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Interactive comment on “Biological and climatic controls on leaf litter decomposition across European forests and grasslands revealed by reciprocal litter transplantation experiments” by M. Portillo-Estrada et al.

Anonymous Referee #1

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The manuscript “Biological and climatic controls on leaf litter decomposition across European forests and grasslands revealed by reciprocal litter transplantation experiments” by M. Portillo-Estrada and co-authors is dedicated to study tree and grass litter decomposition across several climates in Europe. This study demonstrates that climatic conditions affect the litter decomposition quantitatively more strongly than species, litter origin and soil type. The data was used to develop prediction models of carbon and nitrogen release during the decomposition period.

Several incomprehensible description of the correlations between the rate of decom-

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position and the different parameters, such as temperature, leaf area, N content and other. If it is possible to lead a table which showing the correlation coefficients.

In the paragraph 3.3 seems more logical describe to first how the content of C and N changing during the decomposition. Then describe the dependence N_t/N_0 from temperature and precipitation.

The article presents data on the relative change (%) content of C and N during the decomposition. In addition, the dependence the rate of decomposition (k) from the initial contents of nitrogen are estimated. However, there are no data about initial contents of nitrogen and carbon in plant remains. While this might explain why trees and grass has the different dynamics of carbon and nitrogen contents.

Interactive comment on Biogeosciences Discuss., 12, 18053, 2015.

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