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Temporal changes of trees thermal sensitivity: a view from the modern measurements to paleo-data

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It is usually supposed that the radial growth of trees depends on summer temperature in a high degree. This postulate is a basis for temperature paleo-reconstructions through tree-rings width measurements. Meanwhile, loss of thermal sensitivity of trees during last decades has been discussed in different papers (see, for example, Oberhuber et al., 2008). An analysis of this phenomenon was performed on the basis of modern and paleo-data for differently located trees. It was found that the trees climatic sensitivity change is not only a modern effect, but is observed at long time-scales in the past.
The discussed trees climatic sensitivity loss may be a result of global climate changes and related CO_2 increase. On the other hand, there is not only non-linear tie between climatic parameters and plant growth, but also some impact of the geomagnetic field and space weather on tree growth is reported (Khabarova & Savin, 2011). In this view, possible effects of space weather as seen from reconstructed solar activity and isotope data are discussed.

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