

## Is the universe really 13.8 billion years old?

*[Editor's note: Ethan Siegel is an astrophysicist and author.]*

You've no doubt heard that the Universe itself has been around for 13.8 billion years since the Big Bang, and that scientists are extremely confident of that figure. In fact, the uncertainty on that figure is under 100 million years: less than 1% of the estimated age. But science has been wrong in the past. Could it be wrong again, about this?

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By measuring what's in the Universe today, how distant objects appear to move, and how the light from them behaves nearby, at intermediate distances, and for the greatest distances observable, we can reconstruct the expansion history of the Universe.

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[We] know how these components evolve in time, and that the Universe obeys the laws of General Relativity. Combine those pieces of information, and a single, compelling picture of our cosmic origins emerge.

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[It is unlikely] that there's going to be a major revision of this 13.8 billion year figure. Even if there is more fundamental physics than the forces, particles, and interactions that we know of, they are unlikely to change the physics of how stars work, how gravity works over time, how the Universe expands, or how radiation/matter/dark energy make up our Universe.

**The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [Ask Ethan: How Sure Are We That The Universe Is 13.8 Billion Years Old?](#)**