We thank Anonymous Referee #3 for the useful feedback. Here is a list of the referee's comments followed by our response (in italic):

The seven sites selected were mainly located in central and northern Europe; only one site was located in southern Europe but with a major Atlantic influence. Therefore, it should be clearly stated in the text that some conclusions obtained by this study cannot be considered as representative for the whole Europe; thus, specific areas such as the Mediterranean region, with peculiar characteristics for atmospheric aerosols are not considered. This could be of special interest for the coarse fraction given the higher influence of mineral dust, mainly accumulated in the coarse fraction, in southern Europe. Probably some other stations from Southern Europe (Greece, Italy, Southern France, Eastern Spain,..), measuring PM10 and PM2.5 simultaneously, should had been included in this study. Nevertheless, this paper merits publication.

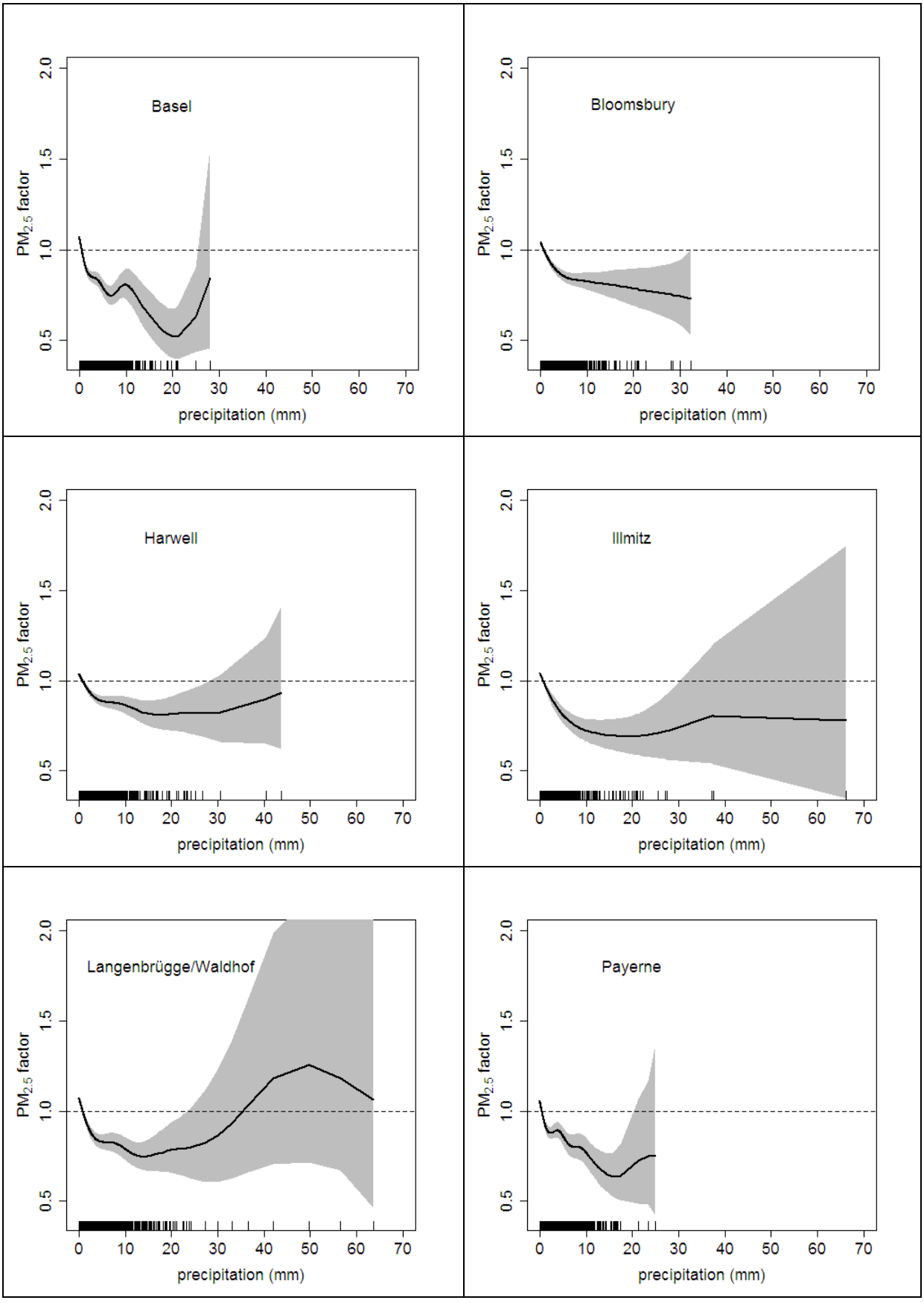
It is true that this study does not investigate PM trends in Europe as a whole but only in a limited set of European regions. This will be stressed in the text. We would like to note that it was our intention to include more than 7 sites in this study. However, most regular daily $PM_{2.5}$ measurements in Europe began in 2005 or 2006. It was therefore difficult to find more sites with regular daily measurements suitable for a decade-long investigation.

