INTERNATIONAL STANDARD

ISO 1151-7

Second edition
2023-11

Flight dynamics — Vocabulary —

Part 7: Flight points and flight envelopes

Dynamique de vol – Vocabulaire —

Partie 7: Points de vol et domaines de vol

Reference number
ISO 1151-7:2023(E)

© ISO 2023



COPYRIGHT PROTECTED DOCUMENT

© ISO 2023

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

© ISO 2023 – All rights reserved

Contents

Page

Foreword ..... **iv**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

3.1 Accomplishment of a mission 1
3.2 Controls, geometric configuration and condition of systems 2
3.3 State of the aircraft 3
3.4 Environment 4
3.5 Flight points 5
3.6 Effective flight points 6
3.7 Flight envelopes 7

Bibliography **8**

Index **9**

© ISO 2023 – All rights reserved

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 8, *Aerospace terminology*.

This second edition cancels and replaces the first edition (ISO 1151-7:1985), which has been technically revised.

The main changes are as follows:

— new terms for subclause “Types of aircraft motion” have been supplemented.

A list of all parts in the ISO 1151 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

© ISO 2023 – All rights reserved

Flight dynamics — Vocabulary —

Part 7: Flight points and flight envelopes

1 Scope

This document defines the concepts and terms used in flight dynamics studies to specify aircraft flight conditions and envelopes.

This document applies to the analysis of operational, experimental or simulated flights for the purposes of safety analyses and qualification, taking into account potential failures and likely environmental conditions.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1 Accomplishment of a mission

3.1.1
mission
purpose of a flight achieved while respecting constraints, among others, of time and of space

Note 1 to entry: The objective and the constraints can be specified in a flight plan.

3.1.2
flight program
preschedule of intermediate objectives required to fulfil the *mission* (3.1.1) within an *authorized flight envelope* (3.7.1)

Note 1 to entry: Provision can be made in the flight programme for some conditional changes of intermediate objectives according to circumstances arising during the flight (failure, meteorology, traffic, etc.).

3.1.3
phase
flight phase
portion of the flight characterized by an intermediate objective

Note 1 to entry: The intermediate objective is defined with some tolerance as to the accuracy with which the objective is considered to have been achieved, such that the following phase can be initiated under conditions that allow it to be executed.

Note 2 to entry: Examples of flight phases are: take-off, climb, cruise, descent, approach, landing.

© ISO 2023 – All rights reserved