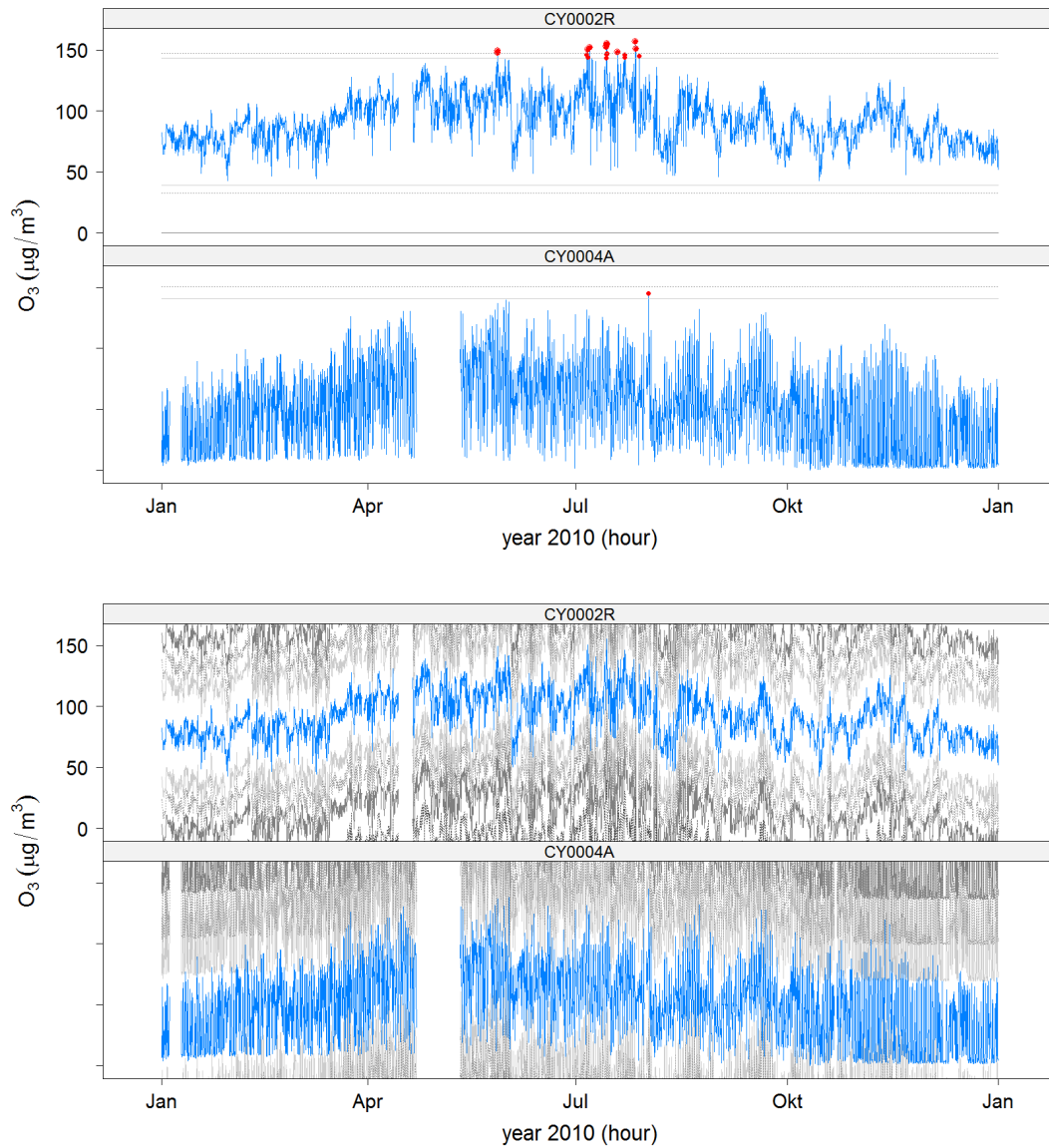


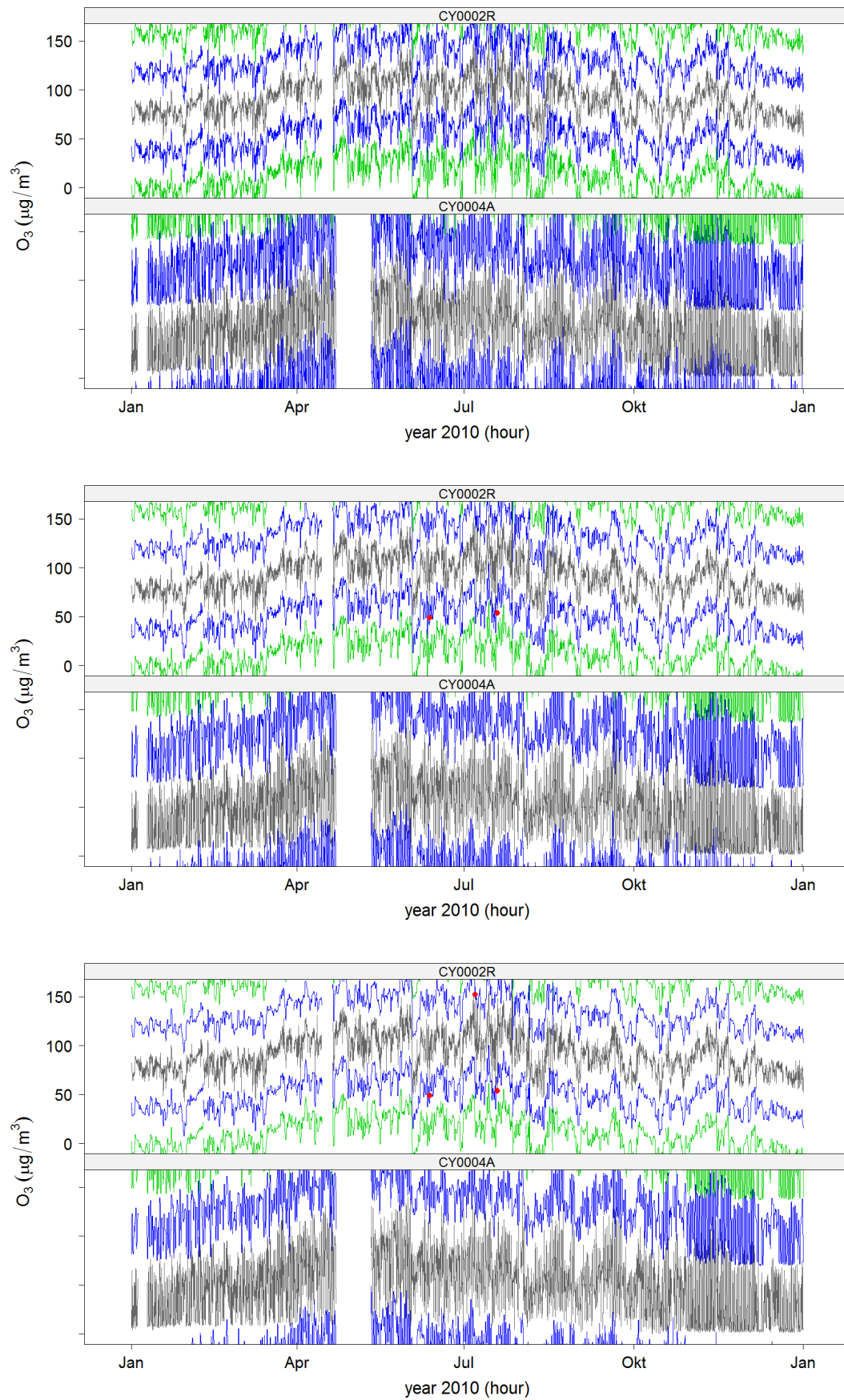
# 1 Outlier Detection

This appendix contains more figures on outlier detection for stations from Cyprus. We present figures with sensitivity assessment and window width