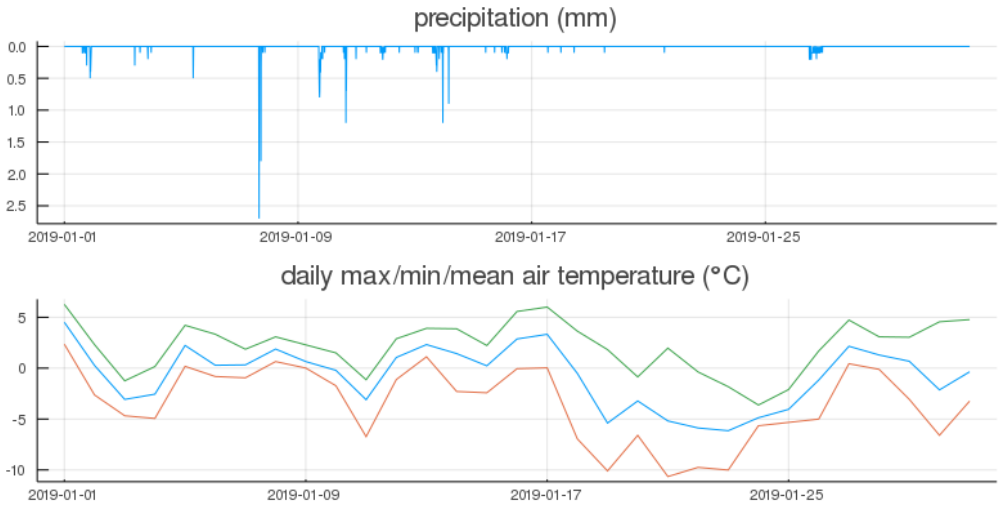
Data description for Nučice catchment 2019

1. Summary

Precipitation, temperature, and stream discharge were measured for most of the year. The highest precipitation is 8.8 mm (in April) and the largest discharge is 47.42 l/s (in June). The lowest/highest temperature were -12.4 ℃ (in February) and 39.4 ℃ (in June), respectively. A new soil moisture network with 6 depths and a new rain gauge were installed in the catchment in the end of the year.

