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Hydrology and Earth System Sciences Discussions

Interactive comment on "Scaling and trends of hourly precipitation extremes in two different climate zones – Hong Kong and the Netherlands" *by* G. Lenderink et al.

Anonymous Referee #1

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General Comments: The manuscript of Lenderink et al. deals with scaling of hourly precipitation extremes in two different climate zones. The manuscript represents an important contribution to the scientific progress within the scope of Hydrology and Earth System Sciences. This manuscript addresses a relevant scientific question, is well written and provides a worthwhile analysis of scaling dependency of hourly precipitations and daily air temperature values. The methods are clearly presented. May be the selection criteria "4 hours before a precipitation event" could be addressed in a more detailed way. The authors stated that this criterion gave the best results for NL, is this also the fact for Hong Kong? If another criterion e.g. "2 or 3 hours before a precipitation

event" would have been used for the analyses, would this lead to significantly different results? A second minor shortcoming of the paper is, from my point of few, the lacking homogeneity tests of the time series used in this analyses. It should be proven that all data sets are statistically reliable before they are used in later meteorological analyses. The title and abstract reflect the content of the paper. I recommend publication of this paper after addressing the minor comments below.

Specific comments: - Page 4705, line 11: Wong et al. 2010 but Wong et al. 2011 in the references

- Page 4706, line 11: Even an adequate reference is given; the authors should ad one or two sentences about the advantages of this binning technique particularly why the bins overlap.

- Page 4718, figure 3: Please ad an adequate y-axis labelling in both graphs

- Page 4718, figure 3: It would be easier for the reader when the colour of the lines are repeated in the text below the figure in the same way as done in figure 4. . . .. . . dew point temperature a re potted for all hours (black line). . .. . .

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