comparisons for half window widths of 2, 4 and 6 hours.

## 1.1 $O_3$ hourly data

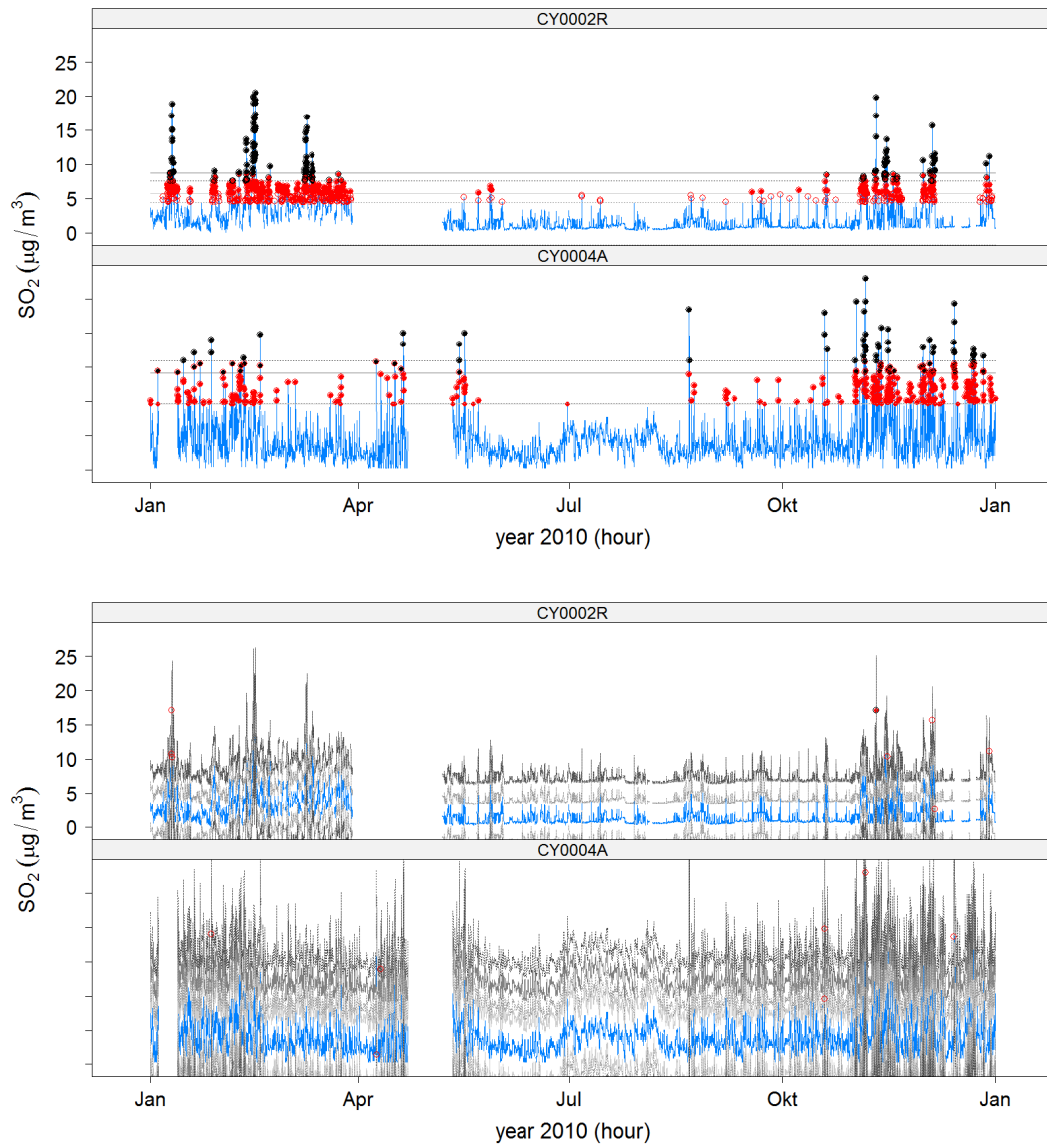


**Figure 1.1:** Original time series data, overview heuristics, no window (top) and extremely narrow window of width 3 (bottom).

