

SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)
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THE APPLICATION OF UPPER STAGES IN SPACE MISSIONS

Abstract

Upper Stage Vehicle(USV) is a type of independent space launching vehicles. In this article, different USVs, such as Centaur series, Saturn series, IUS, DTV, OTV, OMV, Breeze, etc, are classified and compared together in tasks design and general design. And the analyses in structures, propulsion types, payload capacity, and the launching systems built up with other elements and prediction for the application of USVs in the future space exploration will be put forward. At the end, a brief conception of commercial launching capacity and the prospective of international cooperation will be discussed.