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SMALL LAUNCHERS FOR SMALL SATELLITE: LAUNCH EVENTS TRENDS AND PERSPECTIVE
- A QUANTITATIVE ANALYSIS BASED ON HISTORICAL TRENDS (1988-2010)**Abstract**

Eurospace and ESA have promoted the construction of a historic database of launch events. After the beta version was tested thoroughly in 2008, a working prototype was issued in 2009. The database tool is a repository of publicly available information on launch events. The data collected focuses on information available for all launch events and spacecraft launched, such as name, customer, mission(s), mass at launch, destination orbit, launcher used, launch site etc. The database also collects information on manufacturers for the spacecraft, the payload(s) and the launcher. The database aims at exhaustively identifying all spacecraft launched worldwide, and allow statistical analysis of the data. Among the key features of the database are a number of aggregation fields allowing either to supplement missing information (notably for secret programmes), either to support bulk analysis of selected phenomena. Using this tool and specific extractions, the paper will focus on - Analysing the small spacecraft launch events focusing on small launchers use - Identification of main historic trends - Identifying past and current small satellite launch players (suppliers; launch systems and launch sites; customers public,civil,public military and commercial) and more particularly small launchers players - Identification of current issues for small launchers markets

The purpose of this paper is to show that: Small satellite are increasingly effective for scientific and operationnal missions (including commercial ones). As a consequence there is a growing need for launch opportunities. Small launchers answer this need. The supply is evolving with the introduction of new launchers (SpaceX, VEGA) that will have to compete with the established solution (Kosmos). The paper will present the main trends in small launcher activity worldwide and provide conclusions on their specific segment.