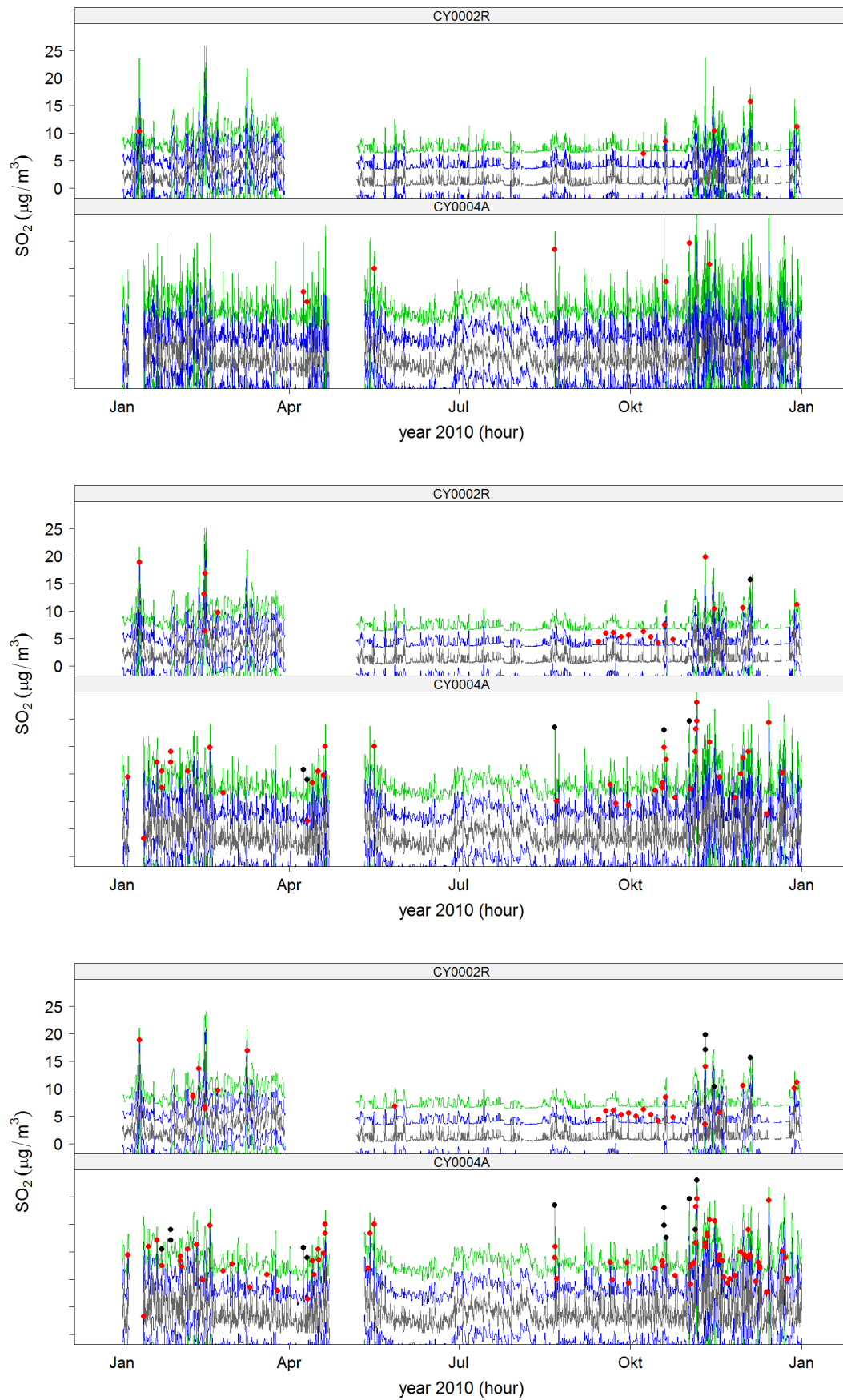


**Figure 1.2:** Original data, Tukey heuristic. From top to bottom: Window width = 5 hours, 9 hours and 13 hours.

## 1.2 $SO_2$ hourly data

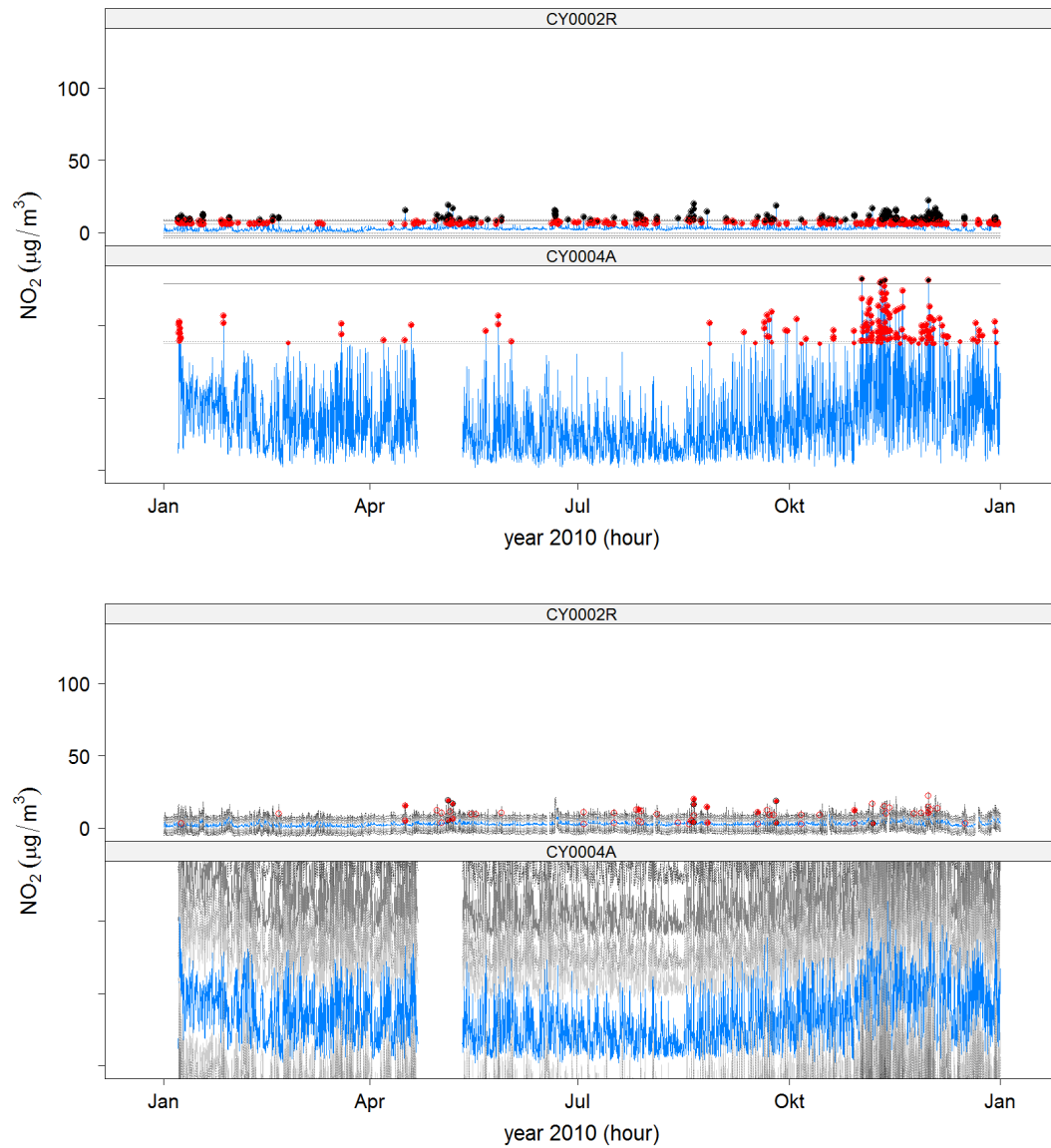


**Figure 1.3:** Original time series data, overview heuristics, no window (top) and extremely narrow window of width 3 (bottom).

