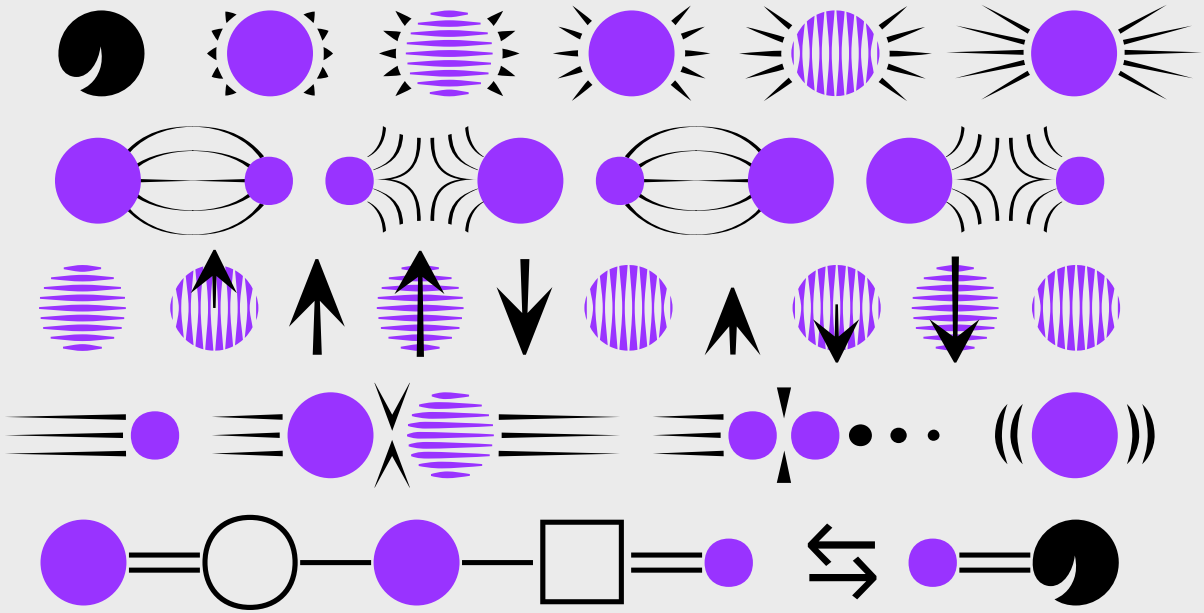
Quantype
User guide

Quantype is a typeface with symbols initially created to accompany a popularisation discourse.

This is a guide to better understant and user this typographic family.

More infos : http://oceanejuvin.fr/quantype/project.html



Quantype glyphset

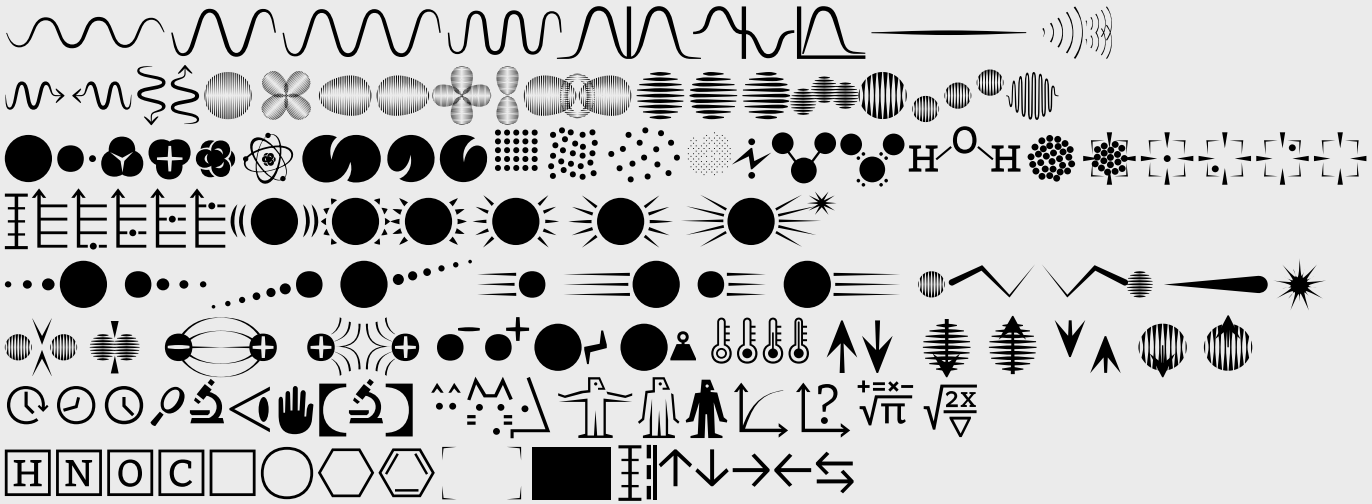
Quantype is a typeface in one weight composed of:

- a standard font set (alphabet, diacritics, punctuation, figures...) with mathematic symbols and signs;
- a symbols font which depict various objects and concepts that are useful to popularise quantum physics.

Quantype ABC

ABCDEFGHIJKLMNOPQRSTUVWXYZ Œ & @ HONCBWZ
abcdefghijklmnopqrstuvxyzàáâäçèéêëìíîïòóôöøùúûüýÿŷœñ
ÀÁÂÄÈÉÊËÇÌÍÎÏŒÒÓÔØÖÙÚÛÜÝŸŶĤ
ΓΨΩ∇∂γνπτυhħiντνμνe
√−1√x√ 0123456789 123456789 $^{123789-}{}_{23456789-e}$ −+ ±×÷<=>
¼½¾⅐⅑⅓⅔⅕⅙⅛/()*[\]!"#%,-./:;?_{|}¡¦«»·−−‘’“”,•…‹›←→↔↕⇆

Qantype Symbols



Typeface family
Quantype ABC

A practical and familiar slab-serif, slightly evoking typewriter or classical Didones that we can often see in equations.

Its discreat shapes make if comfortable to read on screen and on long text, but not too invisible to make small amounts of text like legends or titles visible.

Calligraphic drawing with light contrast.

Smooth serifs.

Big x-height for legibility in small size.

Squared curves to ease screen reading.

Physique Quantique

<([–273,15°

Baseline marked by slab serifs repetition, so eyes can distinguish letters from symbols more easily.

Default tabular figures.

Typeface family

Quantype ABC

Latin alphabet	ABCDEFGHIJKLMNOPQRSTUVWXYZ Œ œ abcdefghijklmnopqrstuvxyz
Diacritics	àáâäçèéêëìíîïòóôöøùúûüýÿŷñ ÀÁÂÄÈÉÊËÇÌÍÎÏŒÒÓÔØÖÙÚÛÜÝŶŸ
Punctuation	«‹›»· • -– _—’“, … .:;,?¿¡!"
Stylised letters for symbolic use	HONCBWZ $\sqrt{-1}\sqrt{x}$ Ĥ hħi ντνμνe ſſ ſſſ
Greek letters used as symbols	ΓΨΩ∇γνπτυ
Figures & mathematical operators	0123456789 123456789 −+±×÷<=> ∂ ∛ ∜ $^{123456789-}$ $_{123456789-}$ % ¼½¾⅐⅑⅓⅔⅕⅙⅛ ⁄ () [\] {}/
Various signs	&@*#¦ ←→↔↕↑↓

