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ICS 49.060
CCS V 04

NATIONAL STANDARD OF THE

PEOPLE'S REPUBLIC OF CHINA

GB/Z 41270.8-2026

Process management for avionics - Atmospheric radiation effects - Part 8: Proton, electron, pion, muon, alpha-ray fluxes and single event effects in avionics electronic equipment awareness guidelines

航空电子过程管理 大气辐射影响 第8部分：对航空电子产品中质子、电子、π介子、μ子、α射线注量率导致单粒子效应的考虑

(English Translation)

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Preview: page 1 of 2 shown, 47 in the full document. Complete English PDF, instant download:
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Table of Contents

Foreword

1 Scope

2 Normative references

3 Terms and definitions

Foreword

GB/Z 41270.8-2026 is a national guiding technical document (GB/Z) of the People's Republic of China, issued on 24 September 2026 by the State Administration for Market Regulation and the Standardization Administration of China.

The document adopts an international standard (ISO or IEC).

It is under the responsibility of the Standardization Administration of China.

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1 Scope

This guiding technical document is the eighth part of a multi-part series on atmospheric radiation effects within process management for avionics. It addresses awareness of single event effects in avionics electronic equipment that arise from fluxes of protons, electrons, pions, muons and alpha rays. It is aimed at avionics designers, equipment manufacturers, reliability and safety engineers, and certification specialists who must consider how radiation in the atmosphere can affect electronic hardware.

It adopts an international standard and was issued on 24 September 2026. Because it is a GB/Z, it provides guidance rather than binding requirements. Its title speaks of awareness guidelines, so its role is to help engineers recognise which particle types matter and where their effects may show up in equipment, rather than to prescribe a single design route. Teams that manage radiation-related risk in avionics programs can use it to see how these particles are considered in a Chinese national guidance document.

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