

## Editorial comments:

### Comments to the author:

Dear Authors, My apologies for significant delay on the decision. Thank you for adding statistical significance to the pattern correlation analysis, as requested by the reviewer. Could you please also describe briefly how you calculated the statistical significance? Did you conduct any Monte Carlo simulation for example?

Thanks,  
Shrad

### Response:

Once again, we thank the you for your time and efforts on the manuscript.

As suggested, we have briefly described how we calculated significance of the coefficients for both LAI-SPEI and LAI-PRECIPITATION. We used the LinRegTTest.

Please see below for the text. This can also be found in Lines 625-638, pg 25 of the manuscript.

*In order to determine the significance of correlation coefficient, we performed the Linear Regression T-Test (i.e. LinRegTTest). This finds the best line of fit among a set of data points. It also checks the quality of the fit by carrying out a t-test on the slope, thus testing the null hypothesis that the best fitted line is 0, suggesting that there is no correlation between two variables, since an association with a slope of zero implies that one variable does not affect the other. Therefore, if the p-value is not sufficiently low, then we do not have sufficient data to accept relationship between the variables. For this study, we used a significance level of 5% i.e.  $\alpha = 0.05$ , which is the most commonly used value in life and biological sciences. We then tested the hypothesis on whether the p-value is less than the significance level ( $\alpha = 0.05$ ), which is our null hypothesis. In cases where that is the case, we rejected the null hypothesis and concluded that there is adequate evidence that there is a significant linear relationship between the variables i.e. LAI-SPEI and LAI-Precipitation. In cases where p-value is greater, we do not reject null hypothesis since there is not enough evidence to conclude on the significance of correlation coefficients.*