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Comment

## ***Interactive comment on “Global precipitation response to changing external forcings since 1870” by A. Bichet et al.***

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We would like to thank R.J. Van der Ent for his interest and his constructive comments. We agree with his comments and propose to reformulate Section 4.1 as follow.

Minor comments:

1. Section 4.1 Origin of water in global land precipitation. “Thereby, in agreement with previous studies (e.g. Wild et al., 2008), we find that at least 35 % (260 mm/year) of global land precipitation must come from oceanic evaporation (Fig. 8b, black curve), meaning that quantitatively, a maximum of 65% of the global land precipitation can come from land evaporation. However, Van der Ent et al. (2010) show that only about 57% of the water evaporated on land falls back on land. This means that in reality, only

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40% of the global land precipitation comes from land evaporation. Nevertheless, our results show that in the 11 years running mean time series, the global land precipitation trend (-0.92 mm/decade) and variability are more highly correlated with the trend (-0.77 mm/decade) and variability ( $r^2=0.81$ ) of the global land evaporation, as opposed to global oceanic evaporation (trend=-0.15 mm/decade,  $r^2 = 0.36$ ). The next sections investigate the sensitivity of the global land and oceanic evaporation to changing external forcings since 1870. “

2. We agree with the comment, I will change the legend

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Interactive comment on Atmos. Chem. Phys. Discuss., 11, 9375, 2011.

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