

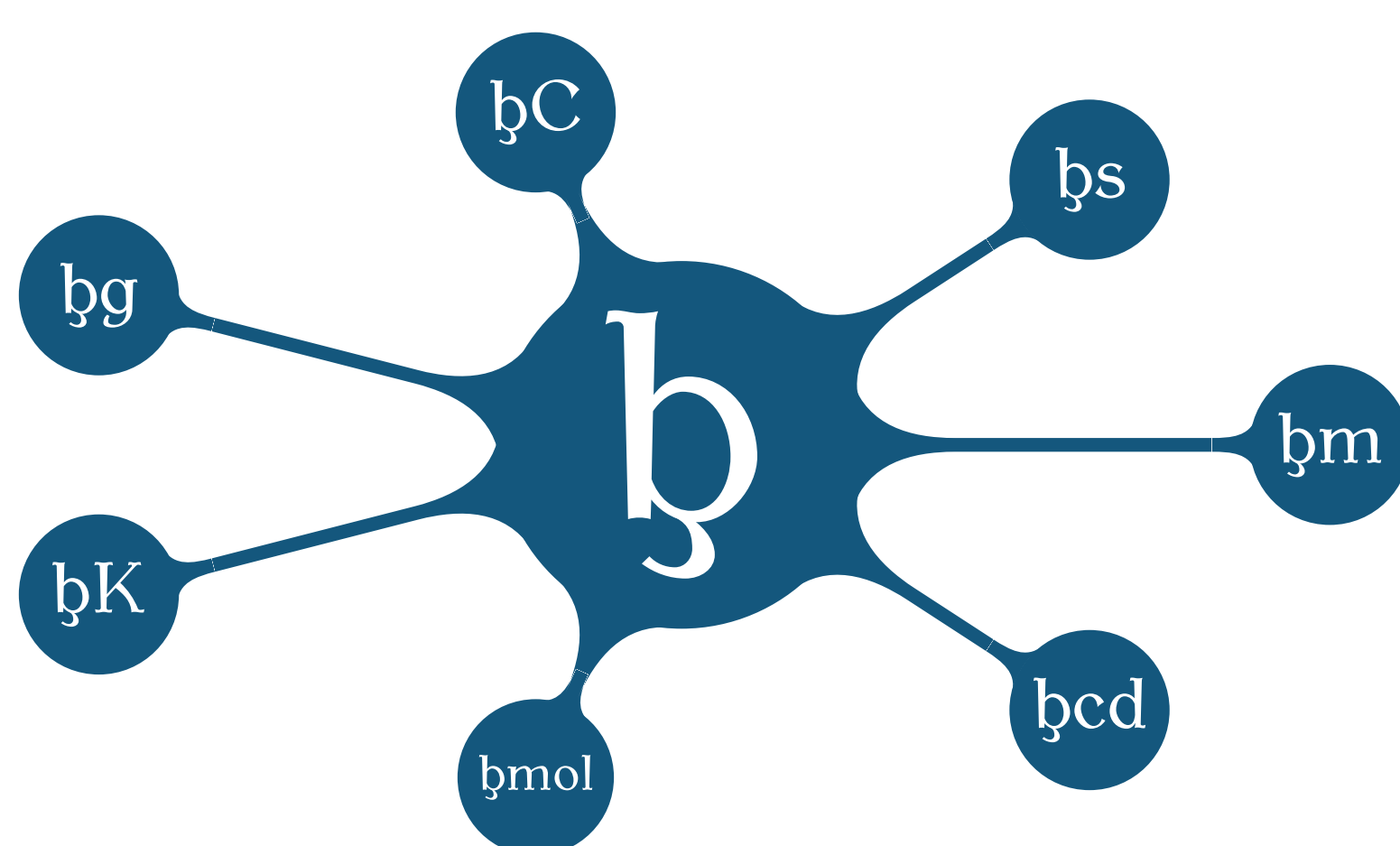
# SYSTÈME BINAIRE D'UNITÉS

A UNIT SYSTEM BASED ON BINARY MULTIPLIERS AND PARAMETERS OF THE UNIVERSE

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## Fundamental units



## Mass

1 b<sub>g</sub> (bigram) =  $2^{24} m_p \approx 1.42635 \text{ g}$ ,  
where  $m_p$  is the Planck mass.

## Length

1 b<sub>m</sub> (bimeter) =  $2^{27-2^3-2^2} \ell_p \approx 1.34273 \text{ m}$ ,  
where  $\ell_p$  is the Planck length.

## Amount of substance

1 b<sub>mol</sub> (bimole) =  $2^{79}$  molecules  
 $\approx 1.0037341 \text{ mol}$ .