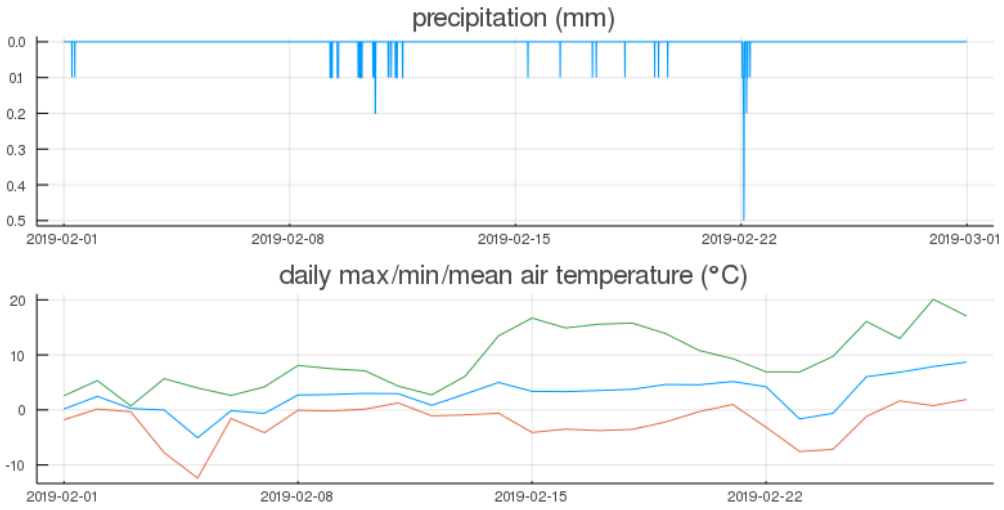
2. Monthly analysis

2.1. January



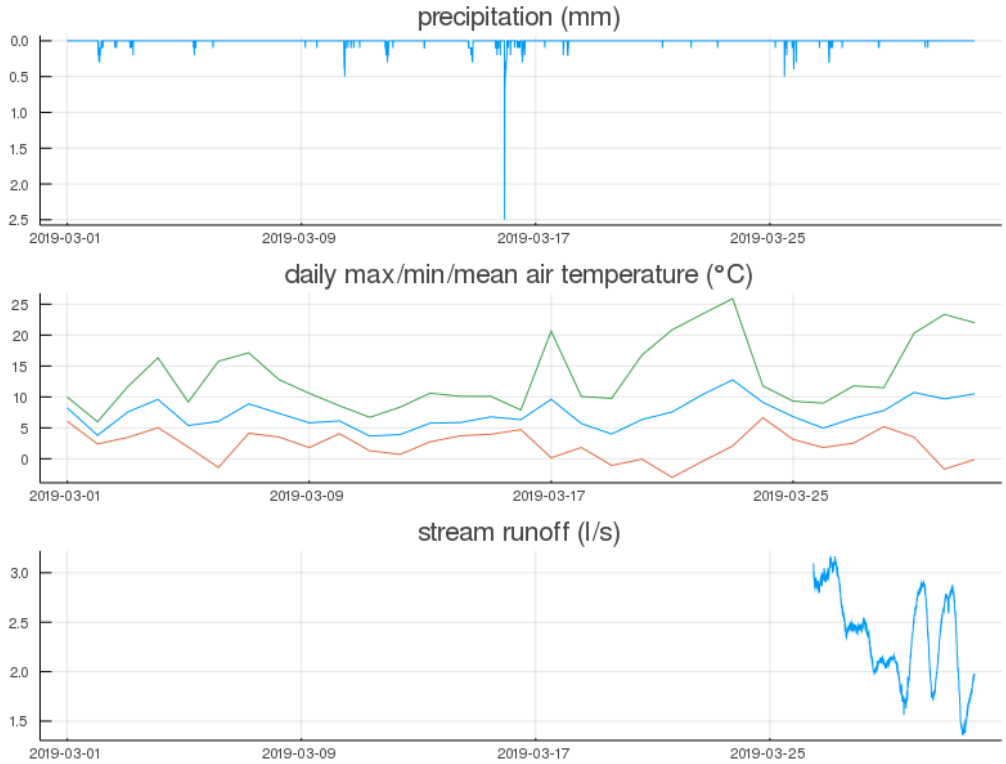
Only precipitation and temperature data were recorded for this month. The average monthly precipitation is about 0.008 mm, the maximum precipitation is 2.7 mm. The mean temperature is -0.7 ℃. The minimum and maximum temperature are -10.7 ℃ and 6.3 ℃.

2.2. February



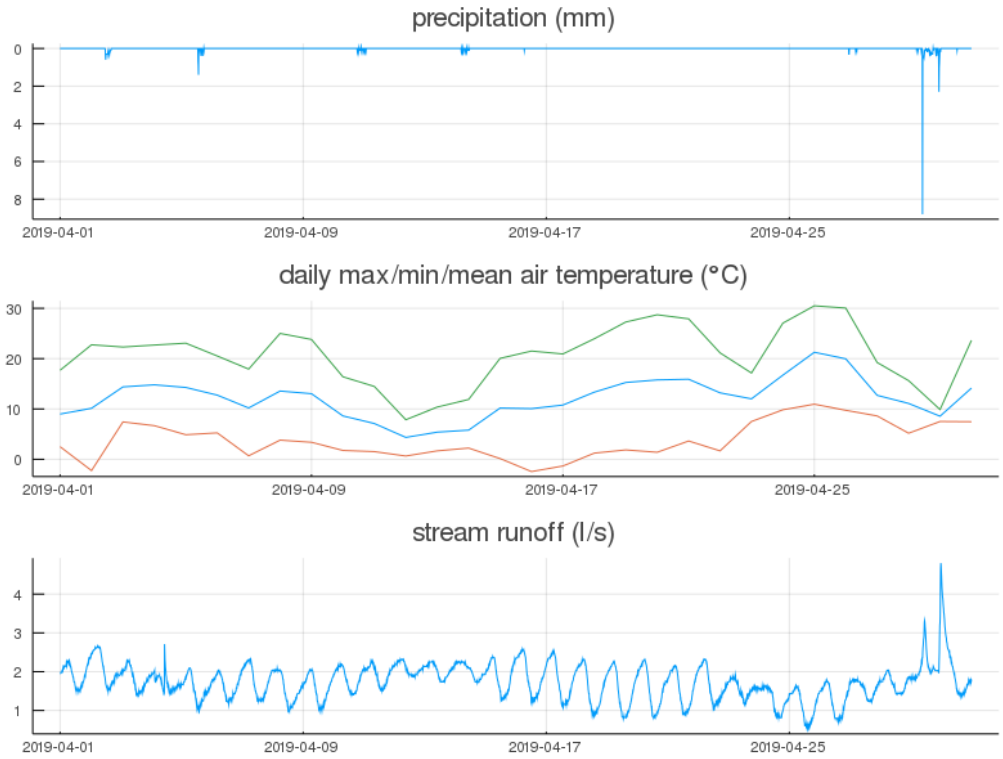
Only precipitation and temperature data were recorded for this month. The average monthly precipitation is about 0.002 mm, the maximum precipitation is 0.5 mm. The mean temperature is 2.7 ℃. The minimum and maximum temperature are -12.4 ℃ and 20.1 ℃.

