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Climatic changes over the Republic of Belarus during the period of instrumental observations

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Contemporary meteorological observations over the territory of Belarus commenced in the early 19th century. It is however a common practice to begin climatological analyses of surface air temperature changes over the nation from 1881 and of precipitation from 1891 respectively, when standard thermometer and rain gauge installations and observational procedures were developed. For the Republic of Belarus, we present analyses of nationwide changes in mean monthly temperature and precipitation during these more than century-long periods that span up to summer of 2009. We focus on the past two decades when unprecedented global climatic changes have occurred and assess their regional impact on the nation climate and found a significant increase in surface air temperatures with the largest changes (up to 3.5K) in the cold season. Nationwide annual surface air temperature has increased by 1K. Geographically, strongest warming was observed in the northern and eastern parts of the nation. This warming was accompanied by a significant decrease in the near surface wind speed across the nation in all seasons (a 15 to 20 percent decrease) and a weak increase (by 6 percent) of the nationwide annual precipitation. Temperature increases in March-April resulted in the earlier snow cover retreat and earlier spring onset. This onset is occurring now by 10-15 days earlier than in the past.