DIMENSIONAL BASIC

(db)

Original explanation for secondary school students

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What if everything in the universe is ultimately made of just one kind of immeasurably small particle?

Also known as: "How I learned to understand db theory."

www.dbphysics.com

www.darkmatterparticle.com

TAKEAWAY

What makes this theory worth your time to read?

It is the completely new knowledge that develops from db theory:

- You could use it to develop artificial atoms
- Create unlimited energy from light particles made of dbs
- Store an entire film in one analogue bit
- And read about even more unique ideas

And you will know how the microcosm truly works. (Something no school teaches you - at least, not yet.)

READING GUIDE
This article explains step by step what db theory proposes. You do not need any previous knowledge of quantum mechanics. Examples, illustrations and questions guide you through the reasoning behind the theory.

CONTENTS

Click a chapter to go straight to it.

1 The smallest building block imaginable
2 Quantum mechanics and db theory
3 How can you picture a single db?
4 What happens between two dbs?
5 Two dbs form a particle of light
6 Relativity: gravity and time
7 The boundary of what we can observe
8 The uncertainty principle according to db theory
9 Artificial atoms and new materials
10 Does light have mass?
11 Making spatial curvature visible
12 Gravity is spatial curvature
13 The db formula
14 Think further: questions about the theory
15 Explore db theory yourself

How to read this article

You do not always have to read chapters 1 through 15 in order. Choose the route that suits what you want to discover.

Choose a short route:

Understanding db theory	Chapters 1, 2, 3, 4, 5, 6, 7 and 8
Critical comparison	Chapters 2, 8, 10, 13 and 14
Future visions and design	Chapters 9 and 15

Reading codes

A green label above a block of text shows what kind of text you are about to read.

ESTABLISHED PHYSICS	An explanation that is widely used in current physics and supported by measurements.
DB THEORY	An assumption or explanation that belongs specifically to the db model.
STILL TO BE INVESTIGATED	A question, prediction or claim that requires a clear test.

The labels mainly help you distinguish between theory, established knowledge and research questions.

Key terms

These words appear several times. The explanations below have deliberately been kept short.

Assumption - A starting point used for further reasoning. An assumption can be tested later.	**Model -** A simplified representation used to understand, calculate or predict something.
db or zero point - The smallest imaginary point particle within db theory, with no measurable dimensions.	**Spatial curvature -** The idea that space and time can influence the movement of matter and light.
Photon - A particle of light: the smallest packet of electromagnetic radiation.	**Quantum mechanics -** The physical theory that describes the behaviour of very small particles.
Quark - An elementary particle. In established physics, protons and neutrons consist of quarks.	**Entanglement -** A quantum connection in which the measurement results of particles are strongly linked.
Dark matter - The name for invisible matter whose gravitational effects are measured in the universe.	**Observation boundary -** The boundary below which a measurement does not provide enough information to see something directly.
Gravitational redshift - Light is measured at a lower frequency when it is in a strong gravitational field.	**Event horizon -** The boundary around a black hole beyond which light can no longer escape.

Tip: Unsure about a word while reading? Go back to this list first.

1. The smallest building block imaginable

Start small. Not with an atom, not with an electron, but with something that, according to db theory, is even more fundamental.

READING CODE · DB THEORY

Db theory calls the smallest particle that exists a dimensional basic, abbreviated to db.

According to the theory, a db is so small that it has no measurable length, width or height. Even with the most powerful microscope imaginable, you could not see it directly. Yet dbs are present everywhere: in the air you breathe, in the chewing gum you chew, in the Sun, the Moon and the stars, and even in the black emptiness of space that at first appears to contain nothing.

1st CORE IDEA

According to the theory, a db has only one basic property: at the particle's exact location, spatial curvature is infinite and time stands still. The farther you move away from that location, the weaker the curvature becomes and the faster time passes.

Formula (0), which appears again later in this article, describes how the curvature of space and time around a single db decreases as the distance increases.

Then something important happens: as soon as one db comes close to another db, they attract each other (they fall towards each other). From this simple starting point, the theory tries to explain increasingly large structures.

The basic property of the db particle

According to db theory, the smallest particle is a zero point: a point with no length, width or height. At that exact point, the curvature of space would be infinite. The farther you move away from the zero point, the smaller the curvature becomes. In its simplest form, the theory writes this as: curvature = 1 / distance.

The theory assumes that infinitely many of these zero points exist in an infinite, three-dimensional space. They are always moving and have many different speeds relative to one another.

According to the theory, things become interesting when two zero points enter each other's curvature. To an observer at a distance, they would then spiral around each other and together form a gravitational pair.

Within db theory, such a pair forms an electromagnetic particle, or electromagnetic wave. From that moment on, it can be viewed as a two-part particle pair. With this idea, the theory tries to explain why a photon can behave both as a particle and as a wave.

THOUGHT QUESTION

Can you imagine something that has no dimensions but still influences the space around it?

