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^{36}Cl Dating of Yenicekale Building Complex in Hittite Capital of Hattusha (Turkey)

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Application of in-situ produced Terrestrial Cosmogenic Nuclides (TCNs) shows a high potential towards the solving of archaeological problems as TCNs are applicable to a broader time period with considerable precision beyond the limit of the radiocarbon method ($\sim$ 40 kyr) and are basically applicable to all lithologies. In addition, their wide applicability to geological problems and the experiences gained over the past decades with this technique are also encouraging for application to archaeology. TCNs have been already tested in a number of archaeological problems during the last decade.

The ruins of Hattusha, which was the capital city of the Hittite Empire from about 1650/1600 to 1200 BC, lies in the northern central part of the Anatolian peninsula. This archaeological site, monument no. 377 in the UNESCO's World Heritage List, has been excavated for more than hundred years since it was first discovered by Charles Texier on July 28th 1834. The Yenicekale building complex is located in the southern part of the Hattusha ruins where the summit of the outcropping limestone block within a mélange was flattened. Using the quarried boulders (ca. 2-3 tons each) coming from both the modified portions of the bedrock outcrop and from distant quarries, a circuit wall was built to form an artificial platform (25x28m) on which a small cistern and the remnants of foundations for walls are preserved. The time of construc-

tion and collapse are still unknown due to the lack of absolute dates, even though the complex must have been built during the Hittite Empire (i.e. from about 1650/1600 to 1200 BC).

The primary focus of this study is on the surface exposure dating of the Yenicekale building complex with 36Cl. Such exposure dates would improve the understanding of the original purpose of this complex, about which little has been known until now, and even the comprehension of its collapse. With this aim, two samples from the limestone blocks forming the circuit wall and one sample from the quarried bedrock on the top of platform were collected and prepared for AMS analysis. The first results of this test study will be presented.