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P R O B L È M E S

P 802, R 1. The following solution has been given by Dr. Z. Lipecki.

The answer is negative if $|X| = \aleph_0$. Indeed, let $\mathscr{A} = \{A_j: j \in J\}$ be an uncountable family of pairwise almost disjoint infinite subsets of X (i.e., $|A_{j_1} \cap A_{j_2}| < \aleph_0$ whenever $j_1, j_2 \in J$ and $j_1 \neq j_2$) (¹). Then any ultrafilter $\mathscr{U} \supset \mathscr{L}_F$ on X contains at most one element of $\mathscr{A}$. Hence, if $\mathscr{U}_i \supset \mathscr{L}_F$ is an ultrafilter for $i = 1, 2, \ldots$, then there exists a $j_0 \in J$ with $A_{j_0} \notin \bigcup\{\mathscr{U}_i: i = 1, 2, \ldots\}$, so that

$$X \setminus A_{j_0} \in \bigcap \{\mathscr{U}_i: i = 1, 2, \ldots\}.$$

The answer is positive if $|X| > \aleph_0$. Indeed, let $\mathscr{I}$ be the family of all countable infinite subsets of X. For any $A \in \mathscr{I}$ choose an ultrafilter $\mathscr{U}_A$ such that $\mathscr{L}_F \cup \{A\} \subset \mathscr{U}_A$. Then

$$\mathscr{L}_F = \bigcap \{\mathscr{U}_A: A \in \mathscr{I}\}.$$

XXV.2, p.326.

(¹) W. Sierpiński, *Sur une décomposition d'ensembles*, Monatshefte für Mathematik und Physik 35 (1928), p. 239-242.

P 860 et P 861, R 1. Dr. B. J. Gardner has informed us (²) that the answer to both problems is positive. Namely, it follows from the equalities $LT = LT_r = LT_1 = B$ (B is the Baer lower radical class) which, in turn, can be easily deduced from some results of J. Levitzki (³) as well as from a more detailed results of B. J. Gardner (⁴).

XXVIII.2, p. 329.

(²) A letter of May 13, 1974.

(³) J. Levitzki, *Contributions to the theory of nilrings*, Riveon Lematematika 7 (1953), p. 50-70 [Hebrew, with English summary].

(⁴) B. J. Gardner, *Some aspects of T-nilpotence*, Pacific Journal of Mathematics (to appear).

RODNEY NILLSEN (SWANSEA)

P 938 et **P 939.** Formulés dans la communication *Discrete orbits in* $\beta N - N$.

Ce fascicule, p. 81.

S. HARTMAN (WROCŁAW)

P 940. Formulé dans la communication *A remark on Fourier-Stieltjes transform.*

Ce fascicule, p. 115.

S. HARTMAN (WROCŁAW)

P 941 - P 943. Formulés dans la communication *Non-closed thin sets in harmonic analysis.*

Ce fascicule, p. 119, 120 et 121.

P 941 et **P 942, R 1.** Y. Meyer proved [5] that the converse of Theorem 1 on p. 118 does not hold. He also gave an example of a set E with uncountable closure and such that $A_0 = C_0$, $A(\bar{E}) \neq C(\bar{E})$.

[5] A letter of April 10, 1974.

LUISA PEDEMONTE (GENOVA)

P 944 - P 946. Formulés dans la communication *Sets of uniform convergence.*

Ce fascicule, p. 131.