2.3. March



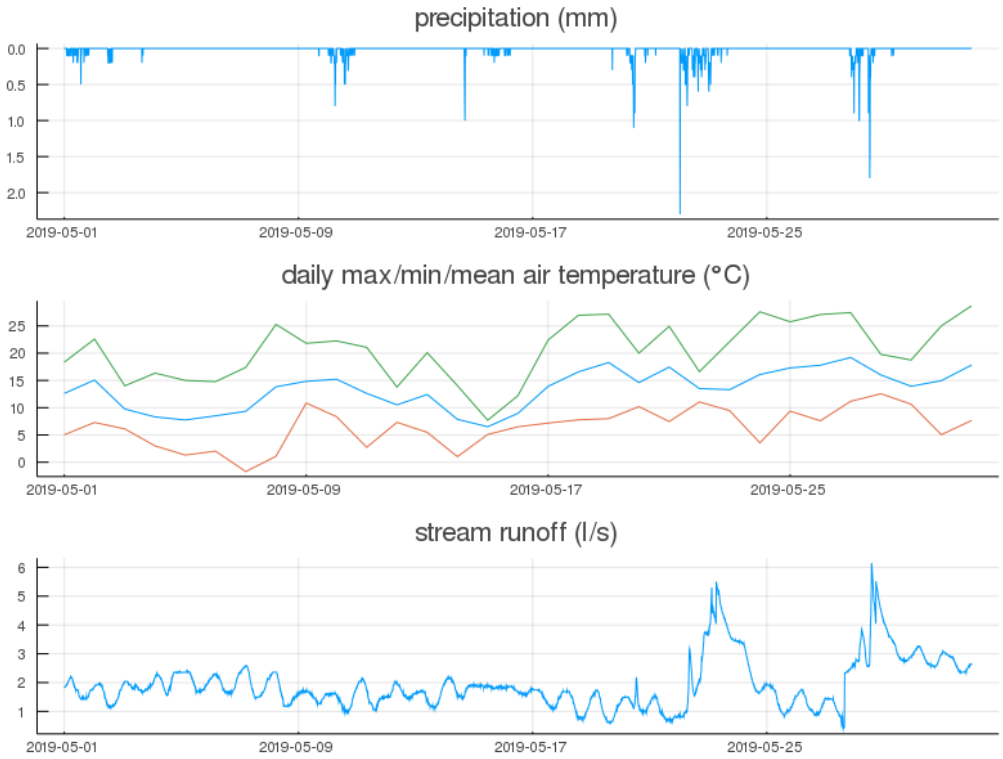
Only precipitation and temperature data were recorded for most of the month. The average monthly precipitation is about 0.006 mm, the maximum precipitation is 2.5 mm. The mean temperature is 7.2 ℃. The minimum and maximum temperature are -3.0 ℃ and 25.9 ℃. The stream discharge has been recorded only in the end of the month with a mean value of 2.36 l/s.

2.4. April



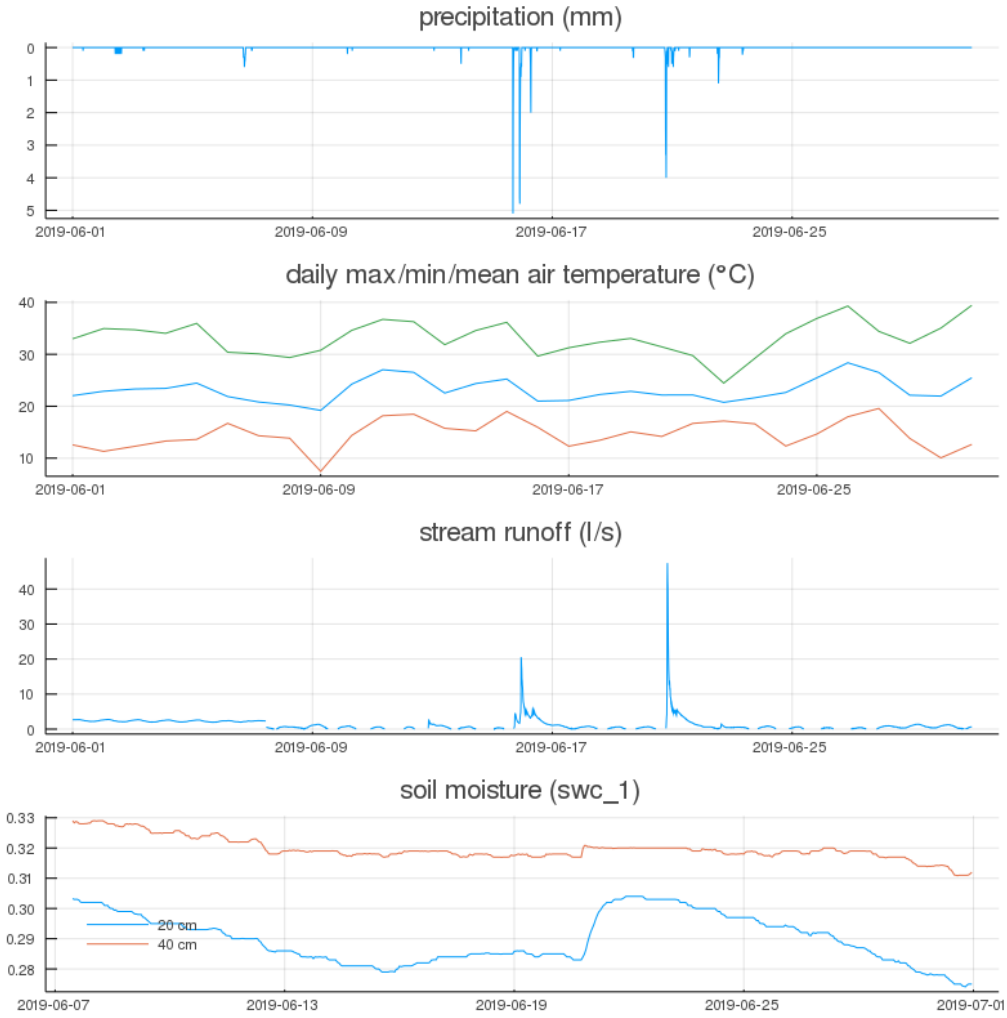
The recorded data includes precipitation, temperature, stream discharge at the outlet. The average precipitation is about 0.010 mm, the maximum precipitation is 8.8 mm. The mean temperature is 12.1 ℃. The minimum and maximum temperature are -2.4 ℃ and 30.5 ℃. The stream had diurnal fluctuation with the amplitude of 1 l/s. The peak flow was recorded as 4.80 l/s after a heavy rainfall event.

