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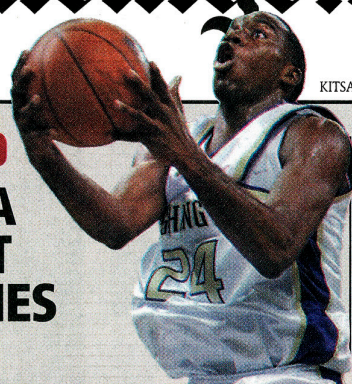
A tip of the hat to 20 years of Rover's

WHAT'S HAPPENING

BASKETBALL

ARIZONA TOO HOT FOR HUSKIES

SPORTS C1



LIFE & ARTS

Dozens of things to do today and tonight

GOING OUT E5, STAYING IN E6

FRIDAY, JANUARY 5, 2007

Planned movie is really out there

Google joins effort to digitally film the entire universe

BY TOM PAULSON
P-I reporter

Google today will announce its partnership with the University of Washington, the University of Arizona and others to create the world's largest database -- a moving picture of the universe.

"It will be the greatest movie of all time," said UW astronomer Craig Hogan, one of the leading scientists working on the project. "It will transform how we do science."

Technically, it's called the Large Synoptic Survey Telescope, or LSST, and it's still mostly just a twinkle in the astronomical community's collective eye. Planned to begin operation in 2013 on a mountaintop in Chile, the telescope will take moving digital images -- rather than the typical static snapshots -- of all space, the entire visible sky.

"This will provide an incredibly rich view of the universe," Hogan said. Once completed, he added, the movies will be publicly accessible for anyone to watch and study. "It will be the YouTube of astronomy."

The Google announcement is being timed to precede a Seattle conference frequently dubbed the "Super Bowl of Astronomy," the national meeting of the American Astronomical Society. Some 2,500 professional stargazers will gather at the Washington State Convention and Trade Center for four days starting Sunday to discuss such exotica as supernovae, quasars, astrobiology and the mysteries of dark matter and gravitational waves.

Proponents of the LSST will be there as well, seeking new partners and more money to move ahead with the new telescope.

"The LSST is certainly emblematic of a new trend in astronomy," said astronomer Stephen Maran, spokesman for the American Astronomical Society. Though it's just one of several proposed telescopes aimed at achieving new insights into the nature of the universe, Maran said, it does represent a novel approach for collecting and distributing basic data.

Operated as a private-public research consortium headquartered in Tucson, the LSST project was launched in 2003 by the UW, the University of Arizona, the National Optical Astronomy Observatory and a private foundation called Research Corp. Many other institutions, such as Harvard, Princeton and the Brookhaven National Laboratory, have since signed on in support of the project.

"The amount of data involved here is going to be just enormous," said Suzanne Jacoby, project coordinator for the LSST in Tucson. "That's where Google's expertise comes in."

More than 30,000 gigabytes

worth of images will be generated every evening, Jacoby said. This daily tsunami of data will have to be analyzed constantly as it accumulates over time, she said, and then efficiently managed to make it publicly accessible.

"Google's mission is to take the world's information and make it universally accessible and useful," said William Coughran, vice president of engineering for Google, in a news release announcing the firm's new partnership with the LSST.

Besides accumulating an unprecedented amount of astronomical imagery in this moving-image format, the new telescope could help answer some important scientific questions such as when the Earth might next get whacked by a killer asteroid.

"Right now, we don't really have any way of finding them early enough, before it's obvious," said Suzanne Hawley, chairwoman of the UW astronomy department. Because the LSST collects images of moving objects, Hawley said, it could be useful for identifying much earlier any asteroid on a collision course with our planet.

The UW's interest in the LSST project, she noted, is based on its previous work in the 1980s that led to a similar project known as the Sloan Digital Sky Survey -- another collaborative effort still under way collecting a photographic survey of hundreds of millions of stars, galaxies and other celestial objects.

"We were also one of the founding members of that," said Hawley, who currently serves as director of the Sloan consortium that operates its telescope from Apache Point, N.M.

LEARN MORE

For more information about the Large Synoptic Survey Telescope project, see lsst.org.

The American Astronomical Society meeting is not open to the public, but for more information about the organization and the event see www.aas.org

Certainly, this year's most widely recognized local contributor to the advancement of astronomy was the UW's Donald Brownlee, principal investigator for NASA's Stardust mission that captured some comet dust and brought it back to Earth for analysis.

Brownlee said he expects to keep a low profile at this year's astronomy meeting in Seattle, adding that the organization only lets members give a "big talk every 10 years" and he had his shot last year (speaking about Stardust, of course).

This year's meeting is expected to provide many new findings and hypotheses, including new images from the Hubble, Chandra and Spitzer space telescopes and a variety of land-based telescopes.

The possibility of life on Mars, new kinds of celestial phenomena, the demotion of Pluto's status as a true planet, the search for extra-solar planets and extraterrestrial intelligence are all either on the conference's agenda or likely to be hot topics at this confab of stargazers.

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