2. Quantum mechanics and db theory

Does physics mainly study what particles do, or also why they do it? A car helps show the difference.

The car of quantum mechanics

Imagine a car. You watch how it moves: sometimes fast, sometimes slowly, sometimes it stands still and sometimes it reverses. You can track exactly where the car goes and how its motion changes.

READING CODE · ESTABLISHED PHYSICS

In this comparison, quantum mechanics does something similar. It describes how very small particles, such as electrons, photons, protons and neutrons, behave. Mathematical rules are used to calculate which movements and reactions are possible.

Under the bonnet with db theory

READING CODE · DB THEORY

In the same comparison, db theory does not only want to watch the moving car. It opens the bonnet and asks: what is underneath? What allows the car to move left, right, forwards or backwards?

You could look at the outside of a car for thousands of years without discovering that it contains an engine. In the same way, db theory aims to add an extra layer of explanation beneath the behaviour already described by quantum mechanics.

TWO TYPES OF QUESTIONS

Quantum mechanics: What does a particle do, where can it end up and how does it react to other particles?

Db theory: What underlying mechanism causes the particle to do exactly that?

In quantum mechanics, you cannot determine both the position and the speed of a particle with unlimited precision. Db theory proposes that an underlying model could, in principle, calculate an exact position and an exact speed at the same time.

The aim is not to discard the measurements and mathematical results of quantum mechanics. Db theory presents itself as an addition: it wants to explain why the measured patterns arise.

Questions for which db theory seeks its own answer

READING CODE · STILL TO BE INVESTIGATED

Existing physics already describes these phenomena. Db theory asks whether one type of zero-point particle can provide an additional, underlying explanation for them.

1. Dark matter. Why does there seem to be more gravity around galaxies and clusters than visible matter can explain? According to db theory, a single unbound db particle is itself dark matter.

2. Entanglement. Measurements of two quantum particles can be strongly linked, even across great distances. This does not make it possible to send useful information faster than light. What underlying connection does db theory propose?

3. Light and curvature. A photon has no rest mass, but it still follows the curved spacetime around a massive object. Db theory also seeks an explanation for this at particle level.

4. Redshift. Light emerging from a strong gravitational field is measured as redder from farther away. Near the event horizon of a black hole, this theoretically becomes extreme. How does the db theory explain this?

3. How can you picture a single db?

From a football to a pinhead, and then even smaller.

Imagine that Earth is the size of a football. Then make that football smaller and smaller until it is only the size of a pinhead. Now imagine that this pinhead still has the same gravity as the entire Earth.

Take it one step further: imagine that this tiny pinhead has as much gravity as the Sun. Then shrink it into such a tiny point that it no longer has measurable length, width or height. The theory calls that point a db.

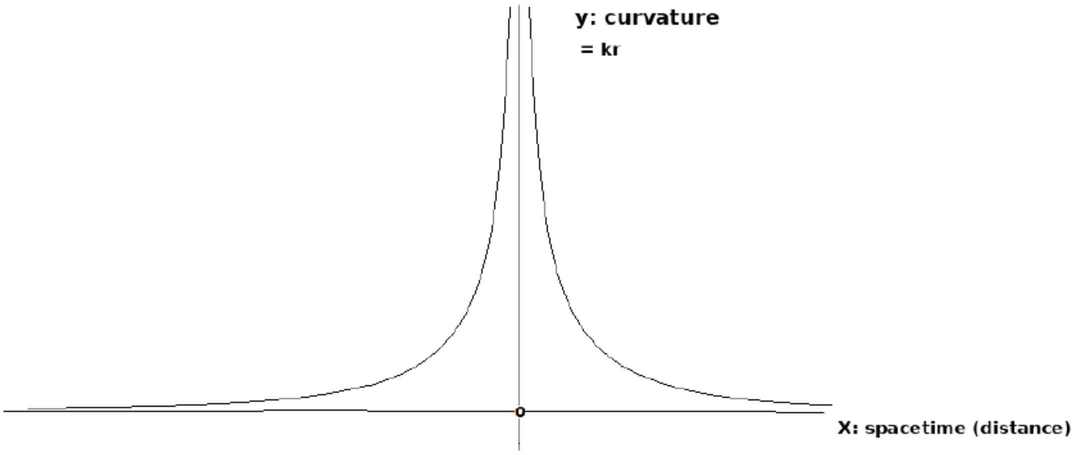
THE MODEL'S BASIC RULE

Db theory starts from the assumption that a db has no dimensions and that spatial curvature is infinite at the particle's exact location. This is a convention of the model: a basic rule on which the rest of the reasoning is built.

Because a db has no surface, nothing can literally touch it. Something can fall towards it and get closer and closer, but there is no surface for it to collide with. According to the theory, it eventually falls past it.

Figure 1 shows this schematically. The horizontal axis shows the distance from the db. The vertical axis shows the strength of gravity, or more precisely, the curvature of space. The closer you get to the point, the stronger the curvature becomes.