2.5. May



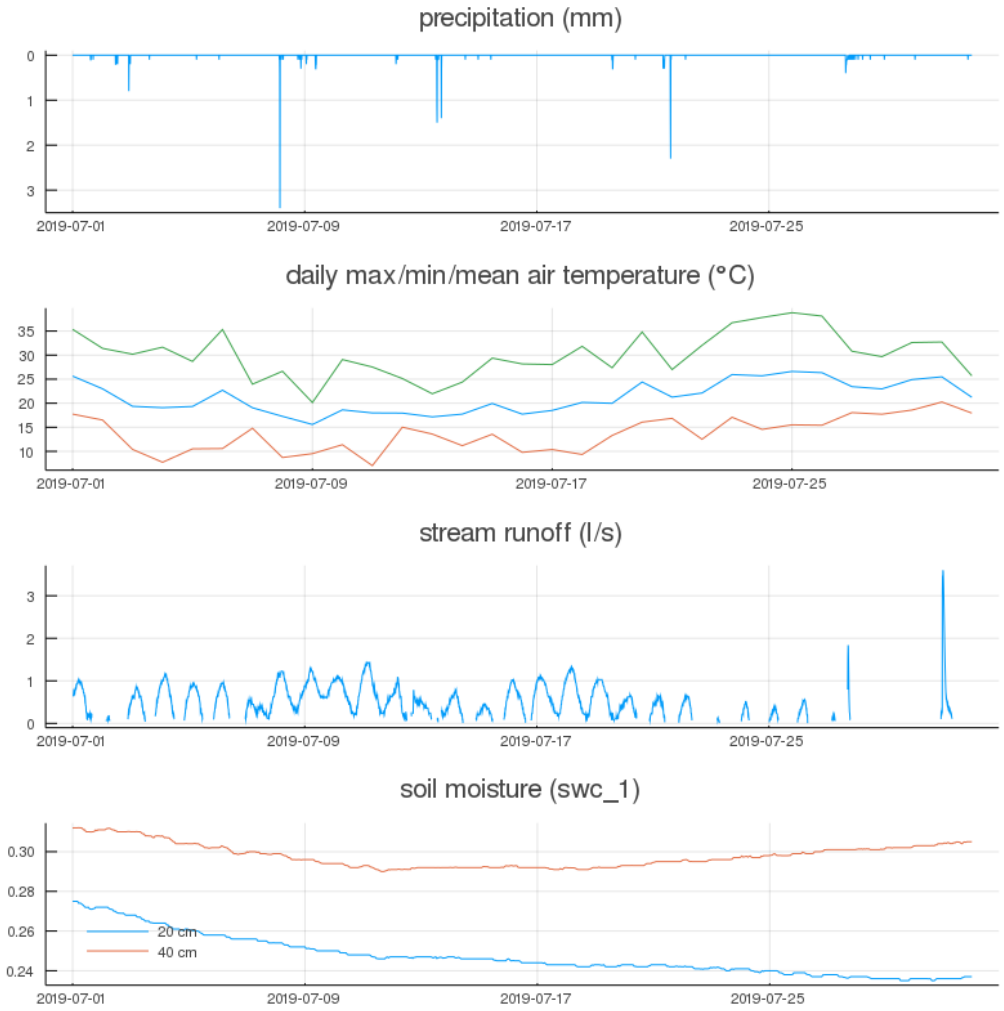
The recorded data includes precipitation, temperature, stream discharge at the outlet. The average precipitation is about 0.018 mm, the maximum precipitation is 2.3 mm. The mean temperature is 13.4 ℃. The minimum and maximum temperature are -1.7 ℃ and 28.7 ℃. The stream had diurnal fluctuation with the amplitude of 1 l/s. The peak flow was recorded as 6.15 l/s after a heavy rainfall event.

