Thank you for your time and comments. We would like to thank you for your time and comments. Here we will comment on, one-by one, the referee comments/suggestions. Below each comment is our response in regular weight blue font.

Sincerely,
Nesibe Köse

One important question is why the authors did not develop their temperature reconstruction using only the chronologies that have significant relationship to temperature? A sensible approach would be to first screen the chronologies to remove those not significantly correlated with temperature. It seems to me they highly manipulated the data and used a very complicated equation to get a high adjusted R2.

We could not use only the chronologies that have significant relationship to temperature, because at the same time they have significant precipitation signal (except ART chronology, Figure 2). On the other hand, we would like to show that it is possible to make a climate reconstruction from a tree-ring network, even if this climate variable is not the most important limiting factor on radial growth. In our case, May to August precipitation was the most important factor, and the second one was March-April TMP for almost all the chronologies. Classical approach in Dendroclimatology, is to use the PC 1 and/or high order PCs reconstruct precipitation. But here, we would like show that PC 1 could be a signal for precipitation but a noise for temperature. On the other hand the other PC's, which explain less variance, could be noise for precipitation and but a signal for temperature.

Specific Comments:
1. Page 3, line 52-53. Hughes et al., (2011) did not develop any reconstruction, but they investigated the climate signal.
Thank you for your attention we will correct it in the manuscript.

2. Page 5-lines 90-91: The authors should cite the investigators produced the chronologies.
We cited the investigators produced the chronologies.

3. Page 6-lines 128-129: What the authors mean by "Third, the final reconstruction is based 128 on bootstrap regression (Till and Guiot, 1990), the best method to assess the quality of the: : :" It is an awkward and not a scientific statement.
We will replace the sentence by: "Third, the final reconstruction is based on bootstrap regression (Till and Guiot, 1990), a method designed to calculate appropriate confidence intervals for reconstructed values and explained variance even in cases of short time-series."
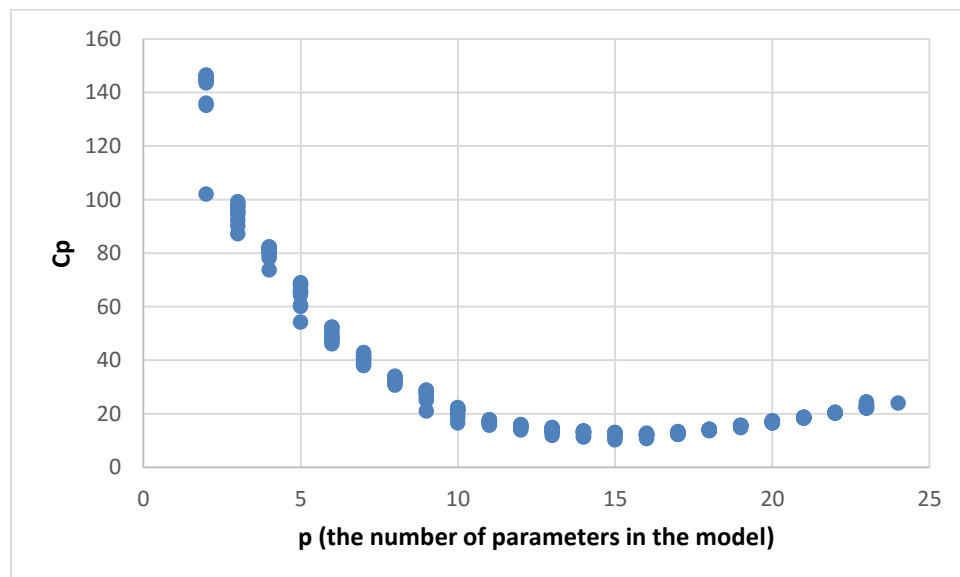
4. Page 7-line 143: another awkward sentence "but bootstrap is much more interesting: : :"
We will replace by "… but bootstrap has the advantage to produce confidence intervals for such statistics without theoretical probability distribution and finally we accept the RE and CE for which the lower confidence margin at 95% are positive. This is more constraining than just accepting all positive RE and CE."

5. Pages 9-10, Temperature reconstruction: The authors mentioned that they conducted

PCA on the 23 chronologies. I have several questions and comments on this section. The authors used stepwise regression (SR), however, they did not give enough details about this procedure. I am concerned that the model could be over-fitted and some of the predictors could be just noise. What criteria were applied to end the stepwise process (e.g., p-to-enter, p-to remove)? Was a conventional statistic such as Mallows' Cp used to arrive at the final model? Does the validation CE and RE continue to increase through each step of the stepwise? Did the authors run SR on each calibration period independently or use the same variables that were suggested by the SR for the whole period?

