

Template for comments and convener's observations

Date:2021-11-03

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Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment ²	Comments	Proposed change	Convener's responses
0001 AU				Ge	Australia has voted no due to the number of technical comments provided.		
0002 AU				Ge	In response to 1CD, Australia suggested (0003 AU) to include all units used within OIML recommendations (e.g. °Z, Brix, and pH). The convenor's response was '°Z and Brix are strictly speaking no units of measurements.' (pH is more complicated). Note, while strictly there may be differences between units and scales, there are measuring instruments (approved against OIML recommendations) that report results in both °Z and Brix and these may be considered as units by many readers of this document. The purpose of this International Document is to facilitate the drafting of national regulations relating to legal units of measurement, so what guidance are we giving for national regulations that refer to °Z and Brix?	Explicitly include all of the units used by OIML recommendation into the document. If some 'units' are other scales, and not strictly units, then add a section to explain this. Another unit used in OIML recommendations is the bar (pressure).	
0003 AU				Te	OIML TC 12 is considering including a number of additional units of measurement for electrical quantities including VA, var, Vah, varh and multiples such as kVA in the next edition of OIML R 46 for electrical energy meters. These units are widely used in other international standards and regulations.	Suggest to acknowledge these units as follows: <ul style="list-style-type: none"> Volt ampere (VA) = $V_{rms} A_{rms}$ (apparent power) Volt ampere reactive (var) = $V_{rms} A_{rms} \sin\phi$ where ϕ radians is the phase angle between the electro-motive force (emf) and the current (reactive power) Volt ampere hour (Vah) = $V_{rms} A_{rms} h$ (apparent energy) Volt ampere hour reactive (varh) = $V_{rms} A_{rms} h \sin\phi$ where ϕ radians is the phase angle between the electro-motive force (emf) and the current (reactive energy) 	
0004 AU				Te	How authoritative are the conversions provided for non-SI units? For example, some references state different values (or approximate equivalence) for the following: <ul style="list-style-type: none"> mmHg (not exactly 133.322 Pa) pound (not exactly 0.453 592 kg) 	Either confirm that conversions are exact, or clarify where they are approximate.	

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² Type of comment: ge = general te = technical ed = editorial

