

The Black Hole

A storage engine provided by MySQL data 40bc6f47eb Blackhole server, a DNS server that handles reverse lookups of invalid IP ranges 40bc6f47eb More fanciful depictions of black holes that do... 40bc6f47eb

Stellar black hole A stellar black hole (or stellar-mass black hole) is a black hole formed by the gravitational collapse of a star. They can be the remnants of supernova explosions, but other formation mechanisms may operate. They have masses ranging from about A stellar black hole (or stellar-mass black hole) is a black hole formed by the gravitational collapse of a star. They have masses ranging from about five to several tens of solar masses 40bc6f47eb

The gravitational collapse of a star is inevitable at the end of the life of a massive star, when all stellar energy sources are exhausted. If the mass of the collapsing part of the star is below the Chandrasekhar limit, a white dwarf results. If the mass is higher but below the Tolman–Oppenheimer–Volkoff (TOV) limit for neutron-degenerate matter, the end product is a neutron star. If the collapsing star has a mass exceeding the TOV limit, the crush will continue until a black hole is formed. These limits for the formation of compact stars are approximate and may vary depending on the chemical composition and spin of the star. 40bc6f47eb == Types of black holes == 40bc6f47eb Black hole or blackhole may also refer to: 40bc6f47eb There is no known way to verify black hole thermodynamics; it is the most widely accepted physical model that combines general relativity, quantum field theory, and thermodynamics, though Hawking's area law has already been tested by analyzing gravitational waves. 40bc6f47eb

Rotating black hole A rotating black hole is a black hole that possesses angular momentum. All currently known celestial objects, including planets, stars (Sun), galaxies A rotating black hole is a black hole that possesses angular momentum. All currently known celestial objects, including planets, stars (Sun), galaxies, and black holes, spin about one of their axes 40bc6f47eb

Supermassive black hole A supermassive black hole (SMBH or sometimes SBH) is the largest type of black hole, with its mass being on the order of hundreds of thousands, or millions A supermassive black hole (SMBH or sometimes SBH) is the largest type of black hole, with its mass being on the order of hundreds of thousands, or millions to billions, of times the mass of the Sun ($M_{\odot}$). Observational evidence indicates that almost every large galaxy has a supermassive black hole at its center. For example, the Milky Way galaxy has a supermassive black hole at its center, corresponding to the radio source Sagittarius A*. Accretion of interstellar gas onto supermassive black holes is the process responsible for powering active galactic nuclei (AGNs) and quasars. Black holes are a class of astronomical objects that have undergone gravitational collapse, leaving behind spheroidal regions of space that nothing, not even light, can escape 40bc6f47eb

Black hole thermodynamics The equivalence is developed by replacing entropy with black hole horizon area and replacing temperature with black hole horizon surface gravity. In physics, black hole thermodynamics is a set of physical relationships between the properties of black holes that stands in direct relationship to classical In physics, black hole thermodynamics is a set of physical relationships between the properties of black holes that stands in direct relationship to classical laws of thermodynamics. Having temperature implies that a black hole must emit radiation, that is, Hawking radiation 40bc6f47eb

Objects whose gravitational fields are too strong for light to escape were first considered in the 18th century. In 1916, the first solution of general relativity that would characterise a black hole was found. By the late 1950s, this solution began to be interpreted physically as a region of space from which nothing can escape. Black holes were long considered a mathematical curiosity; it was not until the 1960s that theoretical work showed they were a generic prediction of general relativity. The first widely accepted black hole was Cygnus X-1, an x-ray source proposed as a black hole... 40bc6f47eb == History == 40bc6f47eb

Micro black hole The concept that black holes may exist that are smaller than stellar mass was introduced in 1971 by Stephen Hawking. Micro black holes, also known as mini black holes and quantum mechanical black holes, are hypothetical tiny ($\ll 1 M_{\odot}$) black holes, for which quantum mechanical Micro black holes, also known as mini black holes and quantum mechanical black holes, are hypothetical tiny ($<1 M_{\odot}$) black holes, for which quantum mechanical effects play an important role 40bc6f47eb

