



activity	average numbers of disintegrations per second during radioactive decay	Radioaktivität
alpha decay	a radioactive process in which a particle is emitted from the nucleus of an atom, decreasing its atomic number by two. Equivalent to a Helium ion.	Alphazerfall
alpha particles	a positively charged particle consisting of two protons and two neutrons, emitted in radioactive decay or nuclear fission; the nucleus of a helium atom (He^{2+}) Symbol: α ${}^4_2\text{He}^{2+}$	Alphateilchen
amu	An atomic mass unit (symbolized AMU or amu) is defined as precisely 1/12 the mass of an atom of carbon-12. The carbon-12 (C-12) atom has six protons and six neutrons in its nucleus.	amu or AMU
atomic number	the number of positive charges or protons in the nucleus of an atom of a given element e.g hydrogen has 1 proton but no neutrons ${}^1_1\text{H}$	Atomnummer
background radiation	low-level radiation at the surface of the Earth that comes from cosmic rays and from small amounts of radioactive materials in rocks and the atmosphere	Hintergrundstrahlung
becquerel	unit for the number of disintegrations per second - Symbol: Bq	Becquerel Bq
beta decay	A nuclear reaction in which a neutron changes into a proton and into an electron, and the atoms emits a beta particle, which is the electron. It increases the atomic number of the atom without changing the mass.	Betazerfall
beta particles	an electron emitted from an atomic nucleus in a certain type of radioactive decay. Symbol: β ,	Betateilchen
carbon dating	Radiocarbon dating is a method for determining the age of an object containing organic material by using the properties of radiocarbon, a radioactive isotope of carbon.	Kohlenstoffdatierung
cloud chamber	an apparatus for determining the movements of charged particles, consisting of a chamber containing a supersaturated mixture of gas and vapour, the vapour condensing around ions created by the particle in its passing, thereby revealing the path of the particle	Nebelkammer
daughter nucleus	nucleus formed after radioactive decay	Tochterkern
decay products	nucleus (or nuclei) formed after radioactive decay and any emitted particles	Zerfallsprodukt
electron	a stable elementary particle present in all atoms, orbiting the nucleus in numbers equal to the atomic number of the element in the neutral atom Symbol: e^-	Elektron
electron shell	a grouping of electrons surrounding the nucleus of an atom; the chemical properties of an atom are determined by the outermost electron shell	Elektronenschale
element	one of a class of substances that cannot be separated into simpler substances by chemical means. Has a unique atomic number (proton number).	Element
fission	the action of dividing or splitting something into two or more parts	Aufspaltung
Fusion	is a reaction in which two or more atomic nuclei are combined to form one or more different atomic nuclei and subatomic particles (neutrons or protons)	Fusion
gamma emission	electromagnetic emission, neither the atomic number nor the mass number is changed	Gammastrahlung

gamma rays	electromagnetic radiation emitted from the nucleus of an atom by radioactive decay	Gammastrahlen
Geiger-Müller Tube	a tube functioning as an ionization chamber within a Geiger counter	Geiger-Müller-Rohr
half-life	the time required for one half the atoms of a given amount of a radioactive substance to disintegrate	Halbwertszeit
ion	an electrically charged atom or group of atoms formed by the loss or gain of one or more electrons e.g. a calcium _____ = Ca ²⁺ , a chlorine _____ = Cl ⁻	Ion
ionizing radiation	any radiation, as a stream of alpha particles (α) or x-rays, that produces ionization as it passes through a medium	Ionisationsstrahlung
isotope	any of two or more forms of a chemical element, having the same number of protons in the nucleus, or the same atomic number, but having different numbers of neutrons in the nucleus, or different atomic weights (nucleon number)	Isotop
mass number	the integer nearest in value to the atomic weight of an atom and equal to the number of nucleons (neutrons + protons) in the nucleus of the atom	Massenzahl
neutron	an elementary particle having no charge, mass slightly greater than that of a proton	Neutron
nuclear radiation	radiation in the form of elementary particles emitted by an atomic nucleus, as alpha or beta particles or gamma rays	Kernstrahlung
nucleon number	another name for mass number = protons + neutrons	Nukleonenzahl
nucleon	A proton or a neutron, especially as part of an atomic nucleus	Nukleonen
nucleus	the positively charged mass within an atom, composed of neutrons and protons, and possessing most of the mass but occupying only a small fraction of the volume of the atom	Atomkern
nuclide	a species of atom characterized by its atomic number and its mass number also known as an isotope	Nuklid
parent nucleus	original nucleus before radioactive decay	Mutterkern
proton	a positively charged elementary particle that is a fundamental constituent of all atomic nuclei	Proton
proton number	another name for atomic number	Protonenzahl
radioactive	a descriptive term for a material made up of atoms in which radioactivity occurs	strahlend
radioactive decay	disintegration of a nucleus that occurs spontaneously or as a result of electron capture. One or more different nuclei are formed and usually particles and gamma rays are emitted	radioaktiver Zerfall
strong nuclear force	an interaction between elementary particles responsible for the forces between nucleons in the nucleus. It operates at distances less than about 10 ⁻¹⁵ metres, and is about a hundred times more powerful than the electromagnetic interaction	Starke Wechselwirkung, starke Kernkraft
valency	the number of chemical bonds the atoms of a certain element can form.	Wertigkeit