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0005 IT				ed	It sounds crazy, but the fonts of even and odd pages look different to me	Kindly check																																					
0006 PL			whole	ed	In the SI Brochure, the product of the base unites is expressed without the half-high dot (·), only space is used between the symbols of unites	e.g. N m, not N · m, etc.																																					
0007 PL			whole	ed	In the SI Brochure, the product of the numbers is expressed with the use of the cross (×)	e.g. 6.626 070 15 × 10 ⁻³⁴ , not 6.626 070 15 · 10 ⁻³⁴ etc.																																					
0008 TR			whole	ed	In the SI Brochure, the product of the numbers is expressed with the use of the cross (×)	e.g. 6.626 070 15 × 10 ⁻³⁴ , not 6.626 070 15 · 10 ⁻³⁴ etc.																																					
0009 JP		Introduction	1 st to 6 th paras. before “1. General provisions”.	ed	<p>The first half of Introduction (1st to 6th paras.) seems unclear. We consider that this part defines the three basic principles of D 2. If so, the content of the 6th paragraph may be merged into the principle 2 with a similar meaning.</p> <p>In addition, the clause numbers in the principle 3 should be corrected as follows.</p> <table><tr><td>2.2.1</td><td>=></td><td>2.2.7</td></tr><tr><td>2.2.6</td><td>=></td><td>2.2.1</td></tr><tr><td>2.3.10</td><td>=></td><td>2.5.2</td></tr><tr><td>2.3.11</td><td>=></td><td>2.3.10</td></tr><tr><td>2.4.1</td><td>=></td><td>2.5.1</td></tr><tr><td>2.5.1</td><td>=></td><td>2.4.1</td></tr><tr><td>2.5.2</td><td>=></td><td>2.4.2</td></tr><tr><td>2.5.3</td><td>=></td><td>2.4.3</td></tr><tr><td>2.5.5</td><td>=></td><td>2.4.5</td></tr><tr><td>2.5.7</td><td>=></td><td>2.4.7</td></tr><tr><td>2.5.8</td><td>=></td><td>2.4.8</td></tr><tr><td>2.5.9</td><td>=></td><td>2.4.9</td></tr></table>	2.2.1	=>	2.2.7	2.2.6	=>	2.2.1	2.3.10	=>	2.5.2	2.3.11	=>	2.3.10	2.4.1	=>	2.5.1	2.5.1	=>	2.4.1	2.5.2	=>	2.4.2	2.5.3	=>	2.4.3	2.5.5	=>	2.4.5	2.5.7	=>	2.4.7	2.5.8	=>	2.4.8	2.5.9	=>	2.4.9	<p>Propose the changes as shown below.</p> <p><i>The purpose of this ...to the following principles:</i></p> <p><i>1 The International System of Units (SI), adopted ...concerning legal units of measurement.</i></p> <p><i>2 As a general rule, units other than SI units should be eliminated; however, for practical reasons it is sometimes necessary to use other units as legal units of measurement (e.g., the kilowatt hour (kW · h)). <u>For such purposes, other definitions not included in the SI are given in this Document.</u></i></p> <p><i>3 Those definitions which ... have been reproduced exactly.</i></p> <p><i>(See subclauses 2.2.1, <u>2.2.7</u> 2.2.6, 2.3.1, 2.3.5, <u>2.3.10</u>, <u>2.4.1</u>, <u>2.4.2</u>, <u>2.4.3</u>, <u>2.4.5</u>, <u>2.4.7</u>, <u>2.4.8</u>, <u>2.4.9</u>, <u>2.5.1</u>, <u>2.5.2</u>, <u>2.3.10</u>, <u>2.3.11</u>, <u>2.4.1</u>, <u>2.5.1</u>, <u>2.5.2</u>, <u>2.5.3</u>, <u>2.5.5</u>, <u>2.5.7</u>, <u>2.5.8</u>, <u>2.5.9</u>, 2.6.1, 2.7.2 and 2.7.4).</i></p> <p><i>For the requirements of legal metrology, other definitions are given here in their most usually accepted form.</i></p>	
2.2.1	=>	2.2.7																																									
2.2.6	=>	2.2.1																																									
2.3.10	=>	2.5.2																																									
2.3.11	=>	2.3.10																																									
2.4.1	=>	2.5.1																																									
2.5.1	=>	2.4.1																																									
2.5.2	=>	2.4.2																																									
2.5.3	=>	2.4.3																																									
2.5.5	=>	2.4.5																																									
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0010 AU		Introduction	4 (Item 2)	Te	The example of other units is kilowatt hour (kW · h). However, in international standards including OIML, IEC and ANSI kilowatt hour is expressed as kWh. This expression is also used in the European Union Measuring Instrument Directive (MID). The correct way to express this unit under the SI is kW h, or kW·h, but this document should at least acknowledge widespread use of kWh.	Either add 'kWh' as an alternative expression, or, acknowledge that it is widely used, but not strictly expressed correctly.	
0011 AU		Introduction	4 Other Units	Ge	The description of clause 4 seems to generally, but not fully, align with the SI brochure clause 4 Non-SI units that are accepted for use with the SI. Most units align, but not all. For example, the SI includes astronomical unit (au), which is not mentioned in this document (possibly because it is unlikely to appear in regulations?). And, this document includes 4.2.4 gon, which is not mentioned in the SI brochure. Further, the description and footnote in the document do not seem to align with the words in the SI. In particular, these units are should not be restricted – they are accepted for use within the SI. As recognised in the SI, these will continue to be used for many years, and we their use in regulations should not be discouraged.	Clarify alignment between clause 4 and the SI.	
0012 UK		Introduction	Principle 2	ed	The SI Brochure states that “In forming products and quotients of unit symbols the normal rules of algebraic multiplication or division apply. Multiplication must be indicated by a space or a half-high (centred) dot (·)”. Throughout this document, symbol multiplication is indicated by space-dot-space rather than either space or dot as mandated.	Change “kW · h” to “kW·h” and make similar changes throughout the document, including in 2.3.1 and other places where single spaces are used.	
0013 AU		1		Te	The general provisions do not include the need for a space between a value and the unit (as provided in 5.4.3 of the SI brochure).	Add a clause (1.7) as follows: The value of a quantity is expressed as a numerical value preceding the unit. A space is always used to separate the number and the unit, with the only exceptions being for degrees (°), minutes(') and seconds (").	
0014 JP		1.1.2		ge	Add a note for the reference regarding the usage of non-SI unit for better understanding.	Add the following note.	

