

PHYSICISTS CONFIRM: "TIME-TRAVEL MAY BE POSSIBLE VIA 'WORM HOLES'"

IN an article by their Science Correspondent in the London *Daily Telegraph* of November 23, 1988, interesting details were given of a paper recently published in the highly respected journal *Physical Review Letters* by three top American scientists, Prof. Kip Thorne and Prof. Ulvi Yurtsever of the California Institute of Technology, and Dr Michael Morris, of the University of Wisconsin, at Milwaukee. They say that, by means of 'worm holes', a sufficiently advanced technological civilization might be able to perform Time-Travel into the Past and make instantaneous journeys by spaceships to distant regions of the Universe. They say that 'worm holes' — actual holes in the structure of Space and Time — exist throughout the Universe.

They say that a message or a spaceship could in theory be "sent through a 'worm hole'", and emerge instantly in a different part of Space or Time.

As Dr Michael Morris explained: "Worm-holes are sub-microscopic objects, but an advanced technology might be able to enlarge them to a size where they would be useful".

Their paper suggests a way in which starships, by travelling instantaneously, could one day bypass the law that forbids faster-than-light travel.

Two 'worm-holes' separated by vast distances would in theory "create a tunnel through Space-Time between them". This would enable a spaceship or a message to make journeys that would be totally impossible in conventional physics.

It would also make time-travel possible. Said Dr Morris: "Travelling into the past has hitherto been considered inherently impossible, because it would enable you to murder your parents before they met, and you would cease ever to have existed.

"But this impossible paradox is avoided in our interpretation of Einstein's General Theory of Relativity. We suggest the existence of an infinite number of *parallel universes*, so that the past you travelled into would be a different past from that in which you grew up."

The three scientists draw attention to the "Many Worlds Theory" of the physicist Hugh Everett, and proposed by him in 1957, which suggests that the Universe is continually branching out into different "states".* There would, for example, be another Universe, just as real as our own, in which Mr Dukakis,

and not Mr Bush, had been the winner in the last American Presidential Election!

Dr David Deutsch, a British physicist, of the Mathematical Institute at Oxford, said recently that these 'branchings of reality' might be detectable by a super-computer — a machine far more sensitive than the human mind, that could perform 10,000 million calculations per second.

Summing up, Dr Morris said: "Our theory is all very speculative. A new idea might, of course, emerge that would prove it impossible. But such speculation is valuable, since it encourages physicists to explore the Universe in new ways."

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* NOTE BY EDITOR

For our previous discussions of these advanced problems of Physics, see the various articles by FSR Consultant Paul Whitehead:—

- FSR 31/1. "From Atoms To Tachyons And Hyperspace — And Back Again!"
- FSR 31/2. "The Parallel Universe & Other Dimensions".
- FSR 31/3. "A Look at the Search for Extraterrestrial Intelligence".
- FSR 31/4. "Science Comes Under Attack — and the 'Hologram Universe' is proposed".
- FSR 31/5. "Spinning Saucers Gain Credibility".
- FSR 31/6. "Other Worlds — Fact, Fiction, Or Beyond Human Comprehension?"
- FSR 32/1. "Life on Mars, UFOs, SETI, SETA — and Scientist claims the Paranormal is for Real!"
- FSR 32/1. "Aliens, Laser Beams and Clones".
- FSR 32/2. "From Dust, Alien Consciousness May Arise!"
- FSR 32/3. "Mind and the New Physics".
- FSR 32/3. "Scientists Confirm: There May Be a Parallel Universe".
- FSR 33/1. "The Debate on Extraterrestrial Life 'hots up'".
- FSR 33/1. "Manned Flight to Alpha Centauri Proposed".
- FSR 33/1. "World Without End — Amen".
- FSR 33/3. "Cosmology, UFOs, CEAs and the Fourth Dimension".
- FSR 34/1. "Wormholes and Faster-than-Light Travel: Latest News".
- FSR 34/2. *Book Review*: Dr Jacques Vallée's "DIMENSIONS".

(See also: FSR 32/5. Rev. Donald Thomas: "Parallel Worlds". *Recent Comment from an eminent Oxford Physicist.*)

THE END OF A CHAPTER?

Gordon Creighton

As all of our information media continue to bombard us with depressing reports about the Ozone Layer; the "Greenhouse Effect"; the melting Ice-Caps and the rising seas; the rapid loss of the Earth's great tropical rain-forests; the massive pollution of land and sea and atmosphere; the terrifying overpopulation of the Earth by Man, the Great Predator; and the accelerating destruction of numerous other species of life, it is evident that many — even among the great unthinking masses of humanity — are beginning to perceive that "SOMETHING IS HAPPENING". And, here and there among them, the more perceptive ones are even starting to see that the close of one of the *Great Chapters in the Book of Life on Earth* may be at hand. Should this indeed be so, then it is nothing new!

For these things have occurred repeatedly before. For what we are discussing is "Catastrophism", and we know that the old-fashioned Victorian idea of "Gradualism", once so dear to the hearts of such folk as the geologist Lyall, has now been totally discarded. Today we already know, from the scientific evidence, of at least 77 reversals of the Earth's Poles.

Firstly, there is the problem of the actual wandering of the physical Poles, and this is no doubt connected with the slow processes of Continental Drift and the movements of the Plates. Secondly, as stated already, there is the question of the magnetic reversals. It seems that there have been about twenty of these in the last 4,500,000 years, which gives us a rate of about one reversal every 200,000 years, on an average. There