2.6. June



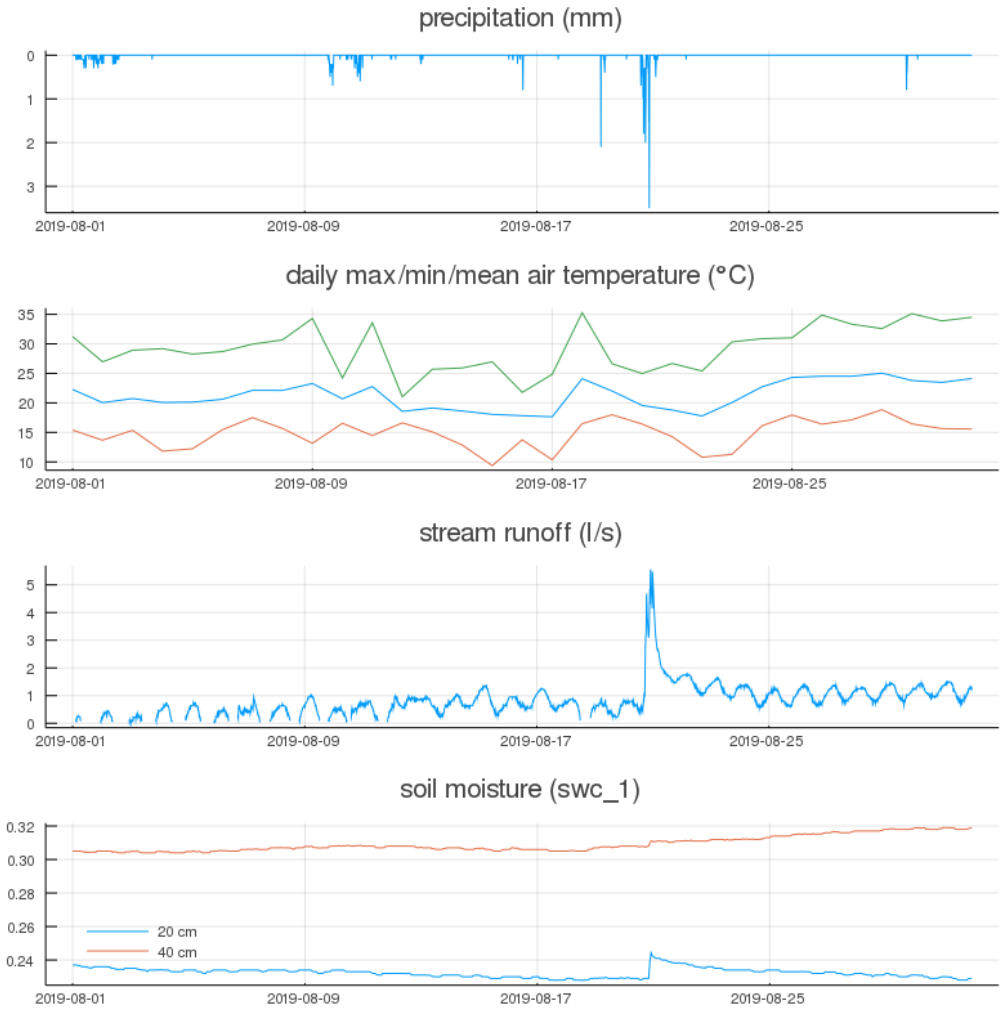
The recorded data includes precipitation, temperature, stream discharge at the outlet, and soil water content at 2 depths. The average precipitation is about 0.015 mm, the maximum precipitation is 5.1 mm. The mean temperature is 23.2 ℃. The minimum and maximum temperature are 7.5 ℃ and 39.4 ℃. The peak flow in the stream was recorded as 47.42 l/s after a rapid heavy rainfall event. Meanwhile the soil water content at 20 cm showed a small amount increase after the heavy rainfall event. However, there was no clear changes in the soil water content at the depth of 40 cm (Possibly errors with device).

2.7. July



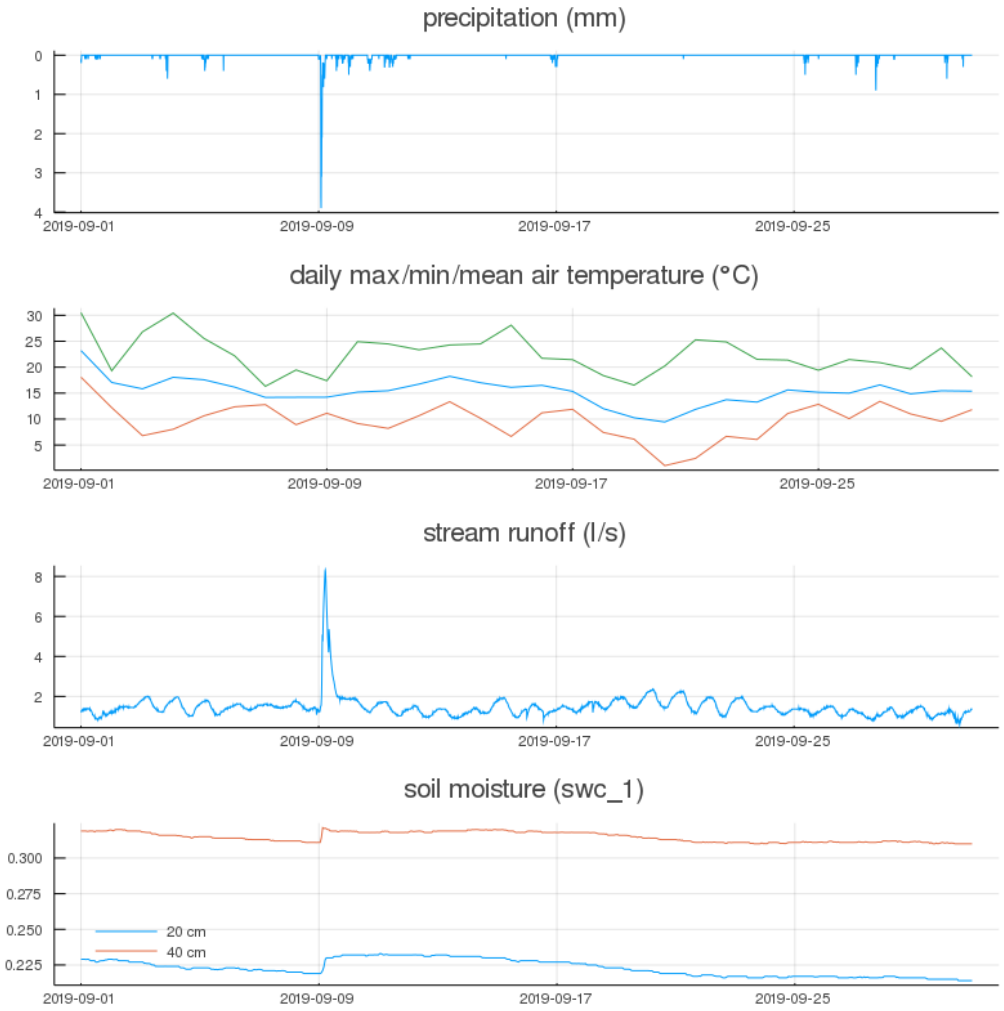
The recorded data includes precipitation, temperature, stream discharge at the outlet, and soil water content at 2 depths. The average precipitation is about 0.006 mm, the maximum precipitation is 3.4 mm. The mean temperature is 21.2 ℃. The minimum and maximum temperature are 7.0 ℃ and 38.8 ℃. The peak flow in the stream was recorded as 3.6 l/s after a constant small rainfall event. Meanwhile the soil water content at both depths had no clear changes. (Possibly errors with device).

