Nuclear Fusion

Harnessing fusion on earth would provide sustainable energy on a nearly unlimited scale to supply the needs of a growing world population

Fusion powers the sun and all the stars of the universe. Harnessing fusion on earth would provide sustainable energy on a nearly unlimited scale to supply the needs of a growing world population. Fusion energy is safe, has no difficult waste issues and is climate friendly.

Why haven't we got fusion yet?

Despite its huge potential, fusion energy is a tough challenge. After many years of research and experiments, the international scientific community is now building ITER which will demonstrate the scientific and technological feasibility of~~to show that~~ fusion on Earth as a sustainable energy source~~is possible at an industrial scale~~.

ITER will be the largest tokamak ever built. A tokamak is a donut-shaped "magnetic bottle" in which fusion takes place. ITER is mostly modelled on the Joint European Torus (JET) JET is currently the world's largest tokamak and holds many scientific records, but these will be surpassed by ITER.

ITER will be the first experiment to generate up to 500 million watts (MW)~~produce significant quantities~~ of fusion power~~energy, considerably more than required to operate the machine~~. Following ITER, the DEMO project will pave the way for commercial fusion electricity.