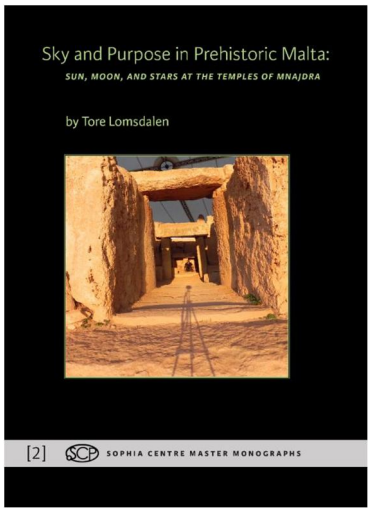


Book Review

Sky and Purpose in Prehistoric Malta: Sun, Moon, and Stars at the Temples of Mnajdra.

Sophia Centre Master Monographs,
University of Wales Trinity Saint David, Wales.

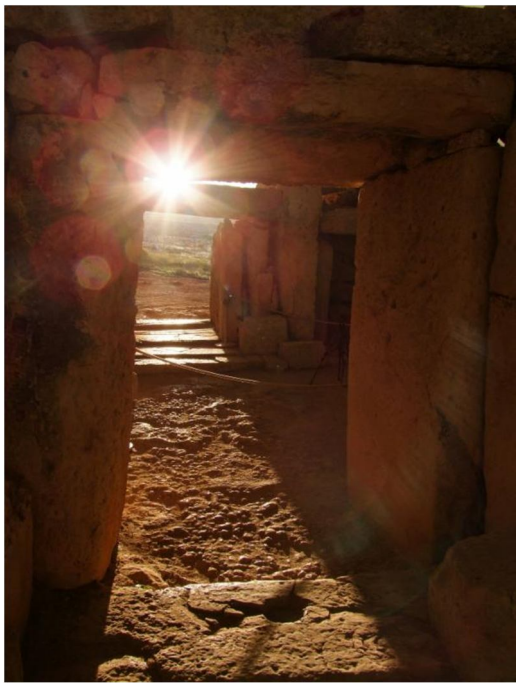
Tore Lomsdalen (2014)

This interesting book re-kindles a debate that started in 1980 with the publication of a report on the possible astronomical significance of the orientations of the prehistoric temples of Malta. That report showed that the orientations had a distinctive signature with a clear preference for directions between southeast and southwest, with one remarkable exception which triggered the debate. The Mnajdra South temple, which is one of a cluster of three temples at Mnajdra faces East and its central axis is undoubtedly directed towards sunrise at the equinox. This unique alignment immediately raised a question on whether it was intentional or merely a chance occurrence. Some effort has already been made to answer this question but Tore Lomsdalen's work is the latest, most focused and detailed attempt to resolve this issue and to go beyond it.

Before delving directly into the question of intentionality, the author introduces readers to the rich Maltese prehistory, which deserves to be better known. He starts with an overview of the first phase of human occupation when the first settlements appeared on the island around 5000 BC and some speculative ideas about the origins of the first settlers. This is followed by a brief review of the second phase (4100 - 2500 BC), known as the Temple Period, during which the prehistoric communities in various parts of the island built monumental megalithic structures of impressive dimensions. Naturally, the main focus is on the structure of the Mnajdra East, Middle and South temples. This is beautifully illustrated by a means of series of photographs, including some taken in 1868 and others taken by the author. He then turns to a review of ideas about the location of the temple sites in the landscape and how an analysis of their relationship to land and sea shows that the sites were chosen carefully. Previous work on the possible connection with celestial objects receives more attention with a mention of weakly supported conjectures, which were proposed in the 19th and early 20th centuries, and a number of more recent systematic investigations of orientations.

Lomsdalen then proceeds to explain his comprehensive research methodology which included measurements of the orientations of several temples, observations and photography of sunrise at the spring and autumn equinoxes and at the solstices at Mnajdra, as well as the rise of Jupiter and the Moon at specific declinations to confirm his results and observations. However, little attention is given to stars and the possible connection with the tally stones in the East temple. Along with the orientations of the central axes of the temples, the author includes orientations of cross-jamb illumination at

sunrise of what are considered significant areas of the temples particularly at the solstices and the equinox but also on cross-quarter days. Cross-jamb illumination refers to the lighting by the sun's rays entering diagonally through the doorway. A discussion of why this illumination was considered would have been appropriate since it is not normally included in archaeoastronomical research. Besides orientations, observations were made of oracle holes in the temple walls and post holes on the horizon to assess their possible astronomical significance.



The results confirm the known alignments with sunrise at the Mnajdra South temple and add new alignments at the Mnajdra Middle temple. With an array of supporting evidence at hand, Lomsdalen concludes that the South and the Middle temples are intentionally oriented towards sunrise on significant days of the year. The investigation is then taken a step further by suggesting how archaeoastronomy can assist in determining the construction sequence of the temple structure. In fact, from possible alignments with the sun and particular construction features in the various chambers and the entrance, Lomsdalen hypothesises that the South and Middle temples were built in five phases. This original hypothesis has potential for opening a new area of study which can be tested not only on other Maltese temples but also on prehistoric structures in other countries. In conclusion, this book is a valuable addition to the study of archaeoastronomy in Malta and to archaeoastronomy in general.

Tore Lomsdalen, *Sky and Purpose in Prehistoric Malta: Sun, Moon, and Stars at the Temples of Mnajdra*, Sophia Centre Press (Sophia Centre Master Monographs no 2), 2014. (Link here).

Reviewed by Frank Ventura, University of Malta
Photograph: The Spring equinox sunrise seen from inside the Mnajdra South Temple. Tore Lomsdalen.