

INVESTIGATION OF CONTROLLABILITY OF LINEAR SYSTEMS WITH SPECIAL TYPE CONTROL AFFECTS

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The Work is dedicated to investigation of controllability of linear systems $\dot{x} = Ax + B(t)u$, where $A = const, B(t) = B_1 \cos \omega t + B_2 \sin \omega t, t \in [t_0, T]$.

The control affects have the mentioned type of structure for problems on optimal flight conditions of flying vehicle with different types of power plant (for example, $\cos \omega t$ and $\sin \omega t$ can represent the angle between the vectors of traction and velocity).

The use of the common type controllability criteria has allowed achieving set of necessary and sufficient condition of controllability for posed problem, formulated by means of appropriate theorems.