

Pleasant Springs Church

12-Week Study · A Quantum Case For God

WEEK 2 OF 12

What Are Quantum & String Physics?

Atoms, particles, strings — and the limits of human knowing

THE BIG IDEA

Classical (Newtonian) physics works on objects you can see. **Quantum physics** works on objects so small you cannot see them, where the rules become — in Feynman's word — *absurd*. **String physics** goes one layer deeper, claiming every particle is a vibrating strand of energy. The honest verdict of the smartest physicists alive is that they understand a tiny corner of the universe and have *no idea* what is on the other side of it. Scripture has said precisely this for three thousand years.

Classical (Newtonian) physics is what most adults learned in high school: forces, falling apples, $F=ma$, the inverse-square law of gravitation. It describes *large* things in the four dimensions of length, width, depth, and time. It works brilliantly for buildings, bridges, planetary orbits, and Major League Baseball.

Quantum physics is the study of energy, matter and motion at the sub-atomic scale — particles smaller than the atom: quarks, electrons, photons, gluons, neutrinos. At this scale, classical physics breaks down. Particles seem to be in two places at once. They behave like waves until you look at them, at which point they behave like particles. They «tunnel» through walls. They communicate instantaneously across any distance.

String physics (also called string theory, M-theory, or *superstring theory*) goes deeper still. It proposes that every particle is, at the bottom, a tiny vibrating strand of energy — a *string*. What kind of particle a string becomes is determined by the *frequency* at which it vibrates, like a guitar string sounding one note for an electron and another for a quark. On this account, the universe is one vast symphony.

The honest verdict of the most accomplished physicists alive is that they understand only a tiny corner of all this. Richard Feynman: «*my physics students don't understand it either. That is because I don't understand it. Nobody does.*» This is not the embarrassment of the field. It is its glory. Scripture, three thousand years ahead, predicted exactly this posture as the precondition of wisdom.

SCRIPTURE

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Job 38:4–5 · Where Were You?

Septuagint (LXX) / Greek New Testament

ποῦ ἦς ἐν τῷ θεμελιοῦν με τὴν γῆν; ἀπάγγελον
δέ μοι, εἰ ἐπίστασαι σύνεσιν. τίς ἔθετο τὰ μέτρα
αὐτῆς, εἰ οἶδας; ἢ τίς ὁ ἐπαγαγὼν σπαρτίον ἐπ'
αὐτῆς;

English Standard Version

Where were you when I laid the foundation of the earth? Tell me, if you have understanding. Who determined its measurements — surely you know! Or who stretched the line upon it?

1 Corinthians 13:12 · Now We Know in Part

Septuagint (LXX) / Greek New Testament

βλέπομεν γὰρ ἄρτι δι' ἐσόπτρου ἐν αἰνίγματι,
τότε δὲ πρόσωπον πρὸς πρόσωπον· ἄρτι
γινώσκω ἐκ μέρους, τότε δὲ ἐπιγνώσομαι καθὼς
καὶ ἐπεγνώσθη.

English Standard Version

For now we see in a mirror dimly, but then face to face. Now I know in part; then I shall know fully, even as I have been fully known.

Proverbs 25:2 · The Glory of Searching Out

Septuagint (LXX) / Greek New Testament

Δόξα Θεοῦ κρύπτει λόγον, δόξα δὲ βασιλέως
τιμὰ πράγματα.

English Standard Version

It is the glory of God to conceal things, but the glory of kings is to search things out.

THE BIBLICAL CASE

The Bucket and the Pacific

Zetting offers a memorable image: imagine walking up to the vast Pacific Ocean and filling a five-gallon bucket. That is what science knows about the universe — a miniscule fraction, yet the implications of that sliver are reshaping how we see the world. The bucket is magnificent. It is also, by volume, statistically zero compared to the ocean. This is the right epistemic posture for the scientist; it is also exactly the posture Paul describes in 1 Corinthians 13:12. We know in part.

Quantum and the Death of Certainty

For two centuries after Newton, classical physics carried an aura of completeness. In the late 1800s, leading physicists were openly suggesting that the work was almost done. Then quantum mechanics arrived. Particles refused to stay where they were put. The act of observation changed what was being

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observed. Cause-and-effect at the smallest scale dissolved into probability. The universe, it turned out, was much bigger and stranger than the bucket of classical science had revealed. Quantum did not destroy the bucket; it revealed the Pacific.

Strings and the Symphony

String theory takes one further step. If you look closely enough at a particle, the theory says, you find a vibrating strand of energy. Different frequencies of vibration produce different particles. All of matter is, at the bottom, a vibration. The image is irresistibly musical. The universe is a sustained song. Remember that image. By week eight we will be singing it back to Genesis 1.

THE CONVERGENCE

The greatest physicists of our age confess they know in part — exactly what Paul confessed in 1 Corinthians 13:12. The deepest principles they reach (vibrating strings, hidden dimensions, probability-not-certainty) are not in tension with scripture. They are scripture's description of creaturely knowledge translated into mathematics.

DISCUSSION QUESTIONS

1. Have you ever held a confident scientific (or theological) certainty that later cracked? What did that experience teach you?
2. Job 38 has God interrogating Job about creation. If God asked you the same questions today, how would your answers compare to Job's? Would your answers be better or just longer?
3. Feynman said «nobody understands quantum mechanics.» Why might admitting that be necessary for honest science?
4. 1 Corinthians 13:12 says we know «in part.» Where does the church most often forget that — in theology, in apologetics, in prayer?
5. If matter is, at the bottom, vibrating strings of energy, how does that change (if at all) how you think about «the physical world»?

CLOSING PRAYER

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*Father of measure and number and weight, you have hidden enough that searching is a joy and revealed enough that we may know you. Save us from the small certainty that fits in a five-gallon bucket. Stretch us toward the Pacific of your wisdom. Teach us to know in part without despair, and to wait for the day when we shall know fully, even as we have been fully known. We ask it through Jesus Christ, in whom are hid all the treasures of wisdom and knowledge. **Amen.***

Week 2 of 12 — A Quantum Case For God, a Pleasant Springs Church discipleship series. The complete 12-week study, and every other lesson, is at [**ps-church.com/discipleship/quantum-case-for-god**](https://ps-church.com/discipleship/quantum-case-for-god)