Supermassive black holes are classically defined as black holes with a mass above 100,000 (10⁵) solar masses ($M_{\odot}$); some have masses of several billion $M_{\odot}$. Supermassive black holes have physical properties... 40bc6f47eb In 1972, Jacob Bekenstein conjectured that black holes should have an entropy proportional to the area of the event horizon, where by the same year, he proposed the no-hair theorem. In 1973 Bekenstein heuristically suggested 40bc6f47eb The information paradox appears when one considers a process in which a black hole is formed through a physical process and then evaporates away entirely through Hawking radiation. Hawking's calculation suggests that the final state of radiation would retain information only about the total mass, electric charge and angular momentum of the initial state. Since many different states can have the same mass, charge and angular momentum, this suggests that... 40bc6f47eb By the no-hair theorem, a black hole can only have three fundamental properties: mass, electric charge, and angular momentum. The angular momentum of a stellar black hole is due to the conservation of angular momentum of the star or objects that produced it. 40bc6f47eb

Black hole information paradox He also argued that the detailed form of the radiation would be independent of the initial state of the black hole, and depend only on its mass, electric charge and angular momentum. The theory of general relativity predicts the existence of black holes that are regions of spacetime from which nothing—not even light—can escape. The black hole information paradox is an unsolved problem in physics and a paradox that appears when the predictions of quantum mechanics and general relativity The black hole information paradox is an unsolved problem in physics and a paradox that appears when the predictions of quantum mechanics and general relativity are combined. In the 1970s, Stephen Hawking applied the semiclassical approach of quantum field theory in curved spacetime to such systems and found that an isolated black hole would emit a form of radiation (now called Hawking radiation in his honor) 40bc6f47eb

Black hole (disambiguation) A black hole is a region of extreme gravitational pull. Black hole or blackhole may also refer to: Black hole (networking), in computer networking, a A black hole is a region of extreme gravitational pull 40bc6f47eb

Some hypotheses involving additional space dimensions predict that micro black holes could be formed at energies as low as the teraelectronvolt (TeV) range, which are available in particle accelerators such as the Large Hadron Collider. Popular concerns have then been raised over end-of-the-world scenarios (see Safety of particle collisions at the Large Hadron Collider). However, such quantum black holes would instantly evaporate, either totally or leaving only a very weakly interacting residue. Beside the theoretical arguments, cosmic rays hitting the Earth do not produce any... 40bc6f47eb There are four known, exact, black hole solutions to the Einstein field equations, which describe gravity in general relativity. Two of those rotate: the Kerr and Kerr–Newman black holes. It is generally believed that every black hole decays rapidly to a stable black hole; and, by the no-hair theorem, that (except for quantum fluctuations) stable black holes can be completely described at any moment in time by these 11 numbers: 40bc6f47eb Two supermassive black holes have been directly imaged by the Event Horizon Telescope; these are Sagittarius A*, at the center of the Milky Way, and the black hole at the center of Messier 87, a giant elliptical galaxy. 40bc6f47eb Black hole (networking), in computer networking, a place where traffic is silently discarded 40bc6f47eb The concept of black holes became popular in science and fiction alike in the 1960s. Authors quickly seized upon the relativistic effect of gravitational time dilation, whereby time passes more slowly closer to a black hole due to its immense gravitational field. Black holes also became a popular means of space travel in science fiction, especially when the notion of wormholes emerged as a relatively plausible way to achieve faster-than-light travel. In this concept, a black hole is connected to its theoretical opposite, a so-called white hole, and as such acts as a gateway to another point in space which might be very distant from the point of entry. More exotically, the point of emergence is occasionally portrayed as another point in time—thus enabling time travel—or even an entirely different universe. 40bc6f47eb

Black holes in fiction pulp era of science fiction, before the term black hole was coined. A common portrayal at the time was of black holes as hazards to spacefarers, a motif that has also recurred in later works. A common portrayal at the time was of black holes as hazards to spacefarers, a motif Black holes, objects whose gravity is so strong that nothing—including light—can escape them, have been depicted in fiction since at least the pulp era of science fiction, before the term black hole was coined 40bc6f47eb

