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Three Universities Plan Automation of Astrophysical Discoveries

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Carnegie Mellon, Johns Hopkins, and the [University](#) of Washington are receiving \$1.6 million from the Department of Energy (DOE) to enable the automated discovery of astrophysical phenomena.

The idea is to capitalize on a new generation of telescopes--to be built and deployed over the next decade--by automating the sifting of massive amounts of cosmological data. The tools will be able to spot new objects for further study, as well as identify patterns in observational data that could help [scientists](#) understand how the universe evolved.

The [telescopes](#) will include the Large Synoptic Sky Survey Telescope (LSST) in Chile, and the Panoramic Survey Telescope and Rapid Response System (Pan-STARRS) in Hawaii, as well as data from the existing Sloan Digital Sky Survey (pictured), a New Mexico telescope that during its first eight years of operation has found 930,000 galaxies, 120,000 quasars, and 460,000 stars. Ultimately, the telescopes will increase the rate of astronomic data gathering a thousand-fold, said Carnegie Mellon associate research professor Jeff Schneider in a university statement.

"In cosmology, you never get to see things evolve," Schneider said. "Instead, you see a bunch of objects that are at different points on the evolutionary path. We need a way to look at those objects and use them to infer the evolutionary path and where each object might be on that path."



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