

[Home](#)[News Releases](#)[Abstracts](#)[Program](#)[Image Gallery](#)[Contacts/Location](#)[IAU Meeting](#)[Australian Festival
of Astronomy](#)

Star Count: ANU Astronomer Makes Best Yet

There are more stars in the sky than all the grains of sand on every beach and in every desert on earth, according to an Australian National University astronomer who has made the most accurate calculation of star numbers to date.

Dr Simon Driver, of the ANU Research School of Astronomy and Astrophysics, using some of the most powerful telescopes in the world, concluded that about 70 thousand million million million stars (7×10^{22}) shine down on us each night.

"Even for a professional astronomer used to dealing in monster numbers this is mind-boggling," Dr Driver says.

Most of these stars are too dim to see with the naked human eye, which can pick out only around 5,000 stars at the darkest parts of earth and just 100 in the middle of a big city, such as Sydney.

Dr Driver and his collaborators – Dr Jochen Liske, from the Royal Observatory Edinburgh; Dr Nicholas Cross, from Johns Hopkins University; Professor Warrick Couch, from the University of New South Wales and Dr David Lemon from St Andrews University – did not count the stars one by one.

Rather, Dr Driver and his team counted all the galaxies, which are large collections of stars, in one small region of the universe close to Earth.

By measuring precisely how bright each galaxy is they were able to estimate how many stars it contained and extrapolated this out to the whole region of the Universe visible through telescopes.

The researchers, who will present their finding to the General Assembly of the International Astronomical Union today, believe their estimate is ten times more accurate than any previous count.

"This is not the total number of stars in the universe, but it's the number within range of our telescopes. The real number could be much, much larger still - some people think it is infinite."

There have been other estimates of the number of stars over the years, but Dr Driver's calculation is the closest so far because it combines the best counts of galaxies ever conducted with the most modern cosmological measurements of the geometry of our universe.

The observations were carried out using many of the world's most powerful telescopes, including the Anglo-Australian Telescope, located at the University's Siding Spring Observatory, near the town of Coonabarabran. The calculations would not have been possible without the world's largest galaxy survey, the 2dF Galaxy Redshift Survey, which will be released at this meeting.

"Most of these stars probably have planets, a fraction of which probably have life," Dr Driver says.

"But they are very, very far away. It's not so much a question of whether other life exists, but whether we will ever be able to contact them given the massive distances involved."

Contacts

Dr Driver is attending the International Astronomical Union 25th General Assembly in Sydney, Australia, 13-26 July 2003. He can be contacted via the media room.

How to Contact the Media Room at the IAU General Assembly in Sydney, Australia

Telephone +61-2-9282 5418, 5419, 5420

Fax +61-2-9282 5421

Email iaumedia@netscape.net

Chief Media Liaison Helen Sim, mobile phone number +61-419-635-905

Media Room will be open 8am-6pm Australian Eastern Standard Time (10 hours ahead of GMT/UT). ([Media room location](#))