

**ASTRONOMICAL CONCERNS AND THEIR SOLVING IN  
CONNECTION WITH THE ARCHEO-ASTRONOMICAL LOCALITY  
LEPENSKI VIR**

**Vladimir Došović, Bojan Tajhmeister and Kristina Pantelić**

*Society of Astronomers of Serbia, Volgina 7, 11000 Belgrade, Serbia*  
E-mail: vladimirdjosowic@gmail.com

Archaeological site of Lepenski Vir is located on the bank of the river Danube in eastern Serbia. Lepenski Vir is a Mesolithic site (Srejović, 1969) which has been dated from 9500 BC to 5500 BC (Borić, Dimitrijević, 2007). The aim of this paper is testing the hypothesis in the paper of Ljubinka Babović where she assumes that the movement of the Sun has influenced the construction of houses on Lepenski Vir (Babovic, 2006). Description of the work and the first references were given by profesor Stevo Segan on the subject of "Processing of Astronomical Observations".

The sunrise was observed from the site, which appeared above the hills Treskavica across the river in Romania (Bajić, Pavlović, 2015). Babović has given the assumption that the positions of the houses are in correlation with sunrise. Also, the range of angles of inclination of the houses to the East corresponds to twice time bigger slope of the ecliptic relative to the equator, respectively that corresponds to the range of declination of the Sun.

Lepenski Vir site has been put into archaeological context. Movement and ephemeris of planets, the Sun and the Moon have been numerically modelled in C++ programming language (Morrison, Stephenson, 2004) The reconstruction of the sky during this period has been modelled. Place of the sunrise has been photographed *in situ*.

**References**

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