



BREAKING NEWS: Error Undoes Faster-Than-Light Neutrino Results

by Edwin Cartlidge on 22 February 2012, 1:45 PM |

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It appears that the [faster-than-light neutrino results](#), announced last September by the OPERA collaboration in Italy, was due to a mistake after all. A bad connection between a GPS unit and a computer may be to blame.

Physicists had detected neutrinos travelling from the CERN laboratory in Geneva to the Gran Sasso laboratory near L'Aquila that appeared to make the trip in about 60 nanoseconds less than light speed. Many other physicists suspected that the result was due to some kind of error, given that it seems at odds with Einstein's special theory of relativity, which says nothing can travel faster than the speed of light. That theory has been vindicated by many experiments over the decades.

According to sources familiar with the experiment, the 60 nanoseconds discrepancy appears to come from a bad connection between a fiber optic cable that connects to the GPS receiver used to correct the timing of the neutrinos' flight and an electronic card in a computer. After tightening the connection and then measuring the time it takes data to travel the length of the fiber, researchers found that the data arrive 60 nanoseconds earlier than assumed. Since this time is subtracted from the overall time of flight, it appears to explain the early arrival of the neutrinos. New data, however, will be needed to confirm this hypothesis.

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