FIGURE 1. Schematic representation of a single db: the curve rises more steeply as the distance to the db decreases.



Two-dimensional representation of the curvature strength around a db, where X is the distance in spacetime and Y is the amount of curvature (kr)

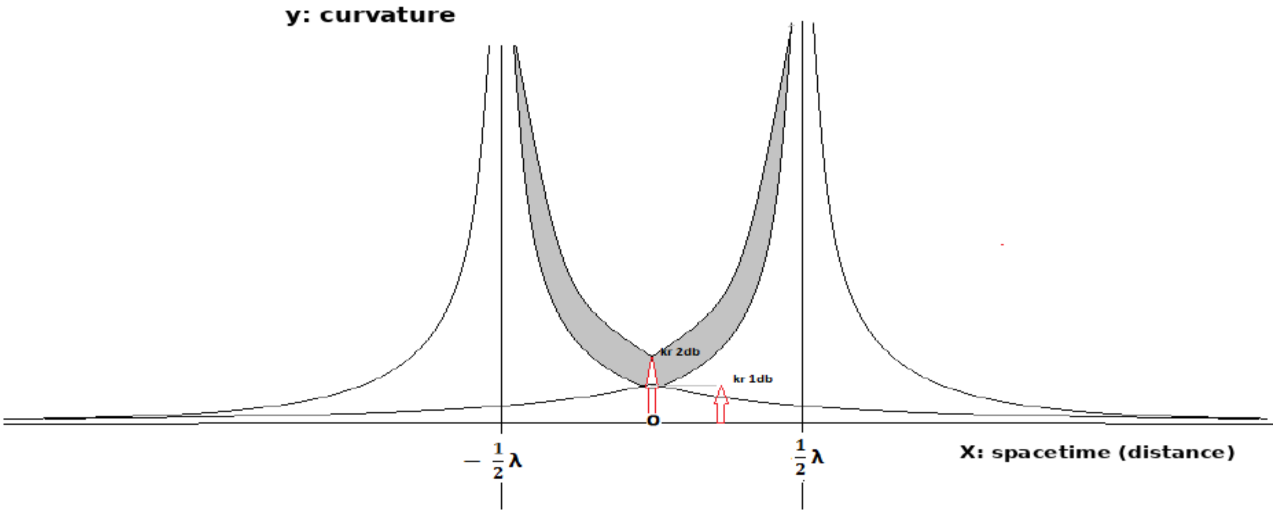
4. What happens between two dbs?

Two points without a surface cannot touch each other. So what do they do instead?

Let us return to the football-sized Earth. Next to it, imagine our Moon as the size of a mandarin orange. If Earth and the Moon attracted each other equally strongly, they would move around each other.

Now place two dbs next to each other. According to the model, both have infinite spatial curvature at their own exact point, so they attract each other enormously. But because neither has a surface, they cannot touch. The theory therefore concludes that they eventually begin to rotate temporarily around each other in a spiral motion.

FIGURE 2 Schematic representation of two dbs and their curvature lines



Two-dimensional view of curvature around a two-db system: X is distance in spacetime; Y is curvature (kr)

To understand what happens between these two dbs, think again of Earth and the Moon. If you hold your hand to the left of the Moon, the Moon's spatial curvature (attraction) dominates. If you hold your hand to the right of Earth, Earth's curvature dominates. Between the two objects, you experience the influence of both.

In the graph of two dbs, this area between them is shown as an additional curved plane. The spatial curvature of one db is added to that of the other. As a result, the space between them is more strongly curved than it would be around a single db.

> 2nd CORE IDEA
> The theory does not treat mass as a separate ingredient. Invariant mass arises when the spatial curvature of two or more dbs is added together.

5. Two dbs form a particle of light

The first composite structure in the model is immediately a familiar one: the photon, or particle of light.

From two dbs to a photon

READING CODE · DB THEORY

According to db theory, two dbs that rotate around each other (always in a spiralling motion) together form one particle of light. The additionally curved region between the particles is part of this composite structure.

In everyday language, this is sometimes called the photon's "mass". The theory prefers a more precise description: the light particle has additional spatial curvature. This curvature is produced by adding together the influence of both dbs.

According to this model, the invariant mass that we can observe in such an electromagnetic particle is the additional shared spatial curvature. It arises because the curvature of both dbs is added together. This is the effect shown in the accompanying graph.

According to the theory, dbs are never completely at rest. They move continuously. This applies not only to individual dbs, but to everything made from them. Your body, the air around you and all matter in the universe would ultimately consist of moving dbs. A single fingertip alone could contain quadrillions of dbs.

The theory sometimes compares a db to an infinitely small black hole: extremely powerful at one point, but without dimensions. Because all dbs attract one another from every direction, the whole system remains in a dynamic balance according to the model. It never stands still, but it also does not simply collapse into one place.

