Review of: "Horizon and curvature"

Yuhang Liu[1]

1 Peking University

Potential competing interests: No potential competing interests to declare.

I'm a differential geometer and the topic of this paper sounds interesting to me.

 However from a mathematician's perspective, some concepts in the paper still lack explanation. For example, In Theorem 3.3, "*Let Γ be* C2 *curve delimiting a strictly convex compact domain with positive curvature everywhere.*" *Is Γ a planar curve? Is the domain a subset of the plane or the 2-sphere? It seems that the domain is contained in 2-sphere, since it has positive curvature.*

*Same question in Corollary 3.4. "If for a*C2 *surface* S *delimiting a strictly convex domain with positive curvature everywhere", Where is the surface S, and what is the convex domain? Is the convex domain 2-dimensional or 3-dimensional? How could a surface bound a 2-dimensional domain? I'm very confused at the spatial relations of those objects. Maybe a picture could help explain.*