Investigating the onset of the Younger Dryas by high temporal resolution of radiocarbon

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Around 12700 BP marks the onset of abrubt climate change, the Younger Dryas (YD). Near the onset of YD there is a sharp rapid increase atmospheric radiocarbon (^{14}C). Atmospheric ^{14}C is affected by the changes in solar activity, the carbon cycle and Earth`s magnetic field. There is little evidence to support a change in the Earth`s magnetic field nor changes in the carbon cycle via deep ocean circulation caused the increase in atmospheric ^{14}C. Therefore, it has been theorized that the increase in atmospheric ^{14}C is due to an increase in cosmic rays reaching earth because a weaker magnetic field from the sun. A weaker sun would aid in explaining why there was a rapid shift to colder tempertures at the start of YD. At the Laboratory of Ion beam Physics we are measuring tree-rings in high temporal resolution between 13000-12500 BP to better understand varitions in atmoshpheric ^{14}C during the YD.