Just a minor question; have you checked the influence of days without precipitation on PM load?

Precipitation was included (along with the other meteorological variables discussed in Section 2) as an explanatory variable in the generalised additive models. Trends adjusted for the effect of the meteorology (including precipitation) are presented in the paper. In addition, the amount of precipitation the previous day is included in the modelling process (see Section 2).

Figures 1 and 2 show the function of the $PM_{2.5}$ and PM_{coarse} factors vs. precipitation for each site (see Section 4.1 for the definition of PM factors). The fitted curves represent a reasonable relationship between PM and daily total precipitation for precipitation values up to approximately 10mm. For larger values of precipitation at some sites the PM factors have very large uncertainties and unrealistic best estimates. This is due to scarcity of data for extreme values of precipitation: days with total daily precipitation above 10mm represent 1.7% of the data on average over all stations. Inadequate model predictions for extreme precipitation events are not considered to be an issue in terms of trend identification because of the rarity of such events.

Days without precipitation correspond to zero millimetres of precipitation in Figures 1 and 2. It can be seen that the $PM_{2.5}$ and PM_{coarse} factors for zero precipitation are considerably larger than for positive values of precipitation.


Basel
Bloomsbury
Harwell
Illmitz
Langenbrügge/Waldhof
Payerne
PM2.5 factor
precipitation (mm)
0.5
1.0
1.5
2.0
0
10
20
30
40
50
60
70

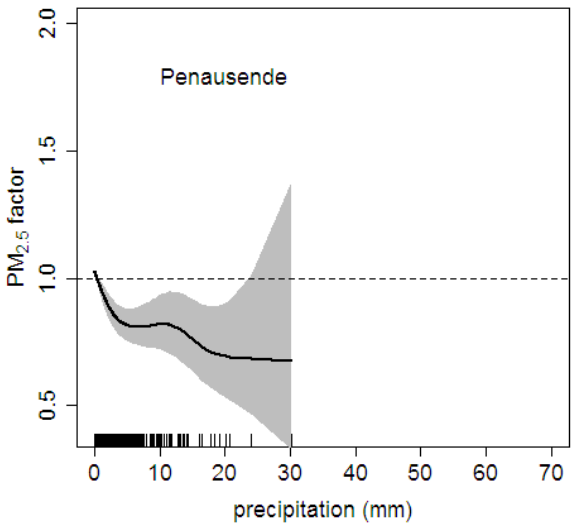


Figure 1. Plots of "$PM_{2.5}$ factors" (see Chapter 4.1 for a definition) vs. daily total precipitation for all considered sites. The best estimate is represented by the solid curve. The grey area represents 2 standard deviations around the best estimate. A rough idea of the distribution of the precipitation data is provided by the "rug" on the x-axis.