A rotating pair that moves forwards

When two dbs move towards each other, they cannot touch. According to the theory, they therefore enter a temporary, almost circular motion and continue to rotate around each other for a certain time. This rotation is linked to forward motion. Think of a propeller. In this model, the photon would move forwards through this rotation at about 300,000 kilometres per second.

Rotating motions appear elsewhere too

Db theory connects this kind of rotation with swirling movements seen in everyday life: smoke curling from a chimney, water spinning down a drain, a tornado and even the spiral shape of galaxies. These examples help make the idea easier to imagine, but they are not in themselves proof that all these phenomena have exactly the same cause.

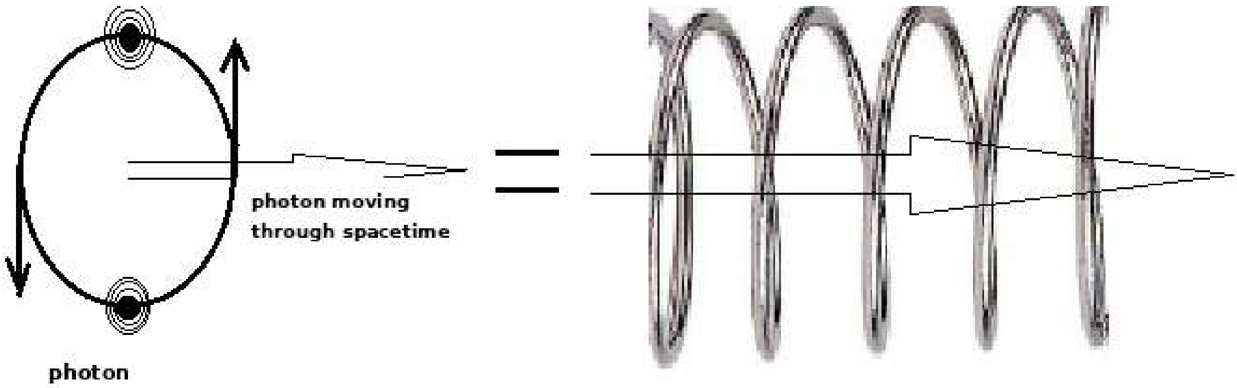
Assumption: the speed of light is not the same everywhere

READING CODE · DB THEORY

Db theory assumes that the speed of light is not constant, but depends on the amount of spatial curvature through which the light travels. According to this assumption, the stronger the spatial curvature, the lower the speed of light would be.

The theory uses water as an example: light travels more slowly through water than through a vacuum. Within db theory, this is explained by the idea that space is more strongly curved in water. This is the explanation within the model.

FIGURE 3 Two rotating dbs as a particle of light



Schematic representation of a photon with its forward circular-rotating motion at 300,000 km/s

What happens when more dbs are added?

According to the theory, adding a third or further dbs produces other particles, such as a quark or a proton. In this explanation, an electron is also made from two dbs, but it follows a curved path around an atomic nucleus.

Assumption: an electron in curved space

READING CODE · DB THEORY

Within db theory, an electron resembles a photon, except that it moves through curved space around an atomic nucleus. When the electron is measured within that curved space, it would therefore appear to have a greater mass than an electromagnetic particle that is not orbiting an atomic nucleus.

In this model, the discrete orbits around the atomic nucleus are explained by the spatial curvature of the zero-point particles, or dbs, in the nucleus. These curvatures would force the electron to remain in a stable orbit.

FIGURE 4 Positron and electron.

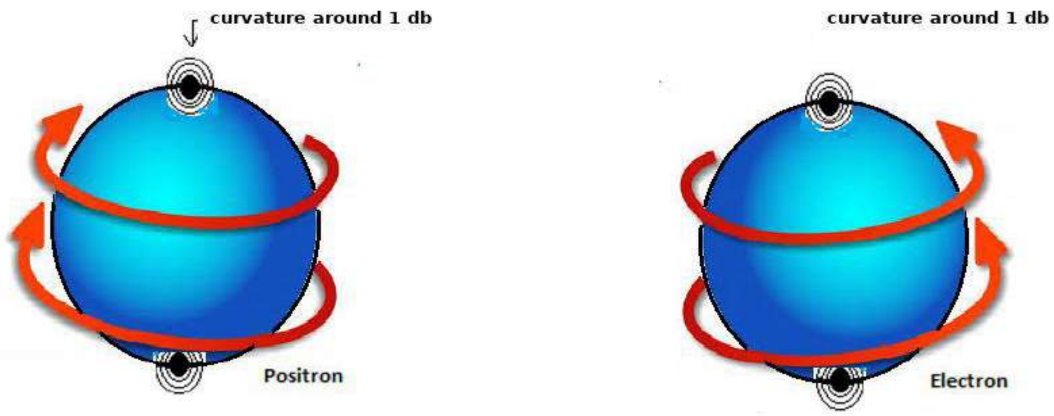


Illustration of a positron and an electron.

6. Relativity: gravity and time

The stronger the gravity, the slower time passes. This idea forms an important link in the theory.

