Replies to Referee 2:

We thank the referee for the review. We improved the description of the methodology regarding the model resolution and lateral boundary conditions in the revised manuscript as suggested. Our answers to specific questions (in *italic*) are as follows:

- I would suggest to comment on the forecast skill of the adopted methodology for projections of 2020. Is O3 increase attributed to emissions used or meteorology?

As described in Page 14,205, we calculated the meteorological fields for 2006 and used the same meteorology for all emission scenarios. The changes predicted by the model simulations therefore are attributed to changes in emissions.

- I would suggest to add a description about the model resolution used for Switzerland and the topographic variability of the area. Why it is considered as adequate? The same is true for the emission inventory used. How about meteorological variability? Is it captured adequately with the model configuration used?

The horizontal resolution of the coarse domain (European domain) is 0.250deg x 0.125deg. Since Switzerland has a complex terrain, a higher resolution was used for the nested Swiss domain, 0.0833deg x 0.0417deg. We think that the model resolution used in this study is an optimum choice for whole year simulations over complex terrain. The emission inventory used for the European domain has a resolution of 0.125° x 0.0625°. The resolution of the emissions inside the Swiss domain is higher. We improved the description of the model resolution as well as the resolution of the emission inventories in the manuscript. Some statistical evaluation for the meteorological variables was added into the Supplementary (Fig. S3)

- For clarity of the presentation of results i suggest redraw the figures showing model results for Europe. The color palette they used is too light and the results are not clearly seen.

We changed the color scale of all the figures showing model results not only for the European but also for the Swiss domain for consistency.

- The time series of Figure 2 and 4 need a better representation. Too long time series of observational and modeled data. I suggest to break in smaller period.

The purpose of Figure 2 is to show how the model captures the temporal variation. We therefore showed the whole year. However, in order to simplify the figure we plotted daily average instead of hourly values in the revised manuscript. On the other hand, Figure 4 shows data only for one month (intensive campaign period for aerosol components in June) and we think that splitting it into a smaller period is not necessary.