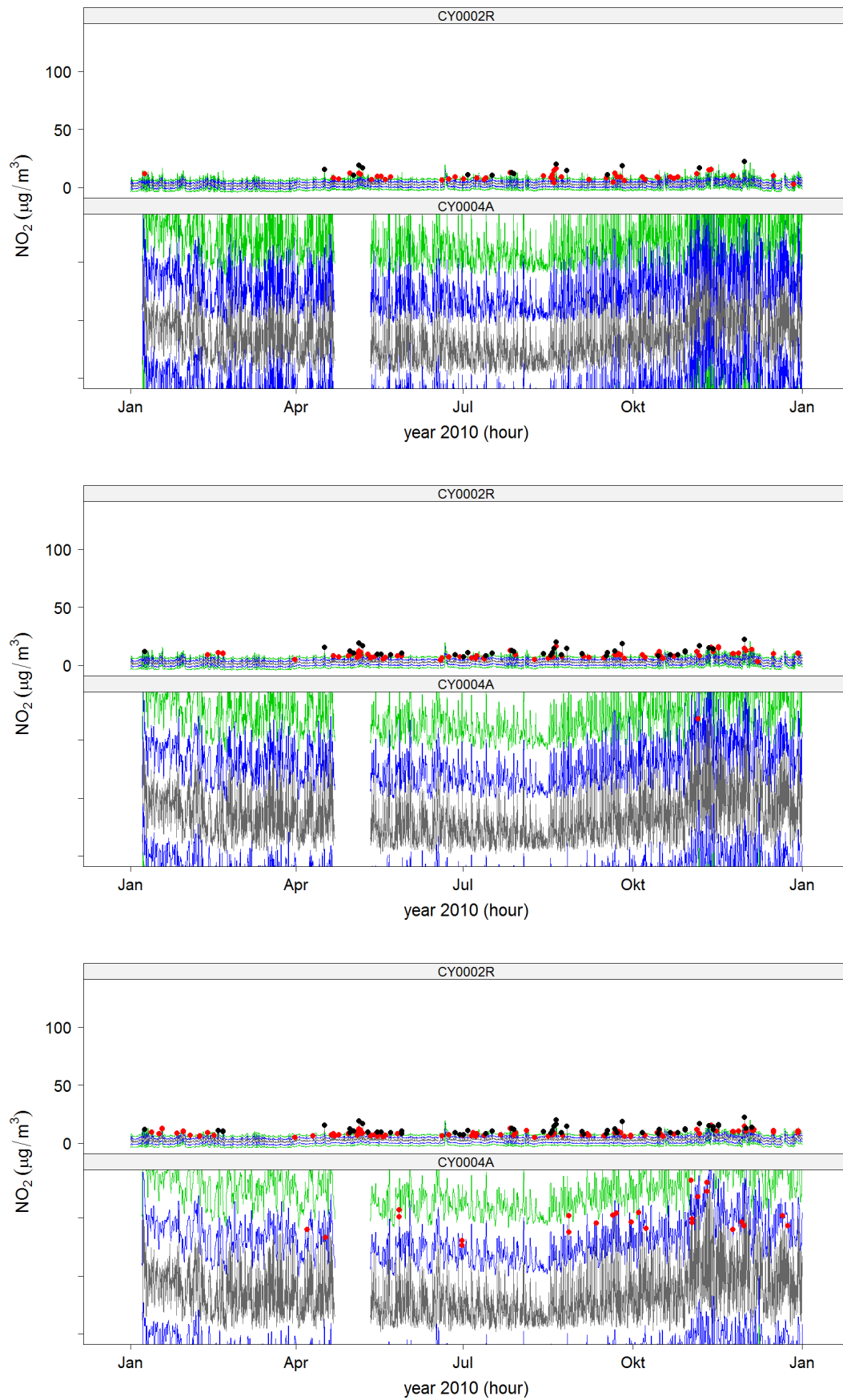


**Figure 1.4:** Original data, Tukey heuristic. From top to bottom: Window width = 5 hours, 9 hours and 13 hours.