2.8. August



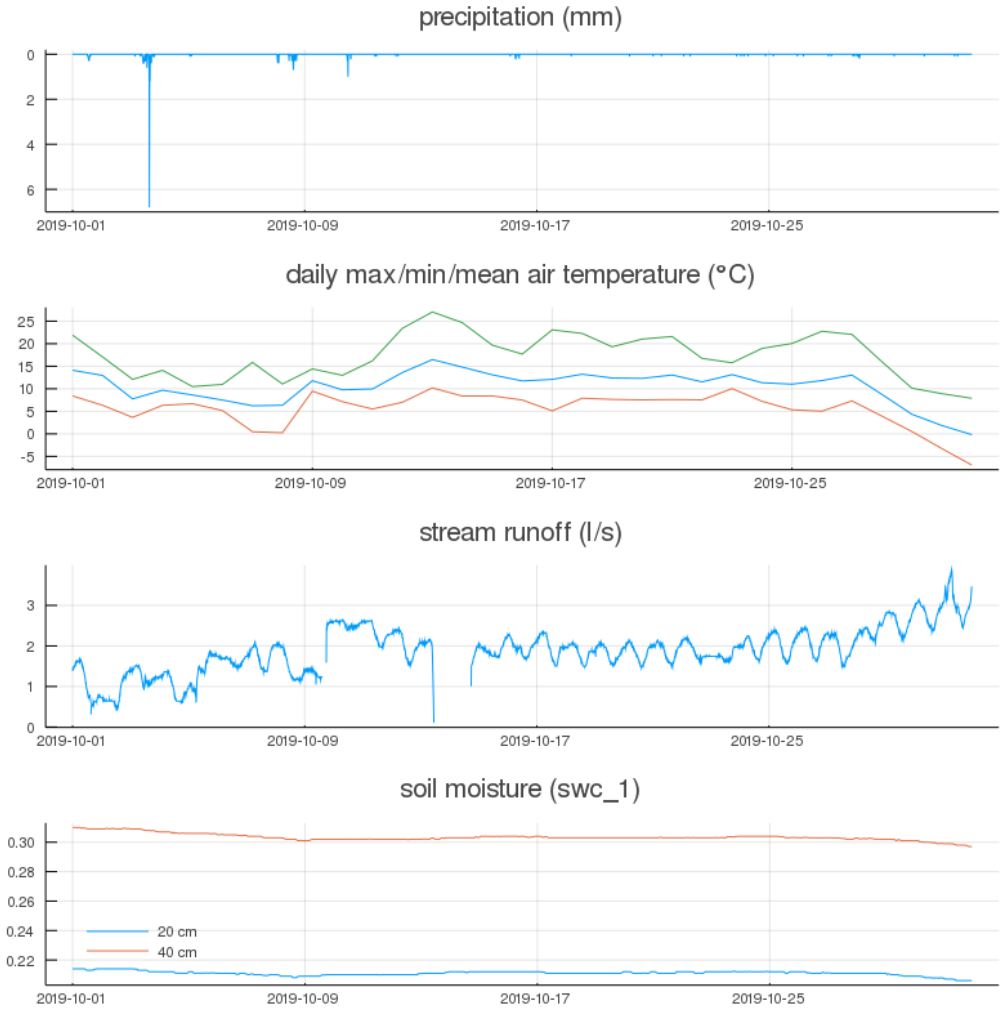
The recorded data includes precipitation, temperature, stream discharge at the outlet, and soil water content at 2 depths. The average precipitation is about 0.014 mm, the maximum precipitation is 3.5 mm. The mean temperature is 21.3 ℃. The minimum and maximum temperature are 9.4 ℃ and 35.3 ℃. The peak flow in the stream was recorded as 5.53 l/s after a heavy rainfall event. Meanwhile the soil water content at both depths had no clear changes. (Possibly errors with device).

