

**ESSENTIAL AND DISCRETE SPECTRA OF
PARTIALLY INTEGRAL OPERATORS***Yu. Kh. Eshkabilov*

Let $\Omega_1, \Omega_2 \subset \mathbb{R}^n$ be compact sets. In the Hilbert space $L_2(\Omega_1 \times \Omega_2)$, we study the spectral properties of selfadjoint partially integral operators T_1 , T_2 , and $T_1 + T_2$, with

$$(T_1 f)(x, y) = \int_{\Omega_1} k_1(x, s, y) f(s, y) d\mu(s),$$
$$(T_2 f)(x, y) = \int_{\Omega_2} k_2(x, t, y) f(x, t) d\mu(t),$$

whose kernels depend on three variables. We prove a theorem describing properties of the essential and discrete spectra of the partially integral operator $T_1 + T_2$.

Key words and phrases: compact integral operator, partially integral operator, Fredholm determinant and minor, spectrum, essential and discrete spectra of selfadjoint operators.

Eshkabilov Yusup Khalbaevich
National University of Uzbekistan,
Tashkent, 100174 Uzbekistan.
E-mail: yusup62@rambler.ru

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