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Every respectable state which obtains the space branches of science and technology must have the space launching site. But Ukraine has not yet got such constructions. Naturally it is necessary to have such space launching site for being independent in cosmic exploration. This scientific project is proposed and initiated to solve the practically important problem of absence of the space launching site in our country.

**The potential benefits** of such proposition are the ways of reduction in creation of the space launching sites. For our country the main benefits are the presence of the launching site for the first place and the independence and freedom in the space research program.

**The goal of this research project** is to elaborate air launching site for launching rockets directly from the board of airplane.

**The propoundation** of this research work is to use the launch vehicle "Cyclone -4" and the airplane An-225.

**The scientific actuality** of this work is to propose the conception of the launch vehicle start from the board of airplane, to use an oval-looking wing for the rocket, to develop the mathematic model of the rocket flight. The corresponding mathematical model of the rocket launch was worked out and the set of necessary calculations was realized.

**The main task** of this creative work is the development of the strategy of the space launching from the board of airplane; its optimization and improvement on the base of elaborating the mathematical model of airplane-rocket system mutual and separate dynamics. It describes the flight of the launch vehicle with taking up the altitude and changes of the trajectory on the first stage after departing of the airplane on the base of solutions of the corresponding system of ordinary differential equations together with correctly and adequately formulated initial conditions.

For realization of the project the complex of stages has been proposed. It means, first of all, in fulfillment of the airplane modification in the way of establishing on it the system of ruling of the launch vehicle, fiction unit and the system of the thermo defense, flow rounded surfaces. The certain modification of the launch vehicle is considered establishing on it of the bearing surfaces and the system of its shooting.

**The supposed results** of experiments and investigations of the system: "airplane-rocket", are to use the oval-looking wing in rocket, the development of the strategy of the mobilitive space site based on the airplane (An-225 "Mriya") and the launch vehicle ( Cyclone-4 ). The constructing of the space launching site for Ukraine is one of the reasons of its integration into the world society. Taking into consideration that fact, that Ukraine has not yet equipped the territory for launching site it is suggested to make it on the base of the airplane An-225 and the launch vehicle "Cyclone-4" of Ukraine production. The usage of these possibilities will help Ukraine in restoring of space science, effectively developing and taking it up on quantitatively and qualitatively new levels.