Reviewer 1 (Dr. Dennis Wheeler):
We would like to thank the reviewer for many important comments:

1. I fully appreciate that there are difficulties in deriving drought frequencies from source that do not cover every year and month. But I wonder if drought frequencies might be 'scaled' according to the number of time units for which evidence is available. If this is done for all time periods then more direct comparisons might be possible across the time range. But this is just a thought, rather than a recommendation.
Response:
We are working on monthly scale with respect to documentary evidence which is available. It is a standard unit for which we are able to develop precipitation indices as some measure of drought intensity. We think that it is not possible to "scale" our drought frequencies according to density of records because the final index value for individual month is very often interpreted from different number of sources. For instance, even if we have daily records, all these are used for construction of the single precipitation monthly index. Of course, there are some years/months for which no interpretable information is available. We try to discuss this aspect as one of uncertainties typical for documentary evidence in Section 5.1.1. Due to great spatial variability of precipitation/droughts we prefer not to complete this documentary-based chronology by other data sources from neighbour countries (with complete or incomplete precipitation indices) or other proxy data. From this reason we did relatively detail comparison with such sources in Sections 5.2 and 5.3 which imply that complementing of our data would be only artificial attempt.

2. Given the seemingly poor links with dendrochronological evidence, I'm surprised that the authors dwell so long on that theme. Might it not be dismissed more briefly?
Response:
Of course, it could be done more briefly. Why we did it in such a way, it follows also from our previous response. Moreover, tree-rings are only a source representing annually resolved (and continuous) natural proxies which are available for our territory or close surrounding. We tried to follow general request on palaeoclimatological studies that data coming from various types of proxies should be carefully compared to show the degree of similarity between them and to identify weaknesses in various data types. In our opinion we did a careful analysis and believe that it is useful to know if there is any (statistically significant or insignificant) agreement between both types of proxies. Another interesting aspect of this comparison is the question what is an agreement between local/subregional reconstruction and that having the regional scale.

3. I'm sorry, and perhaps it's this reviewer being obtuse, but I cannot understand the final paragraph of section 5.1.1.
Response:
The criticised version:
„Visualization of the internal structure a given drought is also driven by the availability of documentary sources. There is a remarkable decline in the number of dry months from April to September, relative to the total number of dry months, from the 16th to the 18th century. Narrative accounts, which typically concentrate largely on the vegetation period, may be extended for later times by other sources that describe the weather for the whole year (e.g. weather diaries), which then come to be used in growing measure for interpretation. By the 18th

century, this is already becoming reflected in the fact that there is a relative increase of dry months disclosed for the winter half-year as well, i.e. between October and March.“
We had try to re-formulate this paragraph as follows:
“In this study, the distribution of dry months through the year is partly influenced by the availability of documentary sources. From the 16th to the 18th century, there is a considerable decline in the relative number of dry months from April to September with respect to the total number of dry months. This may be related to the fact that, in addition to standard narrative sources that concentrate largely upon the weather during the vegetation period, other descriptions of the weather, taking in the whole year (e.g. weather diaries), started to appear in growing numbers for later times. They then come to be used in greater measure for interpretation. By the 18th century, this trend is already becoming reflected in a relative increase of the number of dry months in the total disclosed between October and March and a relative decrease in those between April and September.”

4. I have some lingering anxieties, partly prompted by the precipitation map, about the spatial coherence of the evidence and the events they represent. The area covered is a large one and the geography of precipitation suggests the possibility of droughts perhaps being present in one sub-region but not another. The amalgamation of the data in a form that presumes a single climatic entity needs, I respectfully suggest, clearer justification.
Response:
There is impossible to provide any series of droughts/precipitation indices in scale smaller than the Czech Lands because of great spatial and temporal variability in the availability of documentary evidence. Working with the Czech Lands as a unit means some averaging of spatial patterns what we did for the instrumental period. We have tried to be really open and showed also a possible spatial variability as demonstrated on the example in Fig. 9. Working in smaller areal units it would mean that there would be not possible to create any documentary-based precipitation chronology for any area greater than couple of tenths km (and as it is done, for example, by Glaser for Germany or by Pfister for Switzerland). The argument of great spatial variability of precipitation in relation to concrete synoptic reasons we mention in Section 5.1.3. Moreover, we are not able to give any guarantee that such unit would be stable in the time because spatial interrelationship between them is also not stable with time. We suppose as helpful including of the new third paragraph in Section 3:
“The spatial pattern of droughts interpreted from documentary evidence is related to the Czech Lands as a whole. This is supported by the fact that individual drought episodes are captured by documents from a variety of places and regions scattered throughout the territory of the Czech Lands in the majority of cases. Moreover, in some cases particular drought events are directly reported for far larger territorial units, such as Bohemia or Moravia. Such data coverage is important for comparison with droughts in the instrumental period, in which drought indices are derived for the entire Czech territory.”

