

The authors present a synthesis of seven anthropogenic pollutant records from four well-studied ice core sites in the European Alps. The datasets have all been well-validated in previous publications and the timescales are accurate. If indeed the authors attempt here is the first to compare these datasets, then such a comparison is long overdue and most welcome. Each of the seven chemical constituents show a high degree of correlation among the four sites, as would be expected based on the presented back trajectory and emissions modeling results. The concentration discrepancy at Col de Dome is explained by a higher degree of winter snow preservation, which seems plausible based on the arguments presented. In general, the paper is well written and concise; I don't see any reason not to accept it in its present form. My only possible criticism is that there is nothing particularly new or novel here; but then again, the high degree of agreement between the four sites is powerful and tells a very simple and compelling story.

We really appreciate the positive evaluation of our manuscript by the referee.

In our study we show for the first time, how consistent the Western European air pollution trends are recorded in single Alpine ice cores. In response to both referee comments, we will clarify throughout the manuscript that the main object of the study is the investigation of representativeness, which is novel.