

SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)  
Launch Services, Missions, Operations, and Facilities (2)

Author: Mr. Peter Freeborn

Eurockot Launch Services GmbH, Germany, peter.freeborn@astrium.eads.net

Mr. York Viertel

Eurockot Launch Services GmbH, Germany, york.viertel@astrium.eads.net

Mr. Markus Poetsch

Eurockot Launch Services GmbH, Germany, markus.poetsch@astrium.eads.net

Mrs. Anna Zorina

Eurockot Launch Services GmbH, Germany, anna.zorina@space.eads.net

EUROCKOT LAUNCH SERVICES - ENSURING CUSTOMER-TAYLORED LOW EARTH ORBIT  
LAUNCHES FOR THE FUTURE

**Abstract**

Space missions have tough requirements concerning the performance of the launch vehicle that carries the spacecraft into space. If they are not met, mission success is endangered and the work of many years may be in vain, not to speak about the financial loss. The Rockot launch vehicle is capable of carrying payload of up to 2t into Low Earth Orbit (LEO). In this market segment the expected changes such as the growing demand for constellations of small satellites call for bespoke solutions of a highly innovative character.

In the paper, Eurockot will demonstrate its capability to serve the needs of their customers beyond the scope of standard missions. This begins with the mission analysis phase when the launch service provider is expected to offer solutions for mission specific particularities such as a non-standard separation system, orbital maneuvers to avoid excessive sun exposure or a special treatment of the spacecraft instruments during ground processing. Conditions to be met by the launch service provider during ground processing most of all refer to cleanliness, temperature and humidity. Critical load conditions during launch have to be excluded and high accuracy is expected related to the orbital parameters such as altitude, attitude and inclination. The separation of the spacecraft from the upper stage finally marks the beginning of operations that have been thoroughly planned and presume that the spacecraft are injected into orbit exactly as specified. The paper is illustrated with examples from the most current missions launched by Eurockot such as ESA's magnetic field mission Swarm.