We added information in the text under the titles "Data and Method", "Temperature reconstruction" explaining which method we used stepwise regression. We combined forward selection with backward elimination, checking for entry, then removal, until no more variables can be added or removed. Each procedure requires only that we set significance levels (or critical values) for entry and/or removal. We used $p \leq 0.05$ as entrance tolerance and $p \leq 0.1$ as exit tolerance. Actually, for almost all PCs it was $p \leq 0.01$ in entire regression. The final model obtained when the regression reaches a local minimum of RMSE. We also calculated Mallows Cp values. See the relation Cp and p (the number of parameters in the model, including the intercept) in (Figure1) .

We did not used a split-sample procedure to verify the model stability. We used bootstrap method. Therefore we run SR for the whole period. Bootstrap is only applied to the selected set of predictors by stepwise regression. Then it is not concerned by the bootstrap. We did not calculated calulated RE, CE at each step of the stepwise regression.

6. Page 7, section March-April temperature reconstruction. How did the chronologies cluster around each pc that they used in their equation?

We added a column to Table 3, to show the chronologies represented by higher magnitudes of the eigenvectors.

	Explained variance (%)	Correlation coefficients with		The chronologies represented by higher magnitudes** in the eigenvectors
		May–August PPT	March–April TMP	
PC1	46.57	0.65	0.19	KAR, KIZ, TEF, BON,USA,TUR, CAT, INC, ERC, YAU, SAV, TAN, SIU
PC2	7.86	–0.07	0.15	KAR, SAV, TIR, BOL, YAU, ESK, TEF,BON, SIU
PC3*	4.93	0.04	–0.48	HCR, PAY, BOL, YAU, SIA
PC4*	4.68	0.11	0.17	TEF, KEL, FIR, SIA, KIZ, SIU, ART
PC5*	4.42	–0.25	0.27	SAH, TIR, FIR, ART
PC6	3.73	0.15	–0.14	KIZ, FIR, SAV, KAR, TIR, PAY, ESK, TEF, BON, ART
PC7*	3.56	0.19	0.18	KIZ, BON, BOL, YAU, HCR, PAY, INC
PC8	2.87	0.26	0.01	HCR, ESK, BON, FIR, ERC, SIA
PC9*	2.45	0.16	0.17	PAY, USA, BOL, YAU, TIR, HCR, FIR, SIA, SIU
PC10*	2.21	0.14	–0.08	TUR, CAT, SAV, SIA, KEL, ERC, SIU
PC11	2.09	–0.36	–0.20	HCR, TEF, USA, INC, PAY, TUR, SAV, SIU
PC12	1.80	–0.12	0.05	TEF, CAT, YAU HCR, ESK, USA, BOL, SIA
PC13	1.63	–0.06	0.17	TEF, TUR, BOL, KAR, YAU, SIA
PC14	1.55	–0.14	0.06	TIR, USA, FIR, TUR, YAU, KAR, BON
PC15*	1.50	–0.20	–0.14	KIZ, BON, USA, ESK, INC, BOL
PC16	1.31	0.04	0.08	SAH, HCR, INC, YAU, SAV, KAR, FIR, BOL, SIU
PC17*	1.25	0.15	0.19	SAH, SIU, KAR, ESK, TUR, ERC
PC18	1.14	0.13	0.02	KAR, TEF, TUR, SAV, BON, CAT
PC19	1.09	0.16	–0.11	PAY, INC, SAV, HCR, KEL, CAT, TAN
PC20	0.95	–0.15	–0.01	TIR, SAH, CAT
PC21*	0.89	0.06	–0.28	TUR, INC, TIR, SAV
PC22	0.85	0.44	0.10	KIZ, SAH, BON, YAU, SIU
PC23	0.67	–0.22	–0.02	TAN, KEL, TUR, CAT

"*" indicates the PCs, which used in the reconstruction as predictors

"**" which exceed ±0.2 value.

7. Conclusion, line 325-327: it is an awkward statement. Did any of previous authors indicated in any of their publications it is IMPOSSIBLE to reconstruct the temperature in the eastern Mediterranean. Did the authors read the mind of these authors?

We tried to say with this sentence that no temperature reconstruction has been made, which mean that it is difficult to do that.

8. Show the minor ticks in Figure 4, 5, and 7.
We did suggested changes in the figures.