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**Local presentability of certain comma categories.** (English) Zbl 07177291  
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It is well known [*J. Adámek and J. Rosický, Locally presentable and accessible categories.* Cambridge: Cambridge University Press (1994; [Zbl 0795.18007](#))], Proposition 2.43] that if  $A$  and  $C$  are  $\lambda$ -presentable categories and  $F : A \rightarrow C$  is a  $\lambda$ -accessible functor, then  $\text{id}_C \downarrow F$  is also locally  $\lambda$ -presentable. This paper establishes that

Proposition. If  $A$  and  $C$  are  $\lambda$ -presentable categories and  $F : A \rightarrow C$  is a  $\lambda$ -accessible functor, then  $F \downarrow \text{id}_C$  is also locally  $\lambda$ -presentable.

Reviewer: [Hirokazu Nishimura \(Tsukuba\)](#)

**MSC:**

18 Category theory; homological algebra

**Keywords:**

[locally presentable category](#); [accessible category](#); [accessible functor](#); [comma category](#)

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**References:**

- [1] Adámek, J.; Rosický, J., *Locally Presentable and Accessible Categories* (1994), Cambridge: Cambridge University Press, Cambridge · [Zbl 0795.18007](#)
- [2] Kelly, Gm, *A unified treatment of transfinite constructions for free algebras, free monoids, colimits, associated sheaves, and so on*, *Bull. Aust. Math. Soc.*, 22, 1-83 (1980) · [Zbl 0437.18004](#)

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