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						<i>Note: the usage of non-SI unit follows Chapter 4 of the International System of Units, 9th edition (2019).</i>	
0015 IT		1.5		ge	The first sentence together with the first bullet formally do not allow any translation of the names of the units, yet a widespread practice.	Consider addressing the issue, even with a short sentence	
0016 US		2.1	02.1.3	ed	Incorrect abbreviation for time listed as “m”.	Change to “t”	
0017 FR		2.1.3		Ed/te	The symbol of the unit of time is s	Replace “m” by “s” in the 3 rd column	
0018 IT		2.1.3		ed	The symbol for the second is an obvious blunder	“m” to “s”	
0019 JP		2.1.3 For time		ed	The base unit for time is “s”.	Replace “m” with “s”.	
0020 ES		2.1.3		te	The symbol for the second is wrong. It appears as m when it should be s	s	
0021 TR		2.1.3		ed	The symbol of the unit of time is s	Replace “m” with “s”.	
0022 UK		2.1.3		ed	The symbol for the second is s not m	Change the first “m” to “s”.	
0023 IR		2.1.3	first line	ed	The symbol of “second” is “s” not “m”	“S” should be written for second’s symbol	
0024 JP		2.1.5	All	ed	The clause numbers are not correct.	<p>Correct the numbers as shown below.</p> <p><i>2.1.5 Dimensionless derived units for plane angle and solid angle have the following names and symbols respectively:</i></p> <p><i>Defined in subclause</i></p> <p><i>For plane angle radian rad 2.2.8</i> 2.2.2</p> <p><i>For solid angle steradian sr 2.2.9</i> 2.2.3</p>	
0025 UK		2.2.1		ed	The CGPM referenced is given as the “26 th ” but in 2.3.1 it is referenced as the “26 th ”.	Consistent superscription.	

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0026 UK		2.2.10		ed	The SI Brochure states that “When multiplying the value of quantities either a multiplication sign \times or brackets should be used, not a half-high (centred) dot.”	Change “1 m · 1 m” to “1 m \times 1 m” and make similar changes throughout the document, including the symbol between a value and the power of ten indicator (e.g. “6.626 070 15 · 10 ⁻³⁴ ” to “6.626 070 15 \times 10 ⁻³⁴ ”.	
0027 JP		2.2.11 Volume: cubic metre	All	ed	The expression might be unclear.	Propose to change expression as shown below. <i>The cubic metre is the volume of a cube <u>with the</u> of side <u>length of one</u> ± metre.</i>	
0028 FR		2.2.3 2.2.4 2.2.5 2.2.6 2.3.2 2.3.3 2.3.4 2.3.6 2.3.8 2.3.9 2.3.11 2.3.12 2.4.12 2.5.3 2.5.4 2.5.5 2.7.1 2.7.3 2.8.4		ed	To be consistent with SI brochure, the symbol “.” should be removed in all corresponding unit symbols (placed in brackets in the titles) and replaced by a space.	Change: rad · s ⁻¹ to rad s ⁻¹ rad · s ⁻² to rad s ⁻² m · s ⁻¹ to m s ⁻¹ m · s ⁻² to m s ⁻² kg · m ⁻¹ to kg m ⁻¹ kg · m ⁻² to kg m ⁻² kg · m ⁻³ to kg m ⁻³ N · m to N m Pa · s to Pa s m ² · s ⁻¹ to m ² s ⁻¹ m ³ · s ⁻¹ to m ³ s ⁻¹ kg · s ⁻¹ to kg s ⁻¹ A · m ⁻¹ to A m ⁻¹ J · K ⁻¹ to J K ⁻¹ J/(kg · K) or J · kg ⁻¹ · K ⁻¹ to J/(kg K) or J kg ⁻¹ K ⁻¹ W/(m · K) or W · m ⁻¹ · K ⁻¹ to W/(m K) or W m ⁻¹ K ⁻¹ W · sr ⁻¹ to W sr ⁻¹ cd · m ⁻² to cd m ⁻² C · kg ⁻¹ to C kg ⁻¹	
0029 IR		2.2.5	First paragraph	te	It is better to explain the difference between speed and velocity	Add this statement: “the unit of velocity and speed is similar, however, velocity is a vector quantity but speed is a scalar quantity”	