### 1.3 $\text{NO}_2$ hourly data

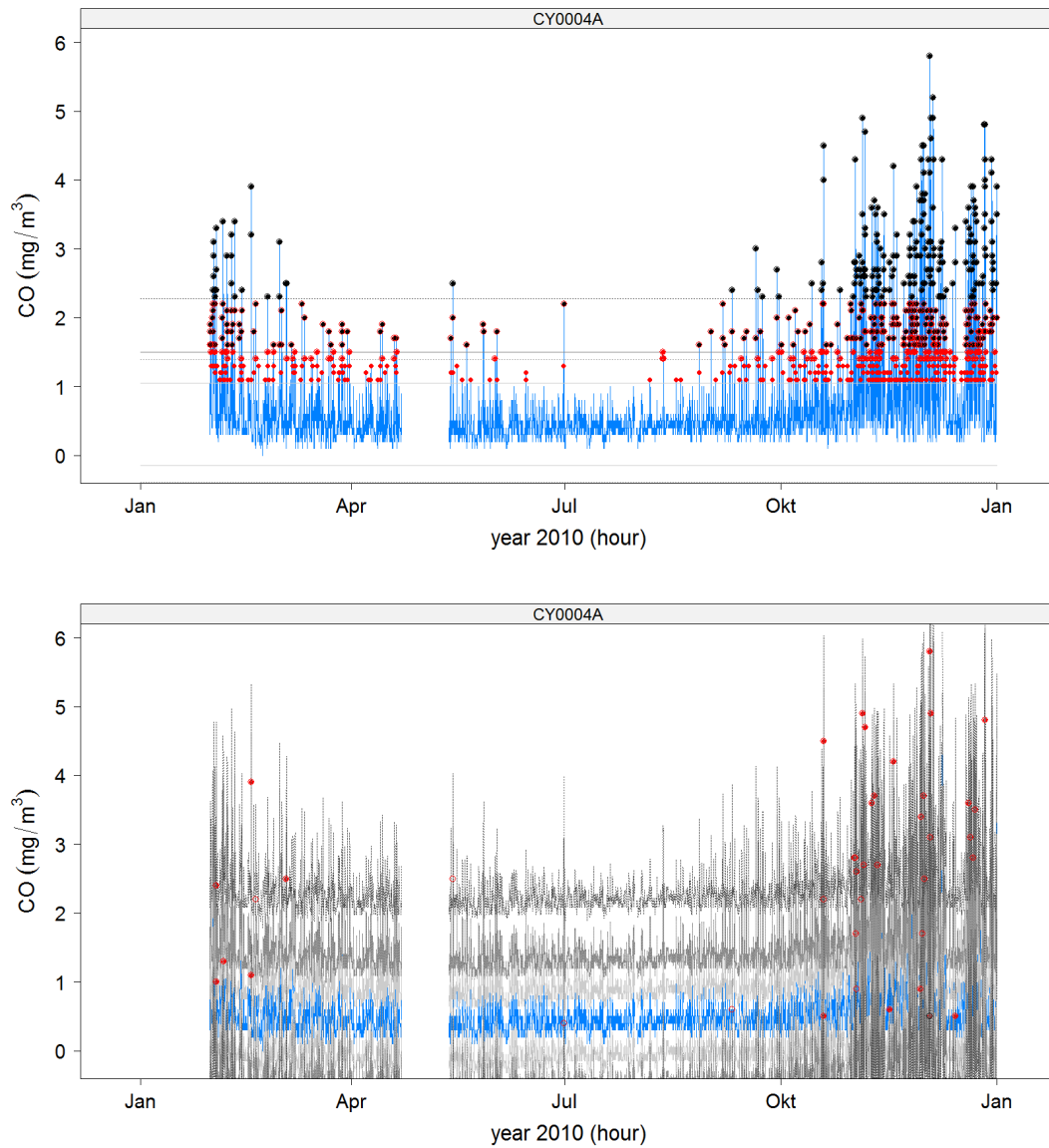


**Figure 1.5:** Original time series data, overview heuristics, no window (top) and extremely narrow window of width 3 (bottom).