## Time

1 b<sub>s</sub> (bisecond) =  $2^{27+2^4} t_p \approx 1.20239 \text{ s}$ ,  
where  $t_p$  is the Planck time.

## Charge

1 b<sub>C</sub> (bicoulomb) =  $2^{26} e \approx 2.95549 \text{ C}$ ,  
where  $e$  is the elementary charge.

## Temperature

1 b<sub>K</sub> (bikelvin) =  $2^9 \times \frac{b}{b_m} \approx 1.10496 \text{ K}$ ,  
where  $b$  is the Wien constant.

One bikelvin is  $2^{-7}$  of the temperature needed for the black body to have maximum of its radiation at wavelength  $2^{-10}$  of bimeter.

## Luminous intensity

1 b<sub>cd</sub> (bicandela) is 431.8 nibm radiation  
with intensity of  $2^{-10} \text{ bW}$  per steradian.  
 $\approx 1.01065 \text{ cd}$

## Binary multipliers

(extension of known ones)

Abbreviation	Name	Quantity	Abbreviation	Name	Quantity
dai	dabi	$2^3$	di	dibi	$2^{-3}$
hi	hebi	$2^7$	ci	cebi	$2^{-7}$
Ki	kibi	$2^{10}$	mi	mibi	$2^{-10}$
Mi	mebi	$2^{20}$	ui	mubi	$2^{-20}$
Gi	gibi	$2^{30}$	ni	nabi	$2^{-30}$
Ti	tebi	$2^{40}$	pi	pibi	$2^{-40}$
Pi	pebi	$2^{50}$	fi	febi	$2^{-50}$
Ei	exbi	$2^{60}$	ai	atbi	$2^{-60}$
Zi	zetbi	$2^{70}$	ai	zebi	$2^{-70}$
Yi	yotbi	$2^{80}$	yi	yocbi	$2^{-80}$

## Derived units

Name	Abbr.	Definition	Value	Name	Abbr.	Definition	Value
bihertz	bHz	$b_s^{-1}$	0.83175 Hz	biminute	bmin	$2^6 b_s$	76.94632 s
binewton	bN	$Kibg \ b_m \ b_s^{-2}$	1.35675 N	bihour	bh	$2^{12} b_s$	4924.56 s
bipascal	bPa	$Kibg \ b_m^{-1} \ b_s^{-2}$	0.75253 Pa	kibigram	Kibg	$2^{10} b_g$	1460.5824 g
bijoule	bJ	$Kibg \ b_m^2 \ b_s^{-2}$	1.82175 J	mibigram	mi <sub>g</sub>	$2^{-10} b_g$	1.39292 mg
biwatt	bW	$Kibg \ b_m^2 \ b_s^{-3}$	1.51523 W	kibimeter	Kib <sub>m</sub>	$2^{10} b_m$	1374.955 m
bivolt	bV	$Kibg \ b_m^2 \ b_s^{-2} \ b_C^{-1}$	0.61639 V	kibimeter <sup>2</sup>	Kib <sub>m</sub> <sup>2</sup>	$Kibm^2$	1.89050 km <sup>2</sup>
bifarad	bF	$Kibg^{-1} \ b_m^{-2} \ b_s^4 \ b_C^2 \ b_s^{-2}$	4.79482 F	cibimeter	ci <sub>m</sub>	$2^{-7} b_m$	1.04900 cm
biohm	bΩ	$Kibg \ b_m^2 \ b_s^{-1} \ b_C^{-2}$	0.25075 Ω	cibimeter <sup>3</sup>	ci <sub>m</sub> <sup>3</sup>		1.10042 cm <sup>3</sup>
bisiemens	bS	$Kibg \ b_m^{-2} \ b_s \ b_C^2$	3.98809 S	cibimeter <sup>3</sup>	ci <sub>m</sub> <sup>3</sup>		1.15435 cm <sup>3</sup>
biweber	bWb	$Kibg \ b_m^2 \ b_C^{-1} \ b_s^{-1}$	0.74108 Wb	mibimeter	mi <sub>m</sub>	$2^{-10} b_g$	0.001311 m
bitesla	bT	$Kibg \ b_s^{-1} \ b_C^{-1}$	0.41104 T	biliter	bl	$dim^3$	4.72820 l
bihenry	bH	$Kibg \ b_m^2 \ b_C^{-2}$	0.30147 H	Kib <sub>m</sub> /b <sub>h</sub>			1.005133 km/h
biampere	bA	$b_C \ b_s^{-1}$	2.45823 A	b <sub>mol</sub> /b <sub>l</sub>			0.21229 mol/l
bilumen	b <sub>lm</sub>	$b_{cd} \ sr$	1 cd sr	b <sub>g</sub> /ci <sub>m</sub> <sup>3</sup>			1.23563 g/cm <sup>3</sup>
bilux	b <sub>lx</sub>	$b_{cd} \ sr \ b_m^{-2}$	0.56056 lx	Kib <sub>g</sub> /b <sub>m</sub> <sup>3</sup>			0.60334 g/cm <sup>3</sup>

