Compact ordered spaces and semi-left-exactness

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We shall characterize a full subcategory of Nachbin's compact ordered spaces whose reflection into Priestley spaces is semi-left-exact (admissible, in the sense of categorical Galois theory). In order to do so we need the simplification given in [4] to the pullback preservation conditions in the definition of a semi-left-exact reflection (see [2]). Then we generalize the proofs in [1, 5.6, 5.7]; in particular, we work with an appropriate notion of connected component, and present a non-symmetrical generalization of entourage. Notice that the next step will be to try to extend the classical monotone-light factorization in compact Hausdorff spaces (with trivial orders) to this category of ordered spaces.

REFERENCES

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