2.9. September



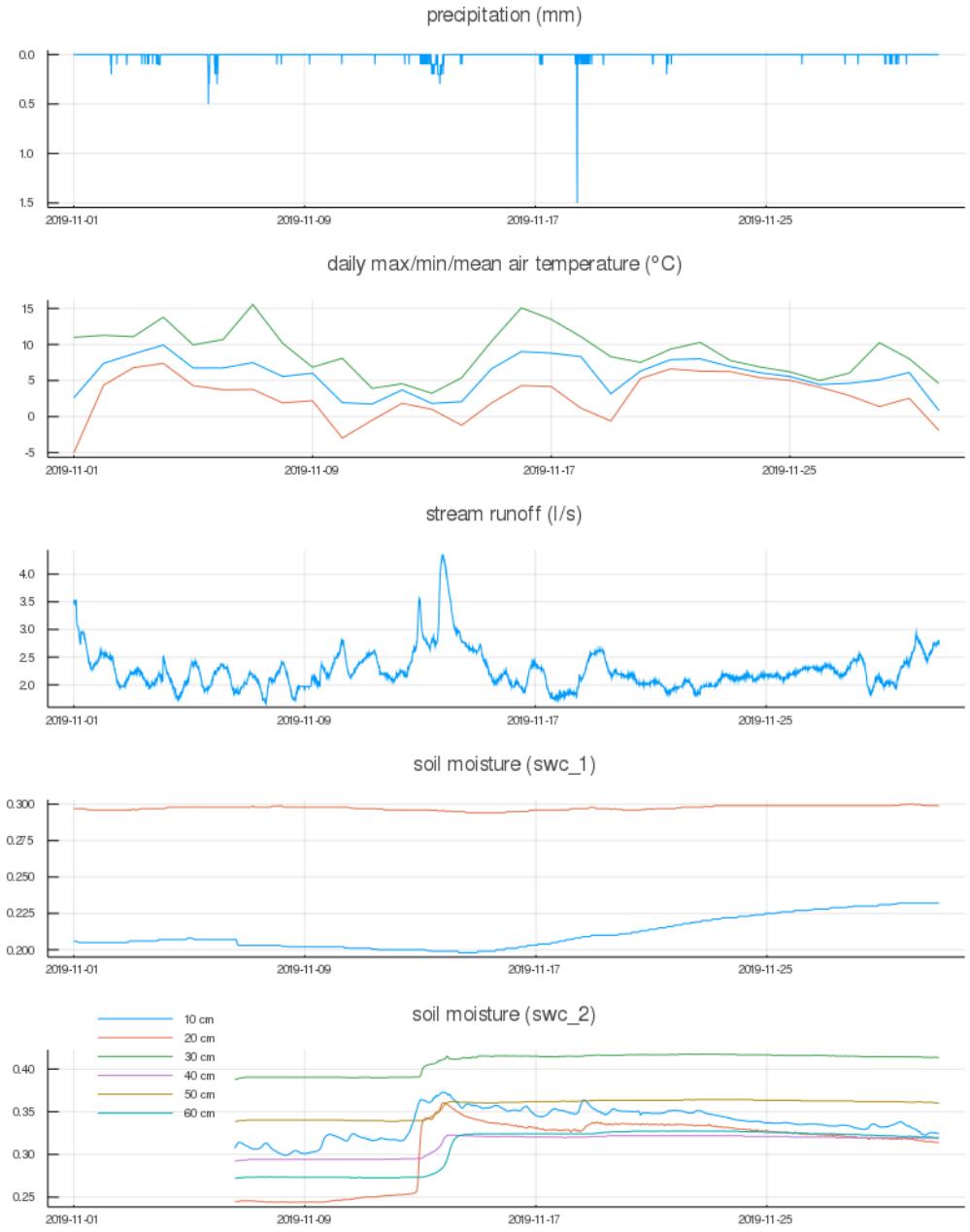
The recorded data includes precipitation, temperature, stream discharge at the outlet, and soil water content at 2 depths. The average precipitation is about 0.013 mm, the maximum precipitation is 3.9 mm. The mean temperature is 15.3 ℃. The minimum and maximum temperature are 1.0 ℃ and 30.5 ℃. The peak flow in the stream was recorded as 8.31 l/s after a heavy rainfall event. Meanwhile the soil water content at both depths had only small increase after the heavy rainfall event. The soil moisture remained constant at both depths (Possibly errors with device).

