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Quality control of 10-min soil temperatures data at RMI

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Soil temperatures at various depths are unique parameters useful to describe both the surface energy processes and regional environmental and climate conditions. To provide soil temperature observation in different regions across Belgium for agricultural management as well as for climate research, soil temperatures are recorded in 12 of the 20 automated weather stations operated by the Royal Meteorological Institute (RMI) of Belgium. At each station, soil temperature can be measured at up to 5 different depths (from 5 to 100 cm) in addition to the bare soil and grass temperature records. Although many methods have been developed to identify erroneous air temperatures, little attention has been paid to quality control of soil temperature data. This contribution describes the newly developed semi-automatic quality control of 10-min soil temperatures data at RMI.