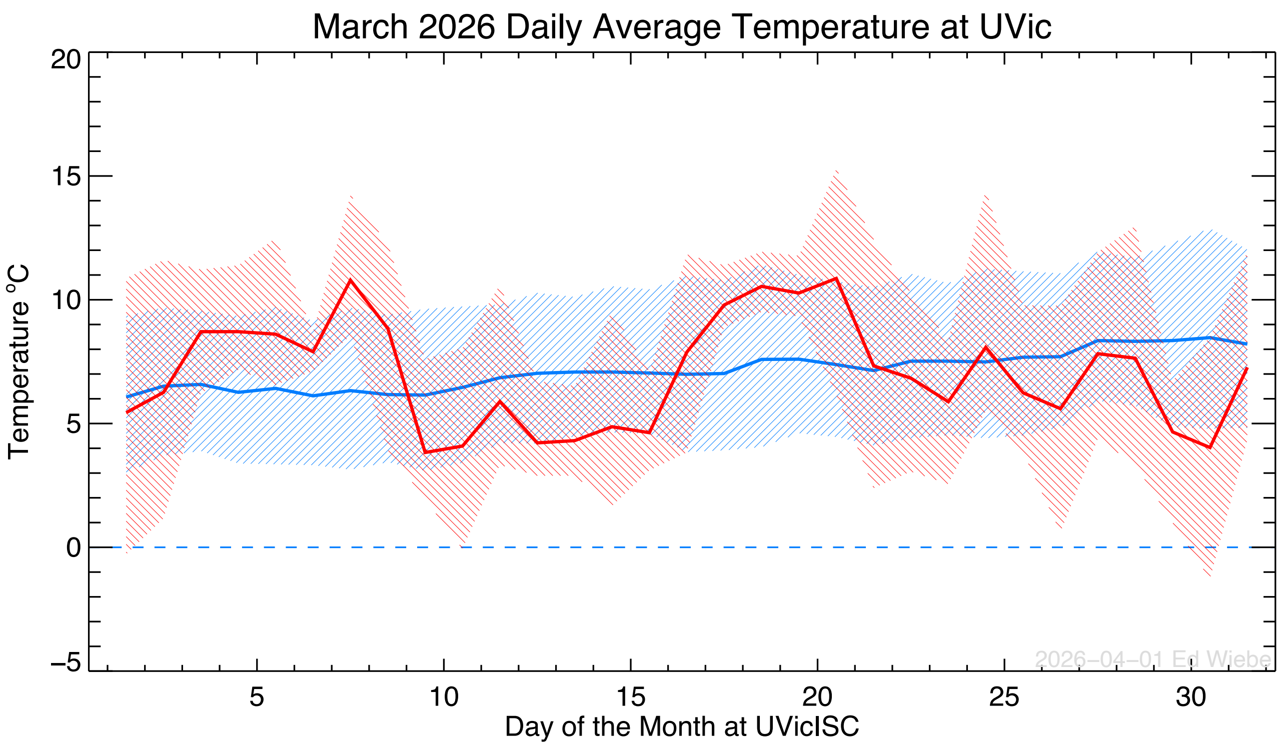

Figure 1: March daily average temperatures.

March 2026

> *The day was uncommonly lovely. It was really March; but it was April in its mild air, brisk soft wind, and bright sun, occasionally clouded for a minute; and everything looked so beautiful under the influence of such a sky, the effects of the shadows pursuing each other, on the ships at Spithead and the island beyond, with the ever-varying hues of the sea now at high water, dancing in its glee and dashing against the ramparts with so fine a sound, produced altogether such a combination of charms for Fanny, as made her gradually almost careless of the circumstances under which she felt them.*
>
> — Jane Austin, Mansfield Park

Temperature

March is over. Spring has sprung. I would say March came in like a lamb with a relatively warm first week. Fig. 1 summarizes the month. As usual, the blue shading shows the long-term average (since 2002) and red shows observations from this year. We had some ups and downs this month. The average temperature this month was 7.03 °C, very close to the long-term average 7.1 °C. Three mornings were cold, and the coldest among them was the morning of the 30^{th}, a chilly and very frosty -1.28 °C. The highest temperature of the month was a very pleasant 15.28 °Con the 20th.

Figure 2 summarizes all of the observed Marches in the record from UVic ISC. 2026 was so very close to average that the difference just doesn't matter. Even the average extremes this month match the overall average extremes. We really have nothing to complain about this year.