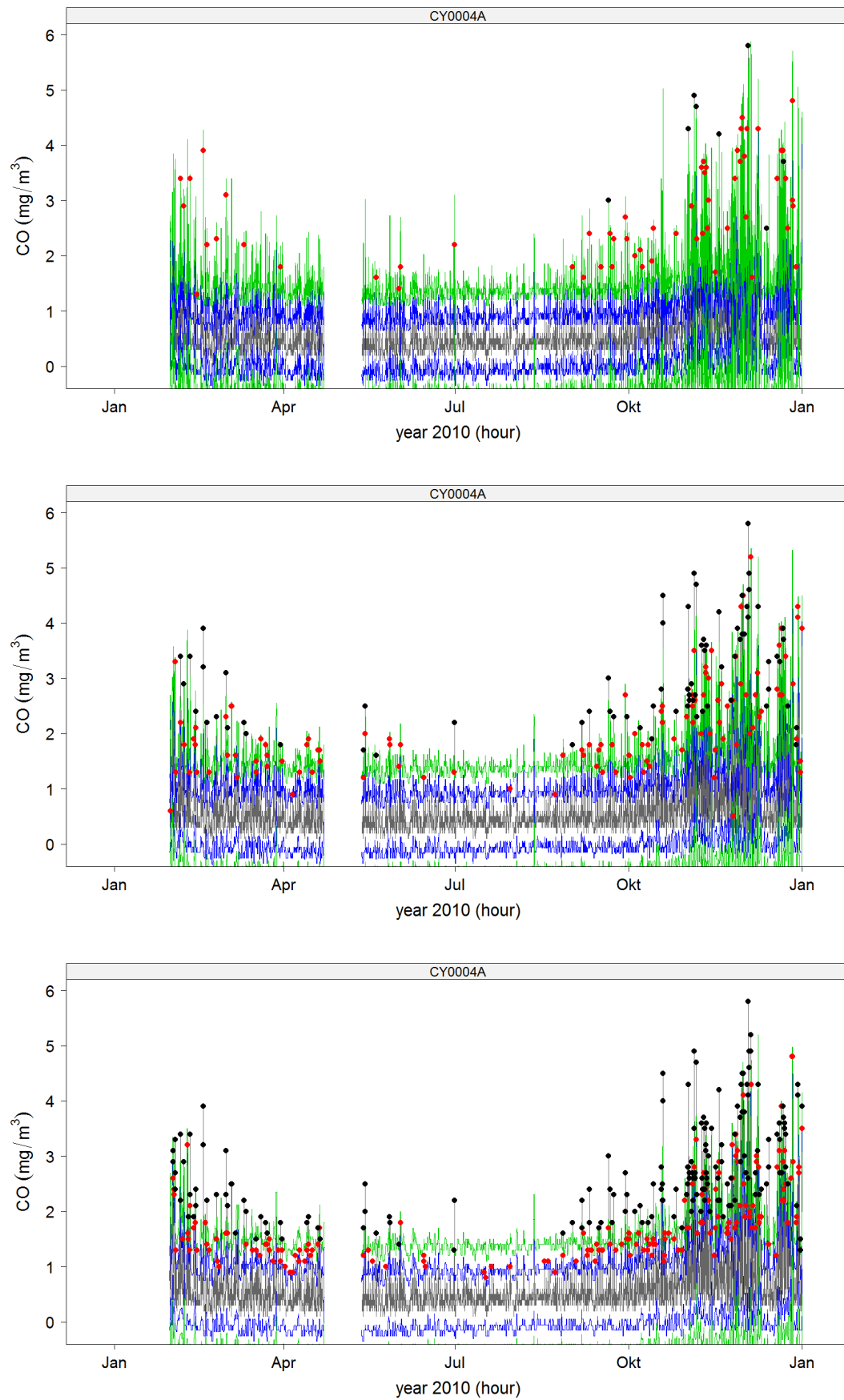


**Figure 1.6:** Original data, Tukey heuristic. From top to bottom: Window width = 5 hours, 9 hours and 13 hours.

## 1.4 CO hourly data



**Figure 1.7:** Original time series data, overview heuristics, no window (top) and extremely narrow window of width 3 (bottom).



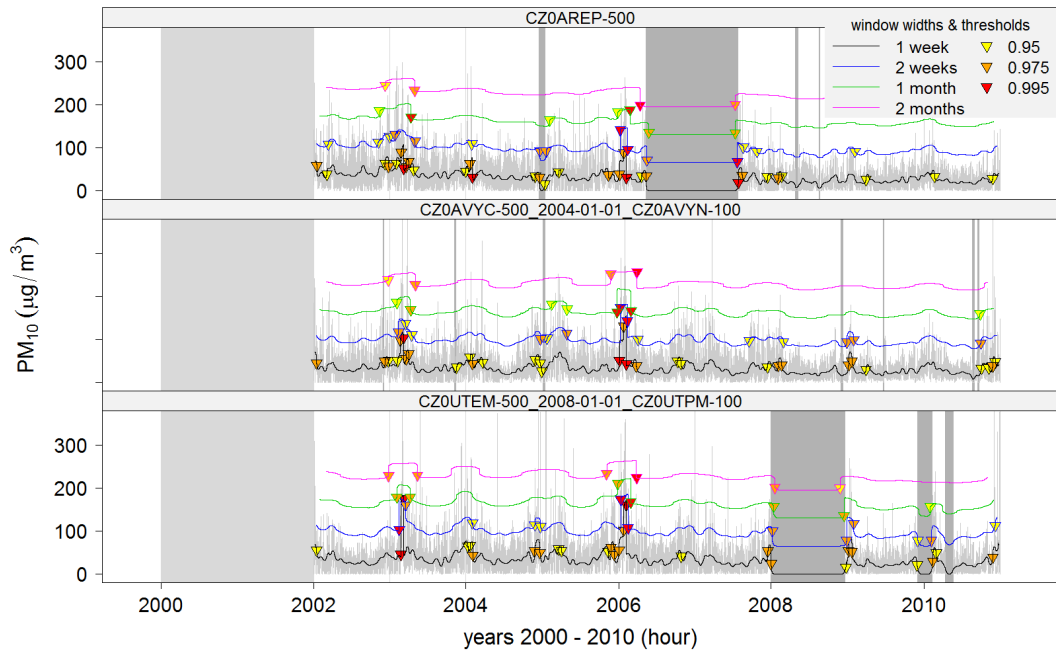
**Figure 1.8:** Original data, Tukey heuristic. From top to bottom: Window width = 5 hours, 9 hours and 13 hours.