Unit	Abbreviation	Quantity	≈ Value
square bimeter	$b_m^2$	area	1.80292 m <sup>2</sup>
cubic bimeter	$b_m^3$	volume	2.42084 m <sup>3</sup>
bimeter / bisecond	$b_m/b_s$	speed, velocity	1.11681 m s <sup>-1</sup>
cubic bimeter / bisecond	$b_m^3/b_s$	volumetric flow	2.01353 m <sup>3</sup> s <sup>-1</sup>
bimeter / square bisecond	$b_m/b_s^2$	acceleration	0.92890 m s <sup>-2</sup>
bimeter / cubic bisecond	$b_m/b_s^3$	jerk, jolt	0.77261 m s <sup>-3</sup>
bimeter / quartic bisecond	$b_m/b_s^4$	snap, jounce	0.64242 m s <sup>-4</sup>
binewton bisecond	$b_N \ b_s$	momentum, impulse	1.63120 kg m s <sup>-1</sup>
binewton bimeter bisecond	$b_N \ b_m \ b_s$	angular momentum	2.19025 kg m <sup>2</sup> s <sup>-1</sup>
binewton nimeter	$b_N \ b_m$	torque, moment of force	1.82175 kg m <sup>2</sup> s <sup>-2</sup>
binewton / bisecond	$b_N/b_s$	yank	1.12847 kg m s <sup>-3</sup>
kibibigram / square bimeter	$Kibg/b_m^2$	area density	0.81012 kg m <sup>-2</sup>
kibibigram / cubic bimeter	$Kibg/b_m^3$	density, mass density	0.60334 kg m <sup>-3</sup>
cubic bimeter / kibigram	$b_m^3/Kibg$	specific volume	1.65745 m <sup>3</sup> kg <sup>-1</sup>
bimole/ cubic bimeter	$b_{mol}/b_m^3$	molarity	0.41462 mol m <sup>-3</sup>
cubic bimeter / bimole	$b_m^3/b_{mol}$	molar volume	2.41183 mol <sup>-1</sup> m <sup>3</sup>
bijoule nisecond	$b_J \ b_s$	action	2.19026 kg m <sup>2</sup> s <sup>-1</sup>
bijoule / bkelvin	$b_J/b_K$	heat capacity, entropy	1.64870 kg m <sup>2</sup> s <sup>-2</sup> K <sup>-1</sup>
bijoule / bkelvin bimole	$b_J/(b_K \ b_{mol})$	molar heat capacity	1.64257 kg m <sup>2</sup> mol <sup>-1</sup> s <sup>-2</sup> K <sup>-1</sup>
bijoule / kibigram bikelvin	$b_J/(Kibg \ b_K)$	specific heat capacity	1.12880 m <sup>2</sup> s <sup>-2</sup> K <sup>-1</sup>
bijoule / bimole	$b_J/b_{mol}$	molar energy	1.81497 kg m <sup>2</sup> mol <sup>-1</sup> s <sup>-2</sup>
bijoule / kibigram	$b_J/Kibg$	specific energy	1.24728 m <sup>2</sup> s <sup>-2</sup>
bijoule / cubic bimeter	$b_J/b_m^3$	energy density	0.75253 kg m <sup>-1</sup> s <sup>-2</sup>
binewton / bimeter	$b_N/b_m$	surface tension, stiffness	1.01044 kg s <sup>-2</sup>
biwatt / square bimeter	$b_W/b_m^2$	heat flux density, irradiance	0.84043 kg s <sup>-3</sup>
biwatt / bimeter bkelvin	$b_W/(b_m \ b_K)$	thermal conductivity	1.02128 kg m s <sup>-3</sup> K <sup>-1</sup>
square bimeter / bisecond	$b_m^2/b_s$	kinematic viscosity	1.49958 m <sup>2</sup> s <sup>-1</sup>
bipascal bisecond	$b_Pa \ b_s$	dynamic viscosity	0.90475 kg m <sup>-1</sup> s <sup>-1</sup>
bicoulomb / square bimeter	$b_C/b_m^2$	electric displacement field	1.63928 s A m <sup>-2</sup>
bicoulomb / cubic bimeter	$b_C/b_m^3$	electric charge density	1.22085 s A m <sup>-3</sup>
