

ICS 49.020
CCS V 70



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 32454-2015

Analysis and evaluation of launch vehicle flight results

运载火箭飞行结果分析与评定

Issued on: December 31, 2015

Implemented on: July 1, 2016

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine;
Standardization Administration of the PRC**

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009. This standard is proposed by China Aerospace Science and Technology Corporation. This standard is nationalized by the National Aeronautical Technology and Its Application Standardization Technical Committee (SAC/TC425). The drafting of this standard. Beijing Aerospace Systems Engineering Research Institute. The main drafters of this standard. Wei Yuanming, Qin Xudong, Lei Kai, Wu Yitian, Li Guoyou, Xie Xuan, Zhu Dongge, Li Chongyuan, Lu Kai, Wang Jinghua, Li Huangli, Xu Qinghong, Zhu Pingping, Pan Hui. Analysis and Evaluation of Flight Result of Launch Vehicle

1 Scope

China's national standard for the analysis and evaluation of launch vehicle flight results. It specifies the general requirements for that evaluation, the requirements for the analysis carried out by the overall design organisation and by each subsystem, and the requirements for the resulting assessment, and it applies to the analysis of the results of launch vehicle flight tests and of operational launches. Every launch produces a very large quantity of data - telemetry from every subsystem, external trajectory measurements, ground observations - and the flight is over in minutes while the analysis takes weeks. What the standard governs is what happens to that data afterwards, and its importance comes from a fact peculiar to launch vehicles: each flight is both a delivery and a test. The vehicle is expendable, so nothing comes back to be examined; the only evidence of how it behaved is the data it transmitted while it was working. And the same design will fly again, so the analysis of this flight is the principal input to the confidence placed in the next. The standard divides the work between the overall design organisation and the subsystems, and it defines both. The overall system is the collective of units performing top-level design - trajectory, guidance and accuracy analysis, attitude control, electrical, structural, separation, aerodynamic and thermal environment, mechanical environment, propulsion and ground systems. The subsystems are those that receive the overall requirements and implement one aspect: control, measurement including telemetry and external trajectory and range safety, propellant utilisation, and the propulsion system including engines and pressurisation. Each analyses its own performance, and the overall organisation reconciles

them into a judgement about the flight. Issued on 31 December 2015 and in force since 1 July 2016.

This standard specifies the general requirements for the evaluation of the results of the launch vehicle, the analysis of the overall and sub-system analysis and the results of the assessment Claim. This standard applies to carrier rocket flight test and application launch results analysis.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article , The latest version (including all amendments) applies to this document.

GB/T 32455-2015 Carrier Terminology

3 Terms and definitions

The following definitions and definitions as defined in GB/T 32455-2015 apply to this document.

3.1 Payload payload An aircraft carried by a launch vehicle into a predetermined orbit, including satellites, detectors, spacecraft, etc.

3.2 Launch vehicle overall systemengineeringoflaunchvehicle To carry out the top of the launch vehicle design unit or professional collectively. Generally include. track, guidance and precision analysis, attitude control overall, electrical total Body, structure of the overall, separation of the overall, pneumatic and thermal environment, mechanical environment, the overall power, the ground and so on.

3.3 Carrier rocket subsystem subsystemoflaunchvehicle Receiving the overall design requirements or mission bookings of the launch vehicle, carrying out the specific design and implementation of the carrier rockets in one aspect or professional Said. General include. control systems, measurement systems (including telemetry systems and outer ballistic survey and safety control systems), propellant utilization systems, arrows (Including engine systems and pressurized delivery systems), ground launch support systems, fault detection and processing systems, escape systems Unified.

3.4 Subst subste The carrier rocket completes the separate part of the separate working stage after being separated, typically in a multi-stage series rocket.

3.5 Debris debris Rocket wreck After the child is separated, it falls on the ground (water) part.