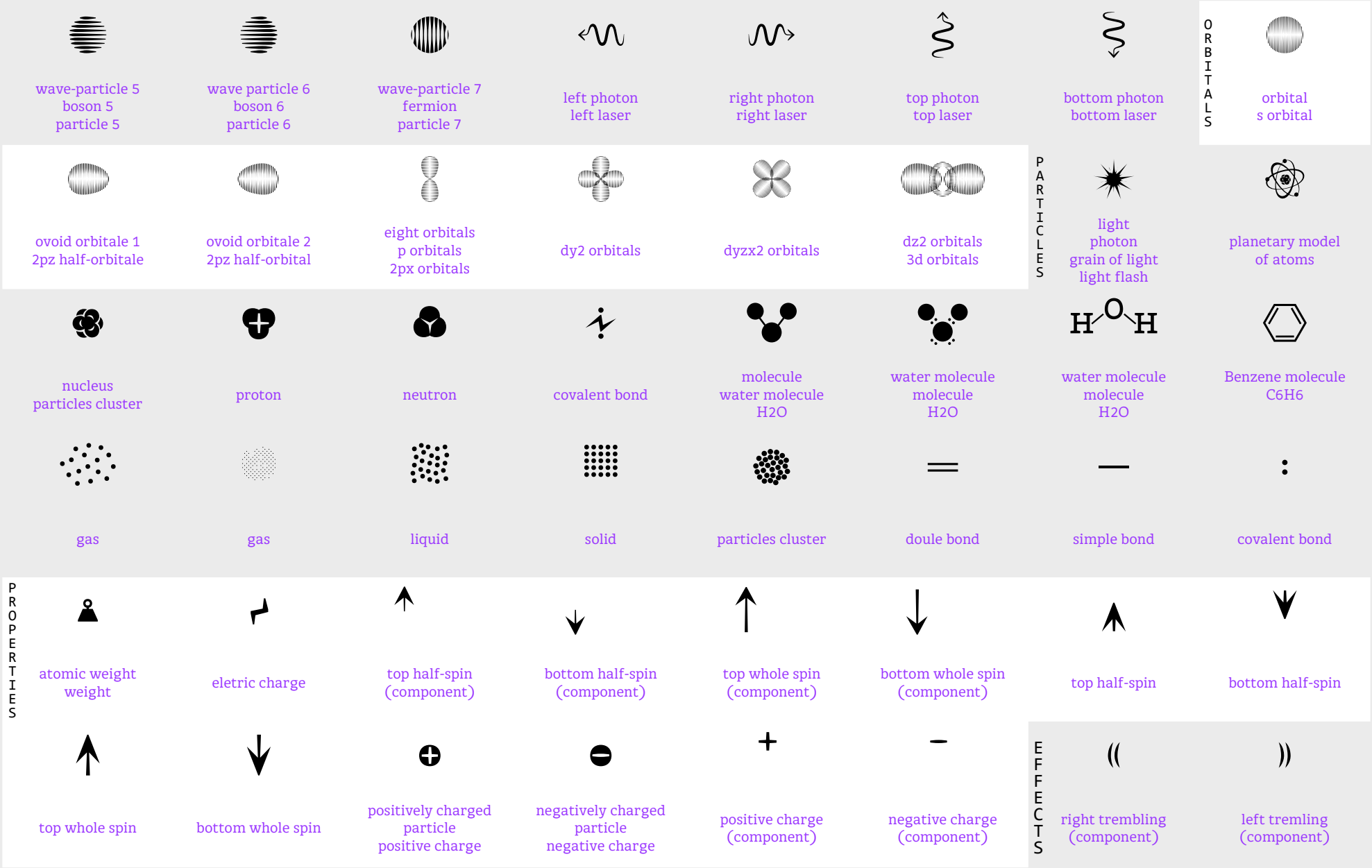
Typeface family
Quantype Symbols

Composites, mixing conventional representations, graphic concepts interpretations, visual metaphores, geometric shapes, they allow different uses and interpretations.