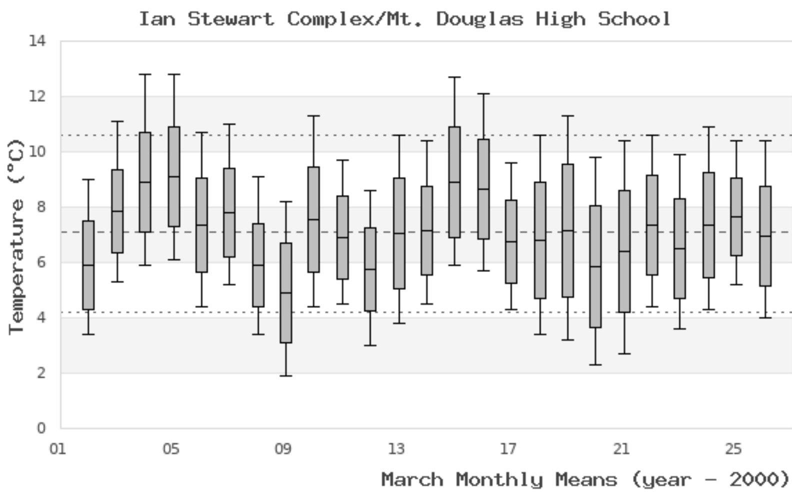

Figure 2: March temperatures.

I'm continuing to explore the differences between the site at the Ian Stewart Complex (ISC) that I have been relying on to represent UVic since 2002 and the location on the roof of the Bob Wright Centre (BWC, called Sci for Science in the database for hysterical reasons). This month the differences in temperature are shown in Fig. 3. The dashed blue line shows the difference in minimum daily temperature (typically before sunrise) and the red shows the difference in daily maximums. Where the shading is blue, Sci's difference of minimums is greater than the difference of maximums. The solid red line gives the difference of daily average temperature. Since this is $UVicSci - UVicISC$ a positive difference means Sci was warmer that ISC. This is usually, but not always the case. Sci is about 10 m higher than ISC, which makes a big difference on still, clear, cold nights.

This month I tried just plotting minute-resolution temperatures at UVicSci against those at UVicISC. The resulting scatterplot is shown in Fig. 4. The first time I did this I wondered about the bulge of points to the left of the 1:1 line at low temperatures. These show Sci is warmer than ISC at those hours. I separated them roughly into day and night observations and coloured the points differently. Now the day and night values are more distinct and the blue and red best-fit lines show different slopes. But there are still some day temperature pairs hidden

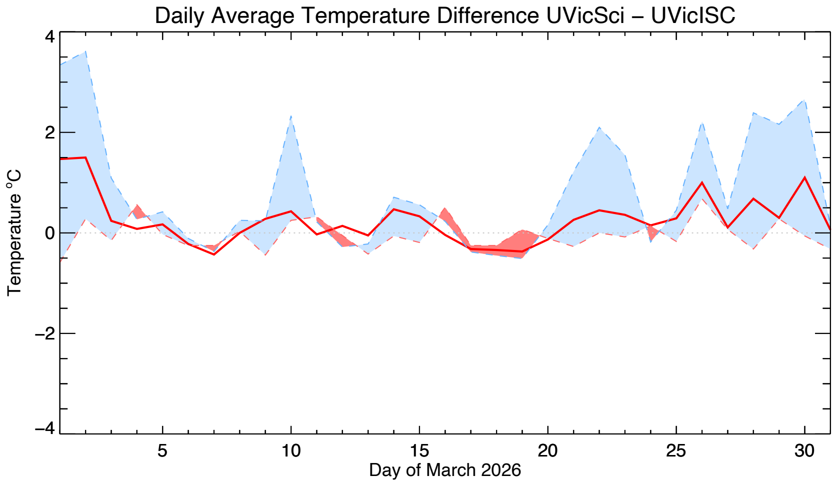

Figure 3: Temperature differences, ISC and SCI.

behind the night. I fully separated in Fig.5. Here we can see that there are very rare nights where ISC is warmer than Sci (points below the 1:1 line, around 7 °C). Otherwise, the night observations are almost all above the 1:1 line; nights are almost always warmer at Sci than SCI. Daytime temperatures are more of a mess. The best-fit is close to 1:1 but is pulled up at low temperatures warmer temperatures at SCI. Since the fit is not shifted far we can see that those warmer daytime hours represent a relatively small fraction of the day time observations. I could separate all of these values by the hour of day to see if there are particular times that are important one way or another. But, probably, those where just unusual days, indicated by the twisted lines of hourly observations we can see in the plot.

Finally, for fun, I have plotted temperatures from some selected days in Fig. 6. These give a sense of how the 'trajectory' of temperatures varies at the two sites.