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0030 PL		2.2.7 and 2.3.1, 2.4.1, 2.5.1, 2.7.2		ed	The given definitions of basic SI units use different writability methods for the multiplication of units by units, e.g. in the definition of the metre (2.2.7) we can find the notation with a dot in the middle: $m \cdot s^{-1}$, while in the other definitions of basic SI units (2.3.1, etc.) we can find the notation without a dot in the middle: e.g., J s or $kg \cdot m^2 \cdot s^{-1}$, etc..	The writability method for the multiplication of units by units should be the same for all definitions of SI base units.	
0031 ES		2.3.1		ed	In the definition of the kilogram, the numerical value of the Planck constant h should have a multiplication symbol \times instead of a point separating the number from 10^{-34} . The point may be used between symbols of units while the symbol \times is used between numbers, as the SI Brochure does.	h to be $6.626\,070\,15 \times 10^{-34}$	
0032 KR		2.3.1	when expressed in the unit J s, which is equal to $kg \cdot m^2 \cdot s^{-1}$,	ed	small dots between units are missing.	when expressed in the unit J·s, which is equal to $kg \cdot m^2 \cdot s^{-1}$,	
0033 FR		2.3.10		te	The definition of the work, energy and quantity of heat and of the unit Joules has been moved in 2.5.2. But the unit Joules is necessary to define the energy flow rate, heat flow rate, power and the unit watt in 2.3.10.	We propose the following options. Please choose either one of them : 1) Add the definition of the work, energy and quantity of heat and of the unit joules before the definition of energy flow rate, heat flow rate, power and the unit watt. (as the unit joule is defined with newton and meter, it seems more logical. Moreover, in this case, the watt will be defined before the volt). (2) Move the definition of energy flow rate, heat flow rate, power and the unit watt after the definition of the work, energy and quantity of heat and of the unit joules. (in this case, the watt will ne be defined before the volt). (3) add a note on joule.	
0034 UK		2.3.2		ed	“Lineic” is not a commonly-used English term.	Change “Lineic mass, linear density” to “Linear mass density” and “lineic mass” to “linear mass density”.	
0035 UK		2.3.3		ed	“Areic” is not a commonly-used English term.	Change “Areic mass, surface density” to “Area density” and “areic mass” to “area density”.	
0036 AU		2.3.5		Te	The expression for force (newton) is wrong.	It should be $1\,N = 1\,kg \cdot m \cdot s^{-2}$	

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0037 FR		2.3.5		te	There is a mistake in the formula for the newton.	Replace the formula by “1 N = 1 kg · 1 m/s ² ” or “1 N = $\frac{1 \text{ kg} \cdot 1 \text{ m}}{\text{s}^2}$ ”	
0038 UK		2.3.5		te	Force is mass multiplied by acceleration, not mass divided by acceleration.	Change $1 \text{ N} = \frac{1 \text{ kg}}{1 \text{ m/s}^2}$ to 1 N = 1 kg·m·s ⁻²	
0039 UK		2.3.5		ed	“per second, per second” is not used elsewhere in the document.	Change to “per second squared”.	
0040 JP		2.3.5 Force: newton	The equation	ed	The formula for defining newton is not correct.	Correct the formula as written in 1CD. Present: 1 N = 1 kg / 1 m/s ² Correct: 1 N = 1 kg · 1 m/s ²	
0041 AU		2.3.6		Te	The expression for moment of force (newton metre) is wrong	It should be 1 N =1 kg·m ² ·s ⁻²	
0042 FR		2.3.6		ed	To be more, consistent with the others definition, replace “a” by “the” in the definition	Replace “newton metre is a moment...” by “The newton metre is the moment”	
0043 FR		2.3.6		te	There is a mistake in the formula for the newton metre.	Replace the formula by “1 N · m = 1 kg · m ² / s ² ” or $1 \text{ N} \cdot \text{m} = \frac{1 \text{ kg} \cdot 1 \text{ m}^2}{\text{s}^2}$	
0044 UK		2.3.6		te	The equation is incorrect.	Change $1 \text{ N} \cdot \text{m} = \frac{1 \text{ kg}}{1 \text{ m}^2/\text{s}^2}$ to 1 N·m = 1 kg·m ² ·s ⁻²	
0045 JP		2.3.6 Moment of force: newton metre	1 st para.	te	The magnitude of a moment of force is the vector product equivalent with the scalar product of (1) the length of radius vector, (2) the force and (3) sin θ. Where, θ is the angle formed by the radius vector and the force. When the radius vector is not normal to the force, the moment of force generated by the radius vector of 1 m and the force of 1 N will not be 1 N · m . Therefore, it may be better to specify that they are normal to each other.	Propose to replace the 1 st paragraph with the expression below. <i>The newton metre is a moment of force about a point which is equal to the vector product of a radius vector with a length of 1 m from this point to a point on the line of action of the force, and the force vector with a strength of 1 N and normal to the radius vector.</i>	
0046 JP		2.3.6 Moment of force: newton metre	The equation	ed	The formula for defining newton is not correct.	Correct the formula as written in 1CD. Present: 1 N · m = 1 kg / 1 m ² /s ² Correct: 1 N · m = 1 kg · 1 m ² /s ²	