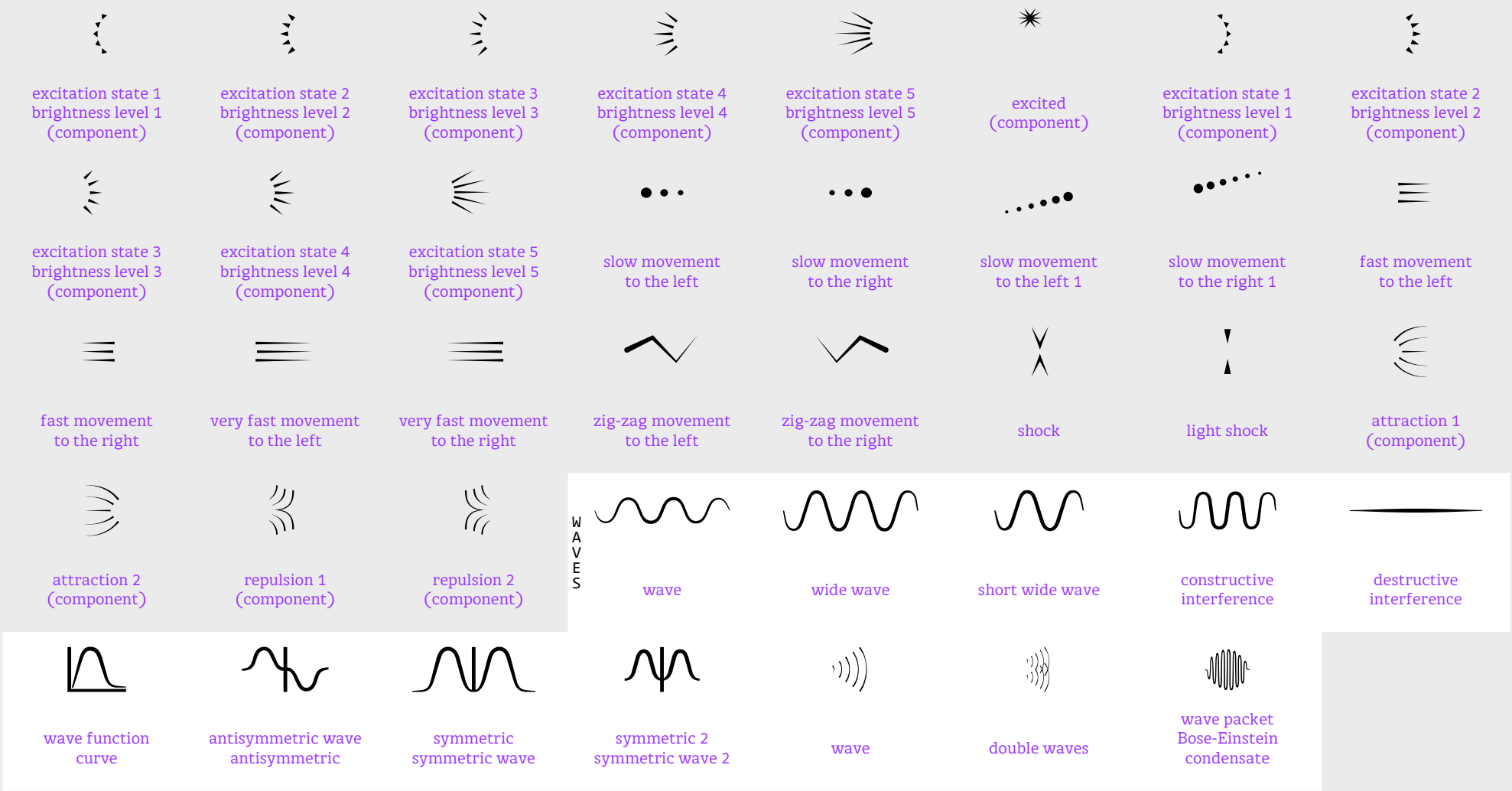
First meanings of symbols

Quantype Symbols								
Names	REALITY	face researcher	human body human scale	human body	eye observator	(Schrödingers) cat	(Schrödingers) little cat	hand stop handling
PHYSICS MARKERS	microscop experiment scientific tool	loup research observation	time passing time duration	time 1	time 2	thermometer hot	thermometer warm	thermometer cold
	thermometer freezing absolute zero	curve (wave) function graphical representation	unknown function graphical projection	equation mathematics	equation	left bracket experiment frame black box edge	right bracket experiment frame black box edge	laser light beam light
scale of measurement	QUANTUM MARKERS	(measurement) frame white void	black box black void	energy levels	level of energy 1	level of energy 2	level of energy 3	level of energy 4
measurement	electron measurement (1)	electron measurement 2	electron measurement 3	PARTICLES	electron 1 particle 1 molecule 1	electron 2 particle 2 molecule 2	electron 3 particle 3 molecule 3	electron 4 particle 4 molecule 4
entangled particle 1	entangled particle 2	two entangled particles	electron 5 particle 5 molecule 5	onde-corpuscule 1 boson 1 particule 1	wave-particle 2 boson 2 particle 2	wave-particle 3 boson 3 particle 3	wave-particle 4 boson 4 particle 4	

First meanings of symbols



First meanings of symbols



Examples of use

Both fonts are created to be typesetted
at the same size.

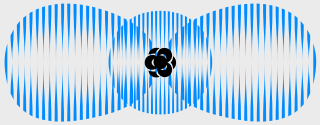
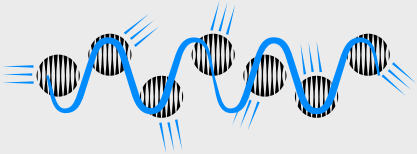
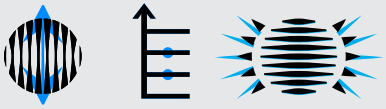
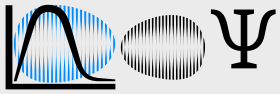
Here is an example of symbols inside a text
that give clues about their meanings.

