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Seasonal and diurnal variations of CO_2 fluxes over a hemiboreal forest

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Forest ecosystems are a major part of the biosphere and control land surface-atmosphere interactions. They influence atmospheric composition and climate significantly being sources and sinks of trace gases and energy.
Hemiboreal forests are located in the transitional zone between boreal and temperate forest bioms. Mixed stands of both coniferous and deciduous tree species are characterized by a greater seasonal variability of forest microclimate, canopy shape and density compared to boreal forests.
A 20 m height scaffolding tower located in Järvselja (58°16'N 27°16'E) in a forest stand dominated by Norway spruce (Picea abies (L.) Karst.) with co-domination of Silver birch (Betula pendula Roth.) and Black alder (Alnus glutinosa L.) was used for the CO_2 flux measurements.
We present two years (2011-2012) of continuous eddy covariance CO_2 fluxes over a mixed hemiboreal forest at the SMEAR Estonia (Station for Measuring Forest Ecosystem-Atmosphere Relations).