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Dedicated to the memory of R. Kopperman

ABSTRACT. In [14] the authors introduced the concept of retractional skeleton (r -skeleton) and they characterized the Valdivia compact spaces with this notion. In [2], the authors introduced the notion of (full) c -skeleton which is a pair consisting of a family of closed subsets and an ω -monotone map which satisfy certain properties; and they proved that a compact space is a Corson compact space iff it admits a full c -skeleton. The main purpose of this article is to prove that a compact space admits a retractional skeleton iff it admits a c -skeleton. Moreover, we establish a condition on a c -skeleton which allows a compact space be a Valdivia compact space. Additionally, we provide an answer to Question 5.8 of the paper [2] by using an argument different from the one used in [11] to respond to the same question.

1. INTRODUCTION

The notion of q -skeleton was introduced in [9] to study connection of the Corson compact spaces and their spaces of continuous functions, as one of the main results they proved that a compact space X is Corson iff $C_p(X)$ admits a full q -skeleton (the reader can find more applications of q -skeletons in [9] and [2]). Later, in the article [2], it was introduced the concept of c -skeleton, this notion is related with the q -skeletons as follows: if a space X has a (full) c -skeleton, then $C_p(X)$ has a (full) q -skeleton; and, if a space X has a (full) q -skeleton, then $C_p(X)$ has a (full) c -skeleton.

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