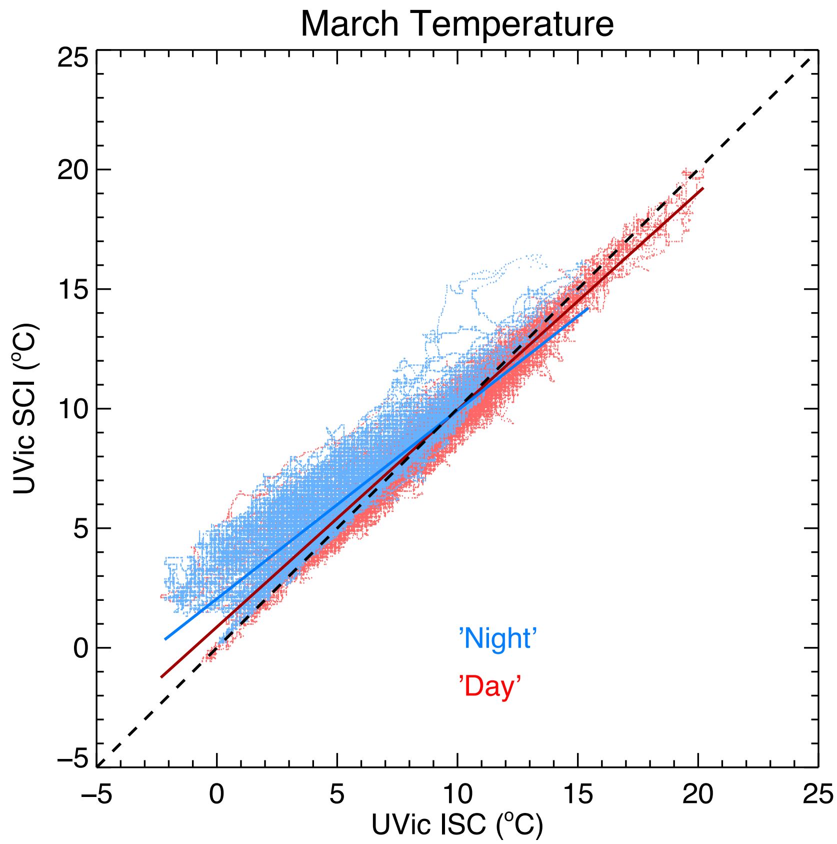

Figure 4: Temperatures at ISC and SCI.

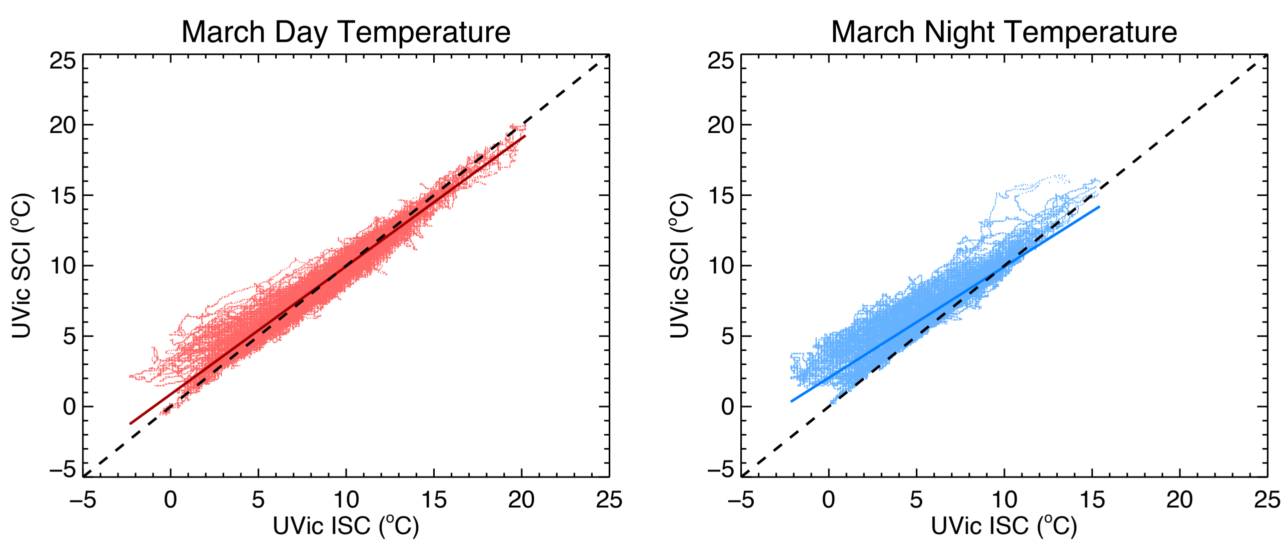

Figure 5: Day and Night Temperatures at ISC and SCI.