== Description == 40bc6f47eb The maximum... 40bc6f47eb

Black Hole of Calcutta 3 m × 5. John Zephaniah Holwell, one of the British prisoners and an employee of the East India Company said that, after the fall of Fort William, the surviving British soldiers, Indian sepoy, and Indian civilians were imprisoned overnight in conditions so cramped that many people died from suffocation and heat exhaustion, and that 123 of 146 prisoners of war imprisoned there died. 5 m), in which troops of Siraj-ud-Daulah, the Nawab The Black Hole of Calcutta was a dungeon in Fort William, Calcutta, measuring 14 by 18 feet (4. 3 m × 5. The Black Hole of Calcutta was a dungeon in Fort William, Calcutta, measuring 14 by 18 feet (4. 5 m), in which troops of Siraj-ud-Daulah, the Nawab of Bengal, held British prisoners of war on the night of 20 June 1756 40bc6f47eb

== Computing == 40bc6f47eb == Background == 40bc6f47eb

Black hole gravitation as the curvature of spacetime, predicts that any sufficiently compact mass will form a black hole. General relativity also predicts that every black hole should have a central singularity, where the curvature of spacetime is infinite. In general relativity, crossing a black hole's event horizon traps an object inside but produces no locally detectable change. Albert Einstein's theory of general relativity, which describes gravitation as the curvature of spacetime, predicts that any sufficiently compact mass will form a black hole. The boundary of no escape is called the event horizon. The boundary of no escape is called the event horizon A black hole is an astronomical body so compact that its gravity prevents anything, including light, from escaping 40bc6f47eb

== Properties == 40bc6f47eb It is possible that such black holes were created in the high-density environment of the early universe (or Big Bang), or possibly through subsequent phase transitions (referred to as primordial black holes). They might be possible to observe through the particles they are expected to emit by Hawking radiation. 40bc6f47eb

https://mobile.expo-x.com/-d/ppt/dl?TEXT=manual_matthew-mench_solution.pdf
<https://mobile.expo-x.com/+b/pub/goto?MD=manual-de-atlantic-vw.pdf>
https://mobile.expo-x.com/@b/edu/data?BOOK=oxford-handbook_of_clinical_medicine-9e-and_oxford-assess_and_progress_clinical_medicine_2e-pack-oxford-medical_handbooks.pdf
https://mobile.expo-x.com/-a/ref/mirror?BOOK=social_skills-the_social_skills-blueprint-become_a_master-of-communication-body-language-charisma-charm-how_to-talk_to_anyone_connect_instantly_self-esteem_eye_contact_alpha_male.pdf
[https://mobile.expo-x.com/\\$x/chap/mirror?PLAY=aprilia-atlantic-500_2003-repair_service_manual.pdf](https://mobile.expo-x.com/$x/chap/mirror?PLAY=aprilia-atlantic-500_2003-repair_service_manual.pdf)
https://mobile.expo-x.com/^b/ppt/data?DOC=suzuki_60hp_4_stroke_outboard-motor_manual.pdf
https://mobile.expo-x.com/^t/lib/find?DOC=new-commentary_on_the_code-of-canon-law.pdf
[https://mobile.expo-x.com/\\$r/course/goto?DOC=ford-explorer_factory_repair_manual.pdf](https://mobile.expo-x.com/$r/course/goto?DOC=ford-explorer_factory_repair_manual.pdf)
https://mobile.expo-x.com/+e/ebook/go?PAGE=chemistry_guided_reading_and_study_workbook_chapter_14-answers.pdf
https://mobile.expo-x.com/-m/ppt/exe?CHAPTER=means_of_communication-between-intermediate-places_and_stations-also_use-of-the_telephone_especially_on-lines-of-small-traffic-a_paper_read_before_june_1892_question-xviii_section_b.pdf
https://mobile.expo-x.com/+q/slide/list?EBOOK=evernote_gtd_how_to.pdf