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0047 US		2.4	02.4.10	ed	Magnetic flux density definition: incorrect symbol for Weber in equation/definition.	Change "Wh" to "Wb"	
0048 ES		2.4.1		ed	In the definition of the ampere, the numerical value of the elementary charge e should have a multiplication symbol \times instead of a point separating the number from 10^{-19} . The point may be used between symbols of units while the symbol \times is used between numbers, as the SI Brochure does.	e to be $1.602\,176\,634 \times 10^{-19}$	
0049 FR		2.4.10		te	There is a mistake in the formula for the magnetic flux density, magnetic induction. The unit on the numerator is not Wh but Wb (Weber).	In the formula, replace "Wh" by "Wb".	
0050 ES		2.4.10		te	The expression for the unit tesla is wrong. It appears as $1\,T = 1\,Wh / 1\,m^2$, when it should be $1\,T = 1\,V \cdot s / 1\,m^2$	$1\,T = 1\,V \cdot s / 1\,m^2$	
0051 UK		2.4.10		ed	The symbol for weber is incorrect.	Change "Wh" to "Wb".	
0052 UK		2.4.10		ed	Typo: "Wh" should be "Wb"	$1\,T = 1\,Wb / 1\,m^2$	
0053 UK		2.5.1		ed	It is not usual to state "expressed in kelvins".	Change to "expressed in kelvin".	
0054 ES		2.5.1	1 st paragraph	ed	In the definition of the kelvin, the numerical value of the Boltzmann constant k should have a multiplication symbol \times instead of a point separating the number from 10^{-23} . The point may be used between symbols of units while the symbol \times is used between numbers, as the SI Brochure does.	k to be $1.380\,649 \times 10^{-23}$	
0055 ES		2.5.1	3 rd paragraph	te	In the sentence it is said "the unit "degree Celsius" (symbol: °C) which is equal to the unit "kelvin" is used. It is better to add "in magnitude", as the SI Brochure specifies.	It is more precise to say: the unit "degree Celsius" (symbol: °C) which is equal in magnitude to the unit "kelvin" is used.	
0056 ES		2.5.2		ed	In the definition of the joule, add "of a force of 1 newton" after "point of application"	The joule is the work done when the point of application of a force of 1 newton moves a distance of 1 metre in the direction of the force	
0057 UK		2.5.4		ed	"Massic" is not a commonly-used English term.	Define only as "Specific heat capacity".	
0058 AU		2.6.1.1		Te	Under the SI, only the multiplication symbol \times should be used when multiplying numbers (5.4.6 of the SI brochure).	Replace $6.022\,140\,76 \cdot 10^{23}$ with $6.022\,140\,76 \times 10^{23}$	