READING CODE · ESTABLISHED PHYSICS

From the theory of relativity, we know the relationship between gravity and time: time passes more slowly in a stronger gravitational field. In the language of db theory, this means that time runs more slowly the closer you get to a db.

To someone at a distance, a second close to a strongly curved region may appear to last longer. In summary: strong gravity means strong spatial curvature, and strong spatial curvature means that time passes more slowly.

READING CODE · STILL TO BE INVESTIGATED

A computer program written in Borland C called ‘Newton.cpp’ is the first computer calculation model for this theory, also known as: “Code to calculate movements of multiple dbs in a 3-dimensional cube”. This code is intended to calculate the movements of many dbs that continually influence one another.

Einstein showed that curved space is a better model than Newtonian gravity. How curved space is created by dbs is represented in the Borland C program ‘einstein.cpp’.

Einstein gives us curved space, which can be seen in computer model 2. This is called the ‘Einstein’ model, and it shows how space is curved by the db particles.

A chip that can store an entire film in a single analogue bit

Because your fingertip alone would have to consist of trillions of these db particles, an enormous amount of computing power is needed to perform calculations with the db particles.

To overcome this problem, Metric Science ends with a completely different kind of computer chip, which follows directly from the theory’s approach. Its patent has now expired, so it is free to use. However, the technology needed to build such a chip still does not exist in 2026.

The computer chip is the calculation from the ‘newton.cpp’ model code turned into matter. An entire digital film consists of ones and zeros. You can express all of that as one number. With this unique computer chip, you could put that single number into one analogue bit all at once. (This should not be confused with a digital bit, which is something quite different.) In this way, one bit could contain an entire Harry Potter film. That one bit represents the complete number that makes up the film. Because everything in computers consists of zeros and ones, you could, in a sense, replace all of them with one number.

7. The boundary of what we can observe

You can only see something if information from it returns to you. But what happens when nothing can be reflected back?

According to db theory, a single unbound db lies below the boundary of direct observation. The particle therefore cannot be detected directly using light.

Think of an atom at which you aim a beam of light. A photon strikes the atom, is reflected and may eventually reach your eye or a measuring instrument. This is how you receive information about what you are trying to observe.

Try the same thought experiment with one db. Can a photon collide with a point that has no surface and then return?

According to the theory, the answer is no. The db cannot be struck, so nothing is reflected back. As a result, the particle remains invisible. In this explanation, the boundary of observation lies around the level at which light particles can still return useful information.

Assumption: the db particle is dark matter

Db theory states that the db particle itself is dark matter. According to the model, a single unbound db exists below the boundary of direct observation and moves continuously through space and time.

When several dbs cluster together, or more precisely, interact with one another, they may form phenomena that at some point do rise above the boundary of observation. What becomes observable is the composite phenomenon created by their interaction.

> **THOUGHT QUESTION**
> If a particle can never be observed directly by definition, which indirect effects would you need to measure to make its existence plausible?

8. The uncertainty principle according to db theory

Can you know exactly where a particle is and exactly how fast it is moving at the same time?

READING CODE · ESTABLISHED PHYSICS

In quantum mechanics, an electron around an atomic nucleus is described using a fundamental uncertainty. Put very simply: the more precisely you determine the particle's position, the less precisely you can determine its momentum or speed, and vice versa.

READING CODE · DB THEORY

Db theory states that its calculation model can bypass this limitation at a deeper level. In the code, both the exact position and the exact speed of every db particle could be tracked at every moment.

A black hole is not an empty hole in which things disappear without a trace. In this simplified explanation, it is better understood as an extremely compact and massive object. Its gravity is so strong that even light can no longer escape. As a result, no reflected light reaches your eyes and the object appears black.

The word "hole" can therefore be misleading: an enormous amount of mass and spatial curvature is actually present. Anything that comes too close can no longer return.

9. Artificial atoms and new materials

What might become possible if you could arrange the smallest building blocks yourself?

READING CODE · DB THEORY

Within db theory, a proton can bind a maximum of two neutrons. This creates three states:

1. a single proton;
2. a proton with one neutron;
3. a proton with two neutrons.

These three states are linked to hydrogen, deuterium and tritium.

Using this idea of proton-neutron bonding, the theory develops the following hypothetical proposal:

From this idea, the theory makes a major leap to artificial atoms: atoms that do not occur naturally, but are deliberately constructed by people. Instead of only fusing or splitting nuclei, the model suggests that you could arrange their building blocks at a chosen level.

THOUGHT EXPERIMENT

Imagine that you could build a new element, for example "element 300", with properties far superior to steel. How long would a bridge made from such a material last: instead of one hundred years, ten thousand years or even longer?

According to this idea, heavy artificial atoms could contain a great deal of internal energy. This raises speculative possibilities: extremely strong materials, new energy sources and perhaps even forms of space travel that currently seem impossible.