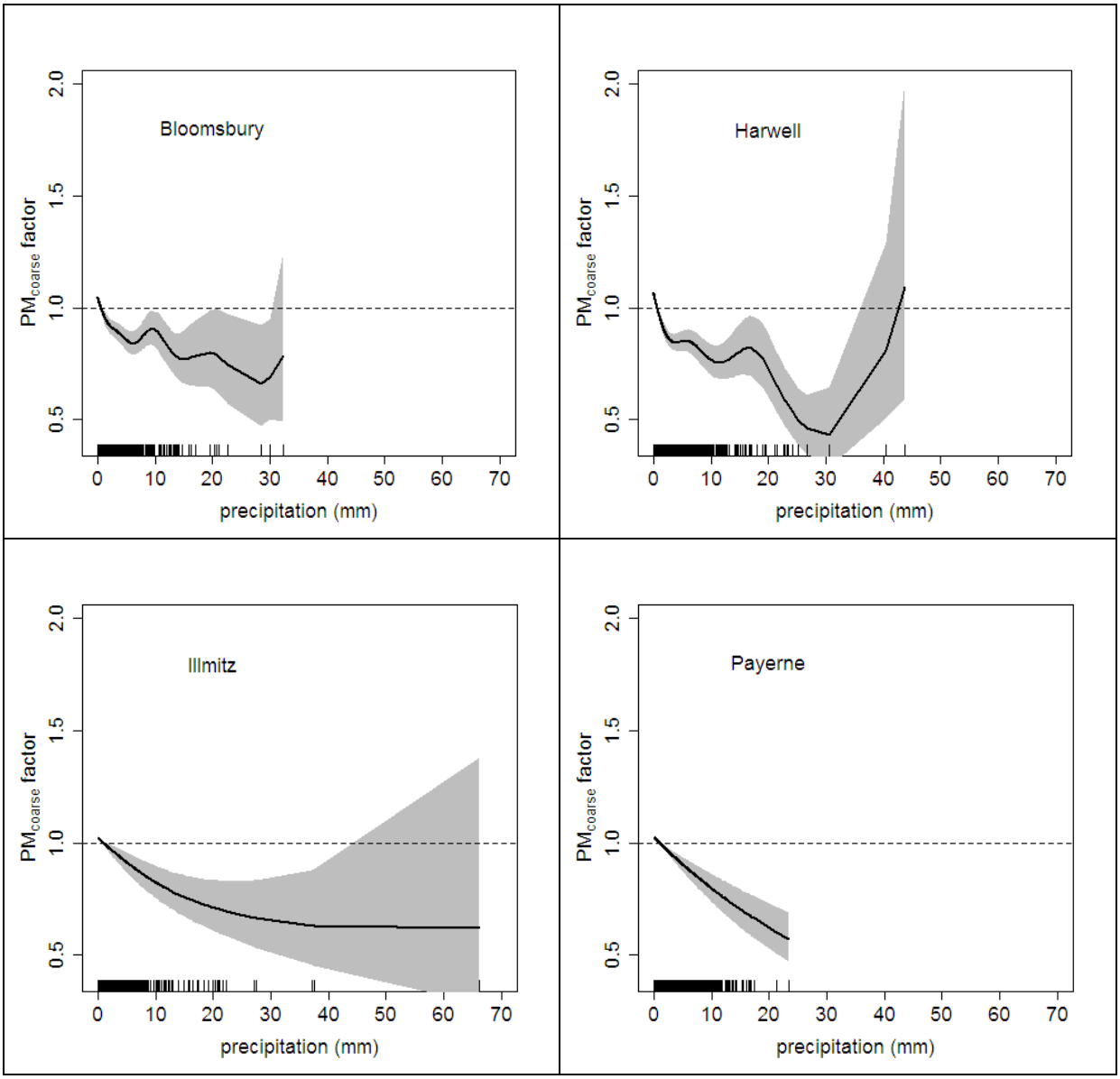


Figure 2. Same as Fig. 1 but for PM_{coarse}. Plots for Basel, Langenbruegge and Penausende sites are missing because precipitation was not selected by the variable selection algorithm for these sites ('yesterday precipitation' was however selected for Basel).