Mathematics > General Topology

For Hausdorff spaces, H-closed = D-pseudocompact for all ultrafilters D

Paolo Lipparini

(Submitted on 7 Jul 2011 (v1), last revised 22 Oct 2011 (this version, v2))

We prove that, for an arbitrary topological space X, the following two conditions are equivalent: (a) Every open cover of X has a finite subset with dense union (b) X is D-pseudocompact, for every ultrafilter D. Locally, our result asserts that if X is weakly initially λ-compact, and $2^ \mu \leq \lambda $, then X is D-\brfrt pseudocompact, for every ultrafilter D over any set of cardinality $ \leq \mu$. As a consequence, if $2^ \mu \leq \lambda $, then the product of any family of weakly initially λ-compact spaces is weakly initially μ-compact.

Comments:	v. 2: added some results, some remarks, various minor improvements. 7 pages. v. 1: 4 pages
Subjects:	**General Topology (math.GN)**
MSC classes:	54D20, 54B10, 54A20
Cite as:	**arXiv:1107.1435 [math.GN]**
	(or **arXiv:1107.1435v2 [math.GN]** for this version)

Submission history

From: Paolo Lipparini [view email]
[v1] Thu, 7 Jul 2011 15:57:18 GMT (5kb)
[v2] Sat, 22 Oct 2011 22:01:33 GMT (7kb)

Which authors of this paper are endorsers?