The Schr⁂dinger's ⁂ doesn't exist. A researcher in physics often speaks in a coded way to describe and understand phenomena that the human eye can't see. As time passing by : →. Inside a solid , a liquid or a gaz , particles • structure themselves differently. ···● Thus they Smove •••···· and interact •• •• in various ways. One particles is more or l ss excited . According to its energy level : . One particle, an à for example, is characterized by ₁₅ , its electrical charge, its shape and its spin . An electron e^- has a neg tive charge : . e^- and γ are the most welknown particles. Orbitals model electrons that orbit around a nucleus. The latter is composed of as many neutrons as protons . Thus the ⊕ and ⊖ charges balance each other out. Indeed, ⊕⊕, ⊖⊖ but ⊕⊖. So $^-$ $^+$. An atom as drawn before the knowledge brought by quantum physics. Some common are : Oxygen and Hydrogen, which make up most of the atmosphere, Carbon and Nitrogen. Different scales nm, ●, •, , from visible to invisible ■ are impacted by quantum physics. A fermion and a boson have different Ψ wave functions : symmetric or antisymmetric . The temperature , and its impact on the state of the particles. From the very cold -273 (the absolute zero) to the very hot . A grain of light is composed of photons . Fermions are rather solitary while bosons are very sociable . The are bound and . A molecule , , H O H , H_2O, is constructed with the help of H—O—H and simple—bonds or double═bonds. The covalent bond is the cement of many molecules, for example to hold H to O in the molecule H_2O. It is a subtle mixture of electrical interactions and the principle of exclusion . The benzene molecule even has its own unicode. Measurement tools or simpler . Different waveforms that form constructive interferences or destructives ——— interferences. To understand all this, the physicist projects «, calculates, models , does experiments and measurements , , , .

13pt
/17pt

Examples of use

Here is an example in which symbols are used to typeset more complex pictures, overlapping ligns of text and using differents colours.

