Hanner, and Karhunen had shown that, (in Cramèr's terminology) if ξ is a (scalar) stationary process which is purely nondeterministic then it has multiplicity $M = 1$ and spectral type $([m])$, where m is Lebesgue measure. This contrasts with the results for nonstationary processes where, even in the purely nondeterministic case any value of M can occur.

In the book under review Rozanov surveys the indicated problem area, including the situation where ξ_t may be vector space valued. Rozanov himself has made many contributions toward the solutions of these problems. It seems remarkable that he manages to give complete proofs and numerous examples in this book of 133 short pages. The translation from the Russian, edited by A. V. Balakrishnan, reads very well. The book should be welcome by both novice and experts in the field.

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STEVEN OREY

BULLETIN (New Series) OF THE
AMERICAN MATHEMATICAL SOCIETY
Volume 1, Number 3, May 1979

0002-9904/79/0000-0209/$02.00

Equations of mixed type, by M. M. Smirnov, Transl. Math. Monographs, Vol. 51, American Mathematical Society, Providence, R. I., 1978, iii + 232 pp., $27.20.

Just what is an equation of mixed type? Equation here means partial differential equation, and if some of these are of mixed type, there must be others not of mixed type. What are they? To answer these questions we must know the labels which are attached to various classes of partial differential equations. As one would expect, the labeling process has evolved over the years in a disorderly way; by now however the terminology has stabilized for many (but far from all) classes of equations. As is the case for the problem of taxonomy in the biological sciences, the subdivision of partial differential equations into clearly defined classes has not been systematic. New terms continue to develop as the need arises. For example, the term strongly elliptic was invented to identify a special subclass of the class of elliptic equations. Classes overlap: hypoelliptic equations contain some elliptic equations and some which are not elliptic; both the class of linear equations and the class of