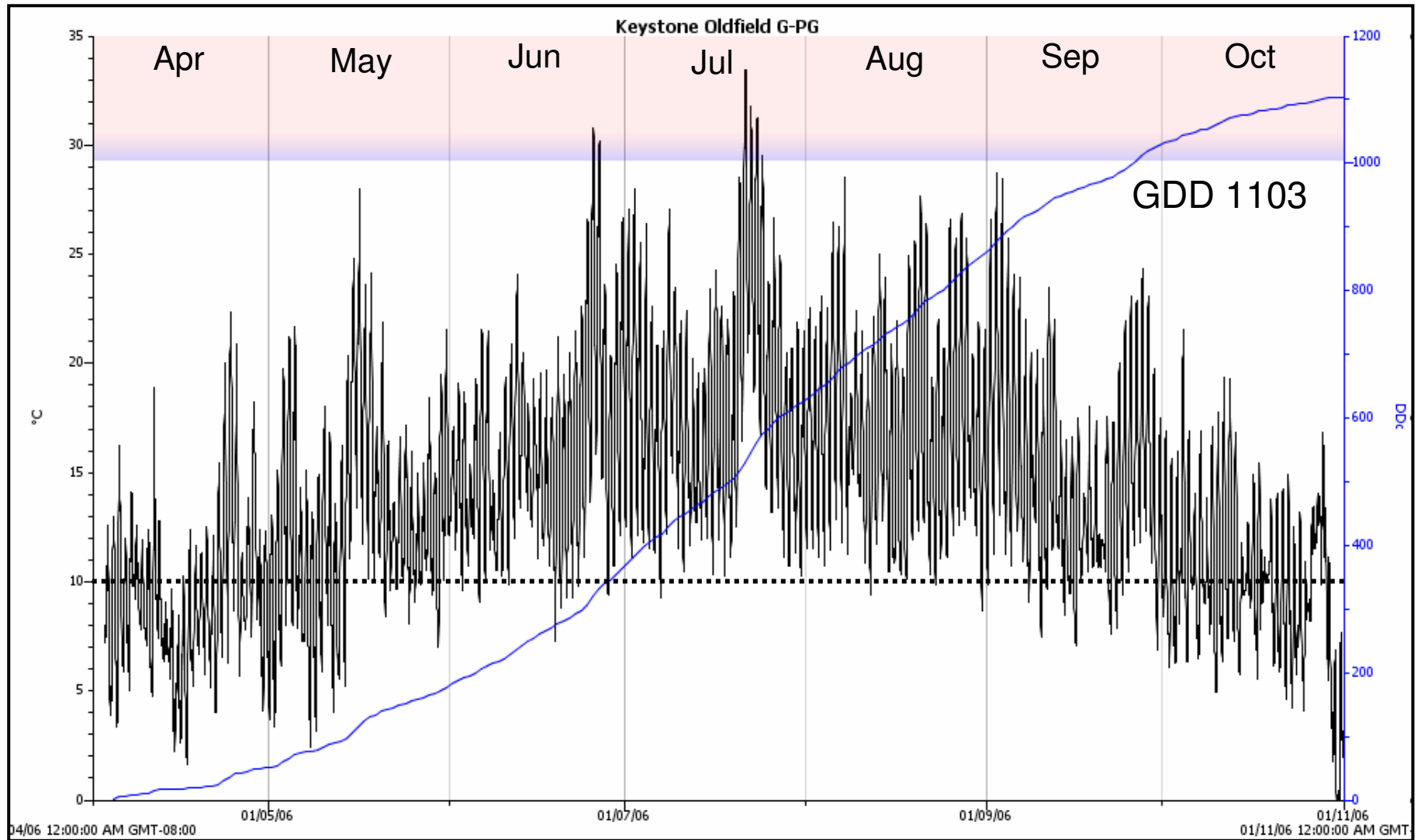
Climate Comparison, Western Canada 2006

Location	MeanMax T Apr-Oct	MeanMin T Apr-Oct	Mean T Apr-Oct	GDD Apr-Oct	Rain mm Apr-Oct
Victoria Airport	19.1	8.7	13.9	1035	203
Victoria UVIC	19.6	9.0	14.3	1080	163
Duncan Glenora	20.4	8.2	14.3	1177	279
Duncan Kelvin Ck	20.2	8.3	14.3	1147	270
Chemainus	19.7	10.7	15.2	1224	308
Port Alberni AUT	21.0	7.2	14.1	1204	311
Comox-A	18.8	9.5	14.2	1054	207
WA Mt Vernon	17.9	7.3	12.6	857	267
Kelowna AWOS	22.3	5.3	13.8	1338	179
Penticton A	22.8	8.6	15.7	1482	258
Osoyoos CS	24.4	9.3	16.9	1708	179



Region	Growing Season^a Tavg (°C)	Climate Maturity Grouping^b
Mosel Valley	13.0	COOL
Alsace	13.1	
Champagne	14.5	
Rhine Valley	14.9	
Northern Oregon	15.2	INTERMEDIATE
Loire Valley	15.3	
Burgundy-Côte	15.3	
Burgundy-Beaujolais	15.8	
Chile	16.3	
Eastern Washington	16.5	
Bordeaux	16.5	
Central Washington	16.6	
Rioja	16.7	
Southern Oregon	16.9	
Coastal California	17.0	WARM
South Africa	17.1	
Northern California	17.4	
Northern Rhône Valley	17.6	
Northern Portugal	17.7	
Barolo	17.8	
Southern Rhône Valley	18.2	
Margaret River	18.6	
Chianti	18.8	
Hunter Valley	19.8	HOT
Barossa Valley	19.9	
Southern Portugal	20.3	
Southern California	20.4	

G. Jones 04
1950-1999 avg
Each 1 deg up



	Gewurtz	Pinot Gris	Pinot Noir	Leon Millot
Harvest Date	Oct 11	Oct 9	Oct 9	Oct 1
Brix	21.6	22.8	23.8	21.0
pH	3.34	3.10	3.39	3.12
TA	0.68	0.78	0.91	0.78

Hobo 2006 Monthly GDD