In this proposal, travelling faster than light would require gigantic amounts of energy. For a small spacecraft the size of an Apollo module, the theory says that a power source the size of Jupiter would be needed every second.

Weaving atomic nuclei

According to the theory, it might be possible to develop an extremely heavy artificial atom, such as 'element 500'. This would work as follows:

The deuterium nucleus consists of one proton and one neutron. Here you can already see the beginning of a helix. Atomic nuclei actually resemble the chromosomes of a human cell.

Do you know what a beautifully twisted strand of DNA, or 'helix', looks like? Then you also know that these strands have an end on one side and another end on the other side. It looks like an interwoven, curling thread. That is DNA. According to this description, atomic nuclei look similar, but are woven together from protons and neutrons.

Some nuclei extend into chains. Others fold into shells, loops or clusters. If you imagine such a chain with two ends, the secret trick is that you could connect those ends. You would then get a circle. This would be a stable and powerful element: a very heavy, highly stable element. Atoms with such high curvature values might make it possible to travel faster than light by strongly distorting spacetime.

Artificial atoms could also be used to develop the strong material needed for the hull of a spacecraft on a journey involving enormous forces.

As stated, it may be possible to create extremely heavy, stable atoms. If you placed such an atom on the ground, it would weigh an enormous amount. According to this idea, that mass in a single atom is exactly what is needed to achieve enormous speeds, including speeds faster than light. And all of this would still fit within present-day physics.

Who will be the first to take this on? (It will be someone with courage, who does not mind that others are sceptical at first.)

But the theory goes further, with even more interesting ideas.

Our beautiful planet needs us to develop technologies different from those we use today.

Only then will we save our beautiful planet Earth.

Creating unlimited energy from light particles made of dbs

The idea of producing electricity from light particles also follows from the theory. That would mean unlimited energy!

Creating energy from light particles would have no environmental impact. If we could produce energy from light, we would have a clean Earth, and the planet could recover because we would no longer pollute it.

The proposed device is a stationary box made of heavy atoms that continually forces incoming dbs into the correct path. Imagine that you have very heavy atoms. You could use them to create a kind of funnel that catches unbound db particles and guides two separate dbs into the correct spiral motion. Then, entirely according to the model, photon light particles would form from those separate db particles. Using our current knowledge and principles, those light particles could then be converted into an electrical charge.

Compare this process with an old cathode-ray-tube television, in which electrons are guided through a cathode and an anode into a phosphor layer, producing light. In the same way, light and then electricity could be produced continuously, without oil, nuclear power stations, solar cells or batteries.

Another possibility would be to give the light particle its spin immediately, causing it to behave like an electron, inside the stationary box. In that case, the cathode-anode solution would no longer be necessary.

What wonderful things might the future develop using non-polluting, inexhaustible energy sources?

THINK CRITICALLY, THEN THINK FURTHER

A big idea only becomes scientifically strong when it makes clear predictions that can be tested. Which step in this energy idea would you want to investigate experimentally first?

FOOD FOR THOUGHT: CAN A DISCOVERY ALSO BE TOO POWERFUL?

New knowledge can improve the world, but it can sometimes also be misused. Who is responsible for the consequences of a discovery: the inventor, the user, the government or society?

And when should a researcher make an idea public, or choose not to do so - at least for the time being?

10. Does light have mass?

In db theory, the word mass has a special meaning: additional spatial curvature that leads to an invariant mass of the photon.

READING CODE · ESTABLISHED PHYSICS

The theory's reasoning begins with the fact that light bends near very massive objects, such as the Sun or a black hole. A beam of light does not follow a perfectly straight line there, but moves through curved space.

READING CODE · DB THEORY

In db theory, this bending is linked to the additional curvature between the two dbs that are said to make up the photon. The theory calls this additional curvature the invariant mass of the light particle.

According to the model, a single unbound db has no mass, because there is nothing to add together yet. Mass only appears with two or more dbs. The combined spatial curvature is not only the cause of mass; according to this approach, it is the mass.

This makes the concept simpler within the theory's own logic: do not think of gravity as an invisible pulling cord, but as space curved in such a way that a particle naturally follows a curved path.

> 3rd CORE IDEA
>
> One db: spatial curvature around one point. Two or more dbs: overlapping curvature. In the theory, this additional curvature is called invariant mass.

A further assumption within db theory is that more complex connections of dbs form quarks. This is one of the points at which the model proposes a different structure from the standard description. In this version, a neutron would consist of four quarks: two up quarks and two down quarks.

