

# DIN EN ISO 20785-1:2018-12 (E)

## Dosimetry for exposures to cosmic radiation in civilian aircraft - Part 1: Conceptual basis for measurements (ISO 207 85-1:2012)

---

<b>Contents</b>		<b>Page</b>
European foreword .....		3
Foreword .....		4
Introduction .....		5
<b>1</b>	<b>Scope .....</b>	<b>7</b>
<b>2</b>	<b>Terms and definitions .....</b>	<b>7</b>
2.1	General .....	7
2.2	Quantities and units .....	8
2.3	Atmospheric radiation field .....	14
<b>3</b>	<b>General considerations .....</b>	<b>16</b>
3.1	General description of the cosmic radiation field in the atmosphere .....	16
3.2	General calibration considerations for the dosimetry of cosmic radiation fields in aircraft .....	17
3.3	Conversion coefficients .....	19
<b>4</b>	<b>Dosimetric devices .....</b>	<b>19</b>
4.1	Introduction .....	19
4.2	Active devices .....	20
4.3	Passive devices .....	23
<b>Annex A (informative) Representative particle fluence rate energy distributions for the cosmic radiation field at flight altitudes for solar minimum and maximum conditions and for minimum and maximum vertical cut-off rigidity [80] .....</b>		<b>26</b>
Bibliography .....		30