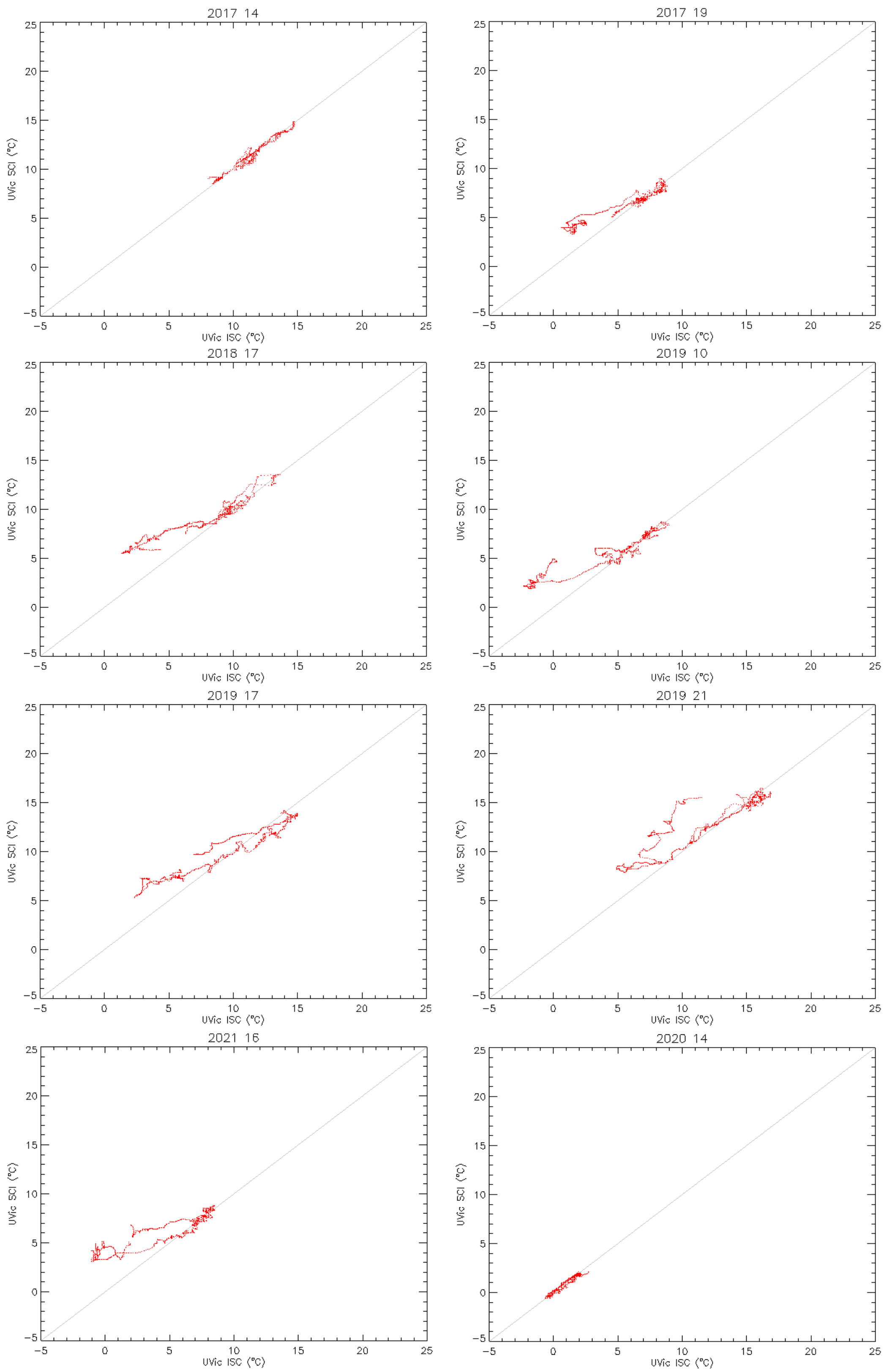

Figure 6: Temperatures of selected days.

Rain and Snow

I experienced some wet snow mixed with rain while cycling to UVic on 2026-03-09 before 08:00. I observed some brief but intense small-scale flurries in the distance early that evening. That was the only snow this winter. Snow isn't exactly common at UVic but it's an unusual winter we have none. According to reporting from CHEK News in Victoria,

> It was also Victoria's first winter without snow in a decade—ending a rare nine-year stretch of winters that saw at least some snow since the winter of 2015-16.
>
> The nine winters from 2016-17 to 2024-25 with snow accumulating on the ground in Victoria was actually the longest string of consecutive winters that saw snow in since Environment Canada began recording snow on the ground in 1955.
>
> Since then, 21 of the past 71 winters in Victoria saw no snow accumulating on the ground.