11. Making spatial curvature visible

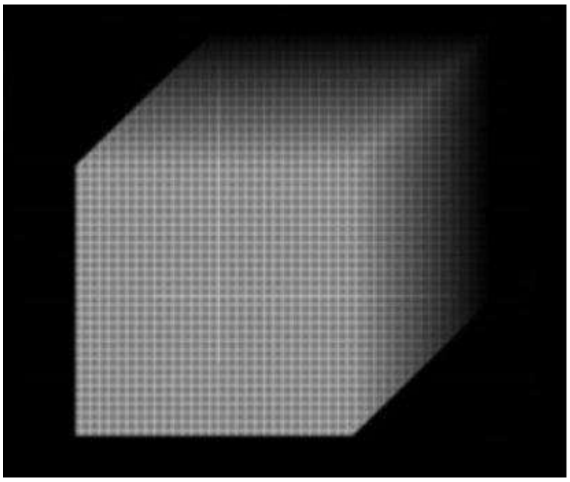
Curvature in three dimensions is difficult to draw. We therefore use cubes, cross-sections and the image of a dented blanket.

From a cube to a star shape

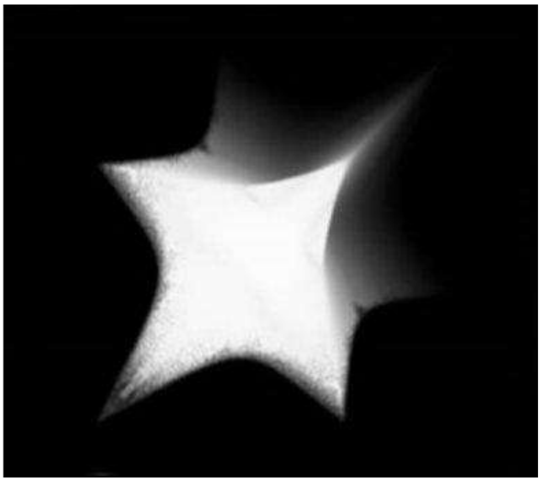
Imagine a cube-shaped block of space on the left, without a db. On the right is the same block, but now with a db exactly at its centre.

The centre of each face of the cube is closer to the db than the corners are. Because spatial curvature becomes stronger as the distance decreases, the cube is distorted. In the schematic image, this gives it a star-like shape.

FIGURE 5 A block of space without and with a db.



5a. Ordinary cube.



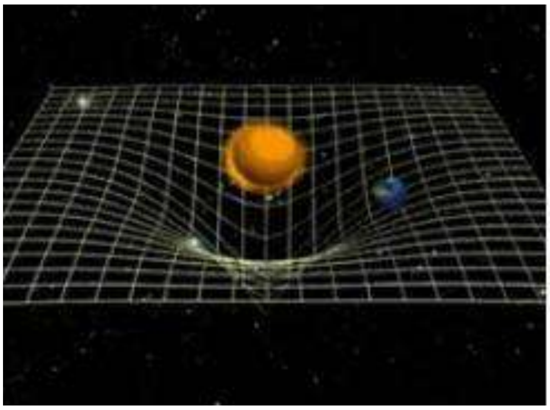
5b. Spacetime curved by a db at its centre.

The dented blanket

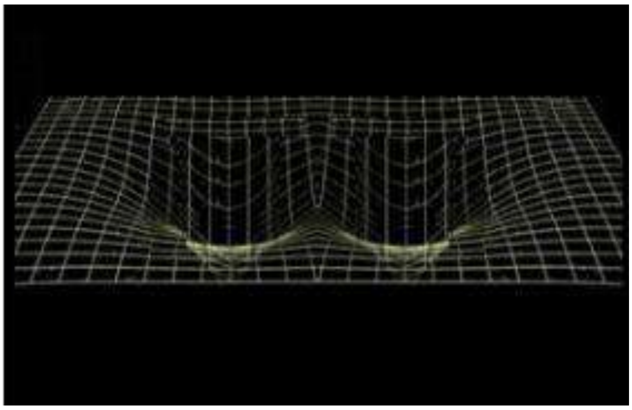
A familiar image for gravity is a heavy ball resting on a tightly stretched blanket. The ball makes a hollow, and smaller objects follow curved paths around that hollow.

Such a blanket is only a two-dimensional representation. Real space is three-dimensional and is affected around an object in every direction. The image therefore shows, as it were, a single cross-section of space.

FIGURE 6



6a. Earth or a db curving a “blanket”.



6b. Curvature fields of a two-db particle.

READING CODE · ESTABLISHED PHYSICS

Earth affects the space around it. The closer you get to Earth, the more strongly you move towards it. At Earth’s surface, gravitational acceleration is approximately 9.8 metres per second squared (m/s^2).

If you draw two objects in the same plane, you can see two regions of curvature that influence each other. If you then take a cross-section through such an image, you again get a graph resembling the earlier figures of one or two dbs.

The theory applies the same principle to any number of dbs. Three dbs all influence one another at the same time. With one hundred dbs, each particle exerts a force on every other particle. The strength of that influence depends on the distance: the greater the distance, the smaller the force between them.

12. Gravity is spatial curvature

Perhaps the word gravity becomes unnecessary once you can see the shape of space.

READING CODE · DB THEORY

What exactly does the theory mean by gravity and spatial curvature? They are two terms for the same phenomenon.