Quantum tunnelling		Atom
	Quantum superposition	
Wave function collapse		Indiscernibility
	Wave function	
Wave-particule duality		Superconductivity
	Quantum entanglement	

Examples of use
Quantype + Bitter Pro

Quantype typeface works well with the different styles of Bitter Pro type family designed by Sol Matas and released under SIL OFL license (free download and use for commercial uses included, with modifying rights).

• Access to fonts: https://github.com/solmatas/BitterPro

Bitter Pro is available in Thin, *Thin Italic*, ExtraLight, *ExtraLight Italic*, Light, *Light Italic*, Regular, *Italic*, Medium, *Medium Italic*, **SemiBold**, ***SemiBold Italic***, **Bold**, ***Bold Italic***, **ExtraBold**, ***ExtraBold Italic***, **Black**, ***Black Italic***.

On peut se la figurer comme une grosse machine. Avant de lancer l'engin pour calculer la fonction d'onde notée Ψ, il faut lui indiquer la masse de l'électron notée m. Il convient ensuite de lui dire tout ce que l'électron va subir. C'est l'énergie potentielle, qu'on note V, qui contient cette information. *On peut y glisser de facon synthétique tout ce que la particule endurera, les chocs avec d'autres particules, la gravité, des champs, des irradiations...* Dans le cas présent, on place dans V le champ électrique de la pile, son intensité, sa forme, son orientation. ħ est une constante qui ne varie jamais. Tout le reste, les symboles, i, ∂/∂t, et le triangle ∇ appelé « nabla » sont des opérations mathématiques qui s'appliquent à la fonction d'onde notée par la lettre grecque Ψ (« psi ») et indiquent comment mener le calcul. Il suffit alors de tourner la manivelle mathématique, et l'équation, à l'image d'un calculateur géant, fournit finalement Ψ et son évolution. *Il est alors non seulement possible de trouver quelle forme prend l'électron, mais aussi son futur, si il avancera ou reculera, si il se contractera ou s'étalera...*

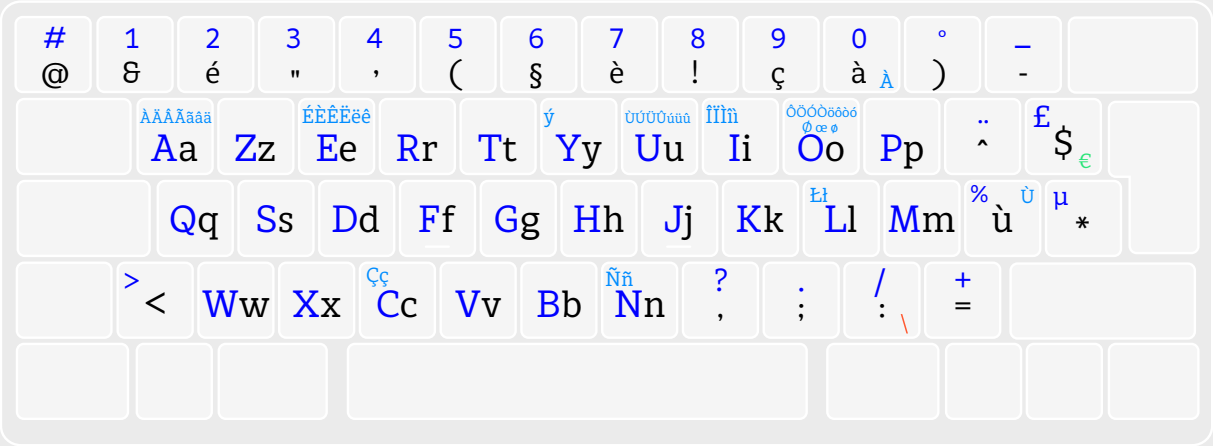
Quantification. Univers discontinu fait de paliers bien séparés, avec possibilité de sauter de l'un à l'autre, mais interdiction absolue de se retrouver entre deux paliers. **Décohérence.** Une particule quantique en contact avec un grand nombre de particules « se reduit » et perd son caractère ondulatoire. **Effet-tunnel.** Une fonction d'onde quantique ne rebondit que partiellement contre une barrière. Une petite partie peut pénétrer de l'autre côté. **Dualité onde-corpuscule.** Toute particule se comporte comme une onde tant qu'on ne la mesure pas. Intrication. **Superposition d'État.** La fonction d'onde d'une particule quantique peut être superposée dans plusieurs états, comme plusieurs notes jouées en meme temps. **Supraconductivité.** Phénomène caractérisé par l'absence de résistance électrique et l'expulsion du champ magnétique à l'intérieur de certains matériaux. **Intrication.** Les particules sont inextricablement entremêlées, de sorte qu'agir sur l'une affecte instantanément toutes les autres. **Indiscernabilité.** Il est impossible de connaître précisément à la fois la vitesse et la position d'une particule quantique.

