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ABSTRACT

A nonlocal multipoint by time problem for an evolution equation with a pseudodifferential operator is studied. This operator is treated as an infinite order differentiation operator in generalized spaces of SS type. We consider the case when the initial condition of the problem is an element of an ultradistributions type space and the nonlocal condition contains pseudodifferential operators. The solvability of such problem is established, the properties of the fundamental solution are investigated, the analytical representation of the solution is found.