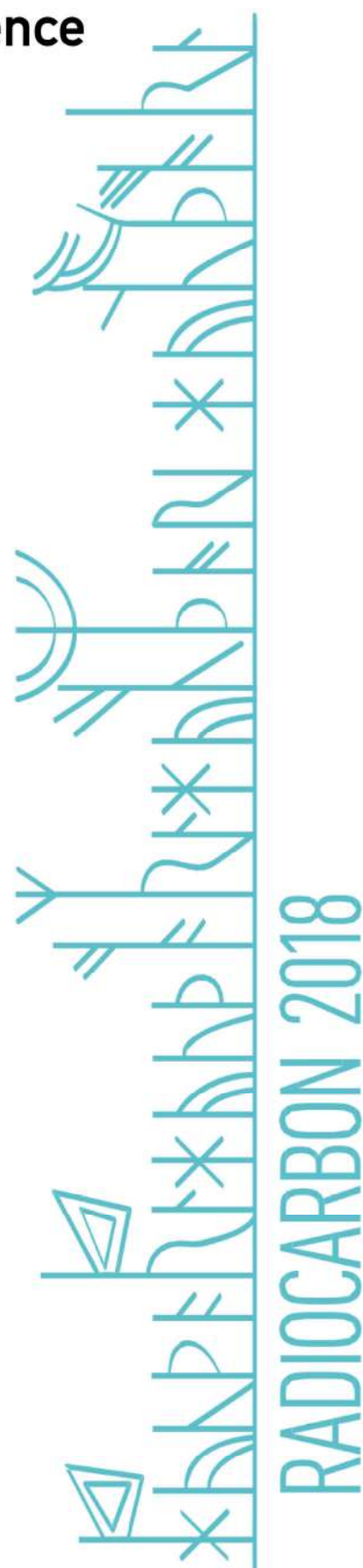


23rd International Radiocarbon Conference
June 17-22 2018
Trondheim

Book of Abstracts



5A-11 Radiocarbon measurements on a charred olive tree from Therasia, Greece.

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We report new radiocarbon dates on a charred olive shrub recovered from a clifftop archaeological site on the Island of Therasia, Greece. The site was abandoned before the Late Minoan eruption of the Thera volcano, at the end of the Middle Bronze Age. The olive sprouted on the surface of the abandonment layer of the site, by an ellipsoid structure, and was found below the layer of pumice of the Minoan eruption which buried the shrub and carbonized the wood. Three roughly cylindrical, small diameter twigs were removed from the trunk. They were selected based upon the presence of bark, and visible, semi-concentric rings which cannot be interpreted as annual growth. Pith, outer wood, and bark sections were dissected and radiocarbon dated. The mean radiocarbon content of the outer wood from the three twigs is statistically identical to radiocarbon dates from the outer '13-ring' section of the Santorini olive branch reported by Friedrich et al. 2006. It is also identical to radiocarbon measurements both on a subset of Akrotiri seeds and the outer three rings of a Tamarisk buried at Akrotiri under Thera ash, and reported by Manning et al. 2006. The Therasia site completes a geographic triangle surrounding the Santorini caldera with Akrotiri and the Santorini olive tree comprising the other two points. The congruence of the new Arizona measurements with past measurements from multiple laboratories has particular relevance in light of new studies by Pearson et al. (in review). These studies demonstrate that the radiocarbon content of dendrochronologically dated, annually resolved tree rings from American Bristlecone Pine and Irish Oak spanning the 17th to mid-15th Centuries BC do not sit on the IntCal calibration curve. The determination of a true calendar date range for the Therasia olive twigs is therefore, for the moment, controversial. Calibration using this new annually resolved calibration dataset pushes the Therasia olive wood dates into the early 16th Century BC, and has similar implications for dates from other sites around the caldera, and hence the timing of the Late Minoan eruption of the Thera volcano.