Le spin est trait de caractère intrinsèque à chaque particule.
Il se comporte comme un petit aimant qui s'oriente selon un pôle négatif ↑↑ ou positif ↓↓.
Sa valeur est quantifiée, soit entière ↑, soit demi-entière ↑.

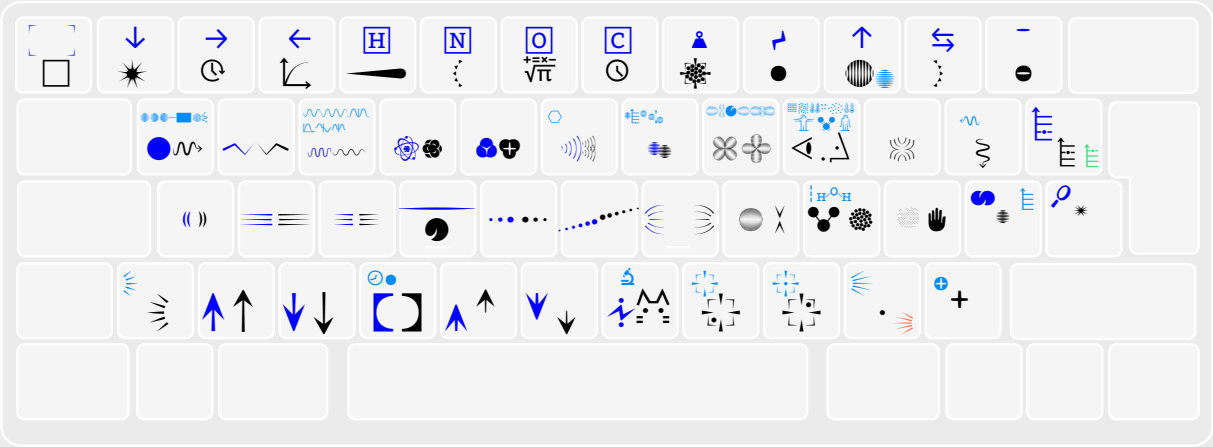
Glyphs access

Correspondances entre symboles et touches d’un clavier Mac

Quantype ABC

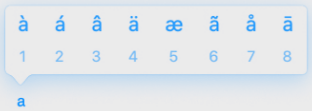


Quantype Symbols



Glyphs access

appui prolongé sur la touche



Glyphs access

Correspondances entre les symboles
de Quantype Symbols et leur accès au clavier

Quantype Symbols							
Accès	e	É	È	E	ê	Ê	ë
Ë	F	Y	y	a	¨	^	ä
K	I	î	Î	i	Ï	ì	À
Â	Ä	u	ù	U	â	à	û
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9	8	ò	ó	Ó	Ò	µ	ñ
W	X	w	x	B	V	v	b
é	è	ç	O	C	c	á	¦
ö	n	o	4	5	6	7	@
m	|	0	1	2	3	°	ü