

# ON $P$ -SPACES

ANDRZEJ KUCHARSKI

(JOINT WORK WITH WOJCIECH BIELAS AND SZYMON PLEWIK)

We discuss the connection between inverse limits of height  $\omega_1$  of discrete topological spaces and  $P$ -spaces. Results are concentrated on dimensional types of some  $P$ -spaces. The name “ $P$ -space” was used by L. Gillman and M. Henriksen [2]. If a space  $X$  is completely regular and every countable intersection of open sets of  $X$  is open, then  $X$  is called  $P$ -space. If  $X$  is topologically embedded in  $Y$ , then the dimensional type of  $X$  is less or equal to the dimensional type of  $Y$  (see [3] or [4]).

## REFERENCES

- [1] W. Bielas, A. Kucharski and Sz. Plewik, *Dimensional types and  $P$ -spaces*, arXiv: 2107.09386
- [2] L. Gillman and M. Henriksen, *Concerning rings of continuous functions*, Trans. Amer. Math. Soc. 77 (1954), 340–362.
- [3] K. Kuratowski, *Topology*, Vol. I. Academic Press, New York-London; PWN, Warsaw (1966).
- [4] W. Sierpiński, *General topology*, Mathematical Expositions, No. 7, University of Toronto Press, Toronto, 1952.

UNIVERSITY OF SILESIA IN KATOWICE, BANKOWA 14, 40-007 KATOWICE  
*Email address:* andrzej.kucharski@us.edu.pl