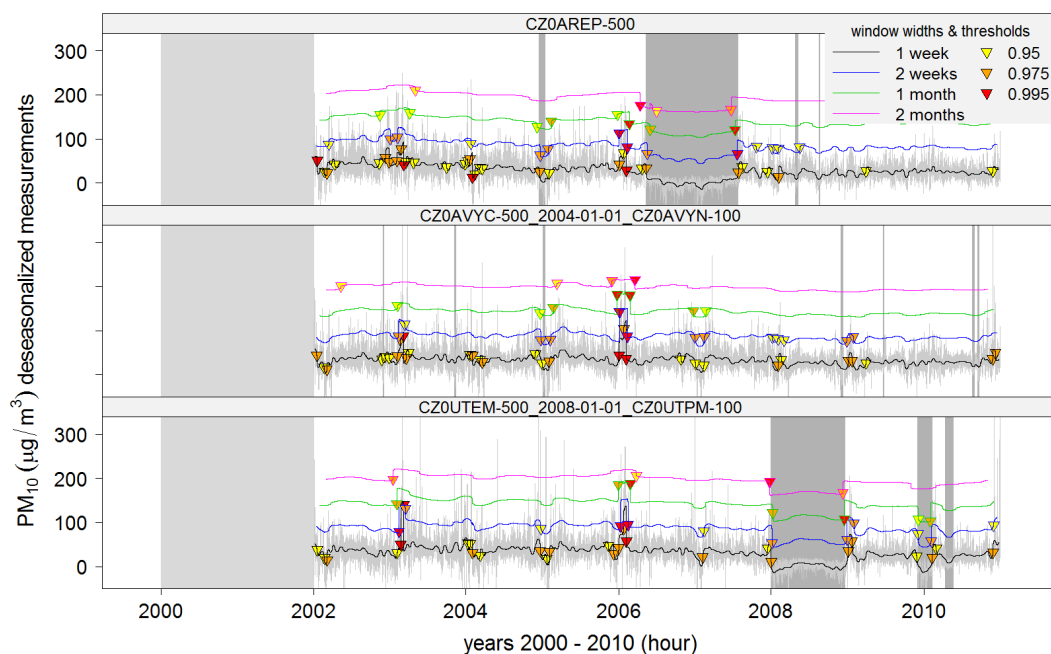
## 2 Break Detection

This appendix contains more figures on break detection for selected stations from Czech Republic. For hourly data only runs of equal values with a minimum length of 120 measurements, i.e. five days, have been marked in the figures. We present figures with window width comparison for original time series and deseasonalized data.

### 2.1 $PM_{10}$ hourly data

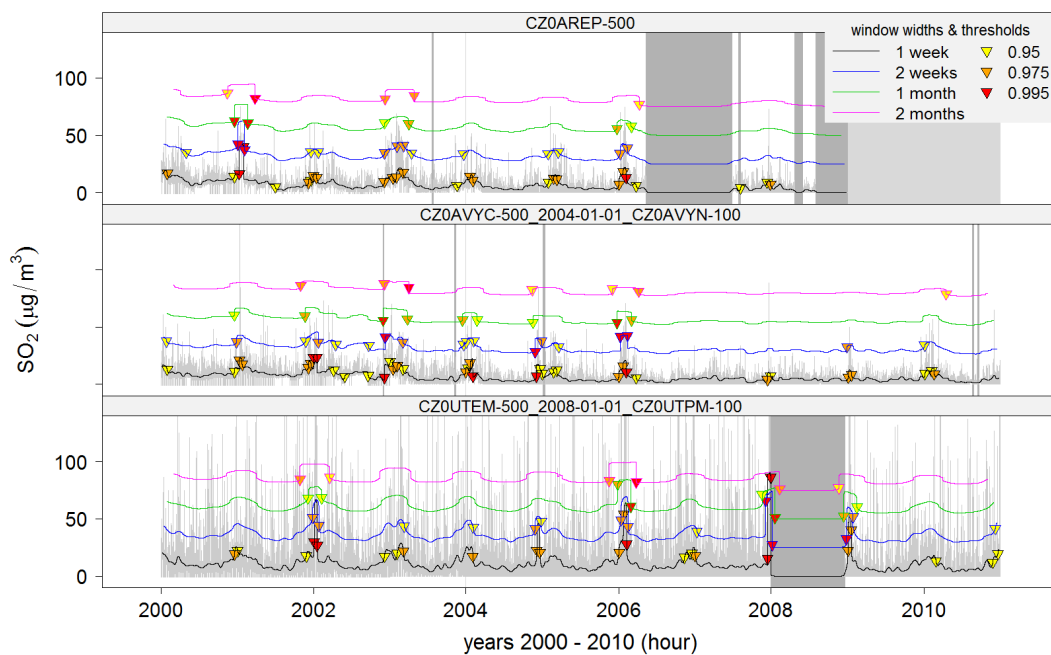


**Figure 2.1:** Findings of the Kolmogorov-Zurbenko adaptive filter for varying window widths.

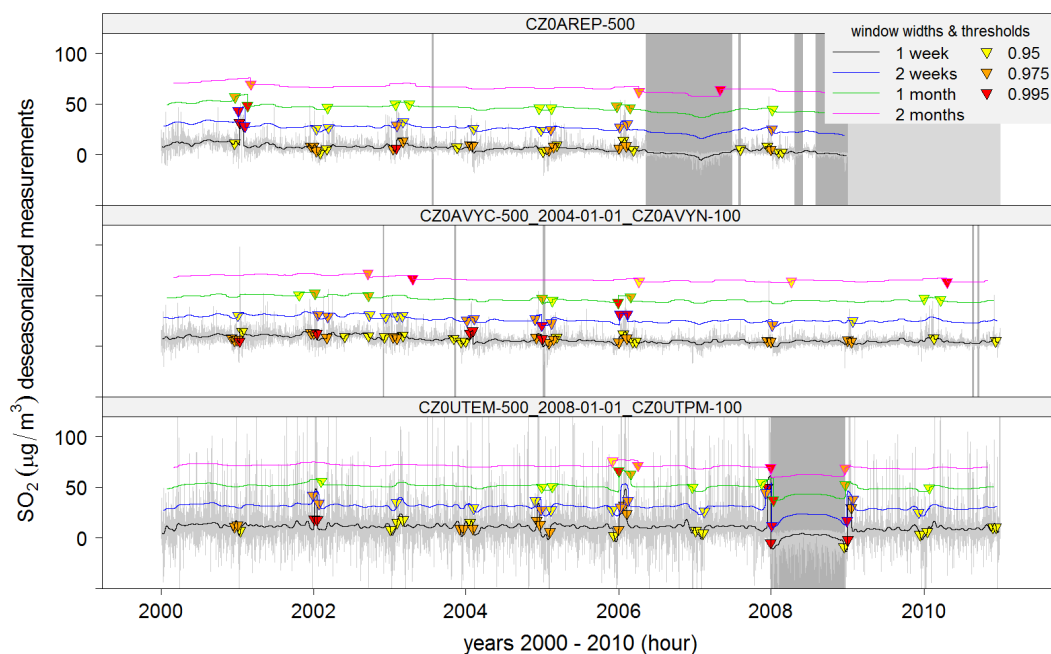


**Figure 2.2:** Findings of the Kolmogorov-Zurbenko adaptive filter for varying window widths when applied to deseasonalized data.

