

She wont believe you, but emails do get lost

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When Internet users have trouble connecting with online destinations it's usually a problem with a server or wireless network, but new computer science research verifies there really are black holes in the cyber universe.

Ethan Katz-Bassett, a graduate student in computer science at the University of Washington, and his adviser, Arvind Krishnamurthy, designed a program to continuously search for these strange Internet anomalies, when a request to visit a website or an outgoing e-mail gets lost along a pathway that was known to be working before.

To make sure the black holes they detect are not a problem with the end user or the host server, they look for computers that can be reached from some, but not all, of the Internet, meaning the issue must be occurring en route.

"We were astounded when we did an initial four-month study and we saw how many problems there were," Katz-Bassett told LiveScience. "It seemed infeasible that this could be happening so often. They're definitely more common than we thought."

Now the team constantly monitors the Web for black holes and posts a map of where the problems are around the world at any given moment. They hope their data will help Internet service providers track down the route of problems experienced on their networks.

"Network administrators are definitely interested in it," Katz-Bassett said. "I think we need to do more analysis of the data and see where exactly these problems are occurring. It would be interesting to come up with predictions about where problems were most likely to occur."

The scientists named their monitoring system Hubble after the Hubble Space Telescope, which can also detect black holes in space. They hope their data will help improve the consistency of the Internet, where we increasingly entrust vital information.