blue = estimate

Vineyard	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Apr-Oct
Victoria Airport Reference	6	4	18	53	125	184	242	207	159	79	18	1	1048
Keystone upper				51	127	185	264	230	172	75			1103
Keystone lower				47	125	184	267	235	177	77			1113
Keystone Sparton				56	137	190	271	231	179	79			1143
Starling Lane				51	132	188	280	242	183	71			1145
Hyndman				50	182	245	298	261	191	78			1305
Crawford				50	118	178	235	203	153	65			1001
Filan (Empire)				62	147	206	271	236	181	92			1195
Brickett Epicure				50	137	183	246	216	172	93			1098
Brickett Logger 2				50	137	193	249	213	165	86			1093
Brickett Logger 1 Sunnydale				50	137	182	260	229	171	75			1103
Beaufort Comox				50	137	194	262	227	174	64			1108
Paiment/vHell site 1				70	152	200	287	264	204	103			1279
Paiment/vHell site 2				61	147	205	289	257	191	89			1240
Paiment/vHell site 3				65	150	196	289	261	201	97			1259
Edwards (non-Hobo data)				50	137	240	331	269	191	75			1293
UVIC Weather Project School Data													
School	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Apr-Oct
Butchart				54	130	197	280	239	173	77			1149
Lochside				50	125	180	249	206	156	67			1033
McTavish				52	128	185	252	221	162	67			1067
Prospect Lk				52	128	183	256	212	163	78			1072
Deep Cove				54	130	197	268	244	181	81			1155
Parkland				50	125	177	227	204	147	73			1003
Sidney				50	125	177	220	206	150	68			995

About the UVic School-Based Weather St