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0059 ES		2.6.1.1		ed	In the definition of the mole, the numerical value of the Avogadro constant N_A should have a multiplication symbol \times instead of a point separating the number from 10^{23} . The point may be used between symbols of units while the symbol \times is used between numbers, as the SI Brochure does.	One mole contains exactly $6.022\,140\,76 \times 10^{23}$ elementary entities	
0060 FR		2.6.1.2		te	This paragraph has been redefined during the 26 th CGPM.	Replace « <i>When the mole is used, the elementary entities must be specified and may be atoms, molecules, ions, electrons, other particles, or specified groups of such particles (14th CGPM, 1971)</i> » by « <i>The amount of substance, symbol n, of a system is a measure of the number of specified elementary entities. An elementary entity may be an atom, a molecule, an ion, an electron, any other particle or specified group of particles 26th CGPM, 2018)</i> ».	
0061 UK		2.6.2.1 & 2.6.2.2		ed	The equation $1\text{ kat} = 1\text{ mol} / 1\text{ s}$ should appear at the end of section 2.6.2.1 and not 2.6.2.2 for consistency.	Move $1\text{ kat} = 1\text{ mol} / 1\text{ s}$ to the end of section 2.6.2.1.	
0062 AU		2.7.2		Te	Under the SI, only the multiplication symbol \times should be used when multiplying numbers (5.4.6 of the SI brochure).	Replace $540 \cdot 10^{12}$ with 540×10^{12}	
0063 ES		2.7.2		ed	In the definition of the candela, the numerical value of the luminous efficacy of monochromatic radiation, K_{cd} , should have a multiplication symbol \times instead of a point separating the number from 10^{12} . The point may be used between symbols of units while the symbol \times is used between numbers, as the SI Brochure does.	It is defined by taking the fixed numerical value of the luminous efficacy of monochromatic radiation of frequency $540 \times 10^{12}\text{ Hz}$, K_{cd} , to be 683 ...	
0064 UK		2.8		ed	"Ionizing Radiations" is not a common term.	Change to "Ionising Radiation".	
0065 FR		3.2		ed	The SI prefix for 10^{-3} is milli and not millo.	Replace "millo" by "milli".	
0066 PL		3.2		ed	In Factor column the spaces should be equal	e.g. $10 = 10^1$, not $10 = 10^1$, etc.	
0067 TR		3.2		ed	SI prefix exa is incorrect as written	Correct from 10^{16} to 10^{18}	
0068 TR		3.2		ed	SI prefix peta is incorrect as written	Correct from 10^{12} to 10^{15}	
0069 TR		3.2		ed	SI prefix tera is incorrect as written	Correct from 10^9 to 10^{12}	

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Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment ²	Comments	Proposed change	Convener's responses
0070 TR		3.2		ed	SI prefix giga is incorrect as written	Correct from 10 ⁶ to 10 ⁹	
0071 TR		3.2		ed	SI prefix mega is incorrect as written	Correct from 10 ⁵ to 10 ⁶	
0072 TR		3.2		ed	The SI prefixes for 10 ⁻³ is milli and not millo.	Replace “millo” by “milli”.	
0073 UK		3.2		ed	The SI prefix for 0.001 is “milli” not “millo”.	Change “millo” to “milli”.	
0074 US		3.2		ed	SI prefix exa is incorrect as written	Correct from 10 ¹⁶ to 10 ¹⁸	
0075 US		3.2		ed	SI prefix peta is incorrect as written	Correct from 10 ¹² to 10 ¹⁵	
0076 US		3.2		ed	SI prefix tera is incorrect as written	Correct from 10 ⁹ to 10 ¹²	
0077 US		3.2		ed	SI prefix giga is incorrect as written	Correct from 10 ⁶ to 10 ⁹	
0078 US		3.2		ed	SI prefix mega is incorrect as written	Correct from 10 ⁵ to 10 ⁶	
0079 PL		3.4		ed	delete the space in word "sub- multiple"	sub-multiple	
0080 UK		4.1.3		te	The footnote referring to the definition of year is nothing to do with day.	Either remove footnote 4 or provide a new entry for year.	
0081 US		4.2	04.2.2	ed	As written, the degree symbol ° appears in the equation as though it is a superscript.	Can this be typographically remedied to appear more like a multiplication factor?	
0082 US		4.2	04.2.3	ed	As written, the minute symbol ´ appears in the equation as though it is a superscript.	Can this be typographically remedied to appear more like a multiplication factor?	
0083 PL		4.2.2, 4.2.3		ed	In the equations 4.2.2 and 4.2.3 it is written: $1' = \left(\frac{1}{60} \right) = \frac{\pi}{10800} \text{ rad}$ and $1'' = \left(\frac{1}{60} \right) = \frac{\pi}{648000} \text{ rad}$	And it should be written as follows: $1' = \left(\frac{1}{60} \right) = \frac{\pi}{10\,800} \text{ rad}$ and $1'' = \left(\frac{1}{60} \right) = \frac{\pi}{648\,000} \text{ rad}$	
0084 TR		4.2.2, 4.2.3		ed	In the equations 4.2.2 and 4.2.3 it is written: $1' = \left(\frac{1}{60} \right) = \frac{\pi}{10800} \text{ rad}$ and	And it should be written as follows: $1' = \left(\frac{1}{60} \right) = \frac{\pi}{10\,800} \text{ rad}$ and	