## 2.2 $SO_2$ hourly data

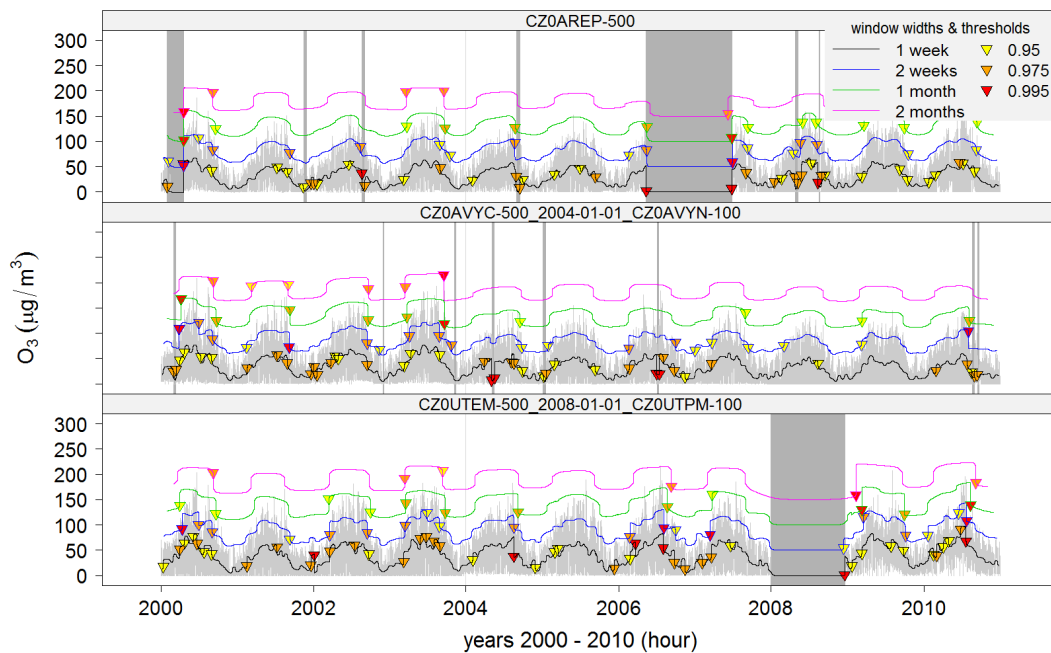


**Figure 2.3:** Findings of the Kolmogorov-Zurbenko adaptive filter for varying window widths.

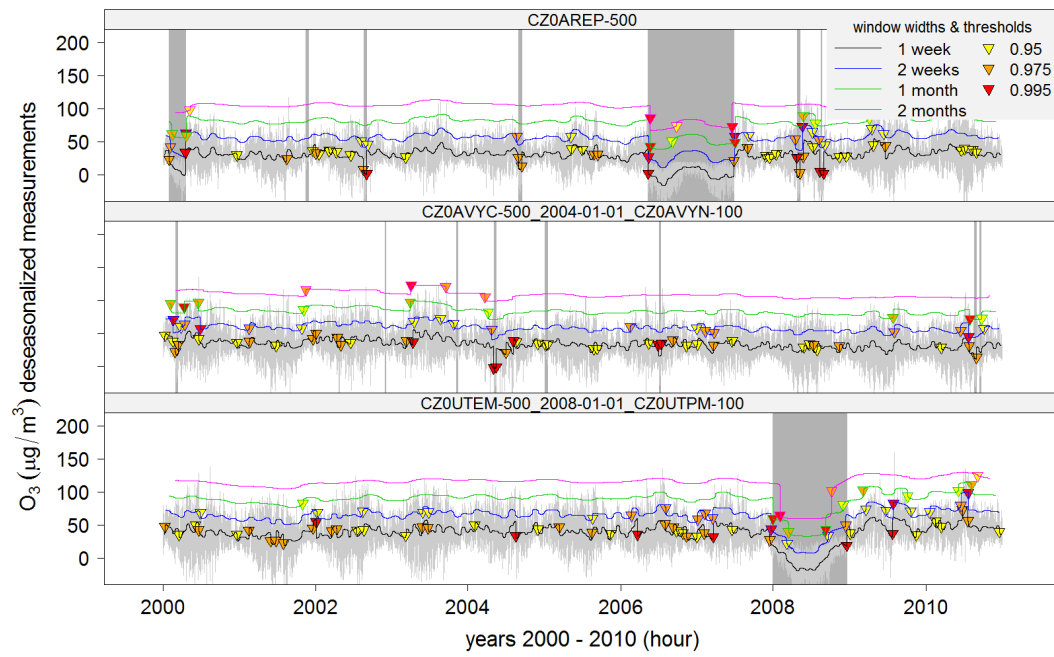


**Figure 2.4:** Findings of the Kolmogorov-Zurbenko adaptive filter for varying window widths when applied to deseasonalized data.

## 2.3 $O_3$ hourly data



**Figure 2.5:** Findings of the Kolmogorov-Zurbenko adaptive filter for varying window widths.



**Figure 2.6:** Findings of the Kolmogorov-Zurbenko adaptive filter for varying window widths when applied to deseasonalized data.