

Review of: "Can Dimensional Anisotropy Satisfy Mach's Principle? A Topological Approach to Variable Dimensions of Space using the Borsuk-Ulam Theorem"

Mustafa Salti¹

¹ Mersin University

Potential competing interests: No potential competing interests to declare.

The topic is quite interesting and the presentation of the study is clear enough. In the present study, the author turned her/his attention mainly on discussing whether dimensional isotropy follows Mach's Principle. On this goal, they introduced a topological approach to the variable space dimensions with the help of Borsuk-Ulam Theorem. After proposing a compact wave function isolated by an information-blocking horizon to form a spatial field, it is seen that she/he obtained an energy requirement for the corresponding interaction. The aforementioned requirement stabilizes the spatial curvature and obeys conservation principles. The field curvature is a smooth surface while the isolated quantum waves form a discrete energy spectrum. Thus, the author concluded that the Page and Wootters mechanism originates in the microstructure of space and gives rise to a quaternion cosmic structure. On the other hand, i had some criticisms about the writing format of the article. In some places in the text, words and mathematical expressions were combined, and in some equations there were shifts. It seems all of these typographical errors have been corrected in the version v3. To summarize my general thoughts on this fluently written work, I can say that I have read it with interest and it is a work that can be published.