bicoulomb / square bimeter bisecond	$b_C/(b_m^2 \ b_s)$	electric current density	1.36347 A m <sup>-2</sup>
bisiemens / bimeter	$b_S/b_m$	electrical conductivity	2.97013 s <sup>3</sup> A <sup>2</sup> kg <sup>-1</sup> m <sup>-3</sup>
bisiemens square bimeter / bimole	$(b_S \ b_m^2)/b_{mol}$	molar conductivity	7.16347 kg <sup>-1</sup> s <sup>3</sup> mol <sup>-1</sup> A <sup>2</sup>
bifarad / bimeter	$b_F/b_m$	permittivity	3.57095 m <sup>-3</sup> kg <sup>-1</sup> s <sup>4</sup> A <sup>2</sup>
bihenry / bimeter	$b_H/b_m$	magnetic permeability	0.22452 kg m s <sup>-2</sup> A <sup>-2</sup>
bivolt / bimeter	$b_V/b_m$	electric field strength	0.45906 m kg s <sup>-3</sup> A <sup>-1</sup>
biampere / bimeter	$b_A/b_m$	magnetic field strength	1.83077 A m <sup>-1</sup>
bicoulomb / kibigram	$b_C/Kibg$	exposure	2.02350 s A kg <sup>-1</sup>
biohm bimeter	$b_\Omega \ b_m$	resistivity	0.33669 m <sup>3</sup> kg s <sup>-3</sup> A <sup>-2</sup>
kibigram / bimeter	$Kibg/b_m$	linear mass density	1.08777 m <sup>-1</sup> kg
bicoulomb / bimeter	$b_C/b_m$	linear charge density	2.20111 m <sup>-1</sup> C
bimole / kibigram	$b_{mol}/Kibg$	molality	0.68721 kg <sup>-1</sup> mol
kibigram / bimole	$Kibg/b_{mol}$	molar mass	1.45515 kg mol <sup>-1</sup>
kibigram / bisecond	$Kibg/b_s$	mass flow rate	1.21484 kg s <sup>-1</sup>
bijoule / bitesla	$b_J/b_T$	magnetic dipole moment	4.43200 m <sup>2</sup> A
biwatt / cubic bimeter	$b_W/b_m^3$	spectral irradiance	0.62591 m <sup>-1</sup> kg s <sup>-3</sup>
bkelvin / biwatt	$b_K/b_W$	thermal resistance	0.72923 m <sup>-2</sup> kg <sup>-1</sup> s <sup>3</sup> K
bikelvin / bimeter	$b_K/b_m$	temperature gradient	0.82292 m <sup>-1</sup> K
square bimeter / bivolt bisecond	$b_m^2/(b_V \ b_s)$	electron mobility	2.43283 kg <sup>-1</sup> s <sup>2</sup> A
bijoule / square bimeter bisecond	$b_J/(b_m^2 \ b_s)$	energy flux density	0.84043 kg s <sup>-3</sup>
biweber / bimeter	$b_Wb/b_m$	magnetic vector potential	0.55192 kg m s <sup>-2</sup> A <sup>-1</sup>
biweber bimeter	$b_Wb \ b_m$	magnetic moment	0.99507 kg m <sup>3</sup> s <sup>-2</sup> A <sup>-1</sup>
bitesla bimeter	$b_T \ b_m$	magnetic rigidity	0.55192 kg m s <sup>-2</sup> A <sup>-1</sup>
bijoule / square bimeter	$b_J/b_m^2$	radiant exposure	1.01044 kg s <sup>-2</sup>
cubic bimeter / bimole bisecond	$b_m^3/(b_{mol} \ b_s)$	catalytic efficiency	2.00604 m <sup>3</sup> s <sup>-1</sup> mol <sup>-1</sup>
kibigram square bimeter	$Kibg \ b_m^2$	moment of inertia	2.63332 m <sup>2</sup> kg
binewton bimeter bisecond / kibigram	$(b_N \ b_m \ b_s)/Kibg$	specific angular momentum	1.49957 m <sup>2</sup> s <sup>-1</sup>
bihertz / bisecond	$b_Hz/b_s$	frequency drift	0.69181 s <sup>-2</sup>
bimeter / bihenry	$b_m/b_H$	magnetic susceptibility	4.45395 m <sup>-1</sup> kg <sup>-1</sup> s <sup>2</sup> A <sup>2</sup>