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On some classes of spaces with the D-property

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Abstract: We shall prove that under CH every regular meta-Lindelöf P-space which is locally D has the D-property. In addition, we shall prove that a regular submeta-Lindelöf P-space is D if it is locally D and has locally extent at most ω_1. Moreover, these results can be extended from the class of locally D-spaces to the wider class of $\mathbb{D}$-scattered spaces. Also, we shall give a direct proof (without using topological games) of the result shown by Peng [*On spaces which are D, linearly D and transitively D*, Topology Appl. **157** (2010), 378–384] which states that every weak $\overline{\theta}$-refinable $\mathbb{D}$-scattered space is D.

Keywords: property D; meta-Lindelöf; weak $\overline{\theta}$-refinable; P-space; scattered space
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