2.10. October



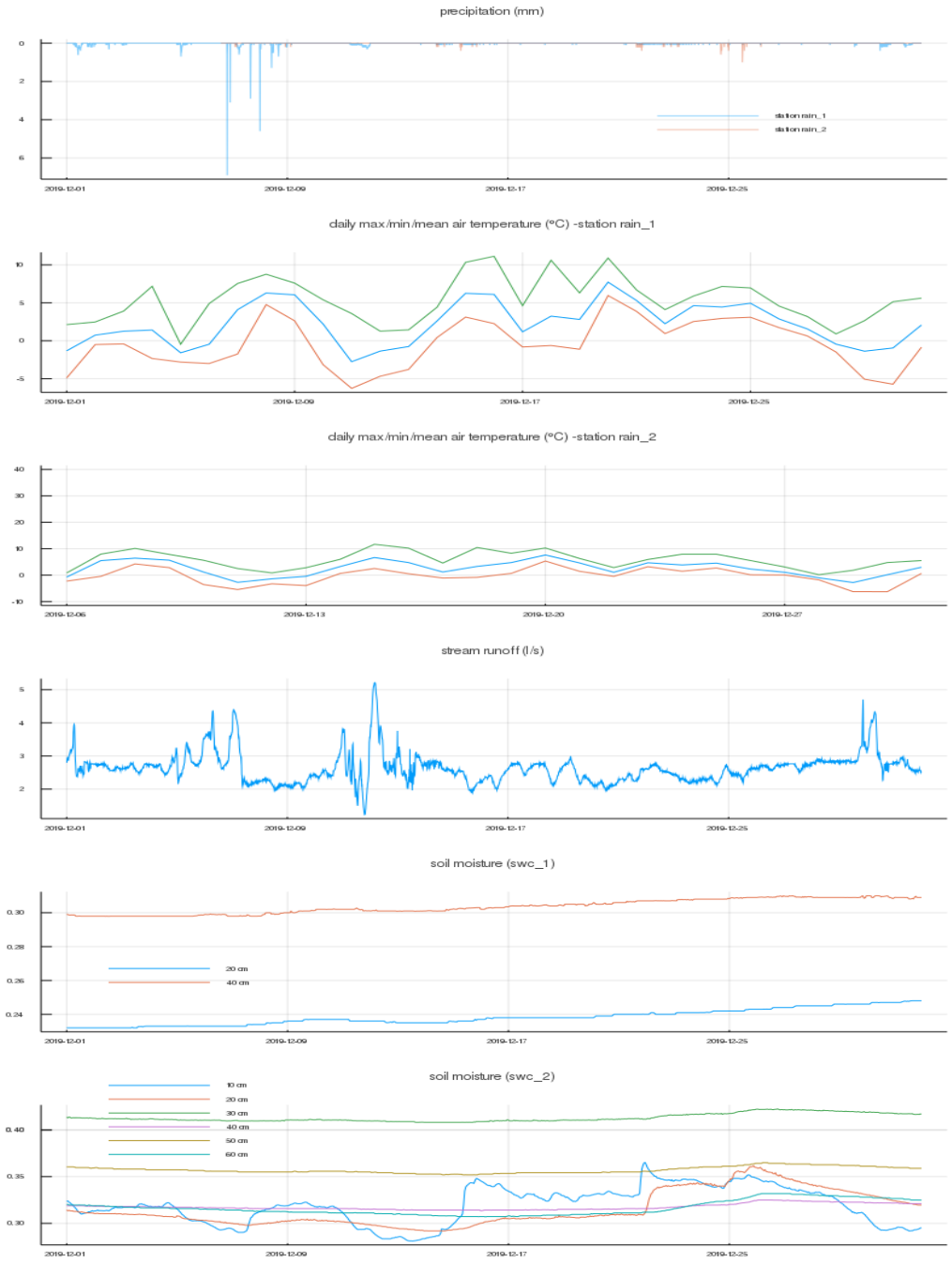
The recorded data includes precipitation, temperature, stream discharge at the outlet, and soil water content at 2 depths. The average precipitation is about 0.008 mm, the maximum precipitation is 6.8 mm. The mean temperature is 10.5 ℃. The minimum and maximum temperature are -6.9 ℃ and 27.3 ℃. The peak flow in the stream was recorded as 3.88 l/s after a group of constant small rainfall events. Meanwhile the soil moisture remained constant at both depths (Possibly errors with device).

2.11. November



The recorded data includes precipitation, temperature, stream discharge at the outlet, and soil water content at 2 locations. The average precipitation is about 0.006 mm, the maximum precipitation is 1.5 mm. The mean temperature is 5.8 ℃. The minimum and maximum temperature are -5.0 ℃ and 15.6 ℃. The peak flow in the stream was recorded as 4.36 l/s after a group of small rainfall events. For the old soil moisture sensors, the soil moisture remained constant at both depths (Possibly errors with device). For the new soil moisture sensors, the soil moisture increased dramatically after a rainfall event.

2.12. December



The recorded data includes precipitation and temperature at two locations, stream discharge at the outlet, and soil water content at 2 locations. For the old weather station: the average precipitation is about 0.019 mm, the maximum precipitation is 6.9 mm. The mean temperature is 2.2 ℃. The minimum and maximum temperature are -6.3 ℃ and 11.1 ℃. For the new weather station: the average precipitation is about 0.004 mm, the maximum precipitation is 1.0 mm. The mean temperature is 2.6 ℃. The minimum and maximum temperature are -6.3 ℃ and 11.7 ℃. The peak flow in the stream was recorded as 5.21 l/s after a group of small rainfall events. For the old soil moisture sensors, the soil moisture remained constant at both depths (Possibly errors with device). For the new soil moisture sensors, the soil moisture changed dramatically after some rainfall events.