



Fakultät für Physik

Isotopenforschung und Kernphysik

### EINLADUNG

#### zum

VERA-SEMINAR

Von

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### Towards a Robust and Near-Absolute Anatolian Middle Bronze Age Tree-Ring Record: Resolving Mesopotamian Chronology and the Dating of the Assyrian Colony Period in Anatolia through the Integration of Dendrochronology and Radiocarbon Dating

Part 1: The problem. Previously published work has claimed the existence of a *Juniperus* sp. based treering record relevant to archaeological dating from central Anatolia covering the period from at least the later 3<sup>rd</sup> millennium BC through to the earlier 1<sup>st</sup> millennium BC. Unfortunately, this claim is not correct for the period before the mid-second millennium BC. Critical re-examination of the tree-ring evidence and the linkages claimed between the individual tree-ring chronologies built from timbers at each of several archaeological sites indicates that some key assumptions or best guesses were made in previous work and that in each key case these assumptions or best guesses are not correct. This talk explores what went wrong, and why.

Part 2: The solution. Despite (and independent of) these problems, a key robust Middle Bronze Age Anatolian dendrochronology can be demonstrated, and this chronology can be near-absolutely placed in calendar time through the integration of tree-ring and radiocarbon evidence. The Middle Bronze Age tree-ring record can be linked with the Mesopotamian text-historical world via records found on clay tablets at the sites of Kültepe and Acemhöyük in Turkey – and resulting in closely defined dates for ~500 years of Ancient Near Eastern history from the earlier second millennium BC, including such pivotal figures as Hammurabi of Babylon, Šamši-Adad I (who conquered Aššur) and Zimrilim of Mari. This historical period has otherwise floated in calendar time subject to rival chronological schemes (High, Middle, Low, New, etc.) as much as 150+ years apart just in recent scholarship. The work presented provides a robust resolution to a century of uncertainty in Mesopotamian chronology, and offers a secure basis for the construction of a coherent timeframe and history across the Near East and East Mediterranean in the earlier second millennium BC.

## Donnerstag, 28. April 2016, 16:30 Uhr

1090 Wien, Währinger Str. 17, "Kavalierstrakt", 1. Stock, Victor-Franz-Hess-Hörsaal