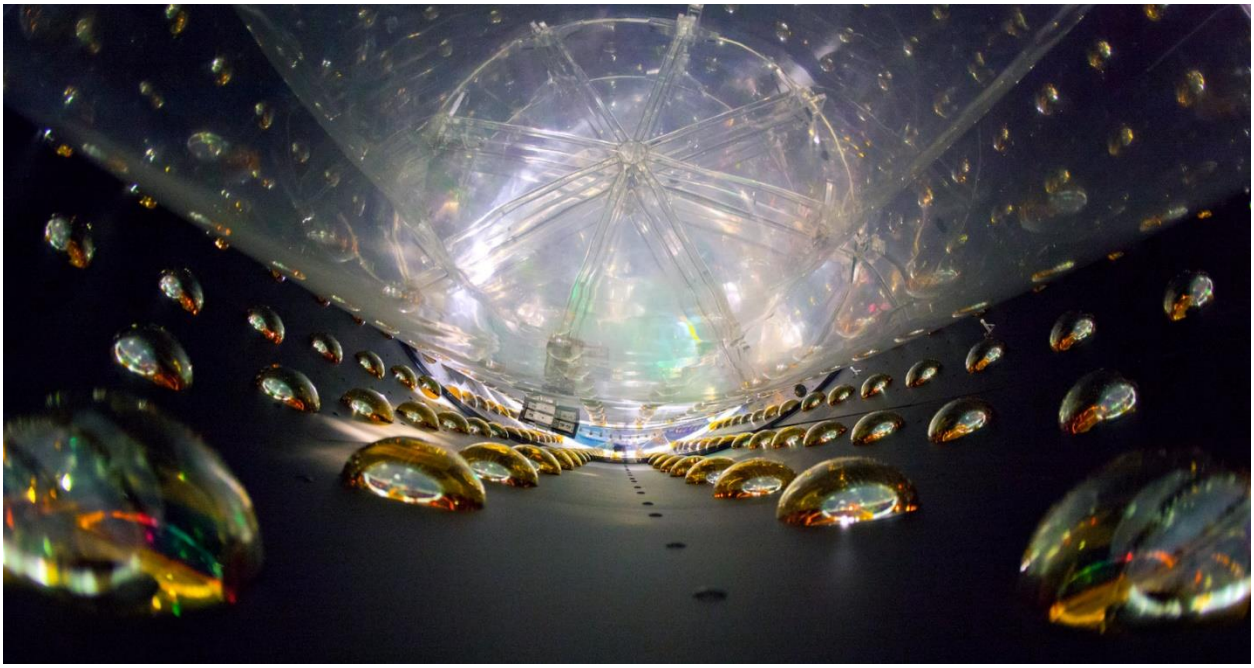

Albert Einstein is considered to be the father of modern physics. His theory of relativity is the building block on which our scientific understanding of how things move in the four dimensions of space-and-time rests. Our physical bodies and material universe exist within that same space-time continuum. However, Einstein might have been wrong!

Flawed Assumption?

Many scientists, including Einstein in 1905, had assumed that certain forces or particles or waves -- including light and radio -- travel at a certain fixed speed in a vacuum, relative to the observer. And that nothing can travel faster than that. It was inspired guesswork, backed up as usual by elaborate mathematical formulae. Out of that basic assumption, Einstein and other "experts" concluded that the fastest thing of all was photons, which they referred to as "the speed of light." Light, they collectively stated, can travel at 299,792 kilometres per second or 186,282 miles per second, and nothing in the entire cosmos can outrun it. However, NOE says no!

Ghost Particles

Neutrinos are subatomic particles with a mass close to zero. Scientists began looking at time travel several years ago to explain anomalies that had been observed in several experiments with neutrinos. Neutrinos are nicknamed ghost particles because they react so rarely with ordinary matter. For example, trillions of neutrinos hit our bodies every second, yet we don't notice them because they zip through without apparently affecting us.

First Time Machine?

In a new paper accepted by the journal Astroparticle Physics, Robert Ehrlich, a recently retired physicist from George Mason University, claims that the neutrino is very likely a tachyon or faster-than-light particle.