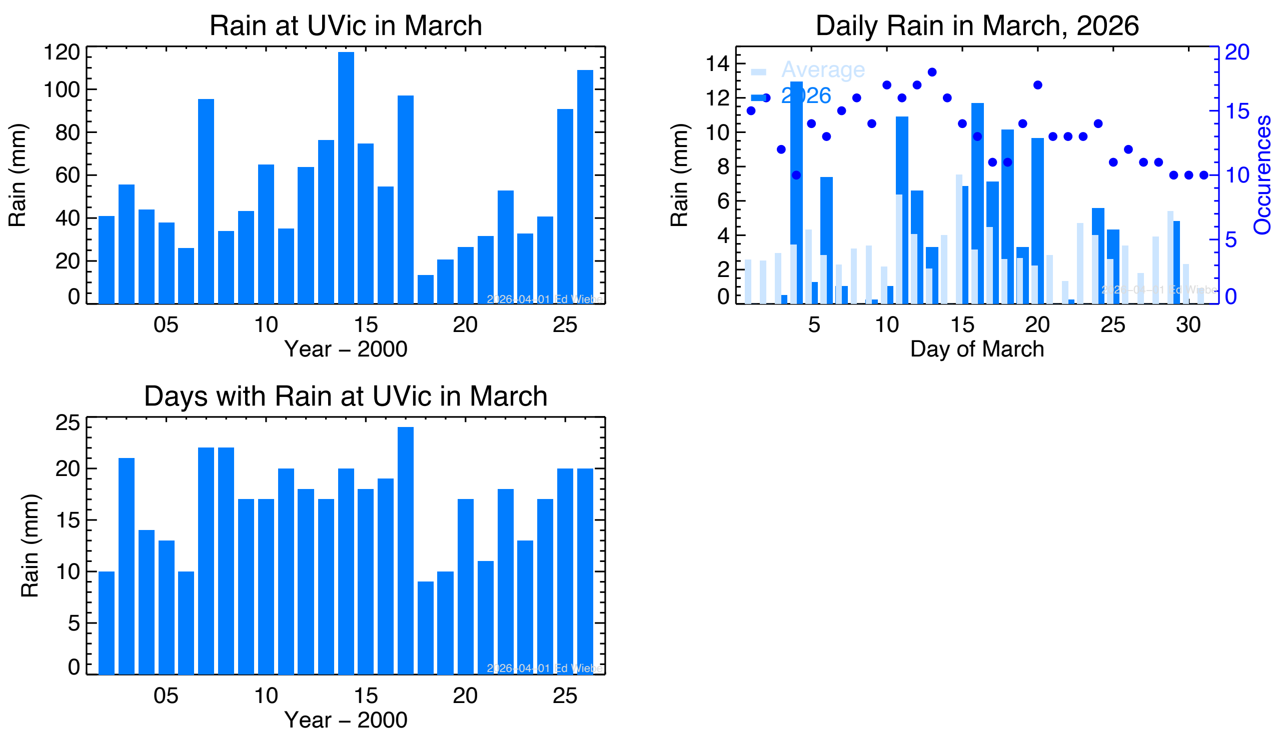

Figure 7: March rain.

This past March was very wet, 109 mm versus the average of 55 mm. Since 2002, only 2014 had more rain (117 mm). Rain was observed on 20 days (the average is 17). These observations are summarized in the left panels in Fig. 7. The right panel there shows the daily rain amounts against the averages for each of the month.

While looking at the count of days with recorded rain in March (dots in Fig. 7, top right), it seemed to me that a trend toward less likelihood of rain began mid-month. I've been learning about changepoint analysis and thought this data was a good way to test my intuition.

Changepoint analysis is a method that identifies points in time series where the behaviour of the series changes. Types of changes that can be found are changes in the mean, in the variances, and in the slope. I followed an introduction from Gaetano Romano at Lancaster University. Using his pseudocode I was able write a function and use it to examine the counts of rain events from the beginning of February through the end of April based on observations between 2003 and 2025.

The counts, converted to observed likelihood are shown in Fig. 9. The months are colour coded. Superimposed on the observations I've added a best-fit line (95% bounds). The trend is, as expected from just living here in Victoria (Fig. 8), shows a decreasing likelihood of rain from the end of Winter to the beginning of Spring.

During the changepoint analysis a key indicator CUSUM (Cumulative Sum) statistic.

> The basic idea behind the CUSUM statistic is to systematically compare the mean of the data to the left and right of each possible changepoint τ. By doing so, we can assess whether there is evidence of a significant change in the mean at a given point.

