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Space systems — Launch-vehicle-tospacecraft flight environments telemetry data processing

Systèmes spatiaux — Traitement des données télémétriques des environnements de vol entre le lanceur spatial et le véhicule spatial



Reference number ISO 15862:2009(E)

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Foreword

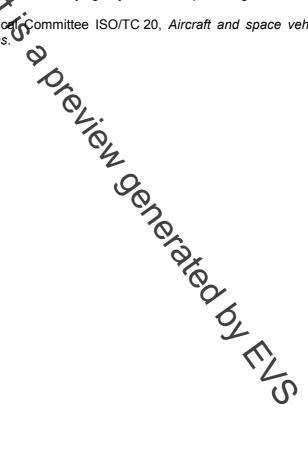
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Space systems — Launch-vehicle-to-spacecraft flight environments telemetry data processing

1 Scope

This International Standard provides basic requirements for the measurement of the spacecraft flight environments generated by the launch vehicle, telemetry data processing and formats of analysis reports.

This International Standard defines the field and number of measurement parameters, the principles of data processing, the format of delivered data and the content and the form of the flight environment analysis report.

Flight telemetry data are used verify if flight environment conditions exceed pre-flight analyses and environmental test results. In the event of a launch failure, adequate flight environment data can assist in investigating and analysing failure causes.

This International Standard is applicable to commercial launch vehicles and related ground processing, no matter which launch vehicle agencies are spected.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1

cut-off

load case when the engine thrust begins to decrease from devent value to zero

2.2

ground transportation

spacecraft transportation at launch site

2.3

lift-off

launch vehicle motion when the vehicle's contact is terminated with launch pad or other support devices

NOTE This is commonly called "first motion" of the vehicle. Possible abnormal cut of is also included.

2.4

load case

event in spacecraft service life during which essential mechanical environments are expected

2.5

maximum dynamic pressure phase

flight phase when dynamic pressure reaches its maximum value

2.6

minimum sampling frequency

minimum number of data points of measurement fields collected per second