Chodos, Hauser, and Kostelecky suggested in 1985 that neutrinos might be hiding in plain sight – specifically that neutrinos are tachyons. This idea led them to propose that protons should beta decay when they travel at sufficiently high speed towards us. Normally, this process is forbidden because it could not conserve energy, but that changes if neutrinos are tachyons, energy can be negative in certain reference frames – in effect negative energy tachyons travel backwards in time. Of course, before you try designing a "tachyon telephone" to send messages back in time to your earlier self it might be prudent to see if Ehrlich's claim is corroborated by others.

What are the Implications?

All great revolutionary discoveries in science started out with an unexpected discrepancy that wouldn't go away. So if neutrinos are capable of superluminal -- faster than light -- motion, then what are the implications of this for science and society in the 21st century?

1. Einstein's special theory of relativity would then be null and void. It would need to be replaced by a new theory: one that encompasses faster than light travel. Einstein's relativity states that whether an object is at rest or in motion is highly subjective to the perspective of the person viewing that object and also that the speed of light is a constant, physical barrier and that to surpass it would take an infinite amount of energy. CERN's neutrino experiments are challenging some of those basic assumptions.

2. This would open the door for time travel -- up until now, the domain of fantasy and science fiction! Although neutrinos couldn't generate the kind of energy for human time travel - plus causality cannot be undone due to the arrow of time - scientists predict that they could carry some sort of message that might be encoded into them and then they would be able to take that message with them and it could arrive in the past, technically before it was written, bringing us to the next possibility:

3. The general principle of temporal cause and effect would be disrupted, replacing the concept of time-imposed consequential duality with the notion of underlying non-duality or unity consciousness. The corollaries of this scientific sea-change are phenomenal and it may well be that our perceived reality influences the underlying unified reality reflexively. These herald a new era beyond Newton and Einstein. What we think and imagine has a fundamental consequence upon events and may be as germane to them as our actions. Perhaps our intentions, aspirations and observations, are not simply a prelude, but actually influence the present scene and final outcome. What Heisenberg's uncertainty principle was alluding to may only be the tip of the iceberg as far as a deeper understanding of our relationships is concerned, which is yet to

come. "Omnia vivunt, omnia inter se conexa" or "Everything is alive, everything is interconnected," as Cicero proclaimed in Rome, half a century prior to the birth of Christ.

4. The standard model of particle physics would need to be adjusted to incorporate superluminal particles in the near future.

5. One explanation for how neutrinos are able to travel faster than the speed of light is that they are not actually travelling in a straight line, but hopping into one of the separate dimensions predicted in the NOE Hypothesis, which acts as a kind of shortcut. It is postulated that neutrinos may travel through a fifth dimension beyond the four of space-and-time!

Conclusion

A lot of confirmations need to be made before the suggestion made by Robert Ehrlich that faster-than-light neutrinos are likely tachyons is accepted as true. As Carl Sagan once said, "Extraordinary claims require extraordinary evidence."

Regardless, Neutrino or Tachyon, as Prof Heinrich Päs at Dortmund proposes, "Even if true, this result neither proves Einstein wrong nor implies that causality has to be violated and time travel is possible. Things can move faster than the speed of light without violating Einstein if either the speed of light is not the limiting velocity as one can observe it ... or space-time could be warped in a way so that neutrinos can take a shortcut without really being faster than the speed of light. As our three space plus one time dimensions look pretty flat, this would require an extra dimension, the fifth dimension."

If the fifth dimension truly exists, as postulated by NOE and as suggested by recent sub-atomic particle experiments, amongst multiple dimensions, the implications of this discovery go beyond time travel and are truly colossal. The scientific discovery may yet herald the dawn of a new age in the 21st century where a number of pre-conceived notions are likely to be superseded by new rules of engagement and acknowledgement of hitherto hidden sensitivities. This new scientific understanding may well pave the way for a quantum step change in our civilisation's approach and behaviour.

On the human scale, as science implies that we are all resonating within an interconnected vibrational energy web, does not the very concept of what is "personal" -- as in thoughts -- come into question? If we exist within one highly subtle, inter-permeable, and inter-responsive matrix, what should be the new rules of our engagement? Should thoughts and words be elevated to a similar status to actions? Should harbouring negativity be considered civilised? Will these new scientific discoveries herald an age of greater personal responsibility, as we endeavour to attune more sensitively our "selves" to the greater social, economic and political fabric into which we are enfolded together?

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