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Corrigendum to

"Does the Budyko curve reflect a maximum-power state of hydrological systems? A backward analysis" published in Hydrol. Earth Syst. Sci., 20, 479–486, 2016

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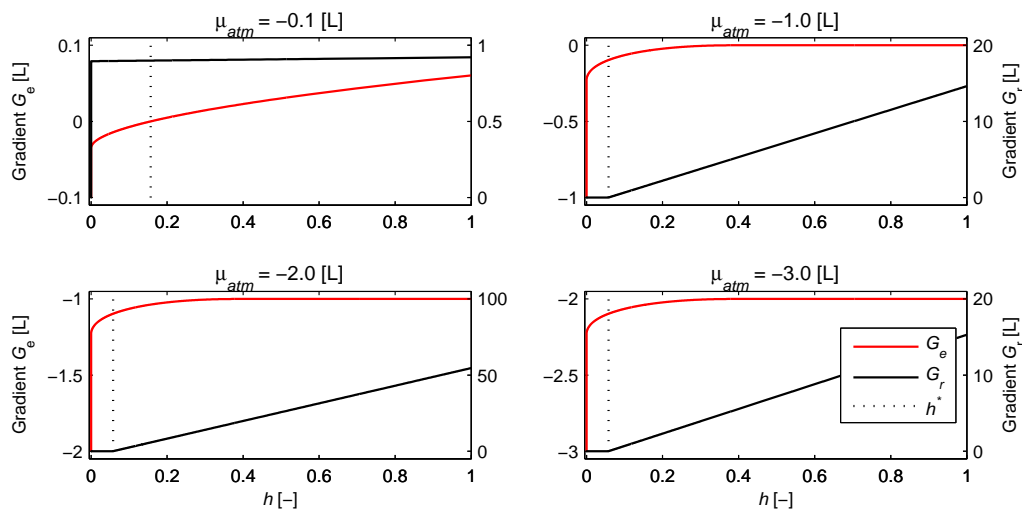[2]Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany

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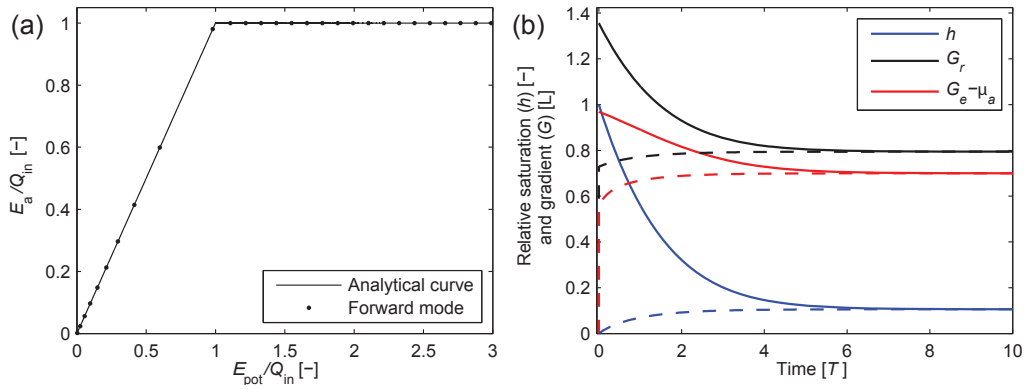
In the article "Does the Budyko curve reflect a maximum-power state of hydrological systems? A backward analysis", published in Hydrol. Earth Syst. Sci., 20, 479–486, 2016, there are wrong figures displayed. The correct figures should be as follows.
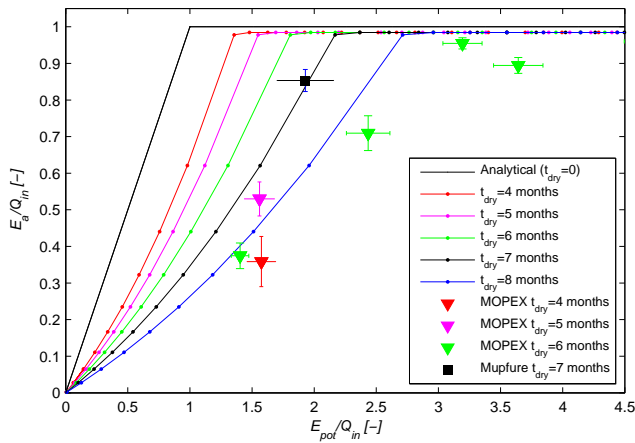
References

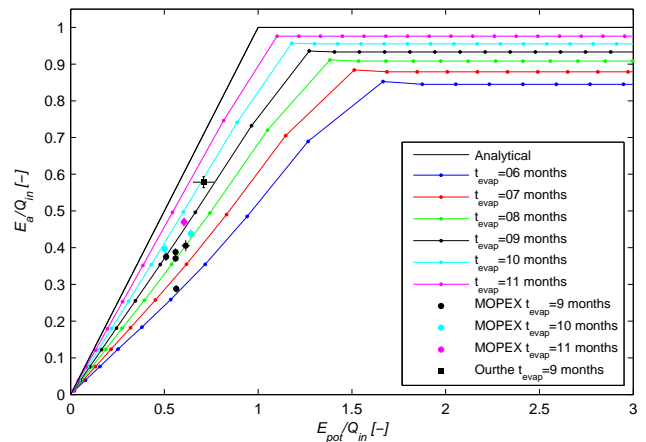Devlin, R.: Plant Physiology, 3rd Edn., D. Van Nostrand Company, New York, 1975.

Figure 1. The gradients driving evaporation (G_e) and run-off (G_r) as a function of the relative saturation (h) for different values of μ_{atm} with $k_r = k_r^*$. At $h = 0$, the slope of the gradient G_e is vertical, while the value of G_r is set to zero to avoid run-off at zero saturation.

Figure 2. (a) Analytical Budyko curve (Eq. 9) and result from forward mode with constant forcing and **(b)** time evolution of relative saturation and both gradients for complete initial saturation (solid lines) and initial dry state (dashed lines). $\mu_{\mathrm{atm}} = -0.7$.

Figure 3. Sensitivity to periodic dry spells in the forward model. MOPEX catchments are filtered to have only those catchments having at least 1 month with a median rainfall $< 2.5\,\mathrm{mm\,month^{-1}}$ and a coefficient of variance < 0.5 for all months with a median rainfall $> 25\,\mathrm{mm\,month^{-1}}$. The final number of dry months was determined by maximizing the difference between the mean monthly precipitation of the X driest months minus the mean monthly precipitation of the $1 - X$ wettest months, where $X = 1, 2 \ldots 12$. Error bars indicate 1 standard deviation and are determined with bootstrap sampling.

Figure 4. Sensitivity to on–off dynamics in actual evaporation in the forward model. MOPEX catchments were filtered to have only those catchments having a coefficient of variance < 0.12 for monthly median rainfall and with at least 1 month with a median maximum air temperature $< 0\,^{\circ}\mathrm{C}$; a month is considered to have no actual evaporation if the monthly median maximum air temperature $< 0\,^{\circ}\mathrm{C}$ (after Devlin, 1975). Error bars indicate 1 standard deviation and are determined with bootstrap sampling.