0. INTRODUCTION
Since 1864, the occurrence of foehn in Altdorf, Switzerland, is being monitored. Altdorf lies in the Reuss Valley which exhibits a rather simple topography and is almost perpendicular to the Alpine ridge. The time series of foehn occurrence is analyzed with respect to diurnal and seasonal variation of foehn as well as with respect to the year-to-year variations. While the yearly and seasonal variations are clearly caused by the corresponding variations in synoptic patterns, diurnal variations are believed to be caused by the interaction of local phenomena such as mountain-valley wind systems with the foehn flow.

1. THE DATA
Observations are made three times a day, namely in the morning, around noon, and in the evening; they consist of a simple foehn/no-foehn information. The classification foehn or no-foehn is based on wind direction and speed, humidity, and temperature. While not true for all other stations, foehn in Altdorf is a prominent and rather distinct meteorological phenomenon.

The analysis presented is based on monthly data, i.e., on the number of foehn observations in the morning, at noon, and in the evening of each month since 1864.

2. THE DATA ANALYSIS
For a trend analysis, yearly values of foehn occurrence were calculated by simply summing up the number of observations during the year. The year-to-year variation is rather large, and there is no obvious trend.

A statistical trend analysis for the entire period 1864 to 2006 does not yield any significant result. If only data since the sixties is included, a linear regression shows a decrease of foehn occurrence by 0.17 observations per year (the yearly value still being the sum of the three daily observations). Because of the great variability, no conclusions about any actual change should be based on this result. As can easily been seen, there were several, even longer time segments exhibiting similar trends.

3. COMPARISON WITH OTHER FOEHN STATIONS
Comparison of the yearly foehn occurrence at different stations. Values represent the mean yearly sum for the period 1973 to 1982. The value for Altdorf (ALT) is 62.2, this number being the sum of positive observations made three times a day.

The seasonal variation of foehn occurrence shows the well-known and quite pronounced peaks in spring and autumn. The relative frequencies of foehn in percent occurring at the three observation times exhibit again a clear seasonal variation (100 percent correspond to the mean total number of occurrences per month).

The variations of the relative frequencies at the different times of the day are not fully understood yet. It is assumed that the cause is an interaction of foehn with seasonally different local wind systems.

Acknowledgements: The authors thank MeteoSwiss for providing the data, and the "Arbeitsgruppe Föhnforschung Bodensee-Rheintal" for supporting the evaluations presented here.