IAF SYMPOSIUM ON COMMERCIAL SPACEFLIGHT SAFETY ISSUES (D6)
Enabling safe commercial spaceflight: vehicles and spaceports (3)

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STUDY ON THE EVALUATION OF THE COMPETITIVENESS OF SPACEPORTS

Abstract

As public and commercial space development activities have advanced rapidly in the global New Space era, the demand for launch services skyrocketed and the strategic importance of spaceport has been elevated.. In order to competitively win launch service orders over the world, existing major launch service companies are developing next-generation launch vehicles with lower launch costs and enhanced performance, and startups developing smaller-sized launch vehicles that are advantageous in flexibly responding to launch demand are increasingly emerging. Meanwhile, the United States, major space-faring countries in Europe and Asia are preemptively renovating existing launch sites or designing new spaceports in a more strategic and competitive way, as a preparation for future rising launch demand. Even some countries with no sovereign launch capability are planning to build spaceports and join expanding space economy by attracting foreign launch service companies to their spaceports. Also, some private companies have already secured or are striving to secure dedicated launch sites to facilitate their launch services. Aside from advanced launch vehicle, the competitiveness of spaceport is being critical in winning launch service orders, attracting complementary companies, and furthermore, laying the groundwork for the space economy ahead. Through this study, we found a set of essential factors relevant for more competitive spaceport including the geographic location (altitude, latitude/longitude, distance from the equator, accessibility), the nearby space industry cluster (i.e., how many space-related companies are placed near the spaceport), safety during flight, the size of the restricted airspace, the lengthy runway, the business-friendly policy, the year-round climate, and others. In conclusion, the study closely analyze major launch sites or spaceports around the world to identify key factors that are crucial for the competitiveness of spaceports, and, based on these factors, compare the competitiveness of global spaceports in an quantitative way, suggesting the implications useful for policymakers, spaceport operators and investors.