



ISO 27875

**Space systems — Re-entry risk
management for uncrewed
spacecraft and launch vehicle
orbital stages**

*Systèmes spatiaux — Gestion du risque de la rentrée
atmosphérique pour les engins spatiaux sans équipage et les
étages orbitaux de lanceurs*

**Third edition
2026-07**

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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

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This document was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 14, *Space systems and operations*.

This third edition cancels and replaces the second edition (ISO 27875:2019), which has been technically revised. It also incorporates the Amendment ISO 27875:2019/Amd 1:2020.

The main changes are as follows:

- a description explaining the entire analysis process has been added ([6.3.2.1](#));
- a description for the selection of the Earth model and the atmospheric model has been added corresponding to the difference of controlled or uncontrolled re-entry ([6.3.2.2](#));
- adding to the expected number of casualties, the following risk factors have been newly added ([6.6](#) and [7.1](#)) and design measures to reduce each risk have been described ([7.4](#)):
 - radioactive substances;
 - floating objects;
 - pressurized or explosive objects;
 - hazardous chemical substances;
- in [Annex B](#), for a more detailed description, [Table B.1](#) has been revised;
- in [Annex C](#), an explanation for the “Expected number of casualties per unit casualty area as an example” has been added with a chart (Figure C.4);
- a design for demise during re-entry has been added as [Annex D](#);
- an “Example of report of the re-entry risk assessment for design review” has been added as [Annex E](#).

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Under international space treaties, the “launching state” is liable for damage or injuries caused by uncrewed spacecraft and launch vehicle orbital stages that re-enter the Earth's atmosphere. In addition, commercial operators are subject to the national safety regulations or laws of the launching country that relate to the re-entry of spacecraft and launch vehicle orbital stages. To minimize damages and injuries caused by re-entering spacecraft and launch vehicle orbital stages, all parties (i.e. developers, manufacturers, space service providers, satellite operators and launch service providers) should take preventive measures during design and operations.

NOTE Useful background information for this document is available in ISO 24113^[2].