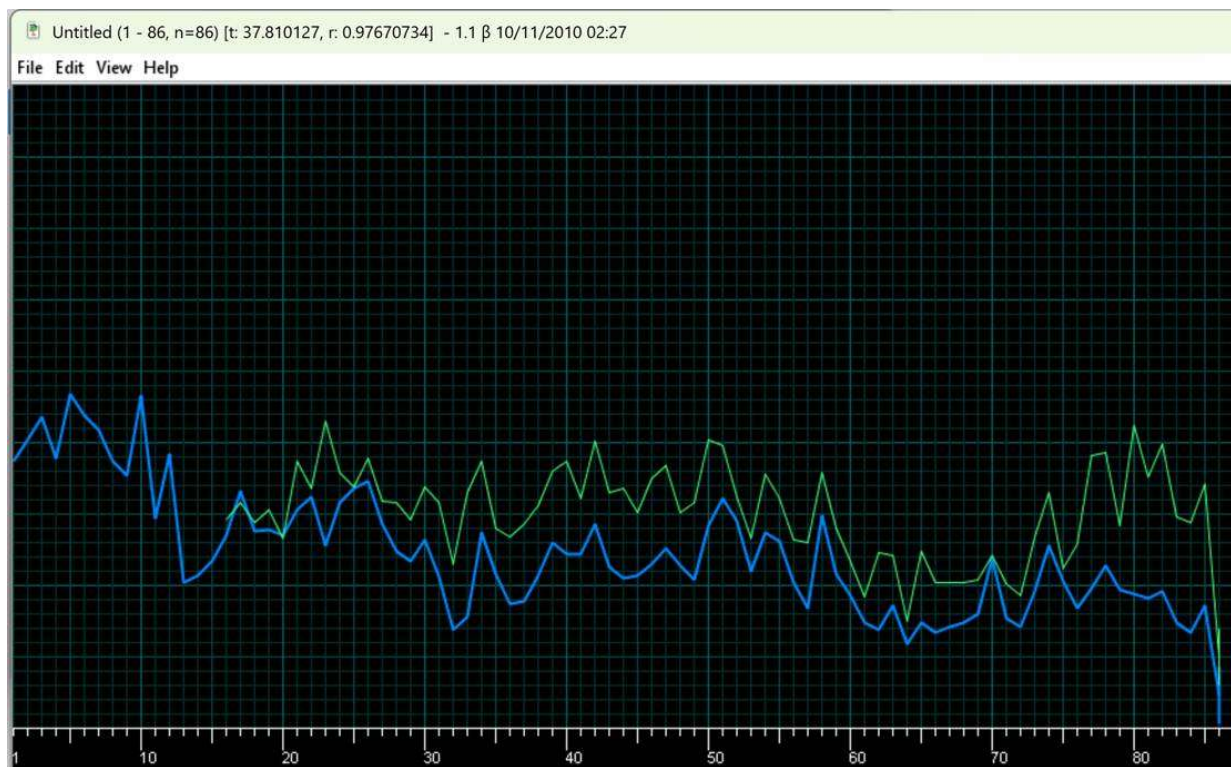


Old Stone Heap, Ithaca, Tompkins County, New York
Dendro Sampling Summary Report
Sturt Manning
December 2025

Summary. Of the 6 samples I took: 5 are pine (and likely eastern white pine), nos. 1, 3, 4, 5 and 6, and one (no. 2) is hemlock. None gave very long sequences, which of course makes dating harder. However, core 1 and core 5 crossdate very nicely to give a combined sequence of 86 rings/years. This does give a reasonable crossdate versus all three of the white pine chronologies I have for the NY region and (predictably) the best match is against our central NY eastern white pine chronology.



Sample 1 (blue) v 5 (green) – very similar and closely associated trees.

Samples 1 & 5 together give a reasonable fit for last ring and what is likely wane edge on sample 5 at 1820: $r = 0.45$ $t = 4.6$ (W. NY), $r = 0.43$ $t = 4.4$ (E. NY) and $r = 0.49$ and $t = 5.1$ (Central NY). Looking at the crossdate in terms of the 50 yr segments involved lagged 25 years within periods 1725-1774, 1750-1799 and 1775-1824 we get correlations between samples 1&5 and the Central NY white pine of 0.56, 0.46 and 0.39. So all OK and there is no better alternative,

A pearson correlation $>ca.0.4$ is often regarded as a likely crossdate in dendrochronology and a Baillie-Pilcher t test value >3.5 is thought to be possible/plausible and values towards and >5 are usually crossdates, and, when the overlap available is not long (like >100 yrs), values as we have are about what one might hope for.

None of the other samples give a convincing crossdate. Clearly we could look to improve a little by replicating samples and looking more carefully. But the sample 1&5 data offer the best picture

currently and give what should be a reliable (and reasonable) date for when the tree or trees used for these two joists were felled - since there is likely waney edge on sample 5. Because we have the 1820 ring and waney edge this would suggest felling likely after growth ended that year, so after summer 1820, thus autumn/fall of 1820 and therefore likely use (building) the next year, 1821 (or of course one or more years after if the lumber was stock-piled a little but this seems unlikely in the circumstances of your building).