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Some pathological examples of precipitous ideals. (English) Zbl 1140.03032
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Summary: We construct a model with an indecisive precipitous ideal and a model with a precipitous ideal with a non-precipitous normal ideal below it. Such kind of examples were previously given by *M. Foreman* ["Smoke and mirrors: combinatorial properties of small cardinals equiconsistent with huge cardinals" (to appear)] and *R. Laver* [*Isr. J. Math.* 48, 97–108 (1984; [Zbl 0595.03044](#))], respectively. The present examples differ in two ways: first, they use only a measurable cardinal and, second, the ideals are over a cardinal. Also, a precipitous ideal without a normal ideal below it is constructed. It is shown in addition that if there is a precipitous ideal over a cardinal κ such that

- after the forcing with its positive sets the cardinality of κ remains above \aleph_1
- there is no normal precipitous ideal

then there is 0^\dagger .

MSC:

[03E35](#) Consistency and independence results
[03E05](#) Other combinatorial set theory
[03E55](#) Large cardinals

Cited in **3** Documents

Keywords:

[precipitous ideal](#); [measurable cardinal](#); [normal ideal](#)

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References:

- [1] DOI: 10.1007/BF02761155 · [Zbl 0595.03044](#) · doi:10.1007/BF02761155
- [2] Handbook of set theory
- [3] On generic elementary embeddings 54 pp 700– (1989)

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