Moreover, following another request of the reviewer 2, Fig. 9 is complemented by another one showing variation coefficients of April-September precipitation totals in 1961-2010:

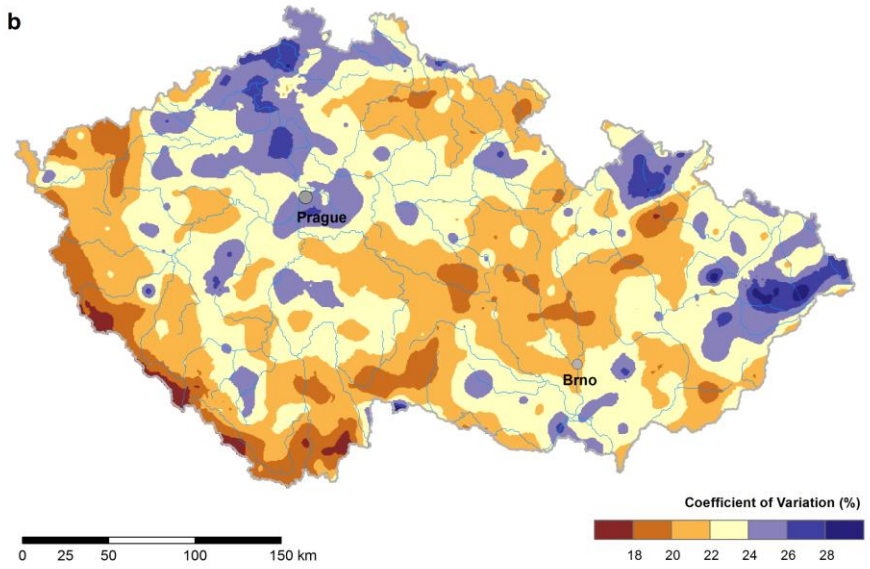

Fig. 9. b) variability of April–September precipitation totals in the Czech Republic in 1961–2010 expressed by coefficients of variation

With respect to Fig. 9b, the new paragraph in Section 5.1.3 is added:
"In order better to demonstrate spatial precipitation variability in the Czech Republic, coefficients of variation in homogenised series of April–September precipitation totals for 787 rain-gauge stations in the 1961–2010 period were calculated (Fig. 9b). These fluctuate between 16.9% (Nová Pec station) and 31.9% (Šance). The highest variability is typical of the central parts of Bohemia extending up to the north-west border with Germany, and for a part of southern Moravia stretching further to the north and north-east. While the areas of highest variability in Bohemia tend to be limited to lower positions, they appear mainly in more mountainous locations in the eastern part of the Czech Republic. The generally spotty character of the field may be attributed to the spatially variable character of convective precipitation in the summer half-year."

5. This is a more general point, and is by no means specific to this paper and is now one that causes me to commit my thoughts to more wider reflection. Over the past 20 years or so Professors Brazdil and Pfister, amongst others, have done much to place documentary studies firmly on the climatic agenda, but this discipline has now reached a stage of maturity where descriptions of past events, changing frequencies
etc. etc, whilst valuable, need to be linked more closely, in the interpretive sense, to the fund of knowledge we have on the background climate variations of the time and it would be good to see at least passing recognition identified periods of anomalous behaviour can stand as evidence to support, or indeed refute, the broader picture that is now emerging from the wider climatological community.
Response:
We agree fully with reviewer but without data, their basic analyses and uncertainty studies in long chronologies there is not possible to follow this comment. Moreover, we tried to develop the long chronology – which despite of data uncertainty and methodological constraints – may be one of steps on this way. We believe that long Czech chronology is helping to better understand

droughts and their behaviour. But existing uncertainties pressure us to be still more carefully in formulations and conclusions which the reviewer expects from us in this stage (moreover, in this paper we are not able to express uncertainty statistically, only described it qualitatively).