Fusion and stars

International Baccalaureate · IB Diploma · Physics · SL · Vocabulary in context

Word	Example
gas pressure and radiation pressure	Inside a star, **gas pressure and radiation pressure** push out against gravity.
equilibrium /ˌiːkwɪˈlɪbrɪəm/	The book is in **equilibrium** because the forces balance.
nuclear fusion /ˈnjuːklɪə ˈfjuːʒn/	**Nuclear fusion** powers the Sun.
proton–proton chain	The **proton–proton chain** turns hydrogen into helium in the Sun.
positron /ˈpɒzɪtrɒn/	A **positron** is like an electron with a positive charge.
neutrino /njuːˈtriːnəʊ/	A **neutrino** has almost no mass.
Coulomb barrier	The **Coulomb barrier** pushes two protons apart.
quantum tunnelling	**Quantum tunnelling** lets protons fuse in the Sun.
astronomical unit	One **astronomical unit** is the distance from the Earth to the Sun.
light year	One **light year** is about 9.5×10^{15} m. 9.5×10^{15} m
parsec /ˈpɑːsek/	The nearest star is about 1.3 **parsec**s away. 1.3
stellar parallax	**Stellar parallax** is used to find the distance to nearby stars.
luminosity /ˌluːmɪˈnɒsɪti/	The **luminosity** of a star is its total power.

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apparent brightness	A nearby star has a large **apparent brightness**.
Hertzsprung–Russell diagram /ˈhɜːtssprʌŋ ˈrʌsl ˈdaɪəgræm/	A **Hertzsprung–Russell diagram** plots brightness against temperature.
main sequence /meɪn ˈsiːkwəns/	The Sun is a **main sequence** star.
red giant /red ˈdʒaɪənt/	The Sun will become a **red giant**.
supergiant	Betelgeuse is a **supergiant**.
white dwarf /waɪt dwɔːf/	A **white dwarf** is about the size of the Earth.
instability strip	Stars in the **instability strip** grow brighter and dimmer.
nebula /ˈnebjʊlə/	New stars form inside a **nebula**.
protostar /ˈprəʊtəʊstɑː/	A **protostar** is a young star that is still forming.
planetary nebula	A **planetary nebula** is a shell of gas around a dying star.
supernova /ˌsuːpəˈnəʊvə/	A **supernova** can be brighter than a whole galaxy.
neutron star /ˈnjuːtrɒn stɑː/	A **neutron star** is very small and very dense.
black hole /blæk həʊl/	Not even light can escape from a **black hole**.