

SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)
Interactive Presentations (IP)

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INNOVATIVE LAUNCH VEHICLE TECHNOLOGIES

Abstract

The two – three last decades of past century had created the perfect models of space vehicles, stages, engines... This hardware is able to solve the most difficult task, and it is a unique industrial base and have its adherents and contestants... Time has shown that not all mastered design and technology stand the test of time. Especially today, when the main task aerospace industry is to reduce cost, laboriousness and production time. This is applicable to both development schedule and production time of the rocket samples. The margin of scientific, technical and technological reserves today are almost exhausted. Only innovative way of the new rockets development can improve the situation. This paper (poster) presents some fresh ideas in transportation system technologies aimed at cost and time effect of the technologies. Recently, some innovative technical solutions are found or obtained, e.g. both the launch systems outline, and fairing design, and the airframe, and engines or nozzle orifices, etc. This paper (poster) reveals also a new mightily concept of patentably distinctive set with of already serially produced parts, units and components for years proven rockets. This approach let make the next generation of launch vehicles more simple and effective. The application of these solutions will in this situation not only catch opportunities which are lost during the crisis, but also to provide a real growth of launches in commercial sector, and in the sector of research and scientific missions, as well sector of the deep space exploration. If small rockets should not entertain much hope for improving the systems efficiency due application of innovation, the launch system for big telecom sats can show a unique growth potential, as well as the super-heavy rockets, where innovation will reveal fully dramatic effect. The paper (poster) also presents some fresh ideas for rocket technologies which still remains the last hope of significant part of world aerospace industry. It's very good to present my concept in poster format, because of some innovative pictures inside.