‘Gravity’ sounds as though an invisible hand pulls on objects. ‘Spatial curvature’ describes more directly what happens: space itself has a shape, and that shape determines motion.

Space bends around the db. An object moving towards the db appears to be attracted. But in the language of the theory, it is simply following a curved path through curved space.

13. The db formula

According to the theory, one basic principle must connect several forces of nature.

READING CODE · DB THEORY

According to db theory, gravitation, understood as pure spatial curvature, is the underlying force from which the other forces of nature can be explained.

In this model, the weak nuclear force, the strong nuclear force, electromagnetism and gravity are not treated as completely separate phenomena. The db formula attempts to describe and calculate them from a single principle.

Assumption: one principle of motion behind four forces

According to db theory, gravity, the strong nuclear force, the weak nuclear force and the electromagnetic force are all variations of complex movements of zero-point particles, the dbs, around and within one another’s paths. The forces we observe would be a complex sum of the circular motions that arise when several dbs interact.

In this assumption, the mutual entanglement of dbs is caused by their spatial curvatures. A change experienced by one db would immediately be experienced by the partner particle or particles to which it is connected.

Because the particles continually attract one another, curled or twisted chains of force arise according to the model. Electromagnetic fields would be present around such chains.

Example within the theory: a current-carrying coil

READING CODE · DB THEORY

What you can observe around a current-carrying coil is the electromagnetic field surrounding the current-carrying wires. Db theory gives the following explanation: the field would be caused by the attractive, almost “suction-like”, action of db particles.

The attracting particles would together form a twisted chain. Their mutual attraction would create a current, with electromagnetic fields around the chain. The observable coil and its field are the example in this passage; the proposed db mechanism is the explanation within the theory.

$$\sqrt{x^2 + y^2 + z^2} \times Kr = 1$$

Formula (0): x, y and z are coordinates in spacetime [m]; K_r represents curvature [m^{-1}].

> **WHAT THE FORMULA IS MEANT TO EXPRESS**
> The distance from a db and the amount of curvature are inversely related: farther away means less curvature; closer means more curvature.

To calculate the curvatures around a single db, we can use a simplified version of

formula (0):

Kr = abs 1/x   In the formula: Kr = curvature [m-1], x = spacetime [m]

14. Think further: questions about the theory

A big idea becomes more interesting when it not only gives answers, but also raises new questions.

READING CODE · STILL TO BE INVESTIGATED

Db theory begins with a simple starting point: one kind of point particle with no dimensions and infinite spatial curvature at its exact location. From that single idea, the theory tries to explain light, mass, other particles, time and gravity, and even to propose ideas for future technology.

Whether or not you find the reasoning convincing, you can use it to think more carefully about what a scientific theory should actually do.

> **QUESTIONS TO EXPLORE FURTHER**
> Which prediction of db theory differs most clearly from established quantum mechanics?
> How would you test a particle that, according to the theory, can never be directly visible?
> Which measurable result would support the theory, and which result would contradict it?
> When is a beautiful and simple explanation also a good scientific explanation?

READING CODE · STILL TO BE INVESTIGATED

Challenge the theory

Choose one statement from the article. Then complete the table. A theory becomes stronger when it is clear which measurement could support it and which measurement could contradict it.

Which statement will you choose?	*Enter the statement here...*
What does db theory predict?	*Enter the prediction here...*

What does established physics predict?	*Enter the difference or similarity here...*
What would you need to measure?	*Enter your measurement or experiment here...*
Which result would contradict db theory?	*Enter the result that would not agree with the theory...*

Keep wondering. **Keep asking questions.** **Keep calculating.**

15. Explore db theory yourself

Use the idea as a starting point for your own imagination, questions and research.

Editorial note for students: the activities below are not part of the original db theory.

You do not first have to decide whether you find the theory convincing. Treat it as a model you can use to calculate, write, draw and ask questions. One sharp question or one good sketch is already a beginning.

1. Visualise it. Draw one db, two rotating dbs and a group of dbs. Use arrows for motion and lines for spatial curvature. Write down which parts come from the theory and which parts come from your own imagination.

2. Turn it into a research question. Choose one statement. Write down what you would measure, which result would agree with the theory and which result would go against it.

3. Build a model or simulation. Use paper, wire, marbles or a computer program. Let two points influence each other and change the distance between them. The model does not have to be literally real; it only needs to make the reasoning visible.

4. Write a possible future. Create a short story, news report or comic about artificial atoms or energy. Add which tests or discoveries would be needed first.

5. Explain it and let someone question you. Explain the main idea to someone in three minutes. Ask that person to pose one critical question. Is the answer in the text, or have you found a new research question?

A GOOD BEGINNING

Write: “According to db theory...”

Then write: “My own idea or question is...”

Keep the two separate. This lets you use your imagination freely while still remaining precise.

You read the theory. **You investigate the idea.**

Imagination leads you to your next question.

Keep asking questions. **Keep investigating.** **Never stop dreaming.**