



14C in the EC and OC fraction of PM10 and PM1 as indicators for different sources

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Previous investigations have shown that ^{14}C analyses can be very useful in investigating the contributions fossil sources (like traffic) and non-fossil sources (like biomass burning and direct biogenic emissions) to particulate matter. We will discuss recent results from field study in the Valais, an Alpine Valley in the southwestern part of Switzerland, using different results during weekdays versus weekends. In Switzerland, there is a ban of trucks on highways. The found differences, especially in EC can clearly be associated with traffic.

In additional campaigns, we have investigated the fossil and non-fossil contribution to PM1 and the coarse fraction PM10-PM1 of both EC and OC for the first time. We can show that different sources are responsible for the fine and coarse fossil and non-fossil EC and OC at different locations. The coarse EC is consistently more fossil than the fine EC. Differences in the fossil/non-fossil contribution to coarse and fine OC were dependent on the location and campaign.