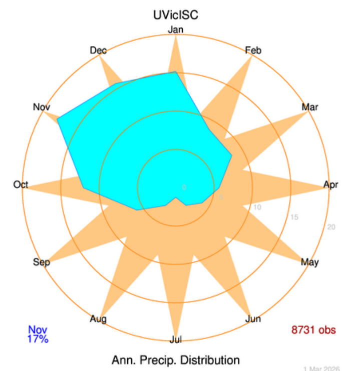

Figure 8: Monthly rain at UVic.

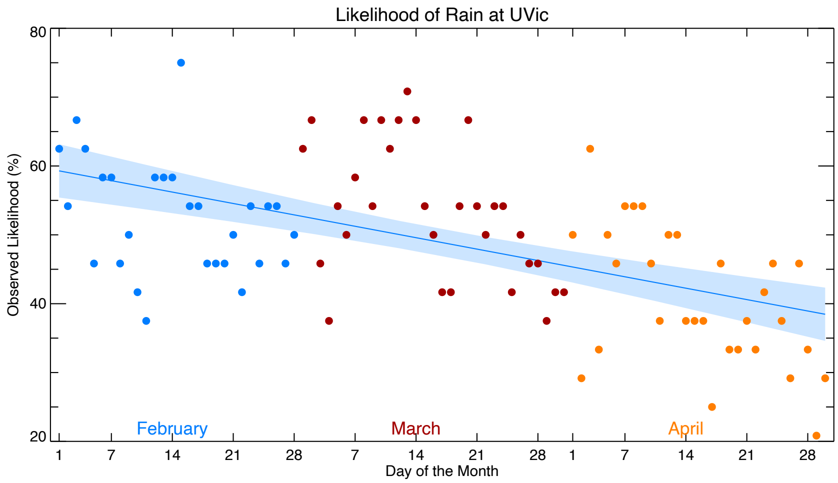

Figure 9: Likelihood of rain, day-by-day.

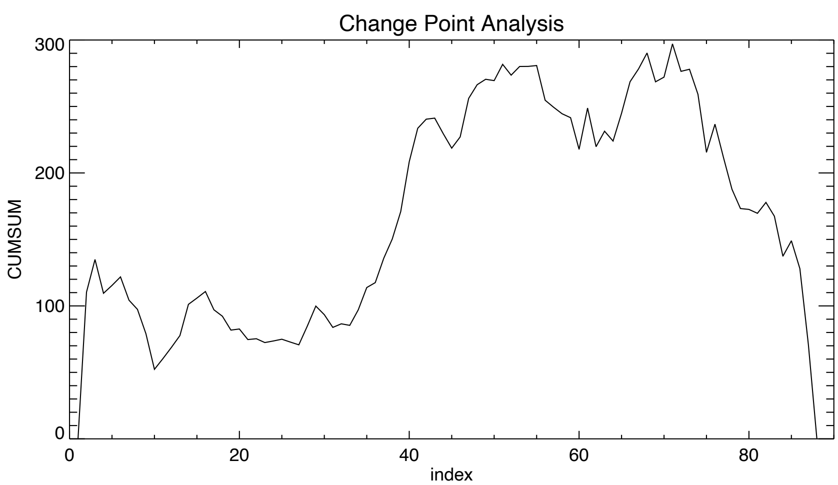

Figure 10: Changepoint analysis results.

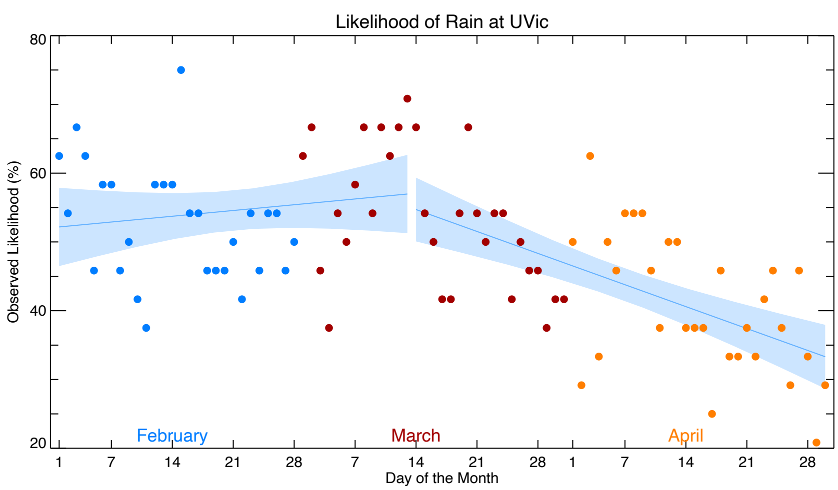

Figure 11: Likelihood of rain in two periods selected by change-point analysis.

