I kindly thank the Referee for the very clear review of my intentions and goals in writing this paper, as outlined in the first paragraph of the Referee Report.

According to the suggestions of the Referee in the third paragraph, I have added the following paragraph at the end of Section 2:

"As the aim is the provision of a very general analysis that is unconstrained by the technicalities of specific models, no concrete theory is discussed.
Nevertheless, it might be not too far-fetched to just briefly mention some potential connections between interdimensionality
and various paradigms in modern particle physics and cosmology.
Some of these involve the description of a volume of space as conceptualized by
holographic principles, such as the AdS/CFT correspondence related to D-branes in string theory,
or the ekpyrotic models relying on string theory, branes and extra ``hidden" dimensions.
Other scenarios in the context of the theory of general relativity involve traversable wormholes
(aka Einstein-Rosen bridges) linking disparate points in spacetime."

I have added the following paragraph at the end of Section 4.1:

"There are similarities between the consistency of observable phenomena with respect to the higher-dimensional bulk space
and the consistent histories approach to Many Worlds models~\cite{Carr-2007}.
Both involve multiple ``merging" paths.

@book{Carr-2007,
  doi = {10.1017/cbo9781107050990},
  url = {https://doi.org/10.1017/cbo9781107050990},
  year = {2007},
  publisher = {Cambridge University Press},
  editor = {Bernard Carr},
  title = {Universe or Multiverse?}
}
"

I have also added brief explanations of the followng terms:

(i) rule inference problem, halting problem

"Rule inference is the process of hypothesizing a general rule or ``law" from examples or ``phenomena"~\cite{go-67,angluin:83}.
The halting problem is the task to determine,
given an arbitrary computer program and an input,
whether the program will eventually halt or continue to run forever. It is generally provable unsolvable.
As the former rule inference problem can be reduced to the latter halting problem, it is generally provable unsolvable."

(ii) dimensional shadowing:

"Interdimensionality, or, by another naming, dimensional shadowing~\cite{sv4}---the ``emulation" of a lowerdimensional configuration space
by a fractal subset of a higherdimensional manifold---..."

(iii) Menger sponge:

"... Cantor set or Menger sponge-like structure---fractals obtained by self-similar elimination of proper parts ..."

(iv) umklapp property:

"... is based on its ``umklapp'' property---the sudden change from measure zero to infinity if the dimension parameter is taken higher or lower than a unique value--- ..."

(v) curved has been changed to " ``bend'' or ``curved'' "

(vi) supercavitation:

"... supercavitation---the formation of vapour bubbles in a liquid caused by flow around an object, allowing minimal friction movement inside liquids at nearly sound speeds."

(vii) The equations have been numbered.

(viii) definition of Hausdorff dimension d: I have added a sentence

"That is, the Hausdorff dimension d is the unique dimensional parameter at which the measure μ_δ as a function of the dimensional parameter value δ smaller or larger than d is infinite or vanishes, respectively."