

1. **accretion** the process of dust grain colliding and coalescing; used to help explain the formation of the sun and planets
2. **alpha particle** a nucleus of helium-4 emitted from a nucleus of an atom undergoing radioactive decay
3. **astronomical units** the average distance from the earth to the sun; equal to 1.5×10^{11}
4. **atmosphere** the layer of gas surrounding a planet
5. **atom** the smallest part of an element that has all the properties of the element
6. **beta particle** an electron emitted from a radioactive nucleus
7. **big bang** an explosion which is postulated to have begun the expansion of the universe approximately 15 billion years ago
8. **black body** an idealised body which absorbs all radiation that falls on it according to Planck's law
9. **black body radiation** radiation emitted by a black body that obeys Planck's law
10. **black hole** a star which has collapsed under its own gravitation, to such an extent that its gravitational field is so intense that even light cannot escape from its surface
11. **brightness** the intensity of light or other radiation emitted or received from a celestial body
12. **carbon cycle** a chain of nuclear fusion reactions by which energy may be generated in stars
13. **cluster** a group of stars or galaxies whose members are sufficiently close to each other to be physically associated
14. **continuous spectrum** a spectrum that shows a complete spread of colours from red to violet
15. **cosmology** the study of the organisation, structure and evolution of the universe
16. **degenerate matter** matter in a highly dense form that can exert a pressure, as a result of certain quantum-mechanical effects; this pressure stabilises a white dwarf against the gravitational force
17. **Doppler effect** the apparent change in frequency (or wavelength) when there is relative motion between the source of waves and an observer; in astronomy, a star receding from us would experience a red shift in its spectrum; the Doppler effect can be used to determine distances to galaxies and the presence of spectroscopic binaries
18. **fusion** the process by which light nuclei join together to produce a heavier nucleus
19. **galaxy** a group of stars, dust and gas bound together gravitationally; galaxies typically have billions of stars
20. **gamma** a high-energy photon emitted from a radioactive nucleus