The CUMSUM values for these data are plotted in Fig. 10, against the index in the dataset. This statistic suggests an important change happens at point 40, March 13. Breaking the data into two series based on that date, and finding two fits, gives us what is shown in Fig. 11. We can now see that the likelihood of rain (probably) increases a bit through February to mid-March. Then, the dry season begins and rain is increasingly unlikely through the end of April (until October, but that analysis has not been done yet). This supports my intuition. The two fits fit better by eye in each part of the time series.

Other

Two other things I looked at are how sunny it was in March this year, and two periods of rain on the 29^{th} of the month.

Maybe it was just my general mood this year (given the state of the world it's difficult to be cheerful) but I felt like it was dark this past month. The data show it wasn't unusual at all. Fig. 12 shows the observations. I sum up the total insolation (incoming solar energy) in the month and divide by an estimated theoretical maximum.

Generally speaking, getting this sort of thing wrong is not surprising. Most of the time the weather is 'normal'. I keep telling people this but am just as guilty as everyone else when it comes to my own perceptions. We are really bad at this sort of thing. Our memories are poor and we form impressions based on what's happening, and what we are feeling, in the moment.

One thing we need to watch out for as the climate continues to change is that we adapt our perceptions of what is normal along with the changes. Collecting observations and systematically comparing them to the past is the key to understanding the changes.

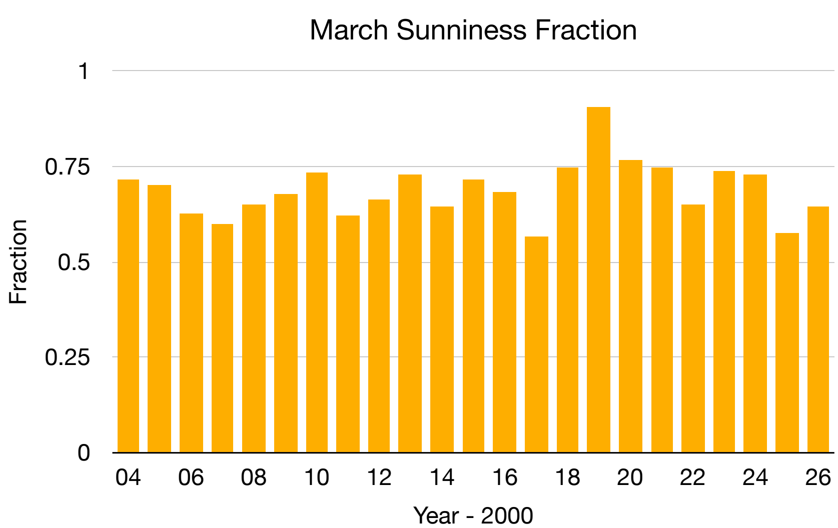

Figure 12: March sunniness.

On 29 March I noticed two intervals of rain during periods of falling temperature and increased windiness. I don't have a brilliant explanation but we can look at the events that day using observations from the station on the Bob Wright Centre (Sci). Fig. 13 includes, from top to bottom, temperature and dew point temperature (with grey shading between), accumulated rain, wind speed and direction (dots), and surface air pressure. The blue shaded bands mark the periods of increased wind speeds. I had imagined, when I first saw this, that it might be some kind of frontal uplift from cold air masses moving over us.

Dew point temperature (DP) remains mostly flat from 08:00 to 14:00 while the temperature falls. When the gap between the DP and the temperature shrinks, the relative humidity is increasing. This can be from added moisture or cooling temperatures. Here we see falling surface temperature with steady DP. Condensation above the surface is removing water vapour. This does make me think the air is being forced up.

The first period of rain coincides (exactly) with the first period of increased wind speed from the north, and ends with a rapid drop in speed while the direction reverses (backing, counterclockwise). At the same time the surface pressure peaks and begins to fall.

Usually a cold front is preceded by falling pressure as the warm air mass you are in is pushed up and out of the way by the arriving cold air. Once the front has passed the pressure begins to increase again. That's not what we see here. In synoptic (medium-scale) weather forecasting backing winds are associated with the initialism CCBC (counterclockwise, backing, cold air advection) and are associated with dynamic sinking. This can happen when air aloft is forced to converge. Sinking air is usually associated with lower surface winds, clearing skies, and warming surface temperatures. This is fundamentally what we see between 15:00 and 17:00.

Rain begins again at 16:00, coincident with increased local unsteadiness in the wind direction. Wind speeds are low and the direction begins to change from south to east and back again until 17:00. Just after 17:00 the wind speed increases and the direction changes back to north.