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					$1'' = \left(\frac{1}{60}\right) = \frac{\pi}{648000} \text{ rad}$	$1'' = \left(\frac{1}{60}\right) = \frac{\pi}{648\ 000} \text{ rad}$	
0085 AU		4.3.1		Te	The expression for litre is wrong	Replace with $1 \text{ l} = 1 \text{ L} = 1 \text{ dm}^3 = 10^{-3} \text{ m}^3$	
0086 UK		4.3.1		te	One litre is not equal to one thousand cubic metres.	Change “ 10^3 m^3 ” to either “ 10^3 cm^3 ” or “ 10^{-3} m^3 ”.	
0087 AU		4.4.2		Te	Under the SI, only the multiplication symbol \times should be used when multiplying numbers (5.4.6 of the SI brochure).	Replace $1.660\ 539\ 066\ 60(50) \cdot 10^{-27} \text{ kg}$ with $1.660\ 539\ 066\ 60(50) \times 10^{-27} \text{ kg}$	
0088 FR		4.4.2		ed	It would be clearer to change the wording, as in the SI brochure 9 th edition, 2019.	Replace by “ The dalton (symbol: Da) and the unified atomic mass unit (symbol: u) are alternative names (and symbols) for the same unit and equal to the fraction 1/12 of the mass of an atom of the nuclide carbon 12, at rest and in its ground state.”	
0089 FR		4.4.2		ed	The sentence needs to be adapted with two units.	Replace “its use” by “their use”.	
0090 ES		4.4.2		ed	In the definition of the Dalton, it is said it is “equal to the fraction 1/12 of the mass of an atom of the nuclide carbon 12, at rest and in its ground state”. The definition should be the same as it appears at the SI Brochure.	equal to 1/12 of the mass of a free carbon 12 atom, at rest and in its ground state.	
0091 ES		4.4.2		ed	It should be added to the approximate value of the dalton, the source where the value is coming from.	Add: Source: 2018 CODATA recommended values	
0092 UK		4.4.2		te	“Its use is only authorised in chemistry and physics” is not a useful statement. How are these fields defined? How is this requirement administered? Where else would the Dalton be used anyway?	Remove this statement.	
0093 AU		4.5.1		Te	Watt hour is widely expressed as Wh. See AU comment above on the introduction.	Add ‘Wh’ as an alternative expression, or acknowledge the widespread use of Wh.	
0094 AU		4.5.2		Te	Under the SI, only the multiplication symbol \times should be used when multiplying numbers (5.4.6 of the SI brochure).	Replace $1.602\ 177 \cdot 10^{-19}$ with $1.602\ 177 \times 10^{-19}$	
0095 FR		4.5.2		te	The value of electronvolt is more accurate in the SI brochure 9 th edition, 2019.	Replace the value by $1 \text{ eV} = 1,602\ 176\ 634 \times 10^{-19} \text{ J}$	
0096 UK		4.5.2		te	The SI Brochure gives an exact value of an electron volt, not an approximation.	Use $1 \text{ eV} = 1.602\ 176\ 634 \times 10^{-19} \text{ J}$	

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0097 UK		4.5.2		te	"Its use is authorised only in specialised fields" is a redundant statement. Which fields? How are these fields defined? How is this requirement administered?	Remove this statement.	
0098 AU		4.6.1		Ed	Equalities are clearer with a space before and after the equal sign.	Check there is a space before and after each equal signs.	
0099 PL		4.6.1, 4.6.2		ed	In clauses 4.6.1 and 4.6.2, the digits relating to references 6 and 7 are written differently in both cases (with a larger gap between 6 and 7 at the point 4.6.1). Moreover, such form of writing (without comma) of those two digits relating to references 6 and 7 may be misread as the number 67 (e.g. in the case of clauses 4.6.2).	The form of writing of the digits relating to references 6 and 7 should be the same in both clauses 4.6.1. and 4.6.2.	
0100 FR		4.6.2		te	$1 \text{ Np} = (1/2) \ln (P/P_0) = (1/2) \ln e^2 = 1$ has become $1 \text{ Np} = (1/2) \ln (F/F_0) = (1/2) \ln e^2 = 1$ in CD2.	Correct the formula with $1 \text{ Np} = (1/2) \ln (P/P_0) = (1/2) \ln e^2 = 1$.	
0101 UK		4.6.2	Note 6	te	This is not consistent with the SI Brochure.	Replace this note with the relevant text from the SI Brochure: "The units neper, bel and decibel have been accepted by the CIPM for use with the International System, but are not SI units".	
0102 AU		A.0.Annexes		Ed	As drafted, the Annex titles are very long and appear to contain guidance/requirements (must and shall not).	Create short title and include any guidance/requirements in a clause of the document.	
0103 UK		A.1		te	"Its use is authorised only in atomic and nuclear physics" is not a useful statement. How are these fields defined? How is this requirement administered?	Remove this statement.	
0104 ES		A.11		ed	In the value of the carat, use the multiplication symbol \times instead of a point separating the number from 10^{-4} . The point may be used between symbols of units while the symbol \times is used between numbers, as the SI Brochure does.	$1 \text{ ct} = 0.2 \text{ g} = 2 \times 10^{-4} \text{ kg}$	
0105 FR		A.2		te	The formula between cP (centipoise) and Pa s has a mistake.	Replace « $1 \text{ cP} = 1 \text{ mPa} \cdot \text{s} = 10^{-3} \text{ mPa} \cdot \text{s}$ » by « $1 \text{ cP} = 1 \text{ mPa} \cdot \text{s} = 10^{-3} \text{ Pa} \cdot \text{s}$ »	
0106 UK		A.2		te	The second equation is incorrect.	Change " $1 \text{ mPa} \cdot \text{s} = 10^{-3} \text{ mPa} \cdot \text{s}$ " to " $1 \text{ mPa} \cdot \text{s} = 10^{-3} \text{ Pa} \cdot \text{s}$ ".	

