Participant Total for Grassroots Astrophysics Project Einstein@Home to Exceed 55,000 On Einstein's Birthday

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The Einstein@Home distributed computing project is enlisting a rapidly growing army of computer users in a search for Einstein's elusive gravitational waves.
Only three weeks after its February 19th kick-off, the Einstein@Home gravitational wave detection program is one of the fastest growing distributed computing projects in the world, adding roughly a thousand users a day. At current rates, more than 55,000 people from over 115 countries will have signed up to aid in the search for gravitational waves as of March 14, 2005 - the 126th anniversary of Albert Einstein's birth.

"I'm thrilled with the response we've gotten in such a short time," says Einstein@Home principal investigator Bruce Allen of the University of Wisconsin – Milwaukee. "The growing number of participants increases the computing power available to us, and improves our odds of finding something. Were we to find a signal in this way, it be an exceptional moment for both theoretical and experimental physics. It would ALSO be the first such scientific breakthrough that was enabled by public distributed computing."

By searching data being collected by US and joint British/German gravitational wave detectors, instein@Home allows anyone from the most advanced astrophysicist to elementary school children to participate in the uest for gravitational waves. These waves are subtle ripples in space and time predicted by Einstein's General Theory of Relativity. The

software necessary to join in the search can be downloaded and run by anyone with Internet access.

Einstein@Home searches the vast amounts of data collected by the US Laser Interferometer Gravitational wave Observatory (LIGO) and the British/German GEO-600 gravitational wave observatory for waves coming compact objects such as quark stars and neutron stars.

The LIGO and GEO-600 detectors collect enormous amounts of data that exceed the capacity of even the latest supercomputers to analyze. Instead Einstein@Home enlists the aid of people who donate omputational time on their home computers to analyze small portions of gravitational wave data. The creators of the program from the University of Wisconsin – Milwaukee, the Albert Einstein Institute in Germany, and the LIGO Laboratory hope to involve hundreds of thousands of people in the search, much like the SETI@Home search for extraterrestrial signals has done.

Einstein@Home is available for Windows, Linux, and Mac operating systems. The program provides a screensaver that depicts the celestial sphere with the major constellations outlined. A moving marker on the screensaver indicates the portion of sky being searched.

Einstein@Home is a flagship program of the World Year of Physics 2005, a celebration of instein's "miraculous year" of discoveries in 1905.

Related Links:

Einstein@Home web page: einstein.phys.uwm.edu/
World Year of Physics web page: www.physics2005.org/

Source: APS