In the end I think the rain was from periods of forced uplift of the air mass, and the interval from a period of sinking air (subsidence). Probably these were driven by changes of the very strong flow aloft and the interaction of the nearer-to-surface winds with the topography around the Salish Sea.

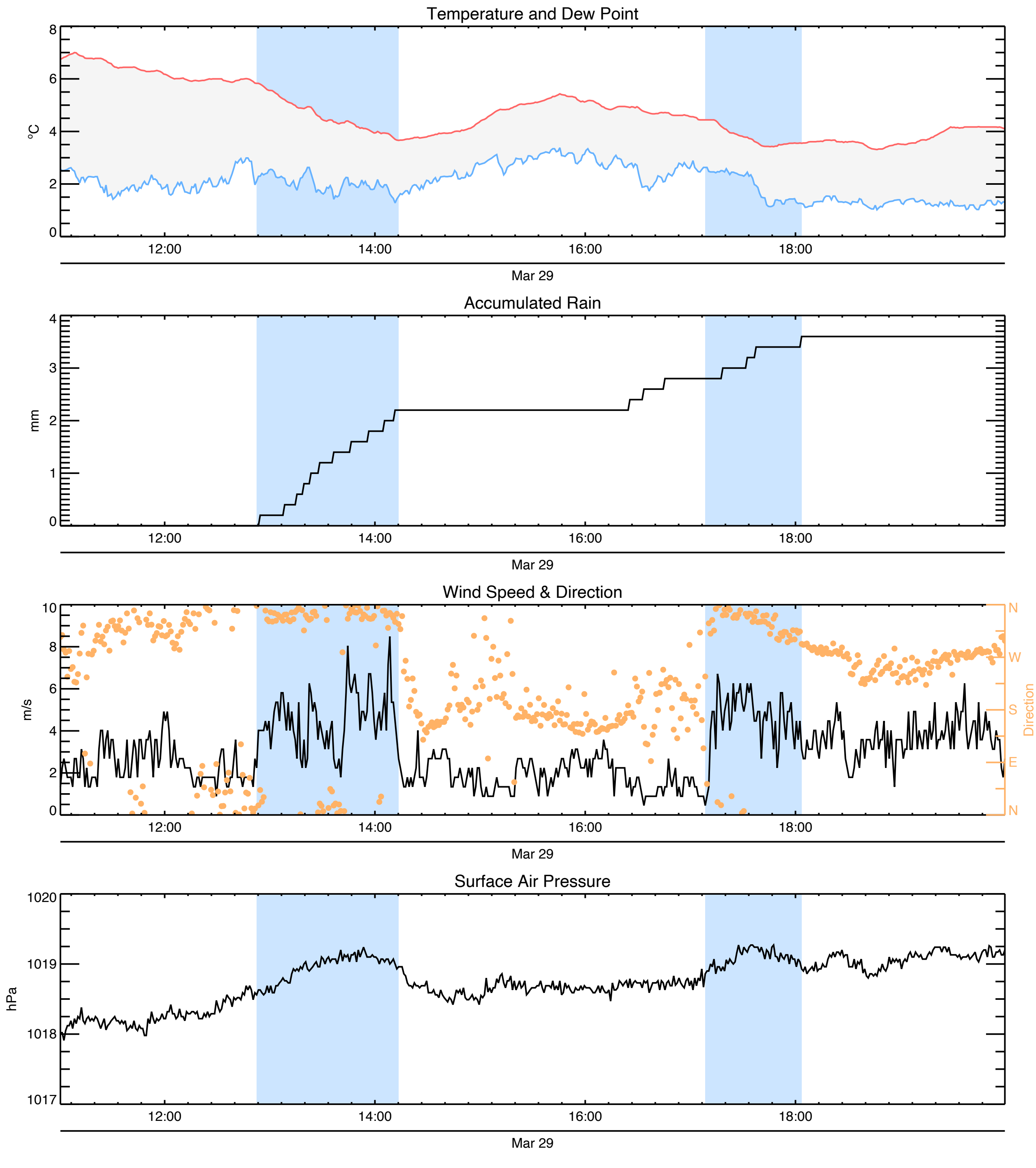

Figure 13: Two rain events on 2026-03-29.

Alerts

There were some weather alerts early in the month. They are listed in Table 1.

Day	Type
9	Greater Victoria; snow
10	Low-Elevation Snowfall for South Coast
11	Greater Victoria; strong winds
11	Risk of Low-Elevation Snowfall Returns

Table 1: Weather alerts in March, 2026.

– Ed Wiebe, April 2, 2026