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0107 ES		A.4		ed	In the value of the curie, use the multiplication symbol \times instead of a point separating the number from 10^{10} . The point may be used between symbols of units while the symbol \times is used between numbers, as the SI Brochure does.	1 Ci = 37 GBq = 3.7×10^{10} Bq	
0108 ES		A.6		ed	In the value of the röntgen, use the multiplication symbol \times instead of a point separating the number from 10^4 . The point may be used between symbols of units while the symbol \times is used between numbers, as the SI Brochure does.	1 R = 0.258 mC/kg = 2.58×10^4 C/kg	
0109 UK		A.7		te	"Its use is authorised only in specialised fields" is a redundant statement. Which fields? How are these fields defined? How is this requirement administered?	Remove this statement.	
0110 UK		A.9		te	'Vergency' is not a common term for this – more common is 'Power'.	Change "Vergency of optical systems" to "Power of optical systems".	
0111 AU		B.1		Ed	For consistency with SI, only the multiplication symbol should be used when multiplying numbers.	Replace $2.54 \cdot 10^{-2}$ with 2.54×10^{-2}	
0112 ES		B.1		ed	In the value of the inch, use the multiplication symbol \times instead of a point separating the number from 10^{-2} . The point may be used between symbols of units while the symbol \times is used between numbers, as the SI Brochure does.	1 in = 2.54 cm = 2.54×10^{-2} m	
0113 FR		B.3		te	The conversion between pounds and kg has a mistake	Replace "1 lb = 453 592 g = 0.453 592 kg » by « 1 lb = 453. 592 g = 0.453 592 kg"	
0114 AU		B.5		Ed	For consistency with SI, only the multiplication symbol should be used when multiplying numbers.	Replace $1.013\ 25 \cdot 10^5$ with $1.013\ 25 \times 10^5$, and Replace $0.980\ 665 \cdot 10^5$ with $0.980\ 665 \times 10^5$, and Replace $9.806\ 65 \cdot 10^3$ with $9.806\ 65 \times 10^3$	
0115 ES		B.5	1 st unit of pressure	ed	In the value of the standard atmosphere, symbol atm, use the multiplication symbol \times instead of a point separating the number from 10^5 . The point may be used between symbols of units while the symbol \times is used between numbers, as the SI Brochure does.	1 atm = 101.325 kPa = $1.013\ 25 \times 10^5$ Pa	
0116 ES		B.5	2 nd unit of pressure	ed	In the value of the technical atmosphere, symbol at, use the multiplication symbol \times instead of a point separating the number from 10^5 . The point may be used between symbols of units while the symbol \times is used between numbers, as the SI Brochure does.	1 at = 98.066 5 kPa = $0.980\ 665 \times 10^5$ Pa	

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0117 ES		B.5	4 th unit of pressure	ed	In the value of the metre of water, symbol mH ₂ O, use the multiplication symbol × instead of a point separating the number from 10 ³ . The point may be used between symbols of units while the symbol × is used between numbers, as the SI Brochure does.	1 mH ₂ O = 